# Baltimore Inner Harbor Environmental Media Monitoring Plan Quarterly Report No. 96 Third Quarter 2013

Prepared for

Honeywell International Inc.

October 2013

CH2MHILL®

15010 Conference Center Drive Suite 200 Chantilly, VA 20151

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ES062613033317WDC III

# **Acronyms and Abbreviations**

EMMP Environmental Media Monitoring Plan

EPA U.S. Environmental Protection Agency

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

ES062613033317WDC IV

## 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 third quarter of 2013.

## 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 third quarter 2013, as well as during the second quarter of 2013. Appendix A provides data associated with sampling during the second quarter; results for the third quarter will be provided in the fourth quarter 2013 report. The surface water sample results for the second quarter 2013 were validated by Critigen, and the validation report for this event is provided in Appendix B. All data quality objectives were met for surface water samples collected during the second quarter of 2013.

## 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 the medium section 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. Raw data and chain-of-custody records are provided in Appendix A.

This progress report describes the surface water monitoring performed during the third quarter of 2013.

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## **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 and third quarters of 2013 was performed by Maryland Environmental Services (MES) at all 20 sampling locations on May 6, 2013, and on August 1, 2013, respectively. The surface water sampling locations are shown in Figure 2-1 (at the end of this section). Results for the surface water samples collected on May 6, 2013, are included in this report. Results of the analysis of the surface water samples collected on August 1, 2013, will be reported in the fourth quarter 2013 report (January 10, 2014). 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 May 2013, 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

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• 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 third quarter 2013 (second quarter 2013 results) are similar to the analytical values reported in second quarter 2013 (first quarter 2013 results). 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.

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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 <10 ppb	Method Detection Limit† Actual Concentration <1.1 ppb				
May	100%	100%	100%	70%				

 $<sup>\</sup>dagger$  The Analytical Detection Limit as determined by the Laboratory QC is 10 ppb

Table 2-2 Surface Water Sampling Data per Location May 2013

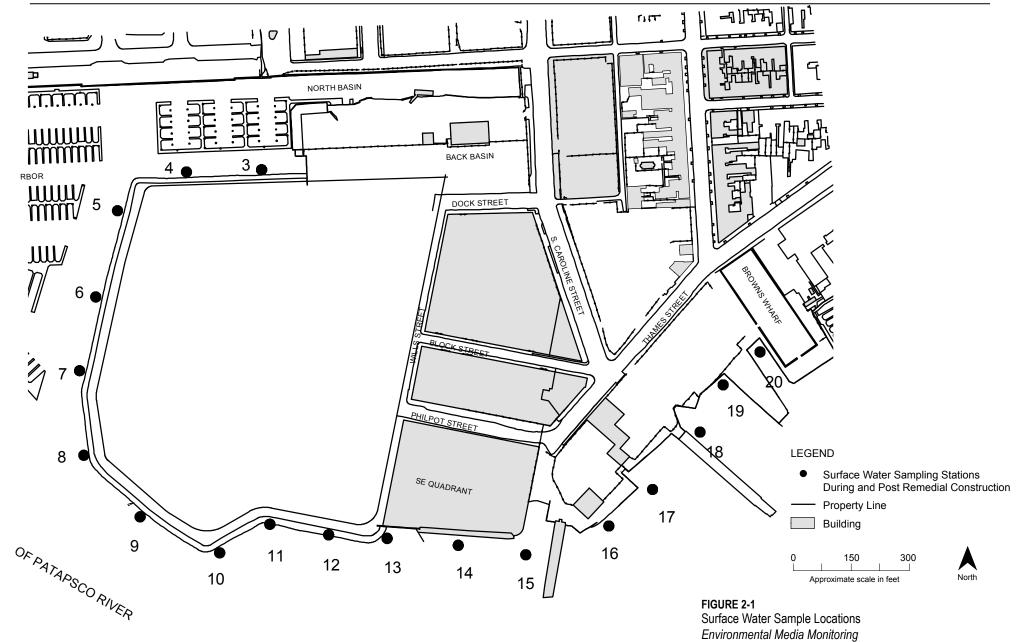
		Total Dissolved Chromium (mg/L)
Station	Detection	5/6/2013
Number	Limit	
3B	0.01	0.005 U
3T	0.01	0.005 U
4B	0.01	0.005 U *
4T	0.01	0.005 U
5B	0.01	0.005 U
5T	0.01	0.001 J
6B	0.01	0.005 U
6T	0.01	0.005 U
7B	0.01	0.005 U
7T	0.01	0.005 U
8B	0.01	0.005 U
8T	0.01	0.005 U
9B	0.01	0.005 U
9T	0.01	0.001 J
10B	0.01	0.005 U
10T	0.01	0.005 U *
11B	0.01	0.002 J
11T	0.01	0.005 U
12B	0.01	0.005 U
12T	0.01	0.005 U
13B	0.01	0.001 J
13T	0.01	0.005 U
14B	0.01	0.005 U
14T	0.01	0.005 U
15B	0.01	0.005 U *
15T	0.01	0.005 U
16B	0.01	0.002 J
16M	0.01	0.005 U
16T	0.01	0.001 J
17B	0.01	0.002 J
17T	0.01	0.005 U
18B	0.01	0.001 J
18M	0.01	0.001 J
18T	0.01	0.005 U
19B	0.01	0.001 J
19T	0.01	0.005 U *
20B	0.01	0.002 J
20T	0.01	0.001 J
Cent B	0.01	0.005 U
Cent T	0.01	0.001 J
LADY B	0.01	0.001 J
LADY T	0.01	0.001 J

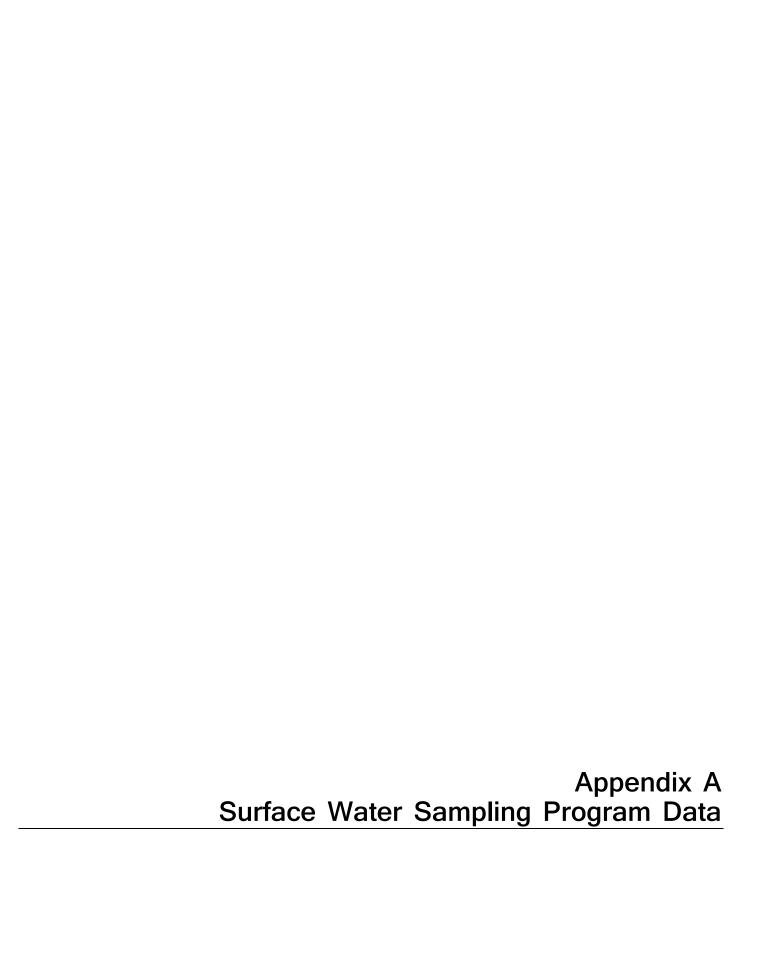
#### NOTES

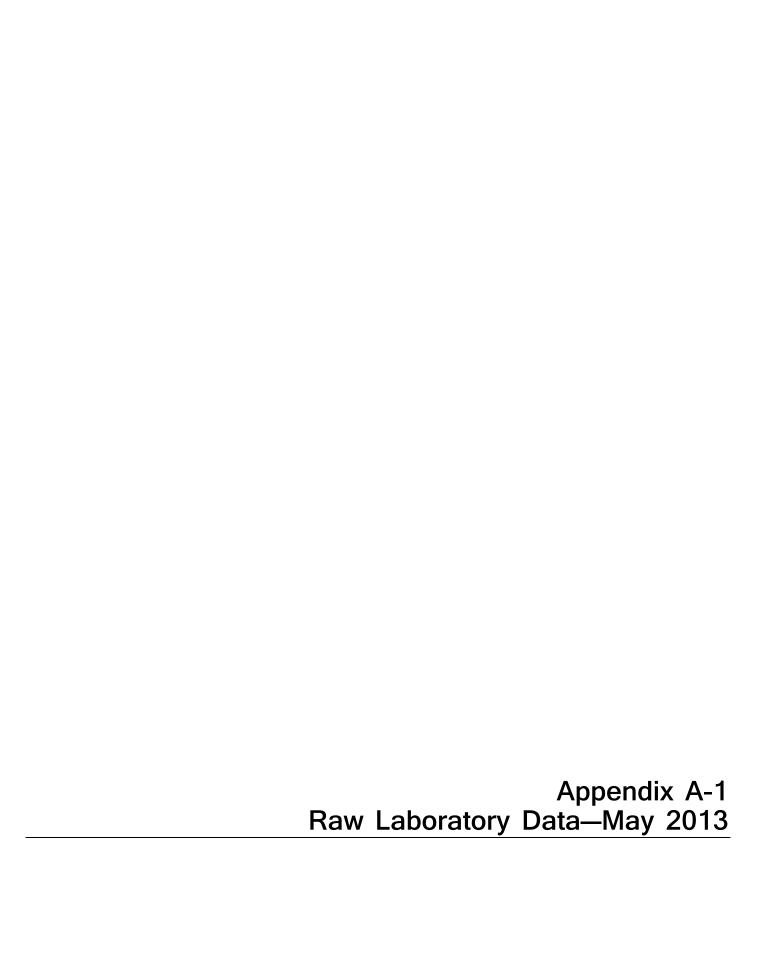
- T Sample collected 1 foot below the surface (TOP)
- M Sample collected from the measured middle of the TOP and BOTTOM measurements (MIDDLE)
- B Sample collected 1 foot from the bottom (BOTTOM)
- \* Average of the sample and its Field Duplicate
- J Results was reported below the Report Dectection Limit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

Table 2-3
Surface Water Sampling Data per Sampling Station
May 2013

	Total Dissolved Chromium (mg/L)
Station	5/6/2013
Number	Station Average of All Depths
3	0.005
4	0.004
5	0.005
6	0.005
7	0.005
8	0.005
9	0.003
10	0.005
11	0.003
12	0.005
13	0.003
14	0.005
15	0.005
16	0.003
17	0.003
18	0.003
19	0.003
20	< 0.001
Cent	0.003
Lady	< 0.001









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#### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Honeywell International, Inc. 101 Columbia Road MEY-3 Morristown NJ 07962

May 12, 2013

Project: Baltimore Inner Harbor, MD

Submittal Date: 05/07/2013 Group Number: 1388105 SDG: BHB06 PO Number: 4500013806 State of Sample Origin: MD

Client Sample Description	Lancaster Labs (LLI) #
30905-SW3T-050613 BKG Grab Water	7047519
30905-SW3T-050613 MS Grab Water	7047520
30905-SW3T-050613 MSD Grab Water	7047521
30905-SW3T-050613 DUP Grab Water	7047522
30905-SW3B-050613 Grab Water	7047523
30905-SW4T-050613 Grab Water	7047524
30905-SW4B-050613 Grab Water	7047525
30905-SW5T-050613 Grab Water	7047526
30905-SW5B-050613 Grab Water	7047527
30905-SW6T-050613 Grab Water	7047528
30905-SW6B-050613 Grab Water	7047529
30905-SW7T-050613 Grab Water	7047530
30905-SW7B-050613 Grab Water	7047531
30905-SW8T-050613 BKG Grab Water	7047532
30905-SW8T-050613 MS Grab Water	7047533
30905-SW8T-050613 MSD Grab Water	7047534
30905-SW8T-050613 DUP Grab Water	7047535
30905-SW8B-050613 Grab Water	7047536
30905-SW9T-050613 Grab Water	7047537
30905-SW9B-050613 Grab Water	7047538
30905-SW10T-050613 Grab Water	7047539
30905-SW10B-050613 Grab Water	7047540

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

ELECTRONIC COPY TO

Honeywell International

Attn: Ken Biles



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Respectfully Submitted,

Wendy A. Kozma

Principal Specialist Group Leader

Wendy a. Kenn

(717) 556-7257



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Sample Description: 30905-SW3T-050613 BKG Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047519 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:38 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW3T SDG#: BHB06-01BKG

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013	14:02	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013	10:50	James L Mertz	1



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Sample Description: 30905-SW3T-050613 MS Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047520 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:38 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW3T SDG#: BHB06-01MS

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.210
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013	14:15	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848006	05/09/2013	10:50	James L Mertz	1



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Sample Description: 30905-SW3T-050613 MSD Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047521 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:38 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/12/2013 07:17

-SW3T SDG#: BHB06-01MSD

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/l mg/l

7440-47-3 0.0011 0.0100 07051 Chromium 0.205

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ıe	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013	14:19	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848006	05/09/2013	10:50	James L Mertz	1



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Sample Description: 30905-SW3T-050613 DUP Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047522 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:38 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW3T SDG#: BHB06-01DUP

Submitted: 05/07/2013 17:35

As Received As Received

CAT

As Received Method Limit of

CAT No. Analysis Name CAS Number Result Method Limit of Dilution Factor

 Metals
 Dissolved
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013	14:11	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848006	05/09/2013	10:50	James L Mertz	1



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Sample Description: 30905-SW3B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047523 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:40 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW3B SDG#: BHB06-02

Submitted: 05/07/2013 17:35

CAT As Received As Received

CAT Analysis Name CAS Number Result

As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15:16	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013 10:50	James L Mertz	1



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Sample Description: 30905-SW4T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047524 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:43 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW4T SDG#: BHB06-03

Submitted: 05/07/2013 17:35

CAT As Received As Received

CAT Analysis Name CAS Number Result

As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15:20	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013 10:50	James L Mertz	1



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Sample Description: 30905-SW4B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047525 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:44 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/12/2013 07:17

-SW4B SDG#: BHB06-04

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/l mg/l

07051 Chromium 7440-47-3 0.0011 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15:32	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013 10:50	James L Mertz	1



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Sample Description: 30905-SW5T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047526 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:47 by AP Hone

Honeywell International, Inc. 101 Columbia Road

TOT COTUMD

MEY-3

Morristown NJ 07962

-SW5T SDG#: BHB06-05

Submitted: 05/07/2013 17:35

Reported: 05/12/2013 07:17

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

Metals Dissolved SW-846 6010B mg/l mg/l mg/l

07051 Chromium 7440-47-3 N.D. 0.0011 0.0100 1

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15	5:37 Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013 10	):50 James L Mertz	1



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Sample Description: 30905-SW5B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047527 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:48 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW5B SDG#: BHB06-06

Submitted: 05/07/2013 17:35

CAT As Received As Received Method Limit of Dilution Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15	5:41	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848006	05/09/2013 10	0:50	James L Mertz	1



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Sample Description: 30905-SW6T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047528 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:51 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/12/2013 07:17

-SW6T SDG#: BHB06-07

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/1mg/l mg/l

07051 Chromium 7440-47-3 0.0011 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15:	15 Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013 10:	James L Mertz	1



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Sample Description: 30905-SW6B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047529 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:53 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/12/2013 07:17

-SW6B SDG#: BHB06-08

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/1mg/l mg/l

07051 Chromium 7440-47-3 0.0011 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15:5	) Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848006	05/09/2013 10:5	) James L Mertz	1



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Sample Description: 30905-SW7T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047530 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:56 by AP

Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962

-SW7T SDG#: BHB06-09

Submitted: 05/07/2013 17:35

Reported: 05/12/2013 07:17

CAT No. Analysis Name

CAS Number

7440-47-3

As Received Result As Received Method Detection Limit\* As Received

Limit of Quantitation

Dilution Factor

Metals Dissolved
07051 Chromium

SW-846 6010B

mg/l

**mg/1** 0.0011 **mg/l** 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013	15:54	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848006	05/09/2013	10:50	James L Mertz	1
	rec)							



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Sample Description: 30905-SW7B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047531 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:58 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW7B SDG#: BHB06-10

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848006	05/11/2013 15:	58 Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848006	05/09/2013 10:	James L Mertz	1



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Sample Description: 30905-SW8T-050613 BKG Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047532 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:00 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW8T SDG#: BHB06-11BKG

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	08:15	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Sample Description: 30905-SW8T-050613 MS Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047533 LLI Group # 1388105 Account # 10651

Factor

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:00 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/12/2013 07:17

-SW8T SDG#: BHB06-11MS

No.

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation

SW-846 6010B mg/l mg/l Metals Dissolved

7440-47-3 0.0011 0.0100 07051 Chromium 0.205

Result

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013 08:28	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013 13:33	James L Mertz	1



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Sample Description: 30905-SW8T-050613 MSD Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047534 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:00 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW8T SDG#: BHB06-11MSD

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.206
 0.0011
 0.0100

## General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	08:32	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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

Sample Description: 30905-SW8T-050613 DUP Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047535 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:00 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW8T SDG#: BHB06-11DUP

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	08:23	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Sample Description: 30905-SW8B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047536 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:02 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW8B SDG#: BHB06-12

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/1
 mg/1
 mg/1

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	09:26	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Sample Description: 30905-SW9T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047537 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:05 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-SW9T SDG#: BHB06-13

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

Metals Dissolved SW-846 6010B mg/1 mg/1 mg/1

07051 Chromium 7440-47-3 0.0012 J 0.0011 0.0100 1

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	09:30	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Sample Description: 30905-SW9B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047538 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:07 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/12/2013 07:17

-SW9B SDG#: BHB06-14

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

SW-846 6010B mg/1mg/l mg/l Metals Dissolved

07051 Chromium 7440-47-3 0.0011 0.0100

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013 (	09:42	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848007	05/09/2013 1	13:33	James L Mertz	1
	rec)							



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Sample Description: 30905-SW10T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047539 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:09 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-S10T SDG#: BHB06-15

Submitted: 05/07/2013 17:35

CAT As Received As Received Method Limit of Dilution Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	09:46	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Sample Description: 30905-SW10B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047540 LLI Group # 1388105 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:11 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/12/2013 07:17 Morristown NJ 07962

-S10B SDG#: BHB06-16\*

Submitted: 05/07/2013 17:35

CAT No. Analysis Name CAS Number Result As Received As Received Method Limit of Dilution Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	09:50	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Page 1 of 1

### Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1388105

Reported: 05/12/13 at 07:17 AM

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.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL**	Blank <u>LOQ</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 131281848006 Chromium	Sample numi		047519-704 0.0100	7531 mg/l	105		90-110		
Batch number: 131281848007 Chromium	Sample numi		0.0100	7540 mg/l	103		90-110		

### Sample Matrix Quality Control

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

Analysis Name		MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 131281848006 Chromium	-		: 7047519- 81-120		1 UNSPI 20	K: 7047519 E N.D.	N.D.	0 (1)	20
Batch number: 131281848007 Chromium	-	umber(s) 103	: 7047532- 81-120		0 UNSPI 20	K: 7047532 E N.D.	N.D.	0 (1)	20

<sup>\*-</sup> Outside of specification

<sup>\*\*-</sup>This limit was used in the evaluation of the final result for the blank

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.



### **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)
С	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 The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- **J** estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 of gas 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.

#### U.S. EPA CLP Data Qualifiers:

### **Organic Qualifiers**

### **Inorganic Qualifiers**

A B C D	TIC is a possible aldol-condensation product Analyte was also detected in the blank Pesticide result confirmed by GC/MS Compound quantitated on a diluted sample	B E M N	Value is <crdl, but="" control="" due="" duplicate="" estimated="" injection="" interference="" limits<="" met="" not="" precision="" sample="" spike="" th="" to="" within="" ≥idl=""></crdl,>
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
		_	
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

Analytical test results meet all requirements of NELAC 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.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Honeywell International, Inc. 101 Columbia Road MEY-3 Morristown NJ 07962

May 14, 2013

Project: Baltimore Inner Harbor, MD

Submittal Date: 05/07/2013 Group Number: 1388106 SDG: BHB07 PO Number: 4500013806 State of Sample Origin: MD

Client Sample Description	Lancaster Labs (LLI) #
30905-SW11T-050613 BKG Grab Water	7047541
30905-SW11T-050613 MS Grab Water	7047542
30905-SW11T-050613 MSD Grab Water	7047543
30905-SW11T-050613 DUP Grab Water	7047544
30905-SW11B-050613 Grab Water	7047545
30905-SW12T-050613 Grab Water	7047546
30905-SW12B-050613 Grab Water	7047547
30905-SW13T-050613 Grab Water	7047548
30905-SW13B-050613 Grab Water	7047549
30905-SW14T-050613 Grab Water	7047550
30905-SW14B-050613 Grab Water	7047551
30905-SW15T-050613 Grab Water	7047552
30905-SW15B-050613 Grab Water	7047553
30905-SW16T-050613 Grab Water	7047554
30905-SW16M-050613 Grab Water	7047555
30905-SW16B-050613 Grab Water	7047556
30905-SW17T-050613 Grab Water	7047557
30905-SW17B-050613 Grab Water	7047558
30905-SW18T-050613 BKG Grab Water	7047559
30905-SW18T-050613 MS Grab Water	7047560
30905-SW18T-050613 MSD Grab Water	7047561
30905-SW18T-050613 DUP Grab Water	7047562
30905-SW18M-050613 Grab Water	7047563
30905-SW18B-050613 Grab Water	7047564

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



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ELECTRONIC	Critigen	Attn: Amy Klopper
COPY TO		
ELECTRONIC	CH2M Hill, Inc.	Attn: Robert Steele
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ELECTRONIC	Honeywell	Attn: Katherine Beach
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ELECTRONIC	Honeywell International, Inc.	Attn: Peeyush Gupta
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Respectfully Submitted,

Wendy A. Kozma

Principal Specialist Group Leader

Wendy a. Kenn

(717) 556-7257



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Sample Description: 30905-SW11T-050613 BKG Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047541 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:20 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY01 SDG#: BHB07-01BKG

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

Metals Dissolved SW-846 6010B mg/l mg/l mg/l

07051 Chromium 7440-47-3 N.D. 0.0011 0.0100 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	19:39	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW11T-050613 MS Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047542 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:20 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY01 SDG#: BHB07-01MS

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.204
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013 19:51	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848008	05/09/2013 13:45	James L Mertz	1



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Sample Description: 30905-SW11T-050613 MSD Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047543 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:20 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY01 SDG#: BHB07-01MSD

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 0.199
 0.0011
 0.0100

0.001

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	e	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013 1	19:55	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848008	05/09/2013 1	13:45	James L Mertz	1



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Sample Description: 30905-SW11T-050613 DUP Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047544 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:20 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

MEY-

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY01 SDG#: BHB07-01DUP

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013 19:47	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013 13:45	James L Mertz	1



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Sample Description: 30905-SW11B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047545 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:22 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/14/2013 10:32

HNY02 SDG#: BHB07-02

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/l mg/l

7440-47-3 0.0011 0.0100 07051 Chromium 0.0018 J

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	20:42	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW12T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047546 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:24 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY03 SDG#: BHB07-03

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	20:46	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW12B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047547 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:26 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY04 SDG#: BHB07-04

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tir	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	20:50	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW13T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047548 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:28 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY05 SDG#: BHB07-05

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Detection Limit \* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	20:54	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW13B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047549 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:30 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/14/2013 10:32

HNY06 SDG#: BHB07-06

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

SW-846 6010B mg/l mg/l Metals Dissolved

7440-47-3 0.0011 0.0100 07051 Chromium 0.0014 J

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	21:05	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW14T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047550 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:33 by AP Honeywell International, Inc.

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Morristown NJ 07962 Reported: 05/14/2013 10:32

HNY07 SDG#: BHB07-07

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/1mg/l mg/l

07051 Chromium 7440-47-3 0.0011 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013 21:	09 Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013 13:	45 James L Mertz	1



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Sample Description: 30905-SW14B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047551 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:34 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY08 SDG#: BHB07-08

Submitted: 05/07/2013 17:35

CAT As Received As Received

No. Analysis Name CAS Number Result

As Received Method Limit of Dilution Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/1
 mg/1
 mg/1

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	21:14	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW15T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047552 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:37 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY09 SDG#: BHB07-09

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	21:18	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW15B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047553 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:39 by AP

Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962

HNY10 SDG#: BHB07-10

Submitted: 05/07/2013 17:35

Reported: 05/14/2013 10:32

Analysis Name

CAS Number

As Received Result As Received Method

Detection Limit\*

As Received

Limit of Quantitation

Dilution Factor

Metals Dissolved

CAT

No.

SW-846 6010B

mg/l

mg/l

mg/l

Metals Dissolved 07051 Chromium

7440-47-3

N.D.

0.0011

0.0100

1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848008	05/12/2013	21:22	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848008	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW16T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047554 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:43 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY11 SDG#: BHB07-11

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result

As Received Method Limit of Detection Limit\* Quantitation Factor

Metals Dissolved SW-846 6010B mg/l mg/l mg/l

07051 Chromium 7440-47-3 0.0013 J 0.0011 0.0100 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:16	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW16M-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047555 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:45 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY12 SDG#: BHB07-12

Submitted: 05/07/2013 17:35

CAT As Received As Received
No. Analysis Name CAS Number Result

As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013 23:20	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848009	05/09/2013 13:45	James L Mertz	1



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Sample Description: 30905-SW16B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047556 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:47 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY13 SDG#: BHB07-13

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

Metals Dissolved SW-846 6010B mg/l mg/l mg/l

07051 Chromium 7440-47-3 0.0019 J 0.0011 0.0100 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:32	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW17T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047557 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:50 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/14/2013 10:32

HNY14 SDG#: BHB07-14

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

SW-846 6010B mg/1mg/l mg/l Metals Dissolved

07051 Chromium 7440-47-3 0.0011 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ne	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:36	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW17B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047558 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:52 by AP

Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY15 SDG#: BHB07-15

Submitted: 05/07/2013 17:35

As Received As Received

CAT

As Received Method Limit of

CAT No. Analysis Name CAS Number Result Method Limit of Dilution Factor

 Metals Dissolved
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 0.0016
 J
 0.0011
 0.0100

General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:40	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW18T-050613 BKG Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047559 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:56 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY16 SDG#: BHB07-16BKG

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	.e	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	22:52	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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

Sample Description: 30905-SW18T-050613 MS Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047560 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:56 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY16 SDG#: BHB07-16MS

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor SW-846 6010B mg/l mg/l Metals Dissolved 7440-47-3 0.0011 0.0100 07051 Chromium 0.201

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013 23:04	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013 13:45	James L Mertz	1



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Sample Description: 30905-SW18T-050613 MSD Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047561 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:56 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY16 SDG#: BHB07-16MSD

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 0.201
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:08	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW18T-050613 DUP Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047562 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:56 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 10:32 Morristown NJ 07962

HNY16 SDG#: BHB07-16DUP

Submitted: 05/07/2013 17:35

CAT No. Analysis Name CAS Number Result As Received As Received Method Limit of Dilution Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013 23	3:00	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848009	05/09/2013 13	3:45	James L Mertz	1



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Sample Description: 30905-SW18M-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047563 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:57 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/14/2013 10:32

HNY17 SDG#: BHB07-17

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/l mg/l

7440-47-3 0.0011 0.0100 07051 Chromium 0.0012 J

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:44	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SW18B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047564 LLI Group # 1388106 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:58 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/14/2013 10:32

HNY18 SDG#: BHB07-18\*

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

Metals Dissolved SW-846 6010B mg/l mg/l

7440-47-3 0.0011 0.0100 07051 Chromium 0.0013 J

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:48	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Page 1 of 1

### Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1388106

Reported: 05/14/13 at 10:32 AM

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.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL**	Blank <u>LOQ</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 131281848008 Chromium	Sample numi		047541-704 0.0100	7553 mg/l	101		90-110		
Batch number: 131281848009 Chromium	Sample numi		0.0100	7564 mg/l	101		90-110		

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 131281848008 Chromium	Sample n 102		: 7047541- 81-120				N.D.	0 (1)	20
Batch number: 131281848009 Chromium	Sample n 101	umber(s)	: 7047554- 81-120				BKG: 7047559 N.D.	0 (1)	20

<sup>\*-</sup> Outside of specification

<sup>\*\*-</sup>This limit was used in the evaluation of the final result for the blank

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.



### **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)
С	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 The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 of gas 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.

**Inorganic Qualifiers** 

#### U.S. EPA CLP Data Qualifiers:

### Organic Qualifiers

Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
Ε	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

Analytical test results meet all requirements of NELAC 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.

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### ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17601 Honeywell International, Inc. 101 Columbia Road MEY-3 Morristown NJ 07962

May 14, 2013

Project: Baltimore Inner Harbor, MD

Submittal Date: 05/07/2013 Group Number: 1388107 SDG: BHB08 PO Number: 4500013806 State of Sample Origin: MD

Client Sample Description	<u>Lancaster Labs (LLI) #</u>
30905-SW19T-050613 BKG Grab Water	7047565
30905-SW19T-050613 MS Grab Water	7047566
30905-SW19T-050613 MSD Grab Water	7047567
30905-SW19T-050613 DUP Grab Water	7047568
30905-SW19B-050613 Grab Water	7047569
30905-SW20T-050613 Grab Water	7047570
30905-SW20B-050613 Grab Water	7047571
30905-SWCentT-050613 Grab Water	7047572
30905-SWCentB-050613 Grab Water	7047573
30905-SWLadyT-050613 Grab Water	7047574
30905-SWLadyB-050613 Grab Water	7047575
30905-SWD1-050613 Grab Water	7047576
30905-SWD2-050613 Grab Water	7047577
30905-SWD3-050613 Grab Water	7047578
30905-SWD4-050613 Grab Water	7047579
30905-SW-FB1-050613 Grab Water	7047580
30905-SW-RB1-050613 Grab Water	7047581
30905-SW-RB2-050613 Grab Water	7047582

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

Honeywell International	Attn: Ken Biles
Critigen	Attn: Amy Klopper
CH2M Hill, Inc.	Attn: Robert Steele
	Critigen



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ELECTRONIC	Honeywell International, Inc.	Attn: Rakesh Singh
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ELECTRONIC	Honeywell International, Inc.	Attn: Peeyush Gupta
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ELECTRONIC	Honeywell International, Inc.	Attn: Aruna Chandraskekar
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ELECTRONIC	Honeywell International, Inc.	Attn: Suraj Nayak
COPY TO		

Respectfully Submitted,

Wendy A. Kozma

Principal Specialist Group Leader

Wendy a. Kenn

(717) 556-7257



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Sample Description: 30905-SW19T-050613 BKG Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047565 LLI Group # 1388107

Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:02 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SW19 SDG#: BHB08-01BKG

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/12/2013	22:59	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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Sample Description: 30905-SW19T-050613 MS Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047566 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:02 by AP

Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962

-SW19 SDG#: BHB08-01MS

Submitted: 05/07/2013 17:35

Reported: 05/14/2013 07:46

Analysis Name

As Received CAS Number Result

Method

As Received

As Received

Limit of Detection Limit\* Quantitation Dilution

Factor

Metals Dissolved 07051 Chromium

CAT

No.

SW-846 6010B

7440-47-3

0.197

mg/l 0.0011 mg/l 0.0100

General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
No.					Date and Tir	me		Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/12/2013	23:11	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1
	rec)							



0.0100

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Sample Description: 30905-SW19T-050613 MSD Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047567 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:02 by AP Honeywell International, Inc.

101 Columbia Road

0.0011

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

7440-47-3

-SW19 SDG#: BHB08-01MSD

07051 Chromium

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor Metals Dissolved SW-846 6010B mg/l mg/l

0.197

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/12/2013	23:15	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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Sample Description: 30905-SW19T-050613 DUP Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047568 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:02 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SW19 SDG#: BHB08-01DUP

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

Metals Dissolved SW-846 6010B mg/l mg/l mg/l

07051 Chromium 7440-47-3 0.0012 J 0.0011 0.0100 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/12/2013 23:07	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013 10:10	James L Mertz	1



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Sample Description: 30905-SW19B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047569 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:05 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-S19B SDG#: BHB08-02

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.0012 J
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	00:43	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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Sample Description: 30905-SW20T-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047570 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:10 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SW20 SDG#: BHB08-03

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.0013 J
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	00:47	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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Sample Description: 30905-SW20B-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047571 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:13 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-S20B SDG#: BHB08-04

Submitted: 05/07/2013 17:35

As Received As Received

CAT As Received Method Limit of

CAT As Received Method Limit of Dilution No. Analysis Name CAS Number Result Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.0016 J
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	00:51	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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

Sample Description: 30905-SWCentT-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047572 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:32 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Morristown NJ 07962 Reported: 05/14/2013 07:46

-SWCT SDG#: BHB08-05

Submitted: 05/07/2013 17:35

As Received As Received Method Limit of CAT As Received Dilution Analysis Name CAS Number Detection Limit\* Quantitation No. Result Factor

SW-846 6010B mg/l mg/l Metals Dissolved

7440-47-3 0.0011 0.0100 07051 Chromium 0.0012 J

#### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	00:55	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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

Sample Description: 30905-SWCentB-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047573 LLI Group # 1388107 Account # 10651

Account

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:34 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-S-CT SDG#: BHB08-06

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/1
 mg/1
 mg/1

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	01:00	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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

Sample Description: 30905-SWLadyT-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047574 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:25 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWLT SDG#: BHB08-07

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.0011 J
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	01:04	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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Sample Description: 30905-SWLadyB-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047575 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:29 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-S6LT SDG#: BHB08-08

Submitted: 05/07/2013 17:35

CAT As Received As Received Method Limit of Detection Limit Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.0013 J
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013	01:15	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013	10:10	James L Mertz	1



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

Sample Description: 30905-SWD1-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047576 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:45 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWD1 SDG#: BHB08-09FD

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Method Limit of Detection Limit\* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 0.0018 J
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131291848002	05/13/2013 01:19	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131291848002	05/11/2013 10:10	James L Mertz	1



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

Sample Description: 30905-SWD2-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047577 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:10 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWD2 SDG#: BHB08-10FD

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Detection Limit Method Limit of Detection Limit Pactor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:52	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1



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Sample Description: 30905-SWD3-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047578 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:40 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWD3 SDG#: BHB08-11FD

Submitted: 05/07/2013 17:35

CAT No. Analysis Name CAS Number Result As Received As Received Method Limit of Dilution Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848009	05/12/2013	23:56	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848009	05/09/2013	13:45	James L Mertz	1
	rec)							



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Sample Description: 30905-SWD4-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047579 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:03 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWD4 SDG#: BHB08-12FD

Submitted: 05/07/2013 17:35

CAT Analysis Name CAS Number Result As Received As Received Detection Limit \* Quantitation Factor

 Metals Dissolved
 SW-846 6010B
 mg/l
 mg/l
 mg/l

 07051 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100
 1

### General Sample Comments

This sample was field filtered for dissolved metals.

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013 09:54	Eric L Eby	1
01848	WW SW846 ICP Digest (tot	SW-846 3005A	1	131281848007	05/09/2013 13:33	James L Mertz	1
	rec)						



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Sample Description: 30905-SW-FB1-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047580 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 10:18 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWF1 SDG#: BHB08-13FB

Submitted: 05/07/2013 17:35

CAT No. Analysis Name CAS Number Result As Received As Received Method Limit of Dilution Factor

 Metals
 SW-846
 6010B
 mg/l
 mg/l
 mg/l

 07051
 Chromium
 7440-47-3
 N.D.
 0.0011
 0.0100

#### General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	09:58	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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

Sample Description: 30905-SW-RB1-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047581 LLI Group # 1388107

Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 11:16 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWR1 SDG#: BHB08-14RB

Submitted: 05/07/2013 17:35

As Received As Received

CAT

As Received Method Limit of

CAT As Received Method Limit of Dilution No. Analysis Name CAS Number Result Detection Limit\* Quantitation Factor

07051 Chromium 7440-47-3 N.D. 0.0011 0.0100 1

#### General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tir	me	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013	10:02	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013	13:33	James L Mertz	1



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Sample Description: 30905-SW-RB2-050613 Grab Water

Baltimore Inner Harbor

LLI Sample # WW 7047582 LLI Group # 1388107 Account # 10651

Project Name: Baltimore Inner Harbor, MD

Collected: 05/06/2013 12:06 by AP Honeywell International, Inc.

101 Columbia Road

MEY-3

Reported: 05/14/2013 07:46 Morristown NJ 07962

-SWR2 SDG#: BHB08-15RB\*

Submitted: 05/07/2013 17:35

As Received As Received

CAT As Received Method Limit of

CAT No. Analysis Name CAS Number Result Method Limit of Dilution Factor

Metals SW-846 6010B mg/l mg/l mg/l

07051 Chromium 7440-47-3 N.D. 0.0011 0.0100 1

#### General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	131281848007	05/11/2013 10:06	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	131281848007	05/09/2013 13:33	James L Mertz	1



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Page 1 of 1

### Quality Control Summary

Client Name: Honeywell International, Inc. Group Number: 1388107

Reported: 05/14/13 at 07:46 AM

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.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL**	Blank <u>LOO</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 131281848007 Chromium	Sample nu N.D.	mber(s): 70 0.0011	047579-704 0.0100	7582 mg/l	103		90-110		
Batch number: 131281848009 Chromium	Sample nu	mber(s): 70 0.0011	047577-704 0.0100	7578 mg/l	101		90-110		
Batch number: 131291848002 Chromium	Sample nu N.D.	mber(s): 70	0.0100	7576 mg/l	98		90-110		

### Sample Matrix Quality Control

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

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 131281848007 Chromium	Sample 103	number(s) 103		-704758 0	82 UNSP 20	PK: P047532 N.D.	BKG: P047532 N.D.	0 (1)	20
Batch number: 131281848009 Chromium	Sample 101	number(s) 100		-70475° 0	78 UNSP 20	PK: P047559 N.D.	BKG: P047559 N.D.	0 (1)	20
Batch number: 131291848002 Chromium	Sample 99	number(s) 98	: 7047565 81-120	-70475 0	76 UNSP 20	PK: 7047565 N.D.	BKG: 7047565 0.0012 J	200* (1)	20

<sup>\*-</sup> Outside of specification

<sup>\*\*-</sup>This limit was used in the evaluation of the final result for the blank

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.



### **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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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 of gas 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.

#### U.S. EPA CLP Data Qualifiers:

### Organic Qualifiers

### **Inorganic Qualifiers**

Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

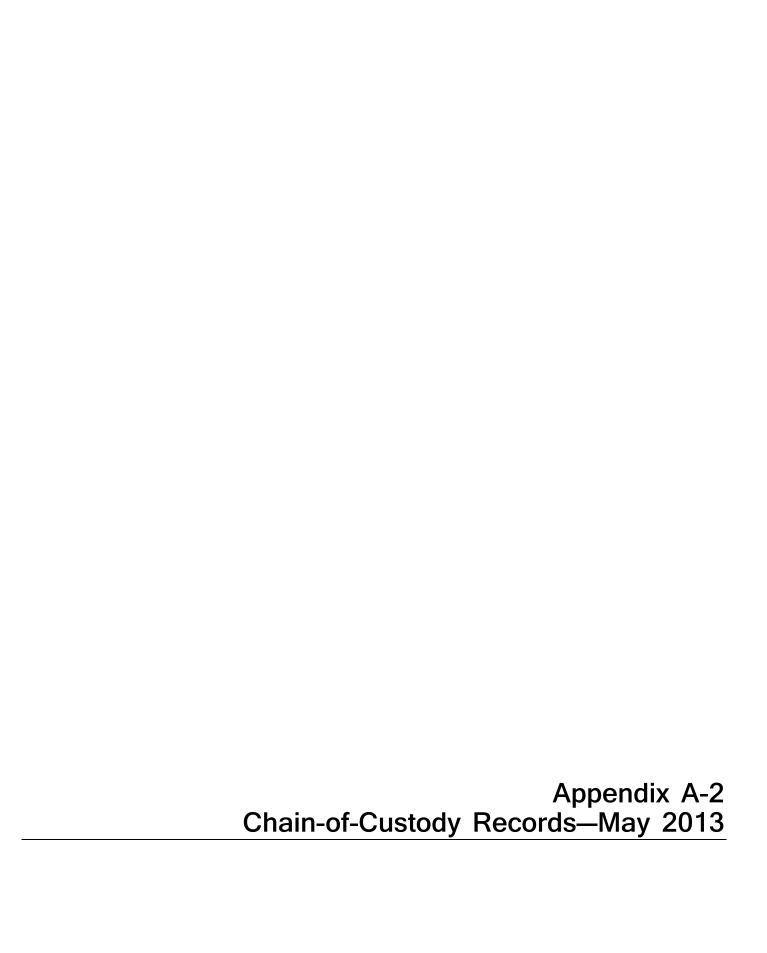
Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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.

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# 10651 | 1388105 | 7047519-40

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4	4T	2.5	_	30905-SW4T-050613	5/6/2013	1043	W-SW	WATER	REG	1	grab		x	The s												
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6	.9	2.5	1.5	30905-SW4B-050613	5/6/2013	1044	W-SW	WATER	REG	1	grab	Υ	x	4				10	). T		S C		SA			
7	5T	2.83	-,	30905-SW5T-050613	5/6/2013	1047	W-SW	WATER	REG	1	grab	Υ	х	13		10				1		×				
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9	5B	2.83	1.83	30905-SW5B-050613	5/6/2013	1048	W-SW	WATER	REG	1	grab	Υ	х													
10	6T	3.67	_	30905-SW6T-050613	5/6/2013	1051	W-SW	WATER	REG	1	grab	Υ	х	1					1							
11	6M			30905-SW6M-050613	5/6/2013		W-SW	WATER	REG		grab				1				1							
12	6B	3.67	2.67	30905-SW6B-050613	5/6/2013	1053	W-SW	WATER	REG	1	grab	Y	x		Δ.							8				
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Relinguistes Kin 5/10) 17:31

3- 5/1/13 1735

# 10651 | 1388105 | 7047519-40

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_	ristown, NJ 07962	es presentativos sur sur s				Consultan	t		CH2M																
Pre	liminary Data To		oiles@ch2 ner@critic	<u>?m.com;</u> sen com: hernice kidd@ch2m.com:								c.												Text & Excel File Drive	Excel & Text File Order
	nple Receipt nowledgement To		oiles@ch2 per@critic	?m.com; gen.com; bernice.kidd@ch2m.com;								Filtered Sample	F												
Har	d Copy To	Amy Klop	per	72 0	Fu	II Report T	AT:		28		Gra	S P	min												
Invo	oice To:	Christoph	ner French	1							site/	tere	Chrc												<b>A</b>
		ole Identif	ication	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Fil	SW6010 Chromium											Copyright AESI: Version 8.0 Unauthorized use strictly prohibited.		
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ng/L											Sampling Method (code)	Lab Sample Numbers
1	7T	2.58	-	30905-SW7T-050613	5/6/2013	1056	W-SW	WATER	REG	1	grab	Υ	х												
2	7M			30905-SW7M-050613	5/6/2013		W-SW	WATER	REG		grab														
3	7B	2.58	1.58	30905-SW7B-050613	5/6/2013	1058	W-SW	WATER	REG	1	grab	Υ	x												
4	8T	3.0	-	30905-SW8T-050613	5/6/2013	1100	W-SW	WATER	REG	1	grab	Υ	х												
5	8M			30905-SW8M-050613	5/6/2013		W-SW	WATER	REG		grab														
6	8B	3.0	2.0	30905-SW8B-050613	5/6/2013	1102	w-sw	WATER	REG	1	grab	Υ	х												
7	9T	3.6		30905-SW9T-050613	5/6/2013	1105	W-SW	WATER	REG	1	grab	Υ	х												
8	9M			30905-SW9M-050613	5/6/2013		W-SW	WATER	REG		grab														
9	9B	3.0	2.0	30905-SW9B-050613	5/6/2013	107	W-SW	WATER	REG	1	grab	Υ	х												
10	10T	2.75	_	30905-SW10T-050613	5/6/2013	1109	W-SW	WATER	REG	1	grab	Υ	х												
11	10M			30905-SW10M-050613	5/6/2013		W-SW	WATER	REG		grab														
12	10B	2.75	1.75	30905-SW10B-050613	5/6/2013	111(	W-SW	WATER	REG	1	grab	Υ	х												
Relin	nquished by			WES Company	r		Received by							Compa	anv r ii	an HIL	Con	dition			-	Custo	dv Se	als Intact	
1	Mmerch	Peul	.8	5/3/13 Date/Time 8			NOB	N				Da	ite/Tim		6/5	/13 0108		er Temp	o.				-	West School (massessory)	
Relir	nquished by			Received by	7			9.75			Compa	any L	LI		dition	_	nto	et	Custo	dy Se	als Intact	Yes			
7	PBK	420	1 telle	12	~			5	1799	te/Tim	e .	21		Coo	er Temp	ο.	0.7	-	)			4			
Pres	servatives: (Other;	Specify):		/			0 (none); 1 (4 D (pH<2), 4Deg C					(H2SO	4 pH<2	); 5 (Na									2)); 8 (	HCI pH<2); 9 (HCI 4 De	eg C); 10 (HNO3
	2. 121011						//	,, (10 140	(b) 1- 1E			-/1 15 /	· O FIEL	o thu	/ U INC	.JEU3], 13	LEITAG	rate), sp	lohe	o-ai IIISU	JUITUI	.01			

Relinguoles Kun stato 17:01 BC: 5/7/13 1735

# 10651 / 1388106 / 7047541-64

425	caster Labo New Holland Pi ester, PA 17605	ke	\$		Н	one	ywel		Chain	Of C	usto	dy / A	Anal	ysis	Req	uest								L	AESI Ref: COC#	41397.5717 30905-0506
	656-2300	-2425			Privileged &	Confidenti	al	N			Site N	lamai		Baltin	nore		The second		Dhasa	Т				L	.ab Proj # (SDG):	
am	pling Co.:	Maryland	Environme	ental Service	EDD To:		kbiles@omiin	c.com				ion of	Site:	BALT	IMORI	E, MD			Phase: Sampli Prograi	~	Surface Sampli		er	L	ab ID	LLI
	nt Contact: (r				Sampler:	Amanda P	enafiel; Rache	el Griner. M	laura Morris					П	Т	$\top$		Г	Ť	T	Jampin	T	Т	5	Site ID	BALTIMO
-	opher French	iamo, oo.	dudioo	<u> </u>	PO#	450001380		3. 00.,	idaid illoini		Preser	vative	3											L	ab Job #	
_	olumbia Road; N						Time (TAT):		14															1	Authorized User:	Honeyv
-	town, NJ 07962 ninary Data To		oiles@ch2r	m com:		Consultan	t		CH2M		-													2		Excel & Te
		amy kloni	ner@critine	en com: hernice kidd@ch2m com								le ?													ext & Excel File Drive	Order
	le Receipt owledgement T	SALES OF THE OWNER, WHEN PERSONS NAMED IN	oiles@ch2r per@critiq	m.com; en.com; bernice.kidd@ch2m.com							9	ашь	E								- 1					
rd	Сору То	Amy Klop	per		Fu	II Report T	AT:		28		Gra	S pe	omin											- 1		
oio	e To:	Christopr	er French								site	iltere	Chr													^
		Samp	le Identifi	cation	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample	SW6010 Chromium											8	opyright AESI: Version .0 Unauthorized use trictly prohibited.	
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Units													Sampling Method (code)	Lab San Numbe							
	11T	3.5	_	30905-SW11T-050613	5/6/2013	1120	W-SW	WATER	REG	1	grab	Υ	х													
	11M			30905-SW11M-050613	5/6/2013		W-SW	WATER	REG		grab															
Ī	11B	3.5	2.5	30905-SW11B-050613	5/6/2013	1122	W-SW	WATER		1	grab	Υ	x									1				
	12T	2.0	-	30905-SW12T-050613	5/6/2013	1124	W-SW	WATER	REG	1	grab	Υ	х													
	12M	2.		30905-SW12M-050613	5/6/2013		W-SW	WATER	REG		grab															
	12B	2.0	1.0	30905-SW12B-050613	5/6/2013	1126	W-SW	WATER	REG	1	grab	Υ	х													
Ļ	13T	2.83	_	30905-SW13T-050613	5/6/2013	1128	W-SW	WATER	REG	1	grab	Υ	х		_						_	_				
L	13M	2 67	1.67	30905-SW13M-050613	5/6/2013	+-	W-SW	WATER	REG		grab				_	_			-		_	_		_		
L	13B	2.83	1.83	30905-SW13B-050613	5/6/2013	1130	W-SW	WATER	REG	1	grab	Υ	х		_					_	_	4				
H	14T	6.58	_	30905-SW14T-050613	5/6/2013	1133	W-SW	WATER	REG	1	grab	Υ	х		_	+	-		-	4	+	+	+			
+	14M	1 10	558	30905-SW14M-050613	5/6/2013	1)34	W-SW	WATER	REG		grab				-		-			-	+	+		-		
	14B	6.50	2.50	30905-SW14B-050613	5/6/2013	11347	W-SW	WATER	REG	1	grab	Υ	Х				1			_1						
inc	uished by	10	n	MES Company	/		Received by	010							pany (	112h	HELL	Conc	lition			C	Custod	dy Sea	Is Intact	
Ourondilate 5/2/08 Date/Time 5/07/3000 Cooler Temp.																										
inq	uished by	10		Company			Received by	7				-5		Com		LU		Cond		I	inta	4	Custod	dy Sea	ls Intact	468
1	NBA			77/13 Date/Time	CHANA	FIL	Kn	1						ne//					er Temp.	_	٥,٦٠-	1.0	,			
ese	rvatives: (Other	r; Specify):		/			0 (none); 1 (4 E (pH<2), 4Deg C	Deg C); 2 (H C); 11 (4C N	Cl pH<2); 3 ( aOH (pH>12	(HNO3 p	H<2); 4 orbic Ac	(H2SC id); 12 (	04 pH< (4C H2	2); 5 (N SO4 (p	laOH p H<2) &	H>12); 6 Na2S2C	(NaOH, 2 3); 13 (Z	Zn Ace Zn Ace	etate); 7 (I tate); sp (	H2SC speci	04 (pH< ial instru	2), 4 luction:	Deg C)	)); 8 (H	Cl pH<2); 9 (HCl 4 De	əg C); 10 (HN
		K	el.ay	guiling ofm	5/2	113	17:2	_					1	2	2	-	5	17	13	1	135					

Page 28 of 30

# 10651 | 1388 106 | 7047541-64

242	ncaster Lab 5 New Holland Pi	ke	S		Н	one	ywel		Chain	Of C	usto	dy / A	nal	ysis Re	eque	st									41397.57195 30905-050613-4
Secretary of the last	caster, PA 17605 7) 656-2300	-2425			Privileged &	-		N			G:4- N			Baltimor	e	RE		DI.		Γ			+	_ab Proj # (SDG):	
Sar	mpling Co.:	Maryland	f Environn	nental Service	EDD To:		kenneth.biles	@ch2m.cor	m		Site N	ion of	Site:	BALTIMO	ORE, N	D				Surface Sampli		er	+	Lab ID	LLI
Clie	ent Contact: (r	name, co.	, addres	ss)	Sampler:	Amanda F	enafiel, Racha	ael Griner I	Maura Morr	ic		$\neg$			Т	П	$\top$	+	Ť	Campi	T	$\neg \top$	1	Site ID	BALTIMORE
	stopher French	, , , , ,	,		PO#	45000138		aei Gilliei, i	viaura iviori	15	Preserv	rativa	3		+						+		+	Lab Job #	
	Columbia Road; N				S. 1981		Time (TAT):		14		110001	ativo									1		7	Authorized User:	Honeywell
	ristown, NJ 07962 iminary Data To		elles © els			Consultan	t		CH2M														[		
图 20		amy klon	oiles@ch2 ner@critic	nen com: hernice kidd@ch2m.com								٥.												Text & Excel File Drive	Excel & Text File Order
Ack		kenneth.t	oiles@ch2	?m.com; gen.com; bernice.kidd@ch2m.com;								Sample	_										Ī		
Haro	d Сору То	Amy Klop	pper		Fu	II Report T	AT:		28		Graf	d Sg	micr												
Invo	ice To:	Christopr	ner French	1							site/Grab	Filtered	Chro		1										_
	ĺ	Samp	ole Identif	ication	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	одш	Field Fil	SW6010 Chromium										8	Copyright AESI: Version 8.0 Unauthorized use strictly prohibited.	
	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		0,											Sampling Method (code)	Lab Sample Numbers
1	15T	6.83	_	30905-SW15T-050613 5/6/2013 1/3 7 w-sw WATER REG 1 grab Y X																					
2	15M			30905-SW15M-050613	5/6/2013		W-SW	WATER	REG		grab														
3	15B	6.83	5.83	30905-SW15B-050613	5/6/2013	1139	W-SW	WATER	REG	1	grab	Υ	х								$\exists$		$\top$		
4	16T	10.5	1	30905-SW16T-050613	5/6/2013	1148	W-SW	WATER	REG	1	grab	Υ	х												
5	16M	10.5	5.25	30905-SW16M-050613	5/6/2013	1145	W-SW	WATER	REG		grab														
6	16B	10.5	9.5	30905-SW16B-050613	5/6/2013	1147	w-sw	WATER	REG	1	grab	Υ	Х												
7	17T	8.25	_	30905-SW17T-050613	5/6/2013	1150	w-sw	WATER	REG	1	grab	Υ	х												
8	17M	001	7.5	30905-SW17M-050613	5/6/2013		w-sw	WATER	REG		grab				1			_					_		
9	17B	8.25	7.25	30905-SW17B-050613	5/6/2013	1152	w-sw	WATER	REG	1	grab	Υ	Х		١,			_			_	_	_		
10	18T	1 (	_ 1 r	30905-SW18T-050613	5/6/2013	1156	W-SW	WATER	REG	1	grab	Υ	Х		-		_	$\perp$		$\vdash$	_	4	$\dashv$		
11	18M	11	4.5	30905-SW18M-050613	WATER	REG	1_	grab	Υ	Х		_			_			$\dashv$		$\dashv$					
12	18B		10	30905-SW18B-050613	5/6/2013	1158	W-SW	WATER	REG	1	grab	Υ	Х					$\perp$							
Relino	quished by			MTS Company		F	Received by	Λ						Compan	y Cit	n HE	LLCO	ndition				Custod	y Se	als Intact	
()	mandi	Pay	2	5/7/13 Date/Time 7:08			7/215	A				Da	te/Tir	ne	_	7/30	0-	oler Te	mp.		$\forall$				
Relino	quished by		F	Received by							Compan		LI		ndition		into.	4	Custod	y Se	als Intact	403			
_	ligg			SI //3 Date/Time			K	in			5	1Da	te/Tin	ne /(')	-0		Co	oler Te	mp.	0.7					
rese	ervatives: (Other;	Specify):				C	(none); 1 (4 DepH<2), 4Deg C	eg C); 2 (HC ); 11 (4C Na	OH (pH>12)	NO3 p	H<2); 4	(H2SO4	1 pH<	2); 5 (NaOl SO4 (pH<2	H pH>1	2); 6 (Na 2S2O3):	OH, Zn A	cetate);	7 (H25	SO4 (pH	<2), 4	Deg C)	); 8 (1	HCI pH<2); 9 (HCI 4 D	Deg C); 10 (HNO3

Pelinguistes Kun 5/2/1 17:20

## 10651/1388107/7047565-82

Lancaster Lab 2425 New Holland Pi	ke	S		Н	one	ywel	I	Chain	Of C	ustod	ly / A	naly	/sis F	Reque	st							Į.	AESI Ref: COC#	41397.57218 30905-050613-5
Lancaster, PA 17605 (717) 656-2300	-2425			Privileged &			N			Site N	ame:	$\neg$	Baltimo	ore			Pi	nase:	Т			$\dashv$	Lab Proj # (SDG):	
Sampling Co.:	Maryland	Environn	nental Service	EDD To:		kenneth.biles	@ch2m.co	m			on of S	Site:	BALTIN	MORE, I	ИD		Si	mpling ogram	Surfa		ater	┪	Lab ID	LLI
Client Contact: (r	name, co.	. addres	ss)	Sampler:	Amanda F	Penafiel; Racha	el Griner I	Maura Morr	ie		$\neg \tau$		Т	Т	Т	Г	$\top$	Ť	Juni	,			Site ID	BALTIMORE
Christopher French		,	,,,	PO#	45000138		aer Griner, i	viaura iviori	13	Preserv	ative	3											Lab Job #	
101 Columbia Road; N	Meyer 3					Time (TAT):		14		1103011	ativo												Authorized User:	Honeywell
Morristown, NJ 07962					Consultan	nt		CH2M																
Preliminary Data To		biles@ch2	?m.com; nen com: hernice kidd@ch2m com								c												Text & Excel File Drive	Excel & Text File
Sample Receipt	kenneth.l	biles@ch2									Filtered Sample ?												meth standard and annual	State   Deliver   Deliver
Acknowledgement T	_	_	gen.com; bernice.kidd@ch2m.com							g	am	Ē												
Hard Copy To	Honeywe	ell; 1000 W	/ills Street; Baltimore, MD 21231	Fu	II Report T	AT:		28		site/Grab	ba	omir												
Invoice To:	Christopr	ner French	1							site	Iten	Š												^
		ole Identif	ication	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Сотро	Field Fi	SW6010 Chromium											Copyright AESI: Version 8.0 Unauthorized use strictly prohibited.	
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units													Sampling Method (code)	Lab Sample Numbers
1 19T	6.92	_	30905-SW19T-050613	5/6/2013	1202	W-SW	WATER	REG	1	grab	Υ	х												
2 19M			30905-SW19M-050613	5/6/2013		W-SW	WATER	REG		grab														
3 19B	6.92	5,92	30905-SW19B-050613	5/6/2013	1205	W-SW	WATER	REG	1	grab	Υ	x												
4 20T	2.42	_	30905-SW20T-050613	5/6/2013	1210	W-SW	WATER	REG	1	grab	Υ	х												
5 20M			30905-SW20M-050613	5/6/2013	100	W-SW	WATER	REG		grab														
6 20B	2.42	1.42	30905-SW20B-050613	5/6/2013	1213	W-SW	WATER	REG	1	grab	Υ	х												
7 Cent T	7.17	_	30905-SWCentT-050613	5/6/2013	1032	W-SW	WATER	REG	1	grab	Υ	х												
8 Cent M			30905-SWCentM-050613	5/6/2013		W-SW	WATER	REG		grab														
9 Cent B	7.17	6.17	30905-SWCentB-050613	5/6/2013	1034	W-SW	WATER	REG	_1_	grab	Υ	х												
10 LADY T	4.61	_	30905-SWLadyT-050613	5/6/2013	1025	W-SW	WATER	REG	1	grab	Υ	х					$\perp$							
11 Lady M			30905-SWLadyM-050613	5/6/2013		W-SW	WATER	REG		grab			_		_		$\perp$							
12 LADY B	4.67	3.67	30905-SWLadyB-050613	5/6/2013	1029	W-SW	WATER	REG	1	grab	Υ	x					$\perp$							
Relinquished by		· A	MES Company	1	Received by							Compa	any UH	21. 4	n/ C	onditio	n			Custo	dy Se	als Intact		
amend	n Per	ufu	Ath 5/07/3 7:0		111	1				Da	ite/Tim			D/130	0	ooler 1	emp.						L	
Relinquished by	Company					Received by							Compa		LJ		onditio	n	nta	4	Custo	dy Se	als Intact	yes
KIBK	5/02/13 Date/Time 4/2m					K	~				j.Da	te/Tim	ne <sub>3</sub>	11	-	U C	ooler T	emp.	0.7	-10	oʻ			
Preservatives: (Other			0 (none); 1 (4 D (pH<2), 4Deg C	eg C); 2 (HC	OI pH<2); 3 ( OH (pH>12)	HNO3 p	H<2); 4	(H2SO4	4 pH<2	2); 5 (Na 3O4 (pH	OH pH>1	2); 6 (N	laOH, Zn	Acetat	e); 7 (H2	SO4 (pl	H<2), 4	Deg C	3)); 8 (	HCI pH<2); 9 (HCI 4 D	eg C); 10 (HNO3			

Relinguisher Kun 5/7/10 17:35

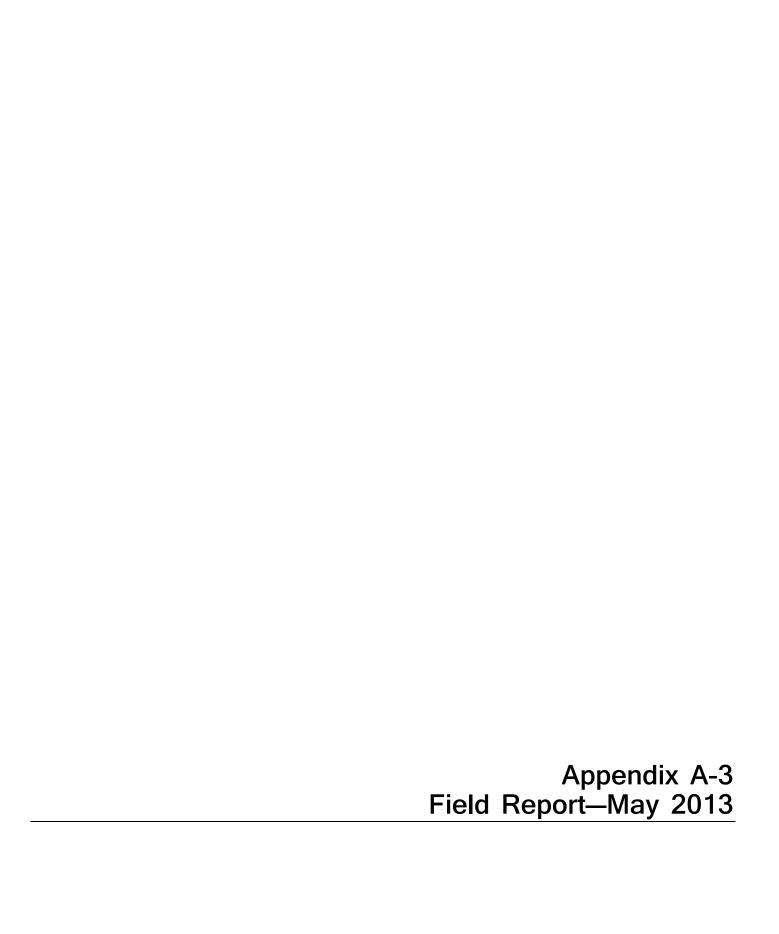
32-5 h/13 1735

# 10651/1388107/7047565-82

Lancaster Labo 2425 New Holland Pi				Н	one	ywel	ı	Chain	Of C	ustod	y / A	naly	sis I	Req	uest								ı	AESI Ref: COC#	41397.57253 30905-050613-6
Lancaster, PA 17605 (717) 656-2300	-2425			Privileged &			N		_	a: 11		-	Baltim	ore			1405	Phase					$\dashv$	Lab Proj # (SDG):	
Sampling Co.:	Maryland	Environme	ental Service	EDD To:		kenneth.biles@		n		Site Na		ite:	BALTI	MOR	E, MD			Samp	ling	Surfac		ter		Lab ID	LLI
Client Contact: (r				Sampler:	Amanda F	enafiel; Racha	al Griner M	Agura Morr	ie		Т	$\dashv$	T	Т	T	T	T	Ť		Jamp	T	$\neg$		Site ID	BALTIMORE
Christopher French	iairie, co.,	audies	5)	PO #	45000138		er armer, r	viaura iviori	13	Preserva	tive	3	_											Lab Job #	CONTROL OF THE STATE OF THE STA
101 Columbia Road M	Neyer 3					Time (TAT):		14																Authorized User:	Honeywell
Morristown, NJ 07962					Consultan			CH2M										1 1		1			- [		
Preliminary Data To	kenneth.b		<u>m.com;</u> en com: bernice kidd@ch2m.com								c.							1 1						Text & Excel File Drive	Excel & Text File Order
Sample Receipt Acknowledgement T	kenneth.b	iles@ch2r		N.						g	ample	E	H												
Hard Copy To	Amy Klop	per		Fu	II Report T	AT:		28		Gra	S pe	Chromium						1 1							
Invoice To:	Christoph	er French	Dead							site/	Itere	Chr						1 1							^
	Samp	le Identifi	cation	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Composite/Grab	Field Filtered Sample ?	SW6010												Copyright AESI: Version 8.0 Unauthorized use strictly prohibited.	
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID							Units		ng/L												Sampling Method (code)	Lab Sample Numbers
1 4B	2.5	1.5	30905-SWD1-050613	5/6/2013	1045	W-SW	WATER	FD	1	grab	Υ	х													
2 10T	275	_	30905-SWD2-050613	5/6/2013	1110	W-SW	WATER	FD	1	grab	Y	x													
3 15B	6.83	5.83	30905-SWD3-050613	5/6/2013	1140	W-SW	WATER	FD	1	grab	Υ	х													
4 19 T	6.92	-	30905-SWD4-050613	5/6/2013	1203	W-SW	WATER	FD	1	grab	Υ	х													
5 FIELDQC			30905-SW-FB1-050613	5/6/2013	1018	BLKWATER	WATER	FB	1	grab	N	х													
6 FIELDQC			30905-SW-RB1-050613	5/6/2013	70/116	BLKWATER	WATER	EB	1	grab	N	х						Ш							
7 FIELDQC			30905-SW-RB2-050613	5/6/2013	1206	BLKWATER	WATER	EB	1	grab	N	х													
8 FIELDQC			30905-SW-RB3-050613	5/6/2013		BLKWATER	WATER	EB		grab			1	v)				Ш							
9														_											
10															_	_		Ш							
11											_		_		_	_		Ш							
12																									
Relinquished by			WES Company	у		Received by							Comp	pany	HILD	ril	Con	dition				Custo	dy Se	als Intact	
Quera	Pen	h	5/07/13 Date/Time			YOR	1.1				Da	te/Tim			5/07/1		Cool	er Tem	p.						
Relinquished by	1	- 1	Company	у	- X	Received by							Comp	-	1.0		_	dition		Juta	act	Custo	dy Se	als Intact	463
YOS	14		Toplas Date/Time	West	r	K	~			3/	Da	te/Tim	10,5	U			Cool	er Tem	p.	0.		oʻ			1
Preservatives: (Othe	r; Specify):					0 (none); 1 (4 D (pH<2), 4Deg C						pH<2	2); 5 (N	laOH p									C)); 8 (	HCI pH<2); 9 (HCI 4 D	eg C); 10 (HNO3

Religioslas Lun 3/7/12 17:35

32 5 h/13 1735



### **BALTIMORE INNER HARBOR**

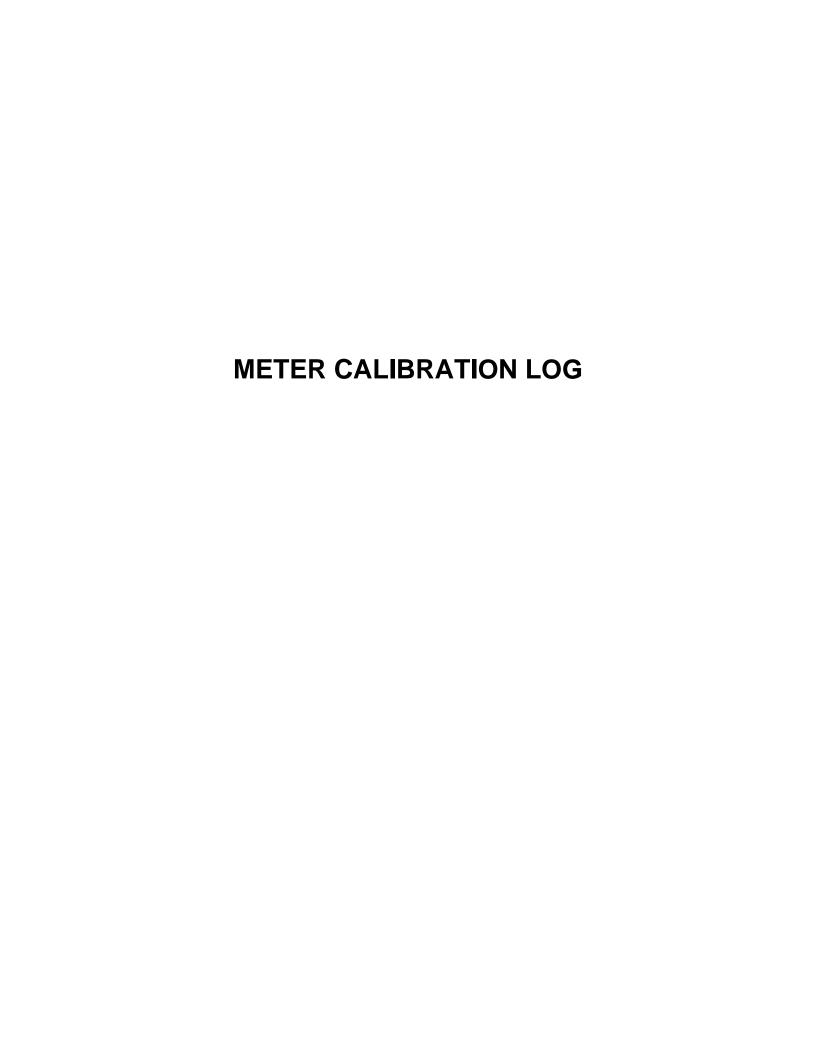
### **SURFACE WATER MONITORING**

2<sup>nd</sup> Quarter 2013

May 6, 2013

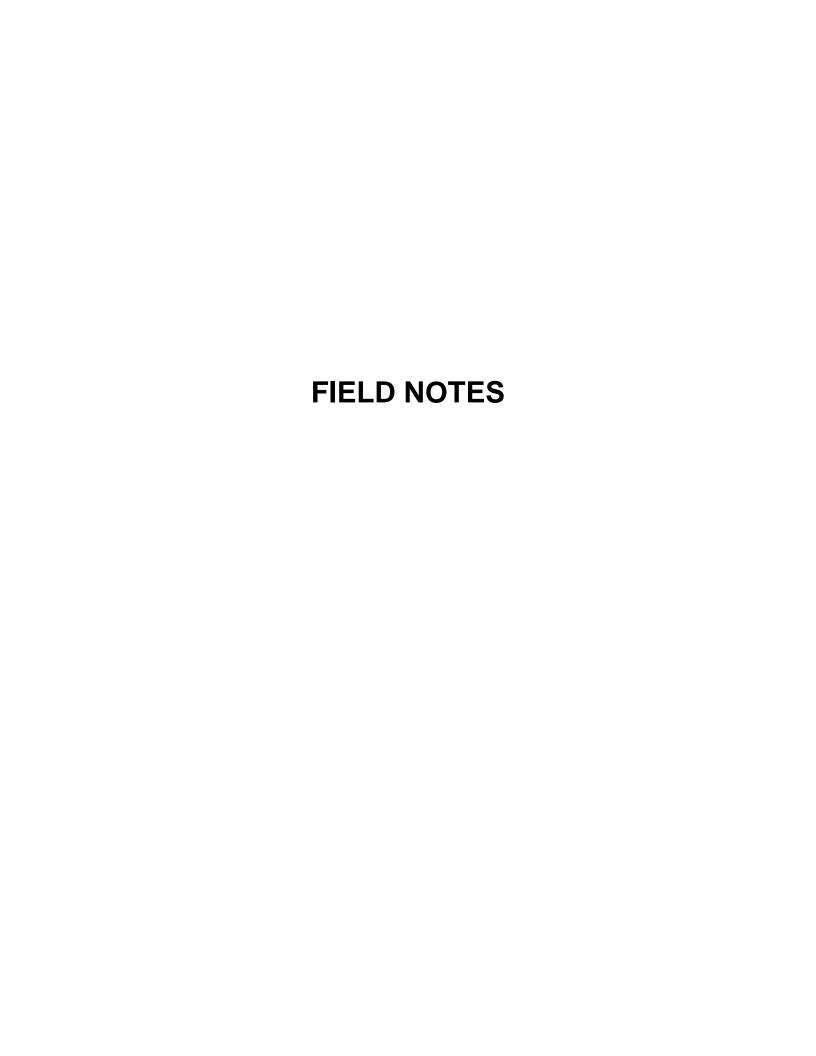






ROJECT	N	Continued From Page	
Date Time Mete	Butter Int	Comments	
3/8/13 0730 YSI 63 3/9/13 0840 YSI 63 3/13/3 2822 YSI 63 4/17/13 0800 HORIDO 4/20/13 0803 YSI 63 4/24/13 0830 HORIDO 4/36/13 0845 YSI 6 5/6/13 0930 YSI 6	7,4,10 RBD 7,4,10 JE. 21 Anto Call AP 7,4,10 RDD 7,4,10 RDD	Pott Surface DMT Deg weather DMT WET BIH GW Monthon DMT weT BIH drainage law NPDES west weat BIH Surface W	ring yer samp. ther
is town and it will	42 - 21 3 3	12 7 22 147 2	.51 79,74
	Read	d and Understood By	Continued on Page
	Date	Signed	Date

Cianad

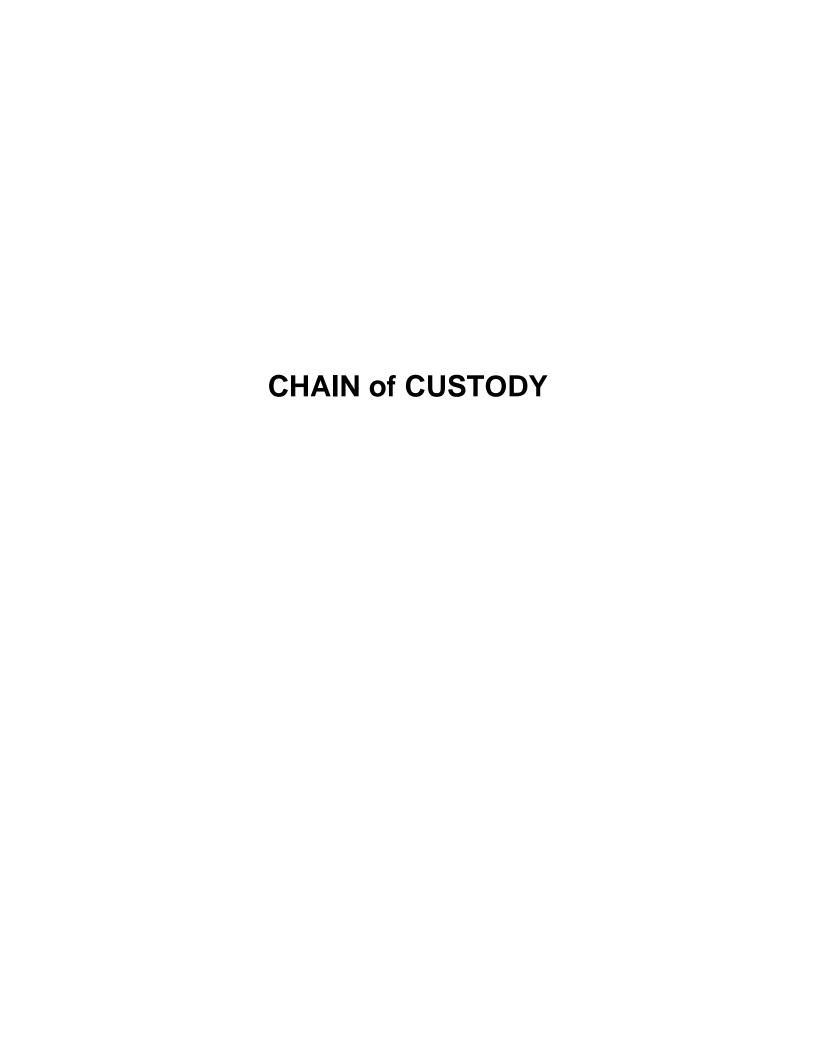


BIH	Surface	e tho	Samp.			05	106/18
Sampler Boat Cap	s = Rach	el Grine Steven K	7 Maure	a Morri	S , Ji	osh Cho	rpmon
weather (	Condition	s = Clou	edy mis	sty 14	5450	Os/ Lon	w 60s
Low Ti	de : 11	:43an					
Sample	Depth to Bottom	Sample Depth	Time	ρН	Temp	Sp. Cond	Int
FBI	- 1	-	10:18	8.18	16.8	18.8	RG
Hady Alarg T	4'8"		10:25	7.29	16.7	13.9	RG
Mary B	4.811	3'8"	10:29	7.53	17.1	8.11	RG.
centT.	7'2"		10:32	7,08	17.1	le. lote	RG
centB.	7'2"	62"	10:34	7.40	17.2	8:53	RG
3T -	31211		10:38:	7.29	[le."7	7.82_	RG
38	31211	2/211	10:40	7.le1	17.0	7.98	RG
чТ	21611	-	10:43	7.73	16.9	7.84	RG
4B	2'6"	11611	10:44	7.82	16.5	8,9	Pla
48(DI)	2'6"	1'6"	10:45	8.04	lle.9	7.87	RCZ
57	211011		10:47	7.87	16.60	7.98	RG
5B	211011	1110"	10:48	8.09	16.7	8.04	RG
CeT	3'8"		1051	8.66	16.8	784	Ra
6B	3'8"	21811	1023	882	14.9	7.93	RG
77	2'7"	*	10:56	8.70	16.8	7.97	RG.
78	2'7"	1:711	10:58	8.87	16.8	7.97	Scale: 1 square = _

BIH Surfa	ie H20 So	impling			C	5/06/2	2013
Sample !	Depth to	Sample	Time	ρN	Temp (	Sp. 17	-int
<u> </u>	Botton 31	Depth	1100	8.73	119.7	8.03	16
88	3	2	1102	8.67	16.6	8.10	RG RG
9T 9B	31	2'	1107	8.23	14.4	8.13	RG
10.7	21911		10:09	8.57	16.8	8.34 8.33	RG RG
10 TD2)	29"	11911	(Φ; ι )	898	lleile	8,40	PG
R81			10:13	9.11	17.7	2.30	RG
N.T.	3'6"	2'6"	11:20	846		8,41	P@
127	2'		1124	8.24		8.26	RG
12B	210"		11:26	8.71	149	8.24	RG
138	2'10"	1'10"	11:30	8.3			RG
14T	67"	50'7"	1133	8.71			1
15 T	1011st		1137				RG
15B	611011	5/10/1	1139	8,5	5 160,0	0.28	RG

BIH Surface H2O Sampling 05/06/2013

	34				-		
52 mpk	Bottom	Sample Depth	Time	pH	Tenp	Sp. Cond.	IN
15 B(D3)	6'104	5'10"	1140	8,71	16.6	8.25	RG
167	10611	<u>.</u>	1143	8.71	16.8	8.21	RG
IOM	101611	21311	1145	8.86	16.7	8,49	RG
163	10'6"	91611	1147	8.67	(6.7	9.12	RG
けて	8,3"		1120	8,63	14.8	8.17	RG
MB	81311	7'3"	1152	8.80	1107	8.92	29
187	1/1		11:50	8.86	11e.le	8,29	RT
18M	11.	. 51511	11:576	8.99	16.7	8.34	RG
18B	(1)	10'0	11:28	892	16.8	9.04	RG
PT	61111		1207	8.75	14.7	8,30	RG
19704)	6'11"	_	1203	8.98	16.8	8,29	RCZ
19B	611	5'11'	1205	9.06	16.8	8.37	RG
RB2			1206	8.92	17.2	3.80	RG
ZOT	215"		1210	8.16	[اها]	7.9	RG
208	2/5"	1.2.	1213	8.27	166	8.31	RG
							1 1 3
							- 1 H
6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 2				8 0 30



Lancaster Laboratories	oratories		ŀ										AESI Ref:	41397.57093
2425 New Holland Pike Lancaster, PA 17605-2425	oike 5-2425			Honeyw	ywe		Chain O	Custo	dy / Anal	Chain Of Custody / Analysis Request			#303	30905-050613-1
(717) 656-2300			Privileged & Confidential	Confident	ial	z		Site	Site Name:	Baltimore	Phase:		Lab Proj # (SDG):	
Sampling Co.:	Maryland Environmental Service	mental Service	EDD To:		kenneth.biles	biles@ch2m.com		Local	Location of Site:	BALTIMORE, MD	Sampling Program	ng Surface Water m Samolino	Lab ID	11
Client Contact: (	Client Contact: (name, co., address)	(ss)	Sampler:	Amanda F	Amanda Penafiel; Rachael Griner, Maura Morris	ael Griner, N	laura Morris						Site ID	BALTIMORE
Christopher French			# Od	4500013806	90			Preservative	vative 3				Lab Job #	
101 Columbia Road Meyer 3	Meyer 3		Analysis T	urnaround	Analysis Turnaround Time (TAT):		14						Authorized User:	Honeywell
Morristown, NJ 07962	60			Consultant			CH2M							
Preliminary Data To Sample Receipt Acknowledgement To		<u>Kenneth biles ® ch2m com:</u> อาการ Vinnaer ® criticae ภาคา harnina นักหาติ ch2m ภาคา Kenneth biles © ch2m com: amy kicoper ® cnitoen com: bernice kidd ® ch2m.com:							mple ?				Text & Excel File Drive	Excel & Text File Order
Hard Copy To			4	Full Report TAT:	AT:		28	Grat						
Invoice To:	Christopher French	h						ətis	_					<
	Sample Identification	fication	Sample Date	Sample	Sample	Sample	Sample #	Compo	F <b>ield F</b>				Copyright AESI: Version 8.0 Unauthorized use strictly prohibited.	
Location ID	Start End Depth Depth (ft) (ft)	Field Sample ID											Sampling Method (code)	Lab Sample Numbers
1 3T	3.17	30905-SW3T-050613	5/6/2013	1038	W-SW	WATER	REG	1 grab	\ \					
2 3M		30905-SW3M-050613	5/6/2013		W-SW	WATER	REG	grab						
3 3B	3.17 2.17	30905-SW3B-050613	5/6/2013	1040	W-SW	WATER	REG	1 grab	×					
4 4T	2.5	30905-SW4T-050613	5/6/2013	1043	W-SW	WATER	REG	1 grab	×					
5 4M		30905-SW4M-050613	5/6/2013		W-SW	WATER	REG	grab						
6 4B	2.5 1.5	30905-SW4B-050613	5/6/2013	1044	W-SW	WATER	REG	1 grab	×					
7 ST	2.83 -	30905-SW5T-050613	5/6/2013	1047	W-SW	WATER	REG	1 grab	×					
8 8		30905-SW5M-050613	5/6/2013		W-SW	WATER	REG	grab						
9 5B	2.83 1.83	-	5/6/2013	1048	W-SW	WATER	REG	1 grab	×					
10 6T	3.67	30905-SW6T-050613	5/6/2013	1051	WS-W	WATER	REG	1 grab	× >					
11 6M		30905-SW6M-050613	5/6/2013		W-SW	WATER	REG	grab						
12 68	13.67 D.67	30905-SW6B-050613	5/6/2013	1053	W-SW	WATER	REG	1 grab	×					
Relinquished by		MES Company			Received by	9.0				Company G12mHt Condition	Condition	Custoo	Custody Seals Intact	
award	Lung	5/7/2 7:08			10	113			Date/Time		19/13 Or. Cooler Temp.		-	
Relinquished by	5	Company			Received by	7				ompany	Condition	Custod	Custody Seals Intact	
	,	∘ Date/Time							Date/Time	Э	Cooler Temp.	-		
Preservatives: (Other; Specify):	ır; Specify):				0 (none); 1 (4 [ (pH<2), 4Deg (	beg C); 2 (HC	I pH<2); 3 (HNC OH (pH>12), & .	39 pH<2); 4 Ascorbic Act	(H2SO4 pH<2	); 5 (NaOH pH>12); 6 ( SO4 (pH<2) & Na2S2O3	NaOH, Zn Acetate); 7 (F I); 13 (Zn Acetate); sp (F	42SO4 (pH<2), 4 Deg C) special instructions)	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); 8 Ascorbic Acid); 12 (4C H2SO4 (pH<2) & Na2SO3); 13 (Zn Acetate); sp (special instructions)	eg C); 10 (HNO3

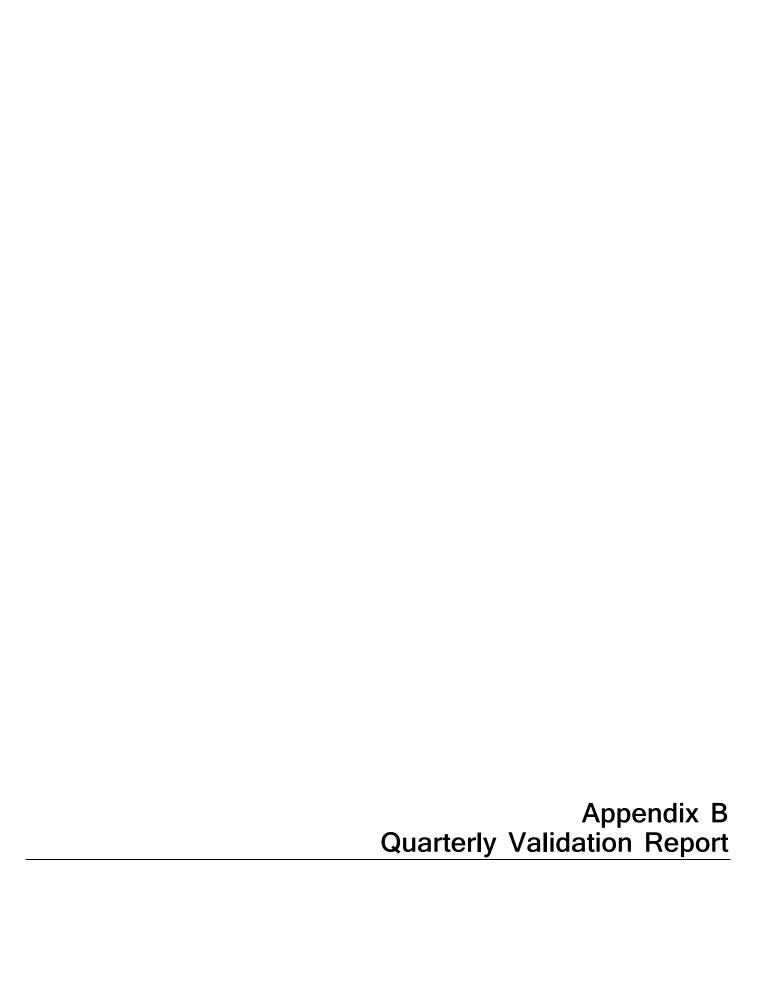
Lancaster Laboratories	oratories	S	THE RESERVE												AESI Ref:	41397.57147
2425 New Holland Pike Lancaster, PA 17605-2425	ike 5-2425			••		Honeywe	<u>a</u>	Chain Of Custody / Analysis Request	Custoc	ıly / Ana	ılysis Re	quest			#303	30905-050613-2
(717) 656-2300				Privileged & Confidential	Confiden	tial	z		Site Name:	ате:	Baltimore		Phase:		Lab Proj # (SDG):	DG):
Sampling Co.:	Maryland	d Environme	Maryland Environmental Service	EDD To:		kenneth.bile	les@ch2m.com	E	Locati	Location of Site:	BALTIMORE, MD	RE, MD	Program	Surface Water	Lab ID	3
Client Contact: (name, co., address)	пате, со.	, address	(\$	Sampler:	Amanda	Amanda Penafiel; Rachael Griner, Maura Morris	ael Griner,	Maura Morris		_					Site ID	BALTIMORE
Christopher French				PO#	4500013806	306			Preservative	rative 3					Lab Job #	
101 Columbia Road; Meyer 3	Meyer 3			Analysis T	urnaround	Analysis Turnaround Time (TAT):		14							Authorized User:	ser: Honeywell
Morristown, NJ 07962					Consultant	ıt		CH2M								
Preliminary Data To Sample Receipt Arknowlednement To		kenneth biles @ ch2m com: amv klonner @ critinen com kenneth biles @ ch2m com; amv klonner @ chilloen com	kenneth biles@ch2m.com: amv knonar@chtinan nom: harnina kirki@nh3m nom: kenneth biles@ch2m.com: amv kinnara@chiloni nom: barnica kirki@ch2m.com:							mble ?					Text & Excel File Drive	Brive Excel & Text File Order
Hard Copy To		oper		2	Full Report TAT:	rAT:		28	Grab							
Invoice To:	Christoph	Christopher French	Deed					ì	) Site/							<
	Samo	Sample Identification	ation	Sample	Sample	Sample	Sample	Sample # of Purpose Cont	odwog	i <b>a bia</b> i e e e			_		Copyright AESI: Version 8:0 Unsufferized use strictly prohibited	notes a second
Location ID	Start Depth	End Depth	Field Sample ID					-	1 2	-	-6-				Sampling Method (code)	thod Lab Sample
1 7	2.58	,	30905-SW7T-050613	5/6/2013	1056	WS-W	WATER	HEG 1		\						
2 7M			30905-SW7M-050613	5/6/2013		MS-M	WATER	REG	grab							
3 7B	2.58	1.58	30905-SW7B-050613	5/6/2013	8501		WATER	REG		×						
4 8T	3.0	1	30905-SW8T-050613	5/6/2013	1100	w-sw	WATER	REG 1	grab	×						
5 8M			30905-SW8M-050613	5/6/2013		WS-W	WATER	REG	grab							
6 8B	3,0	2.0	30905-SW8B-050613	5/6/2013	L102	W-SW	WATER	REG 1	grab	×						
7 9T	3.0	ſ	30905-SW9T-050613	5/6/2013	1105	W-SW	WATER	REG 1		×						
M6 8			30905-SW9M-050613	5/6/2013		W-SW	WATER	REG	grab							
86	3.0	2,0	30905-SW9B-050613	5/6/2013	107	W-SW	WATER	REG 1	grab	×						
10 10T	2.75	١	30905-SW10T-050613	5/6/2013	109	WS-W	WATER	REG 1	grab	× >						
11 10M			30905-SW10M-050613	5/6/2013		W-SW	WATER	REG	grab							
12 10B	3.75	1.75	30905-SW10B-050613	5/6/2013	) =	WS-W	WATER	REG 1		× -						
Relinquished by			MES Company			Received by	100				Company	Company CHAM HILL Condition	Condition	<u>o</u>	Custody Seals Intact	
amonda	Per	3	5/4/13 Date/Time 8			100	MS			Date/Time	ime	97/13 chor	Cooler Temp.			
Relinquished by			Company			Received by					Company		Condition	Ö	Custody Seals Intact	
	>		Date/Time							Date/Time	ше		Cooler Temp.			
Preservatives: (Other: Specify):	r: Specify):					0 (none); 1 (4	Deg C); 2 (HCC): 11 (4C N	CI pH<2); 3 (HNO	3 pH<2); 4	(H2SO4 pH	<2); 5 (NaOH	pH>12); 6 (NaOH, 7	Zn Acetate); 7 (H2S	304 (pH<2), 4 De	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); 9 (HCl 4 Deg C); 9 (HCl 4 Deg C); 10 (HNO3 (nH<2)); 1 (4 Deg C); 11 (4 Deg C); 11 (4 Deg C); 11 (4 Deg C); 11 (4 Deg C); 12 (4 Deg C); 12 (1 Deg C); 10 (HNO3 (nH<2)); 12 (1 Deg C); 10 (HNO3 (nH<2)); 13 (1 Deg C); 10 (HNO3 (nH<2)); 10 (	Cl 4 Deg C); 10 (HNO3
								(T. 1.1.1)		27, 72, 62	(3) (d) (3)	d 14de 52 c 5), 15 (2	n Acelate), sp (spe	cial instructions)		

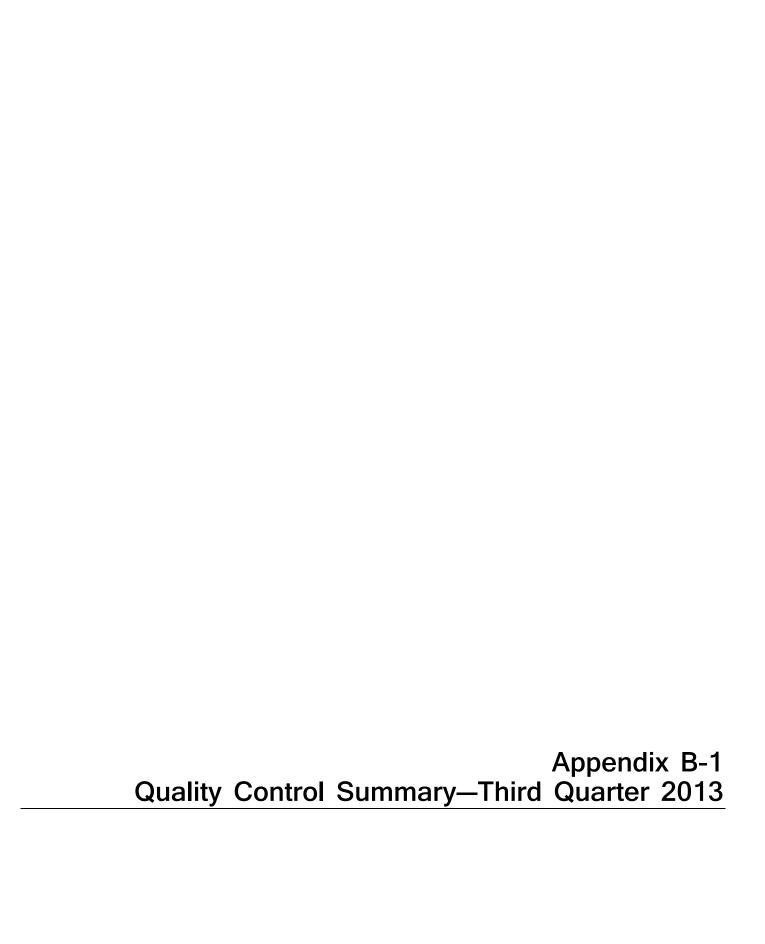
Lancaster Laboratories	oratories	S)														
2425 New Holland Pike Lancaster, PA 17605-2425	ike -2425				Honeyw			Chain	r Custo	dy / Ana	chain Of Custody / Analysis Request	lest			#2002	30905-050613-3
(717) 656-2300				Privileged & Confidential	Ł Confiden	tial	z		Site	Site Name:	Baltimore		Phase:		Lab Proj # (SDG):	
Sampling Co.:	Maryland	Environme	Maryland Environmental Service	EDD To:		kbiles@omiinc.com	nc.com		Local	Location of Site:	BALTIMORE, MD	, MD	Sampling Program	Surface Water Sampling	Lab ID	3
Client Contact: (name, co., address)	name, co.,	, addres	(8	Sampler:	Amanda	Amanda Penafiel; Rachel Griner, Maura Morris	nel Griner, N	faura Morris							Site ID	BALTIMORE
Christopher French				PO #	4500013806	306			Preser	Preservative 3					Lab Job #	
101 Columbia Road; Meyer 3	Meyer 3			Analysis 1	urnarount	Analysis Turnaround Time (TAT):		14							Authorized User:	Honeywell
Morristown, NJ 07962					Consultant	nt		CH2M								
Preliminary Data To		kenneth.biles@ch2m.com; smy klonser@criticen.com	kenneth biles © ch2m com: smy kloman@childen com: benne kidd@ch2m com							٤					Text & Excel File Drive	Excel & Text File Order
Sample Receipt Acknowledgement To		oiles @ cin2r oer @ critige	kenneth bles @.ch2m.com. amy klopper@.chiben.com: bennce kidd@ch2m.com:						, 	_						
Hard Copy To		ber			Full Report TAT.	FAT.		86	3rab	_						
Invoice To:	Christopne	Christopner French						3	)\estie	_						*
	Samo	Sample Identification	ation	Sample	Sample	Sample	Sample	Sample #	Sompos	i <b>a blei</b> =					Copyright AESI: Version 8.0 Unauthorized use	
Ocation ID	Start	End	Cl. olumes Hein					-	-	<del> </del>					Sometime Market	_
	(#)	(#)	rield Sample ID						Units						code)	Lab sample Numbers
11T	3.5	1	30905-SW11T-050613	5/6/2013	1130	W-SW	WATER	REG	1 grab	× ->						
11M			30905-SW11M-050613	5/6/2013		WS-W	WATER	REG	arab							
3 11B	3.5	2.5	30905-SW11B-050613	5/6/2013	1122	W-SW	WATER	REG	1 grab	× >						
4 12T	2.0	١	30905-SW12T-050613	5/6/2013	1134	W-SW	WATER	REG	1 grab	× >						
5 12M	4		30905-SW12M-050613	5/6/2013		W-SW	WATER	REG	grab							
6 12B	a.0	1.0	30905-SW12B-050613	5/6/2013	1126	W-SW	WATER		1 grab	×						
7 13T	2.83	١	30905-SW13T-050613	5/6/2013	1128	W-SW	WATER	REG	1 grab	×						
8 13M			30905-SW13M-050613	5/6/2013	1	W-SW	WATER	REG	grab							
9 13B	28.5	1.83	30905-SW13B-050613	5/6/2013	1130		WATER	REG	1 grab	×						
10 14T	6.58	1	30905-SW14T-050613	5/6/2013	1133	W-SW	WATER	REG	1 grab	× >						
11 14M			30905-SW14M-050613	5/6/2013		W-SW	WATER	REG	grab							
12 14B	6.58	5.58	30905-SW14B-050613	5/6/2013	1134	W-SW	WATER	REG .	1 grab	× >						
Relinquished by	(	«	Mich Company			Received by	1 1		-		Company	Company With HILL C	Condition	Custody	Custody Seals Intact	
amon	Shipe.	7	5/3/08 Date/Time 08			11/2	118			Date/Time		5/67//3 oxe Cooler Temp.	oler Temp.			
Relinquished by		7	Сотралу			Received by	-				ompany	ŭ	Condition	Custody	Custody Seals Intact	
			Date/Time							Date/Time	іте	Ö	Cooler Temp.			
Preservatives: (Other: Specify):	- Specify)					0 (none); 1 (4	Deg C); 2 (H(	Cl pH<2); 3 (HNC	33 pH<2); 4	. (H2SO4 pH	<2); 5 (NaOH pH	>12); 6 (NaOH, Zn	Acetate); 7 (H2S	O4 (pH<2), 4 Deg C))	0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (H2SO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, 2n Acetate); 7 (H2SO4 (pH<2), 4 Deg C)); 8 (HCl pH<2); 9 (HCl 4 Deg C); 10 (HNO3 pH<2); 7 (H2SO4 (pH<2), 4 Deg C); 10 (HNO3 pH<2); 9 (HCl 4 Deg C); 10 (HNO3 pH<2); 10 (HNO3 pH<2	leg C); 10 (HNO3
						Boo Harris	201	The state of the s	Scolloid Ma	12 / L	2004 (prince) a	1000000 13 (cll)	ads) ds (apparen	alan memoranas)		

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2425 New Holland Pike Lancaster, PA 17605-2425		Ĕ	Honeyw	1			SISDO I	uy / Air	onain oi custouy / Ariarysis nequest	182			#303	30905-050613-4
(717) 656-2300		Privileged & Confidential	Confidential		z		Site	Site Name:	Battimore		-		Lab Proj # (SDG):	
Sampling Co.: Maryland Environmental Service	ervice	EDD To:	- Ke	kenneth.biles@ch2m.com	≇ch2m.com		Loca	Location of Site:	BALTIMORE, MD	MD	Sampling Program	Surface Water Sampling	Lab ID	ררו
Client Contact: (name, co., address)		Sampler:	Amanda Penafiel, R	nafiel, Racha	achael Griner, Maura Morris	tura Morris							Site ID	BALTIMORE
Christopher French		PO #	4500013806				Prese.	Preservative 3	3		_	_	Lab Job #	
101 Columbia Road; Meyer 3		Analysis Turnaround Time (TAT):	irnaround Ti	me (TAT):		14					1,		Authorized User:	Honeywell
Morristown, NJ 07862 Preliminary Data To <u>kenneth biles@ch2m_ccm</u> :			Consultant			NZ IV		ě					Text & Excel File Drive	Exce
0	amu binnnariili nitinan nom toonina birki ilinkitan oom kenneth biles (le Ch2m com. amy klopper iil ortilgen com. bernice, kidd (le Ch2m.com.)						q	eldma	13.11					Order
		Full	Full Report TAT:	ت		28	e19\	_	nine					
Invoice To: Christopner French							efie	_	IIIO O					<
Sample Identification		Sample Date	Sample	Sample Type	Sample S Matrix P	Sample Purpose C	Cont.	Field F	II DOSAC				Copyright AESt: Version 8.0 Unauthorized use strictly prohibited.	
Location ID Depth Depth (ft)	Field Sample ID						Units						Sampling Method (code)	Lab Sample Numbers
1 15T 6.83 — 3	30905-SW15T-050613	5/6/2013	1137	W-SW	WATER	REG	1 grab	>	×					
2 15M 30	30905-SW15M-050613	5/6/2013		Ws-W	WATER	REG	grab							
3 15B 6.83 5.83 3	30905-SW15B-050613	5/6/2013	1139	W-SW	WATER	REG	1 grab	>	×					
4 16T (16.5   _ 3	30905-SW16T-050613	5/6/2013	1148	W-SW	WATER	REG	1 grab	>-	×					
5 16M (0.5 5.25 30	30905-SW16M-050613	5/6/2013	1145	W-SW	WATER	REG	grab							
e 168 105 9.5 39	30905-SW16B-050613	5/6/2013	1147	W-SW	WATER	REG	1 grab	×						
7 177 8.35 - 3	30905-SW17T-050613	5/6/2013	1150	W-SW	WATER	REG	1 grab	× >						
8 17M 30	30905-SW17M-050613	5/6/2013		W-SW	WATER	REG	grab				3			
9 TTB 8.25 7.25 30	30905-SW17B-050613	5/6/2013	1152	W-SW	WATER	REG	1 grab	×	, ,					
10 18T     1 S	30905-SW18T-050613	5/6/2013	1156	W-SW	WATER	REG	1 grab	×	<u></u>					
11 18M 11 4.5 3c	30905-SW18M-050613	5/6/2013	1157	W-STW	WATER	REG	1 grab	× >						
12 188	30905-SW18B-050613	5/6/2013	1158	W-SW	WATER	REG	1 grab	× >						
Relinquished by	K		ď	Received by	<				Company	Company CHILL HELL	Condition	Custody	Custody Seals Intact	
de Dades 51	17/13 Date/Tigne 08			11.26	D			Date,	Date/Time 05/		Cooler Temp.			
Relinquished by	Company		Œ	Received by	-				Company	U	Condition	Custody	Custody Seals Intact	
>	Date/Time							Date,	Date/Time	J	Cooler Temp.			
Preservatives: (Other: Specify):			0	0 (none); 1 (4 Do	eg C); 2 (HCI	oH<2); 3 (HI	103 pH<2);	4 (H2SO4 p.	H<2); 5 (NaOH pH>	12); 6 (NaOH, Zr	Acetate); 7 (H2SC	24 (pH<2), 4 Deg C)),	(4 Dag C); 2 (HCl pH-2); 3 (HNO3 pH-2); 4 (H2SO4 pH-2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetara); 7 (H2SO4 (pH-2), 4 Deg C)); 8 (HCl pH-2); 9 (HCl 4 Deg C); 10 (HNO3	Deg C); 10 (HNO)

l ancaster i aboratories	pratories												AESI Ref:	41397.57218
2425 New Holland Pike	ke		I	Honeyw	ywell	_	Chain C	f Custo	dy / Anal	Chain Of Custody / Analysis Request			#300	30905-050613-5
(717) 656-2300	6747-		Privileged & Confidential	Confidenti	-	z		Site	Site Name:	Baltimore	Phase:	-	Lab Proj # (SDG):	
Sampling Co.:	Maryland Environmental Service		EDD To:		kenneth biles (	biles@ch2m.com	_	Loca	Location of Site:	BALTIMORE, MD	Program	Surface Water Sampling	Lab ID	
Client Contact: (name, co., address)	name, co., addres		Sampler:	Amanda Pe	Amanda Penafiel; Rachael Griner, Maura Morris	el Griner, M	faura Morris						Site ID	BALTIMORE
Christopher French			# Od	4500013806	9			Prese	Preservative 3			_	Lab Job #	
101 Columbia Road; Meyer 3	Aeyer 3		Analysis T	Analysis Turnaround Time (TAT):	ime (TAT):		14						Authorized User:	Honeywell
Morristown, NJ 07962	ш			Consultant			CH2M	T						i
Preliminary Data To Sample Receipt		Kenneth biles @ch2m.com; amu khanasr@chihaan nom harnina bidd@ch2m nom: Kenneth biles @ch2m.com;							mple ?				Text & Excel File Drive	Excel & Text File Order
Hard Copy To		Honeywell; 1000 Wills Street; Baltimore, MD 21231		Full Report TAT:	Ë		28	Grab	eS be					
Invoice To:	Christopner French	ų						eite	ərəfli	\				<
	Sample Identification	fication	Sample Date	Sample	Sample Type	Sample Matrix	Sample Purpose O	# of Cont.					Copyright AESI: Version 8.0 Uhauthorized use strictly prohibited.	
Location ID	Start End Depth Depth (ft) (ft)	Field Sample ID						Units	(5)				Sampling Method (code)	Lab Sample Numbers
19T	- Ep.0)	30905-SW19T-050613	5/6/2013	2061	WS-W	WATER	REG	1 grab	×					
M61		30905-SW19M-050613	5/6/2013		W-SW	WATER	REG	grab						
3 19B	692 S.92	30905-SW19B-050613	5/6/2013	1205	W-SW	WATER	REG	1 grab	×					
4 201	2.47 -	30905-SW20T-050613	5/6/2013	0101	W-SW	WATER	PEG	1 grab	×					
5 20M		30905-SW20M-050613	5/6/2013		W-SW	WATER	REG	grab						
6 208	2.42 1.42	30905-SW20B-050613	5/6/2013	1313	W-SW	WATER	REG	1 grab	×					
7 Cent T	7.17	30905-SWCentT-050613	5/6/2013	103A	W-SW	WATER	REG	1 grab	× >-					
B Cent M		30905-SWCentM-050613	5/6/2013		W-SW	WATER	REG	grab						
9 Cent B	7.17 6.17	30905-SWCentB-050613	5/6/2013	1034	W-SW	WATER	REG	1 grab	×					
10 LADY T	4.67	30905-SWLadyT-050613	5/6/2013	1035	W-SW	WATER	REG	1 grab	× >				ì	
11 Lady M		30905-SWLadyM-050613	5/6/2013		W-SW	WATER	REG	grab						
12 LADY B	14.67 3.67	30905-SWLadyB-050613	5/6/2013	103.9	W-SW	WATER	REG	1 grab	× >					
Relinquished by		May Company			Received by					Company CHin HIPL Condition	Condition	Custo	Custody Seals Intact	
Comer	of the to	7th 5/184/ime 7:38	٨		116	no			Date/Time	me Xa/I3ONB Cooler Temp.	Cooler Temp.			
Relinquished by	D	Ö			Received by					Company	Condition	Custo	Custody Seals Intact	
		Date/Time							Date/Time	те	Cooler Temp.			
	7				) (none); 1 (4 E	leg C); 2 (HC	3 pH<2); 3 (HI	VO3 pH<2);	4 (H2SO4 pH<	1 (4 Deg C); 2 (HCl pH-2); 3 (HNO3 pH-2); 4 (H2SO4 pH-2); 5 (NaOH pH>12); 6 (NaOH, Zh Asetate); 7 (H2SO4 (pH-2); 4 Deg C)); 8 (HCl pH-2); 9 (HCl 4 Deg C); 10 (HNO3 PH-2); 1	Zn Acetate); 7 (H2)	SO4 (pH<2), 4 Deg C	;)); 8 (HCl pH<2); 9 (HCl 4 [	Deg C); 10 (HNO3
Preservatives: (Ottler; Specify):	r; specify):				priszl, 40eg	7, 11 (40 146	(2) (1) (1)	A ASCOLDIC A	May, 12 (4011)	(pirk), 400g V), 11 (40 NaO 1 (pirlz) & Asonius Adul; 12 (40 1EOO+ (pirk) & Nacocoo), 13 (zii Adalae), 50 (speciai iissiuddio)s)	al Acetate), sp (sp.	solar IIIstiuctions)		

Lancaster Laboratories	ratories												₹	AESI Ref:	41397.57253
2425 New Holland Pike	425		I	000	Honeywell		Chain Of	Custody	// Anal)	Chain Of Custody / Analysis Request			<u> </u>	#202	30905-050613-6
(717) 656-2300			Privileged & Confidential	Confider	ntial	z		Site Name:		Baltimore	Phase:			Lab Proj # (SDG):	
Sampling Co.:	Maryland Environmental Service	nental Service	EDD To:		kenneth biles	les@ch2m.com	ر	Location	Location of Site:	BALTIMORE, MD	Program	am Sampling		Lab ID	
Client Contact: (name, co., address)	me, co., addre	(ss	Sampler:	Amanda	Amanda Penafiel; Rachael Griner, Maura Morris	ael Griner, N	faura Morris						S	Site ID	BALTIMORE
Christopher French			# Od	4500013806	806			Preservative	îve 3					Lab Job #	
101 Columbia Road Meyer 3	yer 3		Analysis 7	urnaroun	Analysis Turnaround Time (TAT):		14	1					<b>4</b> 1	Authorized User:	Honeywell
Morristown, NJ 07962				Consulta	int		CH2M	Т							
Preliminary Data To	kenneth biles @ch2m.com; amv klonner@retinen com; kenneth biles @ch2m.com;	<u>kenneth biles © ch2m com;</u> amv klonnar @ critinan com, harnina kiddi@ ch2m com kenneth bilas @ ch2m com;				/			) ie 3					Text & Excel File Drive	
Acknowledgement To		amy klopber@critiden.com; bernice kidd@ch2m.com;						_	_						
Hard Copy To	Amy Klopper	c	Ę	Full Report TAT:	TAT:		28	-	_						
Invoice To:	Christopher French	h						-	_						<
	Sample Identification	fication	Sample Date	Sample	Sample	Sample Matrix	Sample # of Purpose Cont.	odwoo	Fi <b>eld F</b>				0 2 8	Copyright AESI: Version 6.0 Unautherized use strictly prohibited.	
:	Start End	1		20		10000			-					Corporation Mothon	40
Location ID	Depth Depth (ft)	Field Sample ID						Units	7/6n					code)	Lab Sample Numbers
1 4R	25 11.5	30905-SWD1-050613	5/6/2013	1045	W-SW	WATER	FD 1	grab	×						
101	275 -	30905-SWD2-050613	5/6/2013	0111	W-SW	WATER	FD 1	grab	×						
3 15 13	6.83 5.83	30905-SWD3-050613	5/6/2013	1140	MS-M	WATER	FD 1	grab	×						
7 91	693	30905-SWD4-050613	5/6/2013	1203	W-SW	WATER	FD 1	grab	×						
5 FIELDQC		30905-SW-FB1-050613	5/6/2013	1018	BLKWATER	WATER	FB 1	grab	×						
6 FIELDQC		30905-SW-RB1-050613	5/6/2013	Mallif	MIIIO BLKWATER	WATER	EB 1	grab	×						
7 FIELDQC		30905-SW-RB2-050613	5/6/2013	1206	BLKWATER	ER WATER	EB 1	grab	×						
8 FIELDOC		30905-SW-RB3-050613	5/6/2013		BLKWATER	ER WATER	EB	grab							
6															
10															
12															
Relinquished by		MES Company			Received by					Company 412, 11 cil	Condition		Custody Seals Intact	ls Intact	
Smanch	Penh	5/07/13 Pate/Time			1791	1.1			Date/Time	80008/10/3 ans	Cooler Temp.	þ.			
Refinduished by	0	Company			Received by					Company	Condition		Custody Seals Intact	is intact	
		Date/Time							Date/Time	e e	Cooler Temp.	o.			
Preservatives: (Other; Specify):	Specify):				0 (none); 1 (4 (pH<2), 4Deg	Deg C); 2 (H( 5); 11 (4C Na	31 pH<2); 3 (HNO.	3 pH<2); 4 (H scorbic Acid);	12SO4 pH<2	0 (none); 1 (4 Deg C); 2 (HCl pH<2); 3 (HNO3 pH<2); 4 (HZSO4 pH<2); 5 (NaOH pH>12); 6 (NaOH, Zn Acetate); 7 (HZSO4 (pH<2), 4 Deg C); 10 (HNO3 pH<2); 8 (HCl pH<2); 9 (HCl 4 Deg C); 11 (4C NaOH (pH>12) & Ascorbic Acid); 12 (4C HZSO4 (pH<2) & Na2S2O3); 13 (Zn Acetate); 9 (special instructions)	iOH, Zn Acetate); 7 13 (Zn Acetate); sg	(H2SO4 (pH<2), 4 (special instruction	t Deg C)); 8 (HC	CI pH<2); 9 (HCI 4 D	eg C); 10 (HNO3





# **QUALITY CONTROL SUMMARY**

This section is a summary of the quality control (QC) review results for samples collected on May 5, 2013, 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 2010) as applicable to the specification contained in SW-846 methodologies, and the project specific requirements set forth in the Work Plan. Three sample delivery groups (SDG's) were associated with this data set: BHB06, BHB07, and BHB08. All field samples and associated QC samples were analyzed for total and/or 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. All acceptance criteria for precision were met.

# LABORATORY REPLICATES

Five laboratory replicates were analyzed during this sampling round. All acceptance criteria for precision were met.

# LABORATORY BLANKS

Chromium was not detected in the calibration or laboratory method blanks.

# FIELD BLANKS

Two equipment rinsate blank samples and one field blank samples were collected during these sampling events. Chromium was not detected in the field blank samples.

## MATRIX SPIKE/MATRIX SPIKE DUPLICATES

Five 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 at the recommended temperature of  $4\pm2$ °C. 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.

## Level 4 Verification Spreadsheet for Metals (Page 1 of 11)

SDG	BHB06							
Calibra	ation Verifi	cation						
				Raw		Reported		
ICV	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	
	Cr	0741	600	591.92	98.653	98.7	90	110
		i			Raw	Reported		
ICB	Element	ID(time)	RL.	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0745	15	1.2	-0.03	1.2	U	ug/l
				Raw		Reported		
CCV	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	
	Cr	0800	500	495.48	99.096	99.1	90	110
		1						
					Raw	Reported		
ССВ	Element	ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0804	15	1.2	0.47	1.2	U	ug/l
					Raw			
PBW	Element	ID(time)	RL	MDL	Conc.	Reported Conc.	Lab Flag	Units
FDW	Cr	0808	15	1.1	-0.04	1.1	U	µg/l
	٥.	0000			0.04		Ü	P9"
		ĺ						
				Raw		Reported		
CCV	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	
	Cr	0847	500	495.18	99.036	99	90	110
		i						
					Raw	Reported		
ССВ	Element	ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0851	15	1.2	0.32	1.2	U	ug/l
001/	F1	ID(time)	T	Raw Found	n/ D	Reported % Rec.		
CCV	Element Cr	ID(time) 0934	True 500	493.96	% Rec. 98.792	98.8	Lim 90	110
	Ci	0334	300	400.00	30.732	30.0	30	110
		1						
					Raw	Reported		
CCB	Element	ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0938	15	1.2	-0.07	1.2	U	ug/l
		1						
				Raw		Reported		
ccv	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	its
	Cr	1021	500	492.21	98.442	98.4	90	110
					_	_		
005	Flores	ID(times)	ъ.	ID.	Raw Conc.	Reported Conc.	1 - 1- 51-	
CCB	Element	ID(time) 1025	RL 15	1,2	-0.32	1.2	Lab Flag	Units ug/l
	-	1025	10	1.2	-0.32	1.2	U	ugn
		1						
				Raw		Reported		
ICV	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	
	Cr	1326	600	606.66	101.110	101.1	90	110
		ı			Raw	Danaste 4		
ICB	Element	ID(time)	RL	IDL	Conc.	Reported Conc.	Lab Flag	Units
ЮВ	Cr	1330	15	1.2	0.2	1.2	U	ug/l
		.000			0.2		J	ug.

SDG BHB06

(ICV) Initial Calibration Verification
(ICB) Initial Calibration Blank
(ICCB) Continuing Calibration Blank
(ICCW) Continuing Calibration Verification
(ICCV) Continuing Calibration Verification
(IDL) Instrument Detection Limit
(MDL) Method Detection Limit
(IRL) Reporting Limit
(INA) Not Applicable

BHB06							
Element	ID(time)	True	Raw Found	% Rec.	Reported % Rec.	Lim	nits
Cr	1346	500	503.85	100.770	100.8	90	110
				Raw	Reported		
	ID(time)	RL	IDL			Lab Flag	Units
Cr	1350	15	1.2	-0.41	1.2	U	ug/l
				Raw	Reported		
							Units
Cr	1354	15	1.1	-0.2	1.1	U	μg/I
			Raw		Reported		
Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	nits
Cr	1436	500	506.06	101.212	101.2	90	110
Flement	ID(time)	RI	IDI			Lab Flag	Units
							ug/l
		_	Raw		Reported		
Cr	1525	500	506.33	101.266	101.3	90	110
	ID(time)	RL	IDL	Raw Conc.	Reported Conc.	Lab Flag	Units
Cr	1528	15	1.2	0.29	1.2	U	ug/l
Element Cr	ID(time)	True 500	Raw Found 508.15	% Rec.	Reported % Rec.	Lim 90	nits 110
Cr	1615	500	Found 508.15	101.630 Raw	% Rec. 101.6 Reported	90	110
			Found	101.630	% Rec. 101.6		
Cr	1615 ID(time) 1619	8L 15	Found 508.15	101.630 Raw Conc.	% Rec. 101.6 Reported Conc.	90 Lab Flag	110 Units
Cr Element Cr	1615 ID(time) 1619	8L 15 15 S (ICS)	Found 508.15	Raw Conc. 0.6	% Rec. 101.6 Reported Conc.	90 Lab Flag U	110 Units
Element Cr	ID(time) 1619 ck Sample	RL 15 S (ICS) Raw Found 478.8	508.15 IDL 1.2	Raw Conc. 0.6  Reported % Rec. 95.8	% Rec. 101.6  Reported Conc. 1.2	90 Lab Flag U	110 Units
Element Cr Element Cr Element Cr	ID(time) 1619  ck Sample  True 500	RL 15 S (ICS) Raw Found 478.8	Found 508.15  IDL 1.2  % Rec. 95.760	Raw Conc.  0.8  Reported % Rec. 95.8	% Rec. 101.6  Reported Conc. 1.2	90 Lab Flag U	110 Units
Element Cr erence Che	ID(time) 1619 ck Sample True	RL 15 S (ICS) Raw Found 478.8	Found 508.15 IDL 1.2	Raw Conc. 0.6  Reported % Rec. 95.8	% Rec. 101.6  Reported Conc. 1.2	90 Lab Flag U	110 Units
Cr  Element Cr  Element Cr  Element Cr  Element Cr	ID(time) 1619  ck Sample  True 500  True	RL 15 S (ICS) Raw Found 478.8 Raw Found 482.1	Found 508.15  IDL 1.2  % Rec. 95.760  % Rec. 96.420	Raw Conc. 0.6  Reported % Rec. 95.8  Reported % Rec. 96.4	% Rec. 101.6  Reported Conc. 1.2  Lim 80  Lim 80	90 Lab Flag U hits 120 hits	110 Units
Element Cr Element Cr Element Cr	ID(time) 1619  Ck Sample  True 500  True	RL 15 S (ICS) Raw Found 478.8 Raw Found 482.1	Found 508.15  IDL 1.2  % Rec. 95.760  % Rec. 96.420	Reported % Rec. 95.8  Reported % Rec. 96.4	% Rec. 101.6  Reported Conc. 1.2  Lim 80	90 Lab Flag U nits 120	110 Units
Cr Element Cr Element Cr Element Cr Element Cr Element Cr	ID(time) 1619  ck Sample 500  True 500	RL 15  Raw Found 478.8  Raw Found 482.1  Raw Found 482.1  Raw Found 482.1	**Sec. 95.760  **Rec. 96.420  **Rec. 99.100	Raw Conc.  0.6  Reported % Rec. 95.8  Reported % Rec. 96.4  Reported % Rec. 99.1	% Rec. 101.6  Reported Conc. 1.2  Lim 80  Lim 80	90  Lab Flag U  nits 120  nits 120	110 Units
Cr  Element Cr  Element Cr  Element Cr  Element Cr	ID(time) 1619  ck Sample  True 500  True	RL 15 Raw Found 478.8 Raw Found 482.1 Raw Found 482.1	Found 508.15  IDL 1.2  % Rec. 95.760  % Rec. 96.420	Raw Conc. 0.6  Reported % Rec. 95.8  Reported % Rec. 96.4  Reported % Rec. 99.1	% Rec. 101.6  Reported Conc. 1.2  Lim 80  Lim 80	90  Lab Flag U  nits 120  nits 120	110 Units
	Element Cr Element Cr	Cr	Cr         1346         500           Element         ID(time)         RL           Cr         1350         15           Element         ID(time)         RL           Cr         1354         15           Element         ID(time)         True           Cr         1436         500           Element         ID(time)         RL           Cr         1440         15           Element         ID(time)         True           Cr         1525         500           Element         ID(time)         RL           Element         ID(time)         RL	Element         ID(time)         True         Found           Cr         1346         500         503.85           Element         ID(time)         RL         IDL           Cr         1350         15         1.2           Element         ID(time)         RL         MDL           Cr         1354         15         1.1           Element         ID(time)         True         Found           Cr         1436         500         506.06           Element         ID(time)         RL         IDL           Cr         1440         15         1.2           Element         ID(time)         True         Found           Cr         1525         500         506.33           Element         ID(time)         RL         IDL           Element         ID(time)         RL         IDL	Element   ID(time)   True   Found   % Rec.	Element   ID(time)   True   Found   % Rec.   % Rec.   100.8	Element   ID(time)   True   Found   % Rec.   % Rec.   Lin

## Level 4 Verification Spreadsheet for Metals (Page 3 of 11)

## SDG BHB06

# Matrix Spikes/Matrix Spike Duplicates (MS/MSD) Client Sample ID: 7047519BKG

		Raw	Raw	MS	MSD			Reported	Reported					
	Sample	MS	MSD	Spike	Spike	MS	MSD	MS	MSD	% I	Rec.		Reported	RPD
Element	Result	Result	Result	Amount	Amount	% Rec.	% Rec.	% Rec.	% Rec.	Lir	nits	RPD	RPD	Limits
Cr	0	210.23	205.28	200	200	105.115	102.640	105	103	81	120	2.383	2	20
Client Sam	ple ID:	7047532BI	kG											

		Raw	Raw	MS	MSD			Reported	Reported					
	Sample	MS	MSD	Spike	Spike	MS	MSD	MS	MSD	% F	lec.		Reported	RPD
Elemen	t Result	Result	Result	Amount	Amount	% Rec.	% Rec.	% Rec.	% Rec.	Lim	its	RPD	RPD	Limits
Cr	0	205.42	205.57	200	200	102.710	102.785	103	103	81	120	0.073	0	20

Duplicates (Dup)

Client Sam	ple ID:	7047519BK	.G		
	Raw Sample	Raw Dup		Reported	RPD
Element	Result	Result	RPD	RPD	Limits
Cr	0	0	N/A	0	20

 $\textbf{Comment:} \ \ \text{RPD is not applicable (N/A), sample concentrations less than five times the PQL of 5 \ \mu\text{g/l}.$ 

Client Sample ID: 7047532BKG

	Raw	Raw				
	Sample	Dup		Reported	RPD	
Element	Result	Result	RPD	RPD	Limits	
Cr	0	0	N/A	0	20	ī

 $\textbf{Comment:} \ \ \mathsf{RPD} \ \mathsf{is} \ \mathsf{not} \ \mathsf{applicable} \ (\mathsf{N/A}), \mathsf{sample} \ \mathsf{concentrations} \ \mathsf{less} \ \mathsf{than} \ \mathsf{five} \ \mathsf{times} \ \mathsf{the} \ \mathsf{PQL} \ \mathsf{of} \ \mathsf{5} \ \mathsf{\mu} \mathsf{g/l}.$ 

# <u>Laboratory Control Samples</u>

		Raw		Reported		
Element	True	Found	% Rec.	% Rec.	Lir	nits
Cr	200	210.78	105.390	105	80	120
		Raw		Reported		
Element	True	Found	% Rec.	% Rec.	Lir	nits

Serial Dilutions
Client Sample ID: 7047519BKG

Element	Raw Sample Result	Raw Ser. Dil. Result	(%D)	Reported % Rec.	Limits (%D)
Cr	0	0	N/A	N/A	10

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.

Client Sample ID: 7047532BKG

Element	Sample Result	Ser. Dil. Result	(%D)	Reported % Rec.	Limits (%D)	
Cr	0	0	N/A	N/A	10	_

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.

## Level 4 Verification Spreadsheet for Metals (Page 4 of 11)

SDG	BHB07								
Calibr	ation Verifi	ication							(ICV) Initial Calibration Verification
									(ICB) Initial Calibration Blank (CCB) Continuing Calibration Blank
				Raw		Reported			(PBW) Preparation Blank
ICV	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim		(CCV) Continuing Calibration Verification (IDL) Instrument Detection Limit
	Cr	1905	600	579.69	96.615	96.6	90	110	(MDL) Method Detection Limit
		1			Raw	Reported			(RL) Reporting Limit (N/A) Not Applicable
ICB	Element Cr	1D(time) 1908	<b>RL</b> 15	1.6	O.22	Conc.	Lab Flag	Units ug/l	(1077) Not Applicable
	o.	1000		1.0	U.LL	1.0	Ü	ug.	
				-					
CCV	Element	ID(time)	True	Raw Found	% Rec.	Reported % Rec.	Lim	its	
	Cr	1923	500	478.45	95.690	95.7	90	110	
		i							
					Raw	Reported			
CCB	Element Cr	1D(time) 1927	<b>RL</b> 15	1.6	Conc.	Conc.	Lab Flag	Units ug/l	
								-9.	
					Raw	Reported			
PBW		ID(time)	RL	MDL	Conc.	Conc.	Lab Flag	Units	
	Cr	1931	15	1.1	-0.24	1.1	U	μg/l	
ccv	Element	ID(time)	True	Raw Found	% Rec.	Reported % Rec.	Lim	ito	
- 001	Cr	2010	500	479.97	95.994	96	90	110	
					Raw	Reported			
CCB	Element Cr	ID(time) 2014	<b>RL</b> 15	1DL 1.6	Onc. 0.07	Conc.	Lab Flag	Units ug/l	
	Cr	2014	15	1.0	0.07	1.0	U	ug/i	
		ı							
				Raw		Reported			
CCV	Element	ID(time) 2058	True 500	Found 473.23	% Rec. 94.646	% Rec. 94.6	Lim 90	its 110	
	o.	2000	000	11 0.20	01.010	01.0	00		
					Raw	Reported			
ССВ		ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units	
	Cr	2102	15	1.6	0.91	1.6	U	ug/l	
		1							
ccv	Element	ID(time)	True	Raw Found	% Rec.	Reported % Rec.	Lim	ite	
	Cr	2145	500	472.34	94.468	94.5	90	110	
		ı							
					Raw	Reported			
CCB	Element Cr	ID(time) 2148	<b>RL</b> 15	1.6	-0.92	Conc.	Lab Flag	Units ug/l	
	·.	2110		1.0	0.02	1.0	Ü	ug/.	
		ì							
				Raw		Reported			
ICV	Element Cr	ID(time) 2218	True 600	Found 582.18	% Rec. 97.030	% Rec.	Lim 90	its 110	
			000	002.10					
ICB	Element	ID(time)	RL	IDL	Raw Conc.	Reported Conc.	Lab Flag	Units	
	Cr	2222	15	1.6	0.28	1.6	U	ug/l	
		1							
				Raw		Reported			
CCV	Element Cr	ID(time) 2237	True 500	Found 488.69	% Rec. 97.738	% Rec. 97.7	Lim 90	its 110	
	Cr	2231	500	400.09	91.138	91.1	90	110	
					D	Bon			
ССВ	Element	ID(time)	RL	IDL	Raw Conc.	Reported Conc.	Lab Flag	Units	
-	Cr	2241	15	1.6	1.27	1.6	U	ug/l	

SDG BHB07	=
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## Level 4 Verification Spreadsheet for Metals (Page 6 of 11)

nt ID(time) 2244  nt ID(time) 2324  nt ID(time) 2328  nt ID(time) 0012  nt ID(time) 0016	RL 15  True 500  RL 15  True 500  RL 15	MDL 1.1  Raw Found 495.97  IDL 1.6  Raw Found 478.95	Raw Conc. 99.194  Raw Conc. 0.99  % Rec. 95.790  Raw Conc0.32	Reported Conc. 1.1 Reported % Rec. 99.2 Reported Conc. 1.6 Reported % Rec. 95.8 Reported Conc. 1.6.	Lim 90  Lab Flag U  Lim 90  Lab Flag U  Lim 90	Units ug/l							
2244  ID(time) 2324  ID(time) 2328  ID(time) 0012  ID(time) 1 ID(time)	15  True 500  RL 15  True 500  RL 15	Raw Found 495.97  IDL 1.6  Raw Found 478.95	Conc.  0.38  % Rec. 99.194  Raw Conc. 0.99  % Rec. 95.790  Raw Conc.	Conc. 1.1  Reported % Rec. 99.2  Reported Conc. 1.6  Reported % Rec. 95.8	Lim 90 Lab Flag U	μg/l its 110 Units ug/l its 110							
t ID(time) 2324  t ID(time) 2328  t ID(time) 0012  t ID(time) 0016	True 500  RL 15  True 500  RL 15	Raw Found 495.97  IDL 1.6  Raw Found 478.95  IDL 1.6	% Rec. 99.194  Raw Conc. 0.99  % Rec. 95.790  Raw Conc.	Reported % Rec. 99.2  Reported Conc. 1.6  Reported % Rec. 95.8	Lim 90  Lab Flag U  Lim 90	Units Units ug/l							
2324	True 500  RL 15  True 1500	Found   495.97   IDL   1.6   Raw   Found   478.95   IDL   1.6	99.194  Raw Conc. 0.99  % Rec. 95.790  Raw Conc.	% Rec. 99.2  Reported Conc. 1.6  Reported % Rec. 95.8  Reported Conc.	90  Lab Flag  U  Lim  90	Units ug/l							
2324	True 500  RL 15  True 1500	IDL 1.6 Raw Found 478.95	99.194  Raw Conc. 0.99  % Rec. 95.790  Raw Conc.	% Rec. 99.2  Reported Conc. 1.6  Reported % Rec. 95.8  Reported Conc.	90  Lab Flag  U  Lim  90	Units ug/l							
ID(time)  1D(time)  1D(time)  1D(time)  1D(time)  1D(time)	True 500 RL 15	IDL 1.6 Raw Found 478.95	Raw Conc. 0.99 % Rec. 95.790 Raw Conc.	Reported Conc. 1.6  Reported % Rec. 95.8  Reported Conc.	Lab Flag U Lim 90	Units ug/l its 110							
2328  ID(time) 0012  ID(time) 0016  ID(time)	15 True 500 RL 15	1.6  Raw Found  478.95	% Rec. 95.790  Raw Conc.	Reported % Rec. 95.8	U Lim	ug/l its 110							
2328  ID(time) 0012  ID(time) 0016  ID(time)	15 True 500 RL 15	1.6  Raw Found  478.95	% Rec. 95.790 Raw Conc.	Reported % Rec. 95.8	U Lim	ug/l its 110							
nt ID(time) 0012  ID(time) 0016	True 500 RL 15	Raw Found 478.95	% Rec. 95.790 Raw Conc.	Reported % Rec. 95.8 Reported Conc.	Lim 90	its 110							
ID(time) 0016  ID(time)	500 RL 15	Found 478.95 IDL 1.6	95.790 Raw Conc.	% Rec. 95.8 Reported Conc.	90	110							
ID(time) 0016  ID(time)	500 RL 15	Found 478.95 IDL 1.6	95.790 Raw Conc.	% Rec. 95.8 Reported Conc.	90	110							
nt ID(time) 0016  nt ID(time)	<b>RL</b> 15	IDL 1.6	Raw Conc.	Reported Conc.									
0016  ID(time)	15	1.6	Conc.	Conc.	Lab Flag								
0016  ID(time)	15	1.6	Conc.	Conc.	Lab Flag								
0016  ID(time)	15	1.6				Units							
	True			1.0	U	ug/l							
	True			_									
		Raw Found	% Rec.	Reported % Rec.	Lim	its							
	500	485.89	97.178	97.2	90	110							
1													
			Raw	Reported									
nt True	Raw Found	% Rec.	% Rec.	Lin									
500	475.9	95.180	95.2	80	120								
	Raw		Reported										
nt True	Found	% Rec.	% Rec.	Lin									
500	473.2	94.640	94.6	80	120								
i													
	Raw												
				1 1									
nt True	Found	% Rec.			nits								
True 500		% Rec. 97.120	% Kec. 97.1	80 80	120								
	485.6		97.1	80									
	Found			80	120								
11	0053 heck Sample True 500	0053 15  heck Samples (ICS). Raw True Found 500 475.9  True Found 500 473.2	0053 15 1.6  heck Samples (ICS) Raw True Found % Rec. 500 475.9 95.180  True Found % Rec. 500 473.2 94.640  Raw	Digiting   RL   DL   Conc.	Digitine   RL   DL   Conc.   Conc.	Digiting   RL   DL   Conc.   Conc.   Lab Flag	Digime  RL   DIL   Conc.   Conc.   Lab Flag   Units		D(time)	D(time)	Digitine   RL   DL   Conc.   Conc.   Lab Flag   Units		Digime   RL   DL   Conc.   Conc.   Lab Flag   Units

## Level 4 Verification Spreadsheet for Metals (Page 7 of 11)

## SDG BHB07

Duplicates (Dup)

Client Sample ID: 7047541BKG | Raw | Sample | Du | Population | Result | Result | Result | Repu | Reported | Result | Result | Repu | Reported | Result | Resu

 $\textbf{Comment:} \ \ \mathsf{RPD} \ is \ \mathsf{not} \ applicable \ (\mathsf{N/A}), \ \mathsf{sample} \ \mathsf{concentrations} \ \mathsf{less} \ \mathsf{than} \ \mathsf{five} \ \mathsf{times} \ \mathsf{the} \ \mathsf{PQL} \ \mathsf{of} \ \mathsf{5} \ \mathsf{\mug/l}.$ 

Client Sample ID: 7047559BKG Raw Raw

Element	Sample Result	Dup Result	RPD	Reported RPD	RPD Limits
Cr	0	0	N/A	0	20

 $\textbf{Comment:} \ \ \mathsf{RPD} \ is \ \mathsf{not} \ \mathsf{applicable} \ (\mathsf{N/A}), \ \mathsf{sample} \ \mathsf{concentrations} \ \mathsf{less} \ \mathsf{than} \ \mathsf{five} \ \mathsf{times} \ \mathsf{the} \ \mathsf{PQL} \ \mathsf{of} \ \mathsf{5} \ \mathsf{\mu}\mathsf{g/l}.$ 

## **Laboratory Control Samples**

Element	True	Raw Found	% Rec.	Reported % Rec.	Lir	mits
Cr	200	202.12	101.060	101	80	120
Element	True	Raw Found	% Rec.	Reported % Rec.	Lir	nits
Cr	200	201.5	100.750	101	80	120

Serial Dilutions					
Client Sam	ple ID:	7047541BK	(G		
	Raw	Raw			
	Sample	Ser. Dil.		Reported	Limits
Element	Result	Result	(%D)	% Rec.	(%D)
Cr	0	6.3	N/A	N/A	10

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.

Client Sample ID: 7047559BKG
Raw Raw

%D)
10

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.

### Level 4 Verification Spreadsheet for Metals (Page 8 of 11)

SDG	BHB08							
Calibr	ation Verifi	ication						
Guillo		- Cutton						
ICV	Element	ID(time)	True	Raw Found	% Rec.	Reported % Rec.	Lim	ite
	Cr	0741	600	591.92	98.653	98.7	90	110
		1			Raw	Reported		
ICB	Element	ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0745	15	1.6	-0.03	1.6	U	ug/l
		1						
				Raw		Reported		
CCV	Element	ID(time)	True 500	Found 495.48	% Rec. 99.096	% Rec.	Lim	110
	0.	0000	000	400.40	55.050	55.1	50	110
					Raw	Reported		
ССВ	Element	ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0804	15	1.6	0.47	1.6	U	ug/l
		1						
					Raw	Reported		
PBW	Element Cr	ID(time) 0808	RL 15	MDL 1.1	-0.04	Conc.	Lab Flag	Units ug/l
				Raw		Reported		
CCV	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	its
	Cr	0847	500	495.18	99.036	99	90	110
		1						
ССВ	Element	ID(time)	RL	IDL	Raw	Reported		Units
LUB	Cr	0851	15	1.6	O.32	Conc. 1.6	Lab Flag	ug/l
		1						
				Raw		Reported		
CCV	Element	1D(time) 0934	True 500	Found 493.96	% Rec. 98.792	% Rec.	Lim 90	110
	-							
					Raw	Reported		
ССВ	Element	ID(time)	RL	IDL	Conc.	Conc.	Lab Flag	Units
	Cr	0938	15	1.6	-0.07	1.6	U	ug/l
		I		D		Description		
ccv	Element	ID(time)	True	Raw Found	% Rec.	Reported % Rec.	Lim	its
CCV	Element Cr	ID(time) 1021	True 500	Raw Found 492.21	% Rec. 98.442	Reported % Rec. 98.4	Lim 90	its
CCV	Element Cr	ID(time) 1021		Found	% Rec. 98.442	% Rec.	<b>Lim</b> 90	its
	Cr	1021	500	Found 492.21	98.442 Raw	% Rec. 98.4 Reported	90	110
ссу	Element Cr	ID(time) 1021 ID(time)		Found	98.442	% Rec. 98.4	90 Lab Flag	110 Units
	Cr	1021 ID(time)	500 RL	Found 492.21	98.442 Raw Conc.	% Rec. 98.4 Reported Conc.	90 Lab Flag	110 Units
	Cr	1021 ID(time)	500 RL	Found 492.21	98.442 Raw Conc.	% Rec. 98.4 Reported Conc.	90 Lab Flag	110 Units
ССВ	Element Cr	ID(time)	8L 15	Found 492.21 IDL 1.6	98.442 Raw Conc. -0.32	% Rec. 98.4  Reported Conc. 1.6	90 Lab Flag U	Units
	Cr	ID(time) ID(time)	RL 15	IDL 1.6	98.442  Raw Conc.  -0.32	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec.	90 Lab Flag	Units
ССВ	Element Cr	ID(time)	8L 15	Found 492.21 IDL 1.6	98.442  Raw Conc0.32  % Rec. 97.030	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97	90 Lab Flag U	Units ug/l
CCB	Element Cr	ID(time) 1025 ID(time) 2218	RL 15	Found 492.21 IDL 1.6 Raw Found 582.18	98.442  Raw Conc0.32  % Rec. 97.030  Raw	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97	90  Lab Flag  U  Lim	Units ug/l
ССВ	Element Cr	ID(time) ID(time)	RL 15	IDL 1.6	98.442  Raw Conc0.32  % Rec. 97.030	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97	90  Lab Flag  U  Lim	Units ug/l
CCB	Element Cr Element Cr	ID(time) 1025 ID(time) 2218	RL 15	Found 492.21 IDL 1.6 Raw Found 582.18	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc.	% Rec. 98.4  Reported Conc. 1.8  Reported % Rec. 97  Reported Conc.	90  Lim 90  Lim	Units ug/l its 110
CCB	Element Cr Element Cr	ID(time) 1025 ID(time) 2218	RL 15	Found 492.21  IDL 1.6  Raw Found 582.18	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc.	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6	90  Lim 90  Lim	Units ug/l its 110
CCB	Element Cr Element Cr Element Cr	ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  ID(time)	FL 15 True 600 RL 15 True	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6	Lim 90  Lim 90  Lab Flag  U	Units ug/l  its 110  Units ug/l
ICV	Element Cr Element Cr Element Cr	ID(time) 1025 ID(time) 2218 ID(time) 2222	RL 15  True 600  RL 15	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6	Lab Flag U Lim 90 Lab Flag U	Units ug/l its 110 Units ug/l
ICV	Element Cr Element Cr Element Cr	ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  ID(time)	FL 15 True 600 RL 15 True	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 97.738	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported Conc. 1.7  Reported Conc. 1.7  Reported % Rec. 97.7	Lim 90  Lim 90  Lab Flag  U	Units ug/l  its 110  Units ug/l
ICV ICB	Element Cr Element Cr Element Cr Element Cr	ID(time) 1025 ID(time) 2218 ID(time) 2222 ID(time) 2237	True 600  RL 15  True 500	Found 492.21 IDL 1.6 Raw Found 582.18 IDL 1.6 Raw Found 488.69	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec.	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported % Rec. 1.6  Reported % Rec. 97.7	Lim 90 Lim 90 Lim 90 Lab Flag U	Units Units Units Units 110 Units Units Units
ICV	Element Cr Element Cr Element Cr	ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  ID(time)	FL 15 True 600 RL 15 True	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 97.738	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported Conc. 1.7  Reported Conc. 1.7  Reported % Rec. 97.7	Lim 90  Lim 90  Lab Flag  U	Units ug/l  its 110  Units ug/l
ICV ICB	Element Cr Element Cr Element Cr Element Cr Element Element Element	ID(time) 1025 ID(time) 2218 ID(time) 2222 ID(time) 1D(time) 1D(time) 1D(time)	True 600 RL 15	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6  Raw Found 1.6	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 97.738	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported Conc. 1.6  Reported Conc. 1.6	Lab Flag U Lim 90 Lab Flag U Lim	Units ug/l  its 110  Units ug/l  Units ug/l  Units Units
ICV ICB	Element Cr Element Cr Element Cr Element Cr Element Cr Cr	ID(time)  1025  ID(time)  2218  ID(time)  2222  ID(time)  2237  ID(time)  2241	RL 15  True 600  RL 15  True 15  True 15	Found   492.21   IDL   1.6   Raw   Found   582.18   IDL   1.6   Raw   Found   488.69   IDL   1.6   IDL   1.6   IDL   1.6   IDL   I	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 1.27  Raw	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported % Rec. 1.6  Reported % Rec. 1.6  Reported % Rec. 97.7	Lab Flag U Lim 90 Lab Flag U Lim	Units ug/l  its 110  Units ug/l  Units ug/l  Units ug/l
ICV ICB	Element Cr Element Cr Element Cr Element Cr Element Cr Element Element Element	ID(time) 1025  ID(time) 2218  ID(time) 2218  ID(time) 2222  ID(time) 2237	True 600  RL 15  True 700  RL 15  True 800  RL 15	Found   492.21   IDL   1.6   Raw   Found   582.18   IDL   1.6   Raw   Found   488.69   IDL   1.6   MDL   M	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 97.738  Raw Conc. 1.27	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported Conc. 1.6  Reported % Rec. 97.7  Reported Conc. 1.6	90  Lab Flag  U  Lab Flag  U  Lim  90  Lab Flag  U  Lab Flag  U  Lab Flag	Units ug/l  Its  Units ug/l  Units ug/l  Units ug/l  Units Units Units Units Units
ICV ICB CCV CCB	Element Cr Element Cr Element Cr Element Cr Element Cr Cr	ID(time)  1025  ID(time)  2218  ID(time)  2222  ID(time)  2237  ID(time)  2241	RL 15  True 600  RL 15  True 15  True 15	Found   492.21   IDL   1.6   Raw   Found   582.18   IDL   1.6   Raw   Found   488.69   IDL   1.6   IDL   1.6   IDL   1.6   IDL   I	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 1.27  Raw	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6  Reported % Rec. 1.6  Reported % Rec. 1.6  Reported % Rec. 97.7	Lab Flag U Lim 90 Lab Flag U Lim	Units ug/l  its 110  Units ug/l  Units ug/l  Units ug/l
ICV ICB CCV CCB	Element Cr Element Cr Element Cr Element Cr Element Cr Element Element Element	ID(time) 1025  ID(time) 2218  ID(time) 2218  ID(time) 2222  ID(time) 2237	True 600  RL 15  True 700  RL 15  True 800  RL 15	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6  Raw Found 488.69  IDL 1.6  MDL 1.1	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 97.738  Raw Conc. 1.27	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6	90  Lab Flag  U  Lab Flag  U  Lim  90  Lab Flag  U  Lab Flag  U  Lab Flag	Units ug/l  Its  Units ug/l  Units ug/l  Units ug/l  Units Units Units Units Units
ICV ICB CCV	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr	ID(time)  ID(time)  ID(time)  ID(time)  ID(time)  2222  ID(time)  2237  ID(time)  ID(time)  2241	True 600 RL 15 True 500 RL 15 RL 15	Found   492.21   IDL   1.6   Raw   Found   1.8   Raw   Found   488.69   IDL   1.6   MDL   1.1   Raw   Raw   Found   Raw   Found   Raw   Found   Raw   IDL   1.8   Raw   IDL   Raw   IDL	98.442 Raw Conc0.32  % Rec. 97.030 Raw Conc. 0.28  % Rec. 1.27  Raw Conc. 1.27	% Rec. 98.4  Reported Conc. 1.6  Reported Conc. 1.7  Reported Conc. 1.6  Reported Conc. 1.7  Reported Conc. 1.7  Reported Conc. 1.8  Reported Conc. 1.8	90  Lab Flag 90  Lab Flag 90  Lab Flag U	Units ug/l  its 110 Units ug/l  its 110 Units ug/l  Units ug/l  Units ug/l
ICV ICB CCV CCB	Element Cr Element Cr Element Cr Element Cr Element Cr Element Element Element	ID(time) 1025  ID(time) 2218  ID(time) 2218  ID(time) 2222  ID(time) 2237	True 600  RL 15  True 700  RL 15  True 800  RL 15	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6  Raw Found 488.69  IDL 1.6  MDL 1.1	98.442  Raw Conc0.32  % Rec. 97.030  Raw Conc. 0.28  % Rec. 97.738  Raw Conc. 1.27	% Rec. 98.4  Reported Conc. 1.6  Reported % Rec. 97  Reported Conc. 1.6	90  Lab Flag  U  Lab Flag  U  Lim  90  Lab Flag  U  Lab Flag  U  Lab Flag	Units ug/l  its 110 Units ug/l  its 110 Units ug/l  Units ug/l  Units ug/l
ICV ICB CCV	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr Element Element Element Element Element Element Element	ID(time) 1025 ID(time) 2218 ID(time) 2222 ID(time) 2237 ID(time) 2241 ID(time) 1D(time)	RL 15  True 600  RL 15  True 15  True 15  True 15  True 15  True 15  True 15	Found	98.442 Raw Conc. 97.030 Raw Conc. 0.28  **Rec. 97.738 Raw Conc. 1.27  Raw Conc. 0.38	% Rec.  98.4  Reported Conc. 1.6  Reported % Rec. 1.7  Reported Conc. 1.6  Reported Conc. 1.6  Reported Conc. 1.7  Reported Conc. 1.7  Reported Conc. 1.6  Reported Conc. 1.7  Reported Co	90  Lab Flag  U  Lim 90  Lab Flag U  Lab Flag U  Lab Flag U	Units ug/l  Units Units Units ug/l  Units ug/l  Units ug/l
CCB ICV CCV CCB	Element Cr Cr Element Cr Cr	ID(time) 1D(time) 1D(	RL 15 True 600 RL 15 True 500 RL 15 True 500 RL 15 True 500 RL 15 RL 15 True 500 RL 15 RL	Found 492.21  IDL 1.6  Raw Found 582.18  IDL 1.6  Raw Found 486.69  MDL 1.1  Raw Found 495.97	98.442 Raw Conc0.32 % Rec. 97.030 Conc. 0.28 % Rec. 0.28 Raw Conc. 1.27 Raw Conc. 0.38	% Rec. 98.4 Reported Conc. 1.6 Reported % Rec. 97.7 Reported Conc. 1.6 September 1.6 Conc. 1.6 Reported Conc. 1.6 Reported Conc. 1.6 September 1.6 Reported Conc. 1.6 Reported Conc. 1.6 Reported Conc. 1.7 Reported Conc. 1.8 Reported Conc. 1.9 Reported Conc. 99.2 Reported Reported Conc. 99.2 Reported Reported Conc. 99.2 Reported Reported Conc. 99.2 Rep	90 Lab Flag U Lin 90 Lab Flag U Lab Flag U Lab Flag U	Units up1  Units 110  Units 110  Units up1  Units up1  Units up1  Units up1
ICV ICB CCV	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr Element Element Element Element Element Element Element	ID(time) 1025 ID(time) 2218 ID(time) 2222 ID(time) 2237 ID(time) 2241 ID(time) 1D(time)	RL 15  True 600  RL 15  True 15  True 15  True 15  True 15  True 15  True 15	Found	98.442 Raw Conc0.32  % Rec. 97.030 Raw Conc. 0.28  % Rec. 1.27  Raw Conc. 0.38	% Rec. 98.4 Reported Conc. 1.6 Reported % Rec. 97 Reported Conc. 1.5 Reported Conc. 1.6 Reported % Rec. 97.7 Reported Conc. 1.6 Reported % Rec. 99.7 Reported Conc. 99.2	90  Lab Flag  U  Lim 90  Lab Flag U  Lab Flag U  Lab Flag U	Units ug/l  Units Units Units ug/l  Units ug/l  Units ug/l

(ICV). Imital Calibration Verification (ICB). Imital Calibration Blank (CCB). Continuing Calibration Blank (PBW) Prognation Blank (PBW) Prognation Blank (CCV) Continuing Calibration Verification (IDL). Instrument Detection Limit (IDL). Instrument Limit (IDL). Instrument Limit

CDC								
ასც	BHB08							
		i						
				Raw		Reported		
ccv	Element	ID(time)	True	Found	% Rec.	% Rec.	Lim	
	Cr	0012	500	478.95	95.790	95.8	90	110
ССВ	Element	ID(time)	RL	IDL	Raw Conc.	Reported Conc.	Lab Flag	Units
	Cr	0016	15	1.6	-0.32	1.6	U	ug/l
		I						
ccv	Element		True	Raw Found	% Rec.	Reported % Rec.		
CCV	Cr	ID(time) 0049	500	485.89	% Rec. 97.178	97.2	Lim 90	110
		1						
					Raw	Reported		
ССВ	Element	ID(time) 0053	RL 15	1.6	O.52	Conc.	Lab Flag	Units ug/l
	0.	0000	10	1.0	0.02	1.0	Ü	ugi
		1						
				Raw		Reported		
ICV	Element	ID(time)	True 600	Found 605	% Rec.	% Rec.	Lim 90	its 110
	٠.	2220	000	000				110
ICB	Element	ID(time)	RL	IDL	Raw Conc.	Reported Conc.	Lab Flag	Units
ICB	Cr	2228	15	1.6	-0.38	1.6	U	ug/l
		ı						
				Raw		Reported		
CCV	Element	ID(time) 2244	True 500	Found 496.92	% Rec. 99.384	% Rec. 99.4	Lim 90	its 110
	ur	2244	500	496.92	99.384	99.4	90	110
					_			
CCB	Element	ID(time)	RL	IDL	Raw Conc.	Reported Conc.	Lab Flag	Units
505	Cr	2247	15	1.6	-0.42	1.6	U	ug/l
		ı						
					Raw	Reported		
PBW	Element	ID(time)	RL	MDL	Conc.	Conc.	Lab Flag	Units
	Cr	2251	15		-0.13	1.1	U	µg/l
	Cr	2251	15	1.1	-0.13	1.1	U	µg/1
	Cr	2251	15	1.1 Raw	-0.13	1.1 Reported	U	µg/l
CCV	Cr	ID(time)	15 True	1.1 Raw Found	-0.13 % Rec.	1.1 Reported % Rec.	U	μg/l its
CCV	Cr	2251	15	1.1 Raw	-0.13	1.1 Reported	U	µg/l
ccv	Cr	ID(time)	15 True	1.1 Raw Found	-0.13 % Rec. 96.436	Reported % Rec. 96.4	U	μg/l its
	Element Cr	2251 ID(time) 2331 ID(time)	True 500	Raw Found 482.18	-0.13 % Rec. 96.436 Raw Conc.	Reported % Rec. 96.4 Reported Conc.	Lim 90 Lab Flag	μg/l its 110 Units
	Element Cr	2251 ID(time) 2331	15 True 500	Raw Found 482.18	-0.13 % Rec. 96.436	Reported % Rec. 96.4	Lim 90	µg/l its 110
	Element Cr	2251 ID(time) 2331 ID(time)	True 500	Raw Found 482.18	-0.13 % Rec. 96.436 Raw Conc.	Reported % Rec. 96.4 Reported Conc.	Lim 90 Lab Flag	μg/l its 110 Units
	Element Cr	2251 ID(time) 2331 ID(time)	True 500	1:1  Raw Found  482.18  IDL  1.6	-0.13 % Rec. 96.436 Raw Conc.	Reported % Rec. 96.4 Reported Conc.	Lim 90 Lab Flag U	μg/l its 110 Units
	Element Cr Element Cr	ID(time) 2331 ID(time) 2335 ID(time)	15 True 500 RL 15	Raw Found 482.18 IDL 1.6	-0.13  % Rec. 96.436  Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6	Lim 90 Lab Flag U	its 110 Units ug/l
CCB	Element Cr Element Cr	ID(time) 2331 ID(time) 2335	15 True 500 RL 15	Raw Found 482.18 IDL 1.6	-0.13 % Rec. 96.436 Raw Conc. -0.16	Reported % Rec. 96.4  Reported Conc. 1.6	Lim 90 Lab Flag U	μg/l its 110 Units ug/l
CCB	Element Cr Element Cr	ID(time) 2331 ID(time) 2335 ID(time)	15 True 500 RL 15	Raw Found 482.18 IDL 1.6	-0.13 % Rec. 96.436 Raw Conc0.16 % Rec. 97.074	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1	Lim 90 Lab Flag U Lim 90	its 110 Units ug/l
CCB	Element Cr Element Cr Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020	15 True 500  RL 15 True 500	1.1  Raw Found  482.18  IDL  1.6  Raw Found  485.37	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1	Lim 90 Lab Flag U	ug/l  Units ug/l
CCB	Element Cr Element Cr	ID(time) 2331 ID(time) 2335 ID(time)	15 True 500 RL 15	Raw Found 482.18 IDL 1.6	-0.13 % Rec. 96.436 Raw Conc0.16 % Rec. 97.074	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1	Lim 90 Lab Flag U Lim 90	its 110 Units ug/l
CCB	Element Cr Element Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time)	15 True 500  RL 15 True 500  RL RL	Raw Found 482.18  IDL 1.6  Raw Found 485.37	"% Rec. 96.436 Raw Conc0.16 % Rec. 97.074	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported % Conc. 97.1	Lim 90  Lab Flag U  Lim 90	ug/l  Units  110  Units  Units  Units
CCB	Element Cr Element Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time)	15 True 500  RL 15 True 500  RL RL	Raw Found 482.18  IDL 1.6  Raw Found 485.37	"% Rec. 96.436 Raw Conc0.16 % Rec. 97.074	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported % Conc. 97.1	Lim 90  Lab Flag U  Lim 90	ug/l  Units  110  Units  Units  Units
CCV	Element Cr Element Cr Element Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time) 0023	15  True 500  RL 15  True 500  RL 15	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6  Raw	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6	Lim 90  Lim 90  Lim 90	Units Units Units Units Units Units Units
CCB	Element Cr Element Cr Element Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time)	15 True 500  RL 15 True 500  RL RL	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37	"% Rec. 96.436 Raw Conc0.16 % Rec. 97.074	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6	Lim 90  Lab Flag U  Lim 90	Units Units Units Units Units Units Units
CCV	Element Cr Element Cr Element Cr Element Cr Element Element	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time) 1D(time) 1D(time) 1D(time)	15  True   500  RL   15  True   500  RL   15	Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.5	Lim 90  Lab Flag U  Lim 90	Units Units Units Units Units Units
CCV	Element Cr Element Cr Element Cr Element Cr Element Element	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time) 1D(time) 1D(time) 1D(time)	15  True   500  RL   15  True   500  RL   15	Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6	"% Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16	Reported % Rec. 96.4  Reported % Rec. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6  Reported % Rec. 96.9	Lim 90 Lim 90 Lim 90 Lim 90 Lim 90	Units Units Units Units Units Units
CCV	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time) 0023  ID(time) 1D(time) 1D(time) 1D(time) 1D(time)	True 500 RL 15 True 500 RL 15	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6  Raw Found 484.45	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6  Reported Conc. 1.6  Reported Conc. 1.6	Lim 90 Lim 90 Lim 90 Lab Flag U Lim 90 Lab Flag	µg/l
CCV	Element Cr Element Cr Element Cr Element Cr Element Cr	ID(time) 2331 ID(time) 2335 ID(time) 0020 ID(time) 0023 ID(time) 0108	True 500 Tru	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6  Raw Found 484.45	-0.13 % Rec. 96.436 % Rec0.16 % Rec. 97.074 Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6  Reported % Rec. 96.9	Lim 90 Lim 90 Lim 90 Lim 90 Lim 90	Units  Units  Units  Units  110  Units  110  Units  110  Units  110  Units
CCV	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time) 0023  ID(time) 1D(time) 1D(time) 1D(time) 1D(time)	True 500 RL 15 True 500 RL 15	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6  Raw Found 1.6  Raw Found 1.6  Raw Found 1.6	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6	Lim 90 Lim 90 Lim 90 Lab Flag U Lim 90 Lab Flag	µg/l
CCV	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr	ID(time)   ID(time)	True 500 RL 15 True 500 RL 15	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6  Raw Found 484.45	-0.13 % Rec. 96.436 Raw Conc0.16 % Rec. 97.074 Raw Conc0.16 % Rec0.16	Reported Conc. 1.6  Reported % Rec. 96.4  Reported % Rec. 97.1  Reported % Rec. 1.6  Reported % Rec. 1.6  Reported % Rec. 1.6  Reported % Rec. 1.6  Reported Conc. 1.6  Reported Reported Conc. 1.6	Lim 90 Lim 90 Lim 90 Lab Flag U Lim 90 Lab Flag	Units   Unit
CCB CCV CCB	Element Cr Element Cr Element Cr Cr Element Cr Element Cr Cr Element Cr Cr Cr Cr Cr Cr Cr Cr Cr	ID(time) 2331  ID(time) 2335  ID(time) 0020  ID(time) 0023  ID(time) 1D(time) 1D(time) 1D(time) 1D(time)	True 500 RL 15 True 500 RL 15 True 15	1.1  Raw Found 482.18  IDL 1.6  Raw Found 485.37  IDL 1.6  Raw Found 484.45  IDL 1.6  Raw Found Raw Raw Found Raw	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16	Reported % Rec. 96.4  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6  Reported % Rec. 97.1  Reported Conc. 1.6	Lim Flag  U  Lim Flag  90  Lab Flag  U  Lim Flag  U  Lim Flag  U	Units   Unit
CCB CCV CCB	Element Cr Element Cr Cr Element Cr Cr Element Cr Cr Element Cr Element Cr Element Element Element Element	ID(time)   ID(time)	True 500 RL 15 True 500 RL 15 True 700 RL 15 True 7	1.1  Raw Found 462.18  IDL 1.6  Raw Found 485.37  IDL 1.5  Raw Found 1.6  Raw Found 484.45	-0.13 % Rec. 96.436 Raw Conc0.16 % Rec0.16 % Rec0.16 % Rec0.16 % Rec0.16 % Rec0.71	Reported Conc.  1.6 Reported Conc. 1.6 Reported Conc. 1.6 Reported Conc. 1.6 Reported Conc. 1.6 Reported Reported Conc. 1.6 Reported Conc. 1.6 Reported Conc.	Lim Flag U Lim Flag	Units   Unit
CCB CCCV CCB	Element Cr Element Cr Element Cr Element Cr Element Cr Element Cr Cr Element Cr Cr Cr Cr Element Cr Cr	ID(time)   ID(time)	True 500  RL 15  True 500  RL 15  True 500  RL 15  True 500	1.1 Raw Found 482.18 IDL 1.6 Raw Found 485.37 IDL 1.6 Raw Found 485.37	-0.13  % Rec. 96.436  Raw Conc0.16  % Rec. 97.074  Raw Conc0.16  % Rec. 96.890  % Rec0.71  % Rec. Raw Raw	Reported % Rec. 96.4 Reported % Rec. 1.6 Reported % Rec. 1.7 Reported Conc. 1.6 Reported Conc. 1.6 Reported Conc. 1.7 Reported Conc. 1.7 Reported Conc. 1.7 Reported Conc. 1.8 Reported Conc. 1.7 Reported Conc. 1.8 Reported Conc. 1.7 Reported Conc. 1.8 Reported	Lim Flag U Lim Flag 90 Lab Flag U Lim Flag U	Units   Unit
CCB CCV CCB	Element Cr Element Cr Cr Element Cr Cr Element Cr Cr Element Cr Element Cr Element Element Element Element	ID(time)   ID(time)	True 500 RL 15 True 500 RL 15 True 700 RL 15 True 7	1.1  Raw Found 462.18  IDL 1.6  Raw Found 485.37  IDL 1.5  Raw Found 1.6  Raw Found 484.45	-0.13 % Rec. 96.436 Raw Conc0.16 % Rec. 97.074 Raw Conc0.16 % Rec. 97.074 % Rec. 97.074	Reported % Rec. 95.4 Reported Conc. 1.6 Reported S% Rec. 97.1 Reported S% Rec. 95.2 Reported Reported Conc. 1.6 Reported S% Rec. 97.2	Lim Flag U Lab Flag U Lab Flag U Lim Flag U Lim Flag U Lim Flag U Lim Flag U	Units   Unit

# SDG BHB08 Final Element True Found Found % Rec. % Rec. Limits Cr 500 481.5 96.300 96.3 80 120

Matrix S	pikes/Matrix	Spike Du	plicates	(MS/MSD

Cirent Sam	ple ID:	*47532BK	3											
		Raw	Raw	MS	MSD			Reported	Reported					
	Sample	MS	MSD	Spike	Spike	MS	MSD	MS	MSD	% F	Rec.		Reported	RPD
Element	Result	Result	Result	Amount	Amount	% Rec.	% Rec.	% Rec.	% Rec.	Lin	nits	RPD	RPD	Limits
Cr	0	205.42	205.57	200	200	102.710	102.785	103	103	81	120	0.073	0	20
Client Sam	ple ID:	*47559BK	3											
		Raw	Raw	MS	MSD			Reported	Reported					
	Sample	MS	MSD	Spike	Spike	MS	MSD	MS	MSD	% F	Rec.		Reported	RPD
Element	Result	Result	Result	Amount	Amount	% Rec.	% Rec.	% Rec.	% Rec.	Lin	nits	RPD	RPD	Limits
	0	201.03	200.64	200	200	100.515	100.320	101	100	81	120	0.194	0	20
			200.64	200	200	100.515	100.320		100		120		0	20
Cr	0			200	200	100.515	100.320		100		120		0	20
Cr Client Sam	0 ple ID:	201.03 7047565BI	KG Raw	MS	MSD			101 Reported	Reported	81				
Cr	0	201.03 7047565Bi	kG			100.515 MS	100.320 MSD	101		81	120 Rec.		0 Reported	20 RPD
Cr	0 ple ID:	201.03 7047565BI	KG Raw	MS	MSD			101 Reported	Reported	81 % F				

## SDG BHB08

Duplicates (Dup)

Client Sample ID: 47532BKG
Raw

	Raw	Raw			
	Sample	Dup		Reported	RPD
Element	Result	Result	RPD	RPD	Limits
Element	Result	Result	RPD	RPD	Limits

Comment: RPD is not applicable (N/A), sample concentrations less than five times the PQL of 5 µg/l.

Client Sample ID: \*47559BKG

Element	Sample Result	Dup Result	RPD	Reported RPD	RPD Limits
Cr	0	0	N/A	0	20

Comment: RPD is not applicable (N/A), sample concentrations less than five times the PQL of 5 µg/l.

Client Sample ID: 7047565BKG

	Raw	Raw			
	Sample	Dup		Reported	RPD
Element	Result	Result	RPD	RPD	Limits
Cr	0	1 19	N/A	0	20

Comment: RPD is not applicable (N/A), sample concentrations less than five times the PQL of 5 µg/l.

# <u>Laboratory Control Samples</u>

Element	True	Raw Found	% Rec.	Reported % Rec.	Lin	nits
Cr	200	206.28	103.140	103	80	120
	l					
		Pow		Donortod		
Element	True	Raw Found	% Rec.	Reported % Rec.	Lin	nits
Element Cr	True 200		% Rec.		Lir 80	nits 120
		Found		% Rec.		

		Raw		Reported		
Element	True	Found	% Rec.	% Rec.	Lir	nits
Cr	200	100 70	06 300	0.0	80	120

# Serial Dilutions \*47532BKG

Client Sample ID:		*47532BKG	5			
	Raw	Raw				
Sample		Ser. Dil.		Reported	Limits	
Element	Result	Result	(%D)	% Rec.	(%D)	
Cr	0	0	N/A	N/A	10	Ī

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.

Client Sample ID: \*47559BKG

	Raw	Raw				
	Sample	Ser. Dil.		Reported	Limits	
Element	Result	Result	(%D)	% Rec.	(%D)	
Cr	0	0	N/A	N/A	10	_

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.

Client Sample ID: 7047565BKG

	Raw	Raw				
	Sample	Ser. Dil.		Reported	Limits	
Element	Result	Result	(%D)	% Rec.	(%D)	
Cr	0	0	N/A	N/A	10	Ī

Comment: Serial dilution is not applicable (N/A), sample concentrations less than fifty times the MDL.