

## **APPENDIX G**

### **Section 23**

Outfall 004 - BMP Effectiveness, January 23-24, 2008

Test America Analytical Laboratory Report

## LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project: BMP Effectiveness  
Monitoring Program

Sampled: 01/23/08-01/24/08  
Received: 01/26/08  
Issued: 02/06/08 17:32

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

## SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IRA2560-01	004 EFF-1	Water
IRA2560-02	004 EFF-2	Water
IRA2560-03	004 EFF-3	Water
IRA2560-04	004 EFF-4	Water
IRA2560-05	004 EFF-5	Water
IRA2560-06	004 EFF-6	Water
IRA2560-07	004 EFF-7	Water
IRA2560-08	004 EFF-8	Water
IRA2560-09	004 EFF-9	Water
IRA2560-10	004 EFF-10	Water
IRA2560-11	004 EFF-11	Water
IRA2560-12	004 EFF-12	Water
IRA2560-13	004 EFF-13	Water
IRA2560-14	004 EFF-14	Water
IRA2560-15	004 EFF-15	Water
IRA2560-16	004 EFF-16	Water
IRA2560-17	004 EFF-17	Water
IRA2560-18	004 EFF-18	Water
IRA2560-19	004 EFF-19	Water
IRA2560-20	004 EFF-20	Water
IRA2560-21	004 EFF-21	Water
IRA2560-22	004 EFF-22	Water
IRA2560-23	004 EFF-23	Water

TestAmerica Irvine

Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
Received: 01/26/08

**LABORATORY ID**

IRA2560-24

**CLIENT ID**

004 EFF-24

**MATRIX**

Water

Reviewed By:



**TestAmerica Irvine**

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
 Received: 01/26/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2560-01 (004 EFF-1 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-02 (004 EFF-2 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-03 (004 EFF-3 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-04 (004 EFF-4 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-05 (004 EFF-5 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-06 (004 EFF-6 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-07 (004 EFF-7 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-08 (004 EFF-8 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-09 (004 EFF-9 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-10 (004 EFF-10 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	

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 Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
 Received: 01/26/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2560-11 (004 EFF-11 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-12 (004 EFF-12 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-13 (004 EFF-13 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-14 (004 EFF-14 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-15 (004 EFF-15 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-16 (004 EFF-16 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-17 (004 EFF-17 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01112	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-18 (004 EFF-18 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-19 (004 EFF-19 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-20 (004 EFF-20 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	0.99	1	02/01/08	02/01/08	

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 Project Manager

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Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
 Received: 01/26/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2560-21 (004 EFF-21 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-22 (004 EFF-22 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-23 (004 EFF-23 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-24 (004 EFF-24 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01113	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2560-01 (004 EFF-1 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	21	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-02 (004 EFF-2 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	18	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-03 (004 EFF-3 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	16	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-04 (004 EFF-4 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	15	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-05 (004 EFF-5 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	15	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-06 (004 EFF-6 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	12	1	02/04/08	02/04/08	

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 Project Manager

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 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
 Received: 01/26/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2560-07 (004 EFF-7 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	11	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-08 (004 EFF-8 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	14	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-09 (004 EFF-9 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	12	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-10 (004 EFF-10 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	12	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-11 (004 EFF-11 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	15	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-12 (004 EFF-12 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	11	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-13 (004 EFF-13 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	13	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-14 (004 EFF-14 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	10	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-15 (004 EFF-15 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	10	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-16 (004 EFF-16 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	12	1	02/04/08	02/04/08	

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 Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
 Received: 01/26/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2560-17 (004 EFF-17 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04100	10	10	ND	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-18 (004 EFF-18 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	17	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-19 (004 EFF-19 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	10	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-20 (004 EFF-20 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	10	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-21 (004 EFF-21 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	11	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-22 (004 EFF-22 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	12	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-23 (004 EFF-23 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	ND	1	02/04/08	02/04/08	
<b>Sample ID: IRA2560-24 (004 EFF-24 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04102	10	10	15	1	02/04/08	02/04/08	

TestAmerica Irvine

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 Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
Received: 01/26/08

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8B01112 Extracted: 02/01/08</u></b>											
<b>Duplicate Analyzed: 02/01/2008 (8B01112-DUP1)</b>											
Density	0.996	NA	N/A	g/cc		0.997			0	20	
<b><u>Batch: 8B01113 Extracted: 02/01/08</u></b>											
<b>Duplicate Analyzed: 02/01/2008 (8B01113-DUP1)</b>											
Density	0.987	NA	N/A	g/cc		0.989			0	20	

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
Received: 01/26/08

## DATA QUALIFIERS AND DEFINITIONS

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.  
**RPD** Relative Percent Difference

**TestAmerica Irvine**

Joseph Doak  
Project Manager

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**IRA2560 <Page 9 of 10>**  
**NPDES - 1035**

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2560

Sampled: 01/23/08-01/24/08  
Received: 01/26/08

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at [www.testamericainc.com](http://www.testamericainc.com)*

### TestAmerica Irvine

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Project Manager

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Client Name/Address:  
**MWH-Arcadia**  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007

Project: Boeing BMP  
**Effectiveness Monitoring Program**

Project Manager: Bronwyn Kelly  
 J M A N A S A  
 Sampler: R B O N A S A  
 Phone Number: (626) 568-6691  
 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Suspended Sediment Concentration (SSC, ASTM D3977-1997)	Field readings:
004 EFF-1	W	500 mL Poly	1	1/23/08-1549	None	1	X	Temp = N/A
004 EFF-2	W	500 mL Poly	1	1/23/08-1649	None	2	X	pH = N/A
004 EFF-3	W	500 mL Poly	1	1/23/08-1749	None	3	X	Time of readings = N/A
004 EFF-4	W	500 mL Poly	1	1/23/08-1849	None	4	X	Comments
004 EFF-5	W	500 mL Poly	1	1/23/08-1949	None	5	X	
004 EFF-6	W	500 mL Poly	1	1/23/08-2049	None	6	X	
004 EFF-7	W	500 mL Poly	1	1/23/08-2149	None	7	X	
004 EFF-8	W	500 mL Poly	1	1/23/08-2249	None	8	X	
004 EFF-9	W	500 mL Poly	1	1/23/08-2349	None	9	X	
004 EFF-10	W	500 mL Poly	1	1/24/08-0049	None	10	X	
004 EFF-11	W	500 mL Poly	1	1/24/08-0149	None	11	X	
004 EFF-12	W	500 mL Poly	1	1/24/08-0249	None	12	X	
004 EFF-13	W	500 mL Poly	1	1/24/08-0349	None	13	X	
004 EFF-14	W	500 mL Poly	1	1/24/08-0449	None	14	X	
004 EFF-15	W	500 mL Poly	1	1/24/08-0549	None	15	X	
004 EFF-16	W	500 mL Poly	1	1/24/08-0649	None	16	X	
004 EFF-17	W	500 mL Poly	1	1/24/08-0749	None	17	X	
004 EFF-18	W	500 mL Poly	1	1/24/08-0849	None	18	X	
004 EFF-19	W	500 mL Poly	1	1/24/08-0949	None	19	X	
004 EFF-20	W	500 mL Poly	1	1/24/08-1049	None	20	X	
004 EFF-21	W	500 mL Poly	1	1/24/08-1149	None	21	X	
004 EFF-22	W	500 mL Poly	1	1/24/08-1249	None	22	X	
004 EFF-23	W	500 mL Poly	1	1/24/08-1349	None	23	X	
004 EFF-24	W	500 mL Poly	1	1/24/08-1449	None	24	X	

Relinquished By: *Bronwyn Kelly* Date/Time: 1-26-08 1245  
 Received By: *[Signature]* Date/Time: 1-26-08 1245

Relinquished By: *[Signature]* Date/Time: 1-26-08 1530  
 Received By: *[Signature]* Date/Time: 1-26-08 1530

Turn around Time: (check) 24 Hours  5 Days  10 Days  72 Hours  Normal  X

Sample integrity: (check) Intact  On Ice:  7.6/5.6°C

# **APPENDIX G**

## **Section 24**

Outfall 004, February 3, 2008

MEC<sup>X</sup> Data Validation Reports



# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB0149

Prepared by

MEC<sup>X</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

**I. INTRODUCTION**

Task Order Title: Boeing SSFL NPDES  
 Contract Task Order: 1261.100D.00  
 Sample Delivery Group: IRB0149  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 1  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 004	IRB0149-01	30227-001, 8020458-01, CRA0035-01, 8697-001	Water	02/03/08 1345	160.2, 200.7, 200.8, 245.1, 525.2, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 1613, ASTM D-5174

**II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-Irvine above the temperature limits; however, the samples had insufficient time to cool. The samples were received at Eberline, TestAmerica-Colton, and Vista within the temperature limits of 4°C ±2°C. The samples were received marginally below the temperature limit at Vista and Weck; however, the samples were not noted to be damaged or frozen. According to the case narrative for this SDG, the sample was received intact at all laboratories. The FedEx courier did not relinquish custody of the sample to Eberline. The remaining COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine and Weck, custody seals were not required. Custody seals were intact upon arrival at Eberline and Vista. If necessary, the client ID was added to the sample result summary by the reviewer.

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### Data Qualifier Reference Table

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Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

---

### Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

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D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: E. Wessling  
Date Reviewed: April 4, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (8/02)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: OCDD was reported in the method blank at 0.00000899 $\mu$ /L. The detect for OCDD in the sample was less than five times the concentration reported in the method blank; therefore, the OCDD detect was qualified as an estimated nondetect, "UJ," and raised to

the reporting limit in sample Outfall 004. The method blank had no other target compound detects above the EDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Nondetects are valid to the estimated detection limit (EDL).

## **B. EPA METHODS 200.7, 200.8, 245.1—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: March 26, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 200.8, and 245.1*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding times, 6 months for metals and 28 days for mercury, were met.
- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were  $\leq 5\%$ , and all masses of interest were calibrated to  $\leq 0.1$  amu and  $\leq 0.9$  amu at 10% peak height, except for cerium associated with the dissolved metals fraction. The cerium mass calibration marginally exceeded the control limit; therefore, antimony, lead,

and thallium were qualified as estimated in the dissolved metals fraction, "J," for detects and, "UJ," for nondetects.

- Calibration: Calibration criteria were met. Mercury initial calibration  $r^2$  values were  $\geq 0.995$  and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury. All CRI/CRA and check standard recoveries were within the control limits of 70-130%.
- Blanks: Selenium was reported in the method blank associated with the total metals fraction at  $-8.4 \mu\text{g/L}$ ; therefore, nondetected selenium in the total metals fraction was qualified as an estimated nondetect, "UJ." There were no other applicable detects in the method blanks or CCBs.
- Interference Check Samples: ICSA/B analyses were performed in association with all analyses except total antimony. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solutions. No 6010 analytes required qualification as the concentrations of the interferents were not significant. For the 6020 analytes, the reviewer was not able to ascertain if the detections were indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Evaluation of method accuracy was based on LCS results.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. The bracketing CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

The reviewer noted that antimony and boron were detected at slightly higher concentrations in the dissolved metals sample fraction and that mercury was detected slightly above the MDL in the dissolved metals fraction but was not detected in the total metals fraction. In all cases, the difference between the total and dissolved results was

within the sensitivity limits of the analytical instrument and, therefore, the reviewer considered the total and dissolved results to be equivalent.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

### C. EPA METHOD 525.2 — Pesticides

Reviewed By: P. Meeks

Date Reviewed: March 27, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides by GC (DVP-4, Rev. 0)*, *EPA Method 525.2*, and the *National Functional Guidelines for Organic Data Review (02/94)*.

- Holding Times: Extraction and analytical holding times were met. The water sample pH was not adjusted within 24 hours; therefore, nondetected diazinon was qualified as an estimated nondetect, "UJ." The sample was analyzed within 30 days of extraction.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria were met. For both target compounds, initial calibration average RRFs were  $\geq 0.05$  and %RSDs  $\leq 30\%$ . Continuing calibration RRFs were  $\geq 0.05$  and applicable target compound responses were within the method QC limits of 70-130%.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample from this SDG. Evaluation of method accuracy and precision was based on the LCS/LCSD results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the method control limits established by the continuing calibration standards of  $\pm 30\%$ .
- Compound Identification: Compound identification was verified. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.
- System Performance: Review of the raw data indicated no problems with system performance.

#### D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: March 28, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0, ASTM Method D-5174, and the National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The tritium sample was analyzed within 180 days of collection. Aliquots for gross alpha and gross beta, were prepared within the five-day analytical holding time for unpreserved samples. Aliquots for radium-226, radium-228, strontium-90, total uranium, and gamma spectroscopy were prepared beyond the five-day holding time for unpreserved samples; therefore, results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects.
- Calibration: The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability.

The gross alpha detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as an estimated detect, "J." The gross beta detector efficiency was greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The tritium detector efficiency for the sample was at least 20% and was considered acceptable. The strontium chemical yield was at least 70% and was considered acceptable. The strontium continuing calibration results were within the laboratory control limits. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 tracer, yttrium oxalate, yields were greater than 70%. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: There were no analytes detected in the method blanks.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established control limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Reported nondetects are valid to the MDA.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

## E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 28, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 160.2*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding time, seven days for TSS, was met.
- Calibration: The balance calibration logs were acceptable.
- Blanks: The method blank had no detect.
- Blank Spikes and Laboratory Control Samples: The recovery was within the laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed for the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this method.
- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.



MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08

Received: 02/03/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: mg/l									
Hardness (as CaCO3)	[CALC]	[CALC]	N/A	0.33	41	1	02/04/08	02/04/08	
Boron J/DNQ	EPA 200.7	8B04079	0.020	0.050	0.021	1	02/04/08	02/04/08	Ja
Calcium	EPA 200.7	8B04079	0.050	0.10	11	1	02/04/08	02/04/08	
Iron	EPA 200.7	8B04079	0.015	0.040	1.7	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	2.9	1	02/04/08	02/04/08	

LEVEL IV

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Joseph Doak  
Project Manager

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Aluminum	EPA 200.7	8B04079	40	50	2700	1	02/04/08	02/04/08	
Antimony J/DNQ	EPA 200.8	8B04080	0.20	2.0	0.72	1	02/04/08	02/05/08	Ja
Arsenic U	EPA 200.7	8B04079	7.0	10	ND	1	02/04/08	02/04/08	
Beryllium ↓	EPA 200.7	8B04079	0.90	2.0	ND	1	02/04/08	02/04/08	
Cadmium ↓	EPA 200.8	8B04080	0.11	1.0	ND	1	02/04/08	02/04/08	
Chromium J/DNQ	EPA 200.7	8B04079	2.0	5.0	2.7	1	02/04/08	02/04/08	Ja
Copper	EPA 200.8	8B04080	0.75	2.0	2.9	1	02/04/08	02/04/08	
Lead	EPA 200.8	8B04080	0.30	1.0	1.4	1	02/04/08	02/04/08	
Nickel U	EPA 200.7	8B04079	2.0	10	ND	1	02/04/08	02/04/08	
Selenium U/B	EPA 200.7	8B04079	8.0	10	ND	1	02/04/08	02/04/08	
Silver U	EPA 200.7	8B04079	6.0	10	ND	1	02/04/08	02/04/08	
Thallium ↓	EPA 200.8	8B04080	0.20	1.0	ND	1	02/04/08	02/04/08	
Vanadium J/DNQ	EPA 200.7	8B04079	3.0	10	4.5	1	02/04/08	02/04/08	Ja
Zinc ↓	EPA 200.7	8B04079	6.0	20	6.2	1	02/04/08	02/04/08	Ja

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron	J/DNQ EPA 200.7-Diss	8B05111	0.020	0.050	0.022	1	02/05/08	02/06/08	Ja
Calcium	EPA 200.7-Diss	8B05111	0.050	0.10	11	1	02/05/08	02/06/08	
Iron	EPA 200.7-Diss	8B05111	0.015	0.040	0.11	1	02/05/08	02/06/08	
Magnesium	EPA 200.7-Diss	8B05111	0.012	0.020	2.4	1	02/05/08	02/06/08	
Hardness (as CaCO3)	SM2340B	8B05111	1.0	1.0	38	1	02/05/08	02/06/08	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aluminum	EPA 200.7-Diss	8B05111	40	50	<b>160</b>	1	02/05/08	02/06/08	
Antimony <i>J/DNQ, *III</i>	EPA 200.8-Diss	8B04144	0.20	2.0	<b>0.75</b>	1	02/04/08	02/05/08	Ja
Arsenic <i>U</i>	EPA 200.7-Diss	8B05111	7.0	10	ND	1	02/05/08	02/06/08	
Beryllium <i>↓</i>	EPA 200.7-Diss	8B05111	0.90	2.0	ND	1	02/05/08	02/06/08	
Cadmium <i>↓</i>	EPA 200.8-Diss	8B04144	0.11	1.0	ND	1	02/04/08	02/05/08	
Chromium <i>↓</i>	EPA 200.7-Diss	8B05111	2.0	5.0	ND	1	02/05/08	02/06/08	
Copper <i>J/DNQ</i>	EPA 200.8-Diss	8B04144	0.75	2.0	<b>1.6</b>	1	02/04/08	02/05/08	Ja
Lead <i>UJ/III</i>	EPA 200.8-Diss	8B04144	0.30	1.0	ND	1	02/04/08	02/05/08	
Nickel <i>U</i>	EPA 200.7-Diss	8B05111	2.0	10	ND	1	02/05/08	02/06/08	
Selenium <i>↓</i>	EPA 200.7-Diss	8B05111	8.0	10	ND	1	02/05/08	02/06/08	
Silver	EPA 200.7-Diss	8B05111	6.0	10	ND	1	02/05/08	02/06/08	
Thallium <i>UJ/III</i>	EPA 200.8-Diss	8B04144	0.20	1.0	ND	1	02/04/08	02/05/08	
Vanadium <i>J/DNQ</i>	EPA 200.7-Diss	8B05111	3.0	10	<b>3.1</b>	1	02/05/08	02/06/08	Ja
Zinc <i>U</i>	EPA 200.7-Diss	8B05111	6.0	20	ND	1	02/05/08	02/06/08	

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Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

### Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0171	0.050	0.20	ND	1	02/06/08	02/07/08	
Mercury, Total	EPA 245.1	W8B0171	0.050	0.20	<b>0.068</b>	1	02/06/08	02/07/08	J

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Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Chlorpyrifos	U	EPA 525.2	C8B0516	0.10	1.0	ND	0.99	02/05/08	02/07/08
Diazinon	UJ/H	EPA 525.2	C8B0516	0.24	0.25	ND	0.99	02/05/08	02/07/08
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>						92 %			
<i>Surrogate: Triphenylphosphate (70-130%)</i>						115 %			
<i>Surrogate: Perylene-d12 (70-130%)</i>						97 %			

LEVEL IV

TestAmerica Irvine

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Project Manager

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IRB0149 <Page 15 of 50>

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8697</u>	Client <u>TA IRVINE</u>
Work Order <u>R802043-01</u>	Contract <u>PROJECT# IRB0149</u>
Received Date <u>02/05/08</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results + 2σ	Units	MDA	
		<i>outfall 004</i> IRB0149-01	8697-001	02/03/08	02/27/08	GrossAlpha	1.63 ± 0.68	pCi/L	0.61 <i>J/R</i>
				02/27/08	02/27/08	Gross Beta	12.7 ± 0.85	pCi/L	0.84
				02/27/08	02/27/08	Ra-228	0.084 ± 0.19	pCi/L	0.51 <i>SJ/H</i>
				02/25/08	02/25/08	K-40 (G)	U	pCi/L	25
				02/25/08	02/25/08	Cs-137 (G)	U	pCi/L	0.95
				02/28/08	02/28/08	H-3	15.8 ± 84	pCi/L	150
				03/03/08	03/03/08	Ra-226	1.05 ± 0.53	pCi/L	0.61 <i>SJ/H</i>
				02/18/08	02/18/08	Sr-90	-0.060 ± 0.32	pCi/L	0.77 <i>SJ/H</i>
				02/26/08	02/26/08	Total U	0.374 ± 0.042	pCi/L	0.022 <i>J/H</i>

*LEVEL IV*

*pm 3/28/08*

Certified by <u><i>[Signature]</i></u>
Report Date <u>03/11/08</u>
Page 1

MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B12074	1.3	4.8	2.1	1	02/12/08	02/12/08	Ja
Chloride	EPA 300.0	8B04043	0.25	0.50	8.0	1	02/04/08	02/04/08	
Fluoride	EPA 300.0	8B04043	0.15	0.50	0.24	1	02/04/08	02/04/08	Ja
Nitrate/Nitrite-N	EPA 300.0	8B04043	0.15	0.26	0.59	1	02/04/08	02/04/08	
Sulfate	EPA 300.0	8B04043	0.20	0.50	9.5	1	02/04/08	02/04/08	
Total Dissolved Solids	SM2540C	8B07122	10	10	130	1	02/07/08	02/07/08	
Total Suspended Solids	EPA 160.2	8B04128	10	10	31	1	02/04/08	02/04/08	

\* Analysis not validated

LEVEL IV

TestAmerica Irvine

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 Project Manager

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# **APPENDIX G**

## **Section 25**

Outfall 004, February 3, 2008

Test America Analytical Laboratory Report

## LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project: Annual Outfall 004

Sampled: 02/03/08  
Received: 02/03/08  
Issued: 03/03/08 11:40

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

## SAMPLE CROSS REFERENCE

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID	CLIENT ID	MATRIX
IRB0149-01	Outfall 004	Water
IRB0149-02	Trip Blanks	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B04007	0.24	0.50	ND	1	02/04/08	02/04/08	
1,1,2-Trichloroethane	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
1,1-Dichloroethane	EPA 624	8B04007	0.27	0.50	ND	1	02/04/08	02/04/08	
1,1-Dichloroethene	EPA 624	8B04007	0.42	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichloroethane	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichlorobenzene	EPA 624	8B04007	0.32	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichloropropane	EPA 624	8B04007	0.35	0.50	ND	1	02/04/08	02/04/08	
1,3-Dichlorobenzene	EPA 624	8B04007	0.35	0.50	ND	1	02/04/08	02/04/08	
1,4-Dichlorobenzene	EPA 624	8B04007	0.37	0.50	ND	1	02/04/08	02/04/08	
Benzene	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
Bromodichloromethane	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
Bromoform	EPA 624	8B04007	0.40	0.50	ND	1	02/04/08	02/04/08	
Bromomethane	EPA 624	8B04007	0.42	1.0	ND	1	02/04/08	02/04/08	
Carbon tetrachloride	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
Chlorobenzene	EPA 624	8B04007	0.36	0.50	ND	1	02/04/08	02/04/08	
Chloroethane	EPA 624	8B04007	0.40	1.0	ND	1	02/04/08	02/04/08	
Chloroform	EPA 624	8B04007	0.33	0.50	ND	1	02/04/08	02/04/08	
Chloromethane	EPA 624	8B04007	0.40	0.50	ND	1	02/04/08	02/04/08	
cis-1,3-Dichloropropene	EPA 624	8B04007	0.22	0.50	ND	1	02/04/08	02/04/08	
Dibromochloromethane	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
Ethylbenzene	EPA 624	8B04007	0.25	0.50	ND	1	02/04/08	02/04/08	
Methylene chloride	EPA 624	8B04007	0.95	1.0	ND	1	02/04/08	02/04/08	
Tetrachloroethene	EPA 624	8B04007	0.32	0.50	ND	1	02/04/08	02/04/08	
Toluene	EPA 624	8B04007	0.36	0.50	ND	1	02/04/08	02/04/08	
trans-1,2-Dichloroethene	EPA 624	8B04007	0.27	0.50	ND	1	02/04/08	02/04/08	
trans-1,3-Dichloropropene	EPA 624	8B04007	0.32	0.50	ND	1	02/04/08	02/04/08	
Trichloroethene	EPA 624	8B04007	0.26	0.50	ND	1	02/04/08	02/04/08	
Trichlorofluoromethane	EPA 624	8B04007	0.34	0.50	ND	1	02/04/08	02/04/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B04007	0.50	5.0	ND	1	02/04/08	02/04/08	
Vinyl chloride	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
Xylenes, Total	EPA 624	8B04007	0.90	1.5	ND	1	02/04/08	02/04/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>112 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>101 %</i>				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>93 %</i>				

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Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-02 (Trip Blanks - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B04007	0.24	0.50	ND	1	02/04/08	02/04/08	
1,1,2-Trichloroethane	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
1,1-Dichloroethane	EPA 624	8B04007	0.27	0.50	ND	1	02/04/08	02/04/08	
1,1-Dichloroethene	EPA 624	8B04007	0.42	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichloroethane	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichlorobenzene	EPA 624	8B04007	0.32	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichloropropane	EPA 624	8B04007	0.35	0.50	ND	1	02/04/08	02/04/08	
1,3-Dichlorobenzene	EPA 624	8B04007	0.35	0.50	ND	1	02/04/08	02/04/08	
1,4-Dichlorobenzene	EPA 624	8B04007	0.37	0.50	ND	1	02/04/08	02/04/08	
Benzene	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
Bromodichloromethane	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
Bromoform	EPA 624	8B04007	0.40	0.50	ND	1	02/04/08	02/04/08	
Bromomethane	EPA 624	8B04007	0.42	1.0	ND	1	02/04/08	02/04/08	
Carbon tetrachloride	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
Chlorobenzene	EPA 624	8B04007	0.36	0.50	ND	1	02/04/08	02/04/08	
Chloroethane	EPA 624	8B04007	0.40	1.0	ND	1	02/04/08	02/04/08	
Chloroform	EPA 624	8B04007	0.33	0.50	ND	1	02/04/08	02/04/08	
Chloromethane	EPA 624	8B04007	0.40	0.50	ND	1	02/04/08	02/04/08	
cis-1,3-Dichloropropene	EPA 624	8B04007	0.22	0.50	ND	1	02/04/08	02/04/08	
Dibromochloromethane	EPA 624	8B04007	0.28	0.50	ND	1	02/04/08	02/04/08	
Ethylbenzene	EPA 624	8B04007	0.25	0.50	ND	1	02/04/08	02/04/08	
Methylene chloride	EPA 624	8B04007	0.95	1.0	ND	1	02/04/08	02/04/08	
Tetrachloroethene	EPA 624	8B04007	0.32	0.50	ND	1	02/04/08	02/04/08	
Toluene	EPA 624	8B04007	0.36	0.50	ND	1	02/04/08	02/04/08	
trans-1,2-Dichloroethene	EPA 624	8B04007	0.27	0.50	ND	1	02/04/08	02/04/08	
trans-1,3-Dichloropropene	EPA 624	8B04007	0.32	0.50	ND	1	02/04/08	02/04/08	
Trichloroethene	EPA 624	8B04007	0.26	0.50	ND	1	02/04/08	02/04/08	
Trichlorofluoromethane	EPA 624	8B04007	0.34	0.50	ND	1	02/04/08	02/04/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B04007	0.50	5.0	ND	1	02/04/08	02/04/08	
Vinyl chloride	EPA 624	8B04007	0.30	0.50	ND	1	02/04/08	02/04/08	
Xylenes, Total	EPA 624	8B04007	0.90	1.5	ND	1	02/04/08	02/04/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>111 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>101 %</i>				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>90 %</i>				

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 Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B04007	4.0	5.0	ND	1	02/04/08	02/04/08	
Acrylonitrile	EPA 624	8B04007	0.70	2.0	ND	1	02/04/08	02/04/08	
2-Chloroethyl vinyl ether	EPA 624	8B04007	1.8	5.0	ND	1	02/04/08	02/04/08	
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					101 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					93 %				
<b>Sample ID: IRB0149-02 (Trip Blanks - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B04007	4.0	5.0	ND	1	02/04/08	02/04/08	
Acrylonitrile	EPA 624	8B04007	0.70	2.0	ND	1	02/04/08	02/04/08	
2-Chloroethyl vinyl ether	EPA 624	8B04007	1.8	5.0	ND	1	02/04/08	02/04/08	
Surrogate: Dibromofluoromethane (80-120%)					111 %				
Surrogate: Toluene-d8 (80-120%)					101 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

TestAmerica Irvine

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 Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Acenaphthylene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Aniline	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
Anthracene	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
Benzidine	EPA 625	8B04111	8.4	20	ND	0.99	02/04/08	02/07/08	L6
Benzoic acid	EPA 625	8B04111	9.9	20	ND	0.99	02/04/08	02/07/08	
Benzo(a)anthracene	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
Benzo(b)fluoranthene	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
Benzo(k)fluoranthene	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
Benzo(g,h,i)perylene	EPA 625	8B04111	4.0	9.9	ND	0.99	02/04/08	02/07/08	
Benzo(a)pyrene	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
Benzyl alcohol	EPA 625	8B04111	2.5	20	ND	0.99	02/04/08	02/07/08	
Bis(2-chloroethoxy)methane	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Bis(2-chloroethyl)ether	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Bis(2-chloroisopropyl)ether	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
Bis(2-ethylhexyl)phthalate	EPA 625	8B04111	4.0	50	ND	0.99	02/04/08	02/07/08	
4-Bromophenyl phenyl ether	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Butyl benzyl phthalate	EPA 625	8B04111	4.0	20	ND	0.99	02/04/08	02/07/08	
4-Chloroaniline	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
2-Chloronaphthalene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
4-Chloro-3-methylphenol	EPA 625	8B04111	2.5	20	ND	0.99	02/04/08	02/07/08	
2-Chlorophenol	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
4-Chlorophenyl phenyl ether	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
Chrysene	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
Dibenz(a,h)anthracene	EPA 625	8B04111	3.0	20	ND	0.99	02/04/08	02/07/08	
Dibenzofuran	EPA 625	8B04111	4.0	9.9	ND	0.99	02/04/08	02/07/08	
Di-n-butyl phthalate	EPA 625	8B04111	3.0	20	ND	0.99	02/04/08	02/07/08	
1,3-Dichlorobenzene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
1,4-Dichlorobenzene	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
1,2-Dichlorobenzene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
3,3-Dichlorobenzidine	EPA 625	8B04111	3.0	20	ND	0.99	02/04/08	02/07/08	
2,4-Dichlorophenol	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
Diethyl phthalate	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
2,4-Dimethylphenol	EPA 625	8B04111	3.5	20	ND	0.99	02/04/08	02/07/08	
Dimethyl phthalate	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
4,6-Dinitro-2-methylphenol	EPA 625	8B04111	4.0	20	ND	0.99	02/04/08	02/07/08	
2,4-Dinitrophenol	EPA 625	8B04111	7.9	20	ND	0.99	02/04/08	02/07/08	
2,4-Dinitrotoluene	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
2,6-Dinitrotoluene	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
Di-n-octyl phthalate	EPA 625	8B04111	3.5	20	ND	0.99	02/04/08	02/07/08	
Fluoranthene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	

### TestAmerica Irvine

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Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Fluorene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Hexachlorobenzene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Hexachlorobutadiene	EPA 625	8B04111	4.0	9.9	ND	0.99	02/04/08	02/07/08	
Hexachlorocyclopentadiene	EPA 625	8B04111	5.0	20	ND	0.99	02/04/08	02/07/08	
Hexachloroethane	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
Indeno(1,2,3-cd)pyrene	EPA 625	8B04111	3.5	20	ND	0.99	02/04/08	02/07/08	
Isophorone	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
2-Methylnaphthalene	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
2-Methylphenol	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
4-Methylphenol	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
Naphthalene	EPA 625	8B04111	3.0	9.9	ND	0.99	02/04/08	02/07/08	
2-Nitroaniline	EPA 625	8B04111	2.0	20	ND	0.99	02/04/08	02/07/08	
3-Nitroaniline	EPA 625	8B04111	3.0	20	ND	0.99	02/04/08	02/07/08	
4-Nitroaniline	EPA 625	8B04111	4.0	20	ND	0.99	02/04/08	02/07/08	
Nitrobenzene	EPA 625	8B04111	2.5	20	ND	0.99	02/04/08	02/07/08	
2-Nitrophenol	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
4-Nitrophenol	EPA 625	8B04111	5.4	20	ND	0.99	02/04/08	02/07/08	
N-Nitrosodiphenylamine	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
N-Nitroso-di-n-propylamine	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
Pentachlorophenol	EPA 625	8B04111	3.5	20	ND	0.99	02/04/08	02/07/08	
Phenanthrene	EPA 625	8B04111	3.5	9.9	ND	0.99	02/04/08	02/07/08	
Phenol	EPA 625	8B04111	2.0	9.9	ND	0.99	02/04/08	02/07/08	
Pyrene	EPA 625	8B04111	4.0	9.9	ND	0.99	02/04/08	02/07/08	
1,2,4-Trichlorobenzene	EPA 625	8B04111	2.5	9.9	ND	0.99	02/04/08	02/07/08	
2,4,5-Trichlorophenol	EPA 625	8B04111	3.0	20	ND	0.99	02/04/08	02/07/08	
2,4,6-Trichlorophenol	EPA 625	8B04111	4.5	20	ND	0.99	02/04/08	02/07/08	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	8B04111	2.5	20	ND	0.99	02/04/08	02/07/08	
N-Nitrosodimethylamine	EPA 625	8B04111	2.5	20	ND	0.99	02/04/08	02/07/08	
Surrogate: 2-Fluorophenol (30-120%)					70 %				
Surrogate: Phenol-d6 (35-120%)					74 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					65 %				
Surrogate: Nitrobenzene-d5 (45-120%)					78 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					84 %				
Surrogate: Terphenyl-d14 (50-125%)					92 %				

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 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Aldrin	EPA 608	8B05099	0.0014	0.0048	ND	0.952	02/05/08	02/06/08	
alpha-BHC	EPA 608	8B05099	0.0024	0.0048	ND	0.952	02/05/08	02/06/08	
beta-BHC	EPA 608	8B05099	0.0038	0.0095	ND	0.952	02/05/08	02/06/08	
delta-BHC	EPA 608	8B05099	0.0033	0.0048	ND	0.952	02/05/08	02/06/08	
gamma-BHC (Lindane)	EPA 608	8B05099	0.0029	0.0095	ND	0.952	02/05/08	02/06/08	
Chlordane	EPA 608	8B05099	0.029	0.095	ND	0.952	02/05/08	02/06/08	
4,4'-DDD	EPA 608	8B05099	0.0019	0.0048	ND	0.952	02/05/08	02/06/08	
4,4'-DDE	EPA 608	8B05099	0.0029	0.0048	ND	0.952	02/05/08	02/06/08	
4,4'-DDT	EPA 608	8B05099	0.0038	0.0095	ND	0.952	02/05/08	02/06/08	
Dieldrin	EPA 608	8B05099	0.0019	0.0048	ND	0.952	02/05/08	02/06/08	
Endosulfan I	EPA 608	8B05099	0.0019	0.0048	ND	0.952	02/05/08	02/06/08	
Endosulfan II	EPA 608	8B05099	0.0029	0.0048	ND	0.952	02/05/08	02/06/08	
Endosulfan sulfate	EPA 608	8B05099	0.0029	0.0095	ND	0.952	02/05/08	02/06/08	
Endrin	EPA 608	8B05099	0.0019	0.0048	ND	0.952	02/05/08	02/06/08	
Endrin aldehyde	EPA 608	8B05099	0.0019	0.0095	ND	0.952	02/05/08	02/06/08	
Endrin ketone	EPA 608	8B05099	0.0029	0.0095	ND	0.952	02/05/08	02/06/08	
Heptachlor	EPA 608	8B05099	0.0029	0.0095	ND	0.952	02/05/08	02/06/08	
Heptachlor epoxide	EPA 608	8B05099	0.0024	0.0048	ND	0.952	02/05/08	02/06/08	
Methoxychlor	EPA 608	8B05099	0.0033	0.0048	ND	0.952	02/05/08	02/06/08	
Toxaphene	EPA 608	8B05099	0.067	0.095	ND	0.952	02/05/08	02/06/08	
Surrogate: Decachlorobiphenyl (45-120%)					81 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					75 %				

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Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	8B05099	0.43	0.48	ND	0.952	02/05/08	02/06/08	
Aroclor 1221	EPA 608	8B05099	0.24	0.48	ND	0.952	02/05/08	02/06/08	
Aroclor 1232	EPA 608	8B05099	0.24	0.48	ND	0.952	02/05/08	02/06/08	
Aroclor 1242	EPA 608	8B05099	0.24	0.48	ND	0.952	02/05/08	02/06/08	
Aroclor 1248	EPA 608	8B05099	0.24	0.48	ND	0.952	02/05/08	02/06/08	
Aroclor 1254	EPA 608	8B05099	0.24	0.48	ND	0.952	02/05/08	02/06/08	
Aroclor 1260	EPA 608	8B05099	0.29	0.48	ND	0.952	02/05/08	02/06/08	
Surrogate: Decachlorobiphenyl (45-120%)					93 %				

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Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08

Received: 02/03/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: mg/l									
Hardness (as CaCO3)	[CALC]	[CALC]	N/A	0.33	41	1	02/04/08	02/04/08	
Boron	EPA 200.7	8B04079	0.020	0.050	0.021	1	02/04/08	02/04/08	Ja
Calcium	EPA 200.7	8B04079	0.050	0.10	11	1	02/04/08	02/04/08	
Iron	EPA 200.7	8B04079	0.015	0.040	1.7	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	2.9	1	02/04/08	02/04/08	

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Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Aluminum</b>	EPA 200.7	8B04079	40	50	<b>2700</b>	1	02/04/08	02/04/08	
<b>Antimony</b>	EPA 200.8	8B04080	0.20	2.0	<b>0.72</b>	1	02/04/08	02/05/08	Ja
Arsenic	EPA 200.7	8B04079	7.0	10	ND	1	02/04/08	02/04/08	
Beryllium	EPA 200.7	8B04079	0.90	2.0	ND	1	02/04/08	02/04/08	
Cadmium	EPA 200.8	8B04080	0.11	1.0	ND	1	02/04/08	02/04/08	
<b>Chromium</b>	EPA 200.7	8B04079	2.0	5.0	<b>2.7</b>	1	02/04/08	02/04/08	Ja
<b>Copper</b>	EPA 200.8	8B04080	0.75	2.0	<b>2.9</b>	1	02/04/08	02/04/08	
<b>Lead</b>	EPA 200.8	8B04080	0.30	1.0	<b>1.4</b>	1	02/04/08	02/04/08	
Nickel	EPA 200.7	8B04079	2.0	10	ND	1	02/04/08	02/04/08	
Selenium	EPA 200.7	8B04079	8.0	10	ND	1	02/04/08	02/04/08	
Silver	EPA 200.7	8B04079	6.0	10	ND	1	02/04/08	02/04/08	
Thallium	EPA 200.8	8B04080	0.20	1.0	ND	1	02/04/08	02/04/08	
<b>Vanadium</b>	EPA 200.7	8B04079	3.0	10	<b>4.5</b>	1	02/04/08	02/04/08	Ja
<b>Zinc</b>	EPA 200.7	8B04079	6.0	20	<b>6.2</b>	1	02/04/08	02/04/08	Ja

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: mg/l									
<b>Boron</b>	EPA 200.7-Diss	8B05111	0.020	0.050	<b>0.022</b>	1	02/05/08	02/06/08	Ja
<b>Calcium</b>	EPA 200.7-Diss	8B05111	0.050	0.10	<b>11</b>	1	02/05/08	02/06/08	
<b>Iron</b>	EPA 200.7-Diss	8B05111	0.015	0.040	<b>0.11</b>	1	02/05/08	02/06/08	
<b>Magnesium</b>	EPA 200.7-Diss	8B05111	0.012	0.020	<b>2.4</b>	1	02/05/08	02/06/08	
<b>Hardness (as CaCO3)</b>	SM2340B	8B05111	1.0	1.0	<b>38</b>	1	02/05/08	02/06/08	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Aluminum</b>	EPA 200.7-Diss	8B05111	40	50	<b>160</b>	1	02/05/08	02/06/08	
<b>Antimony</b>	EPA 200.8-Diss	8B04144	0.20	2.0	<b>0.75</b>	1	02/04/08	02/05/08	Ja
Arsenic	EPA 200.7-Diss	8B05111	7.0	10	ND	1	02/05/08	02/06/08	
Beryllium	EPA 200.7-Diss	8B05111	0.90	2.0	ND	1	02/05/08	02/06/08	
Cadmium	EPA 200.8-Diss	8B04144	0.11	1.0	ND	1	02/04/08	02/05/08	
Chromium	EPA 200.7-Diss	8B05111	2.0	5.0	ND	1	02/05/08	02/06/08	
<b>Copper</b>	EPA 200.8-Diss	8B04144	0.75	2.0	<b>1.6</b>	1	02/04/08	02/05/08	Ja
Lead	EPA 200.8-Diss	8B04144	0.30	1.0	ND	1	02/04/08	02/05/08	
Nickel	EPA 200.7-Diss	8B05111	2.0	10	ND	1	02/05/08	02/06/08	
Selenium	EPA 200.7-Diss	8B05111	8.0	10	ND	1	02/05/08	02/06/08	
Silver	EPA 200.7-Diss	8B05111	6.0	10	ND	1	02/05/08	02/06/08	
Thallium	EPA 200.8-Diss	8B04144	0.20	1.0	ND	1	02/04/08	02/05/08	
<b>Vanadium</b>	EPA 200.7-Diss	8B05111	3.0	10	<b>3.1</b>	1	02/05/08	02/06/08	Ja
Zinc	EPA 200.7-Diss	8B05111	6.0	20	ND	1	02/05/08	02/06/08	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B12074	1.3	4.8	2.1	1	02/12/08	02/12/08	Ja
Chloride	EPA 300.0	8B04043	0.25	0.50	8.0	1	02/04/08	02/04/08	
Fluoride	EPA 300.0	8B04043	0.15	0.50	0.24	1	02/04/08	02/04/08	Ja
Nitrate/Nitrite-N	EPA 300.0	8B04043	0.15	0.26	0.59	1	02/04/08	02/04/08	
Sulfate	EPA 300.0	8B04043	0.20	0.50	9.5	1	02/04/08	02/04/08	
Total Dissolved Solids	SM2540C	8B07122	10	10	130	1	02/07/08	02/07/08	
Total Suspended Solids	EPA 160.2	8B04128	10	10	31	1	02/04/08	02/04/08	

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Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	8B04112	2.2	5.0	ND	1	02/04/08	02/04/08	
Perchlorate	EPA 314.0	8B12073	0.65	4.0	ND	1	02/12/08	02/13/08	

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**NPDES - 1074**

MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Chlorpyrifos	EPA 525.2	C8B0516	0.10	1.0	ND	0.99	02/05/08	02/07/08	P, pH
Diazinon	EPA 525.2	C8B0516	0.24	0.25	ND	0.99	02/05/08	02/07/08	
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					92 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					115 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					97 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08

Received: 02/03/08

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0149-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0171	0.050	0.20	ND	1	02/06/08	02/07/08	
<b>Mercury, Total</b>	EPA 245.1	W8B0171	0.050	0.20	<b>0.068</b>	1	02/06/08	02/07/08	J

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NPDES - 1076

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: Outfall 004 (IRB0149-01) - Water</b>					
EPA 300.0	2	02/03/2008 13:45	02/03/2008 18:25	02/04/2008 05:00	02/04/2008 07:44
EPA 624	3	02/03/2008 13:45	02/03/2008 18:25	02/04/2008 00:00	02/04/2008 13:53
<b>Sample ID: Trip Blanks (IRB0149-02) - Water</b>					
EPA 624	3	02/03/2008 13:45	02/03/2008 18:25	02/04/2008 00:00	02/04/2008 14:22

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**NPDES - 1077**

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Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04007 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04007-BLK1)</b>											
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	0.24	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
1,1-Dichloroethane	ND	0.50	0.27	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
Chloromethane	ND	0.50	0.40	ug/l							
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l							
Dibromochloromethane	ND	0.50	0.28	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	ND	1.0	0.95	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.27	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.30	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	22.9			ug/l	25.0		91	80-120			

### TestAmerica Irvine

Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04007 Extracted: 02/04/08</b>											
<b>LCS Analyzed: 02/04/2008 (8B04007-BS1)</b>											
1,1,1-Trichloroethane	30.6	0.50	0.30	ug/l	25.0		122	65-135			
1,1,2,2-Tetrachloroethane	27.3	0.50	0.24	ug/l	25.0		109	55-130			
1,1,2-Trichloroethane	25.9	0.50	0.30	ug/l	25.0		103	70-125			
1,1-Dichloroethane	29.2	0.50	0.27	ug/l	25.0		117	70-125			
1,1-Dichloroethene	25.5	0.50	0.42	ug/l	25.0		102	70-125			
1,2-Dichloroethane	27.2	0.50	0.28	ug/l	25.0		109	60-140			
1,2-Dichlorobenzene	26.5	0.50	0.32	ug/l	25.0		106	75-120			
1,2-Dichloropropane	26.7	0.50	0.35	ug/l	25.0		107	70-125			
1,3-Dichlorobenzene	26.4	0.50	0.35	ug/l	25.0		106	75-120			
1,4-Dichlorobenzene	24.3	0.50	0.37	ug/l	25.0		97	75-120			
Benzene	25.9	0.50	0.28	ug/l	25.0		103	70-120			
Bromodichloromethane	29.9	0.50	0.30	ug/l	25.0		120	70-135			
Bromoform	22.2	0.50	0.40	ug/l	25.0		89	55-130			
Bromomethane	29.3	1.0	0.42	ug/l	25.0		117	65-140			
Carbon tetrachloride	29.8	0.50	0.28	ug/l	25.0		119	65-140			
Chlorobenzene	24.8	0.50	0.36	ug/l	25.0		99	75-120			
Chloroethane	30.1	1.0	0.40	ug/l	25.0		120	60-140			
Chloroform	30.2	0.50	0.33	ug/l	25.0		121	70-130			
Chloromethane	28.5	0.50	0.40	ug/l	25.0		114	50-140			
cis-1,3-Dichloropropene	24.0	0.50	0.22	ug/l	25.0		96	75-125			
Dibromochloromethane	25.6	0.50	0.28	ug/l	25.0		103	70-140			
Ethylbenzene	27.1	0.50	0.25	ug/l	25.0		108	75-125			
Methylene chloride	27.1	1.0	0.95	ug/l	25.0		108	55-130			
Tetrachloroethene	22.8	0.50	0.32	ug/l	25.0		91	70-125			
Toluene	26.1	0.50	0.36	ug/l	25.0		104	70-120			
trans-1,2-Dichloroethene	29.8	0.50	0.27	ug/l	25.0		119	70-125			
trans-1,3-Dichloropropene	24.1	0.50	0.32	ug/l	25.0		96	70-125			
Trichloroethene	24.6	0.50	0.26	ug/l	25.0		99	70-125			
Trichlorofluoromethane	34.8	0.50	0.34	ug/l	25.0		139	65-145			
Vinyl chloride	29.8	0.50	0.30	ug/l	25.0		119	55-135			
Xylenes, Total	78.7	1.5	0.90	ug/l	75.0		105	70-125			
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	26.0			ug/l	25.0		104	80-120			

### TestAmerica Irvine

Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04007 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/04/2008 (8B04007-MS1)</b>						<b>Source: IRB0146-01</b>					
1,1,1-Trichloroethane	29.1	0.50	0.30	ug/l	25.0	ND	117	65-140			
1,1,2,2-Tetrachloroethane	27.0	0.50	0.24	ug/l	25.0	ND	108	55-135			
1,1,2-Trichloroethane	24.6	0.50	0.30	ug/l	25.0	ND	98	65-130			
1,1-Dichloroethane	27.8	0.50	0.27	ug/l	25.0	ND	111	65-130			
1,1-Dichloroethene	24.9	0.50	0.42	ug/l	25.0	ND	100	60-130			
1,2-Dichloroethane	26.1	0.50	0.28	ug/l	25.0	ND	104	60-140			
1,2-Dichlorobenzene	25.7	0.50	0.32	ug/l	25.0	ND	103	75-125			
1,2-Dichloropropane	25.3	0.50	0.35	ug/l	25.0	ND	101	65-130			
1,3-Dichlorobenzene	25.8	0.50	0.35	ug/l	25.0	ND	103	75-125			
1,4-Dichlorobenzene	23.6	0.50	0.37	ug/l	25.0	ND	94	75-125			
Benzene	25.1	0.50	0.28	ug/l	25.0	ND	101	65-125			
Bromodichloromethane	28.8	0.50	0.30	ug/l	25.0	ND	115	70-135			
Bromoform	21.5	0.50	0.40	ug/l	25.0	ND	86	55-135			
Bromomethane	28.6	1.0	0.42	ug/l	25.0	ND	114	55-145			
Carbon tetrachloride	28.4	0.50	0.28	ug/l	25.0	ND	113	65-140			
Chlorobenzene	23.9	0.50	0.36	ug/l	25.0	ND	96	75-125			
Chloroethane	28.9	1.0	0.40	ug/l	25.0	ND	115	55-140			
Chloroform	28.9	0.50	0.33	ug/l	25.0	ND	116	65-135			
Chloromethane	28.8	0.50	0.40	ug/l	25.0	ND	115	45-145			
cis-1,3-Dichloropropene	22.8	0.50	0.22	ug/l	25.0	ND	91	70-130			
Dibromochloromethane	24.4	0.50	0.28	ug/l	25.0	ND	98	65-140			
Ethylbenzene	26.4	0.50	0.25	ug/l	25.0	ND	106	65-130			
Methylene chloride	26.1	1.0	0.95	ug/l	25.0	ND	104	50-135			
Tetrachloroethene	22.0	0.50	0.32	ug/l	25.0	ND	88	65-130			
Toluene	25.3	0.50	0.36	ug/l	25.0	ND	101	70-125			
trans-1,2-Dichloroethene	28.4	0.50	0.27	ug/l	25.0	ND	114	65-130			
trans-1,3-Dichloropropene	22.5	0.50	0.32	ug/l	25.0	ND	90	65-135			
Trichloroethene	23.9	0.50	0.26	ug/l	25.0	ND	96	65-125			
Trichlorofluoromethane	34.2	0.50	0.34	ug/l	25.0	ND	137	60-145			
Vinyl chloride	29.4	0.50	0.30	ug/l	25.0	ND	118	45-140			
Xylenes, Total	76.3	1.5	0.90	ug/l	75.0	ND	102	60-130			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.7			ug/l	25.0		103	80-120			

TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04007 Extracted: 02/04/08</b>											
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04007-MSD1)</b>						<b>Source: IRB0146-01</b>					
1,1,1-Trichloroethane	28.6	0.50	0.30	ug/l	25.0	ND	114	65-140	2	20	
1,1,2,2-Tetrachloroethane	29.1	0.50	0.24	ug/l	25.0	ND	116	55-135	7	30	
1,1,2-Trichloroethane	26.1	0.50	0.30	ug/l	25.0	ND	104	65-130	6	25	
1,1-Dichloroethane	28.1	0.50	0.27	ug/l	25.0	ND	112	65-130	1	20	
1,1-Dichloroethene	25.1	0.50	0.42	ug/l	25.0	ND	100	60-130	1	20	
1,2-Dichloroethane	26.8	0.50	0.28	ug/l	25.0	ND	107	60-140	2	20	
1,2-Dichlorobenzene	25.8	0.50	0.32	ug/l	25.0	ND	103	75-125	1	20	
1,2-Dichloropropane	25.8	0.50	0.35	ug/l	25.0	ND	103	65-130	2	20	
1,3-Dichlorobenzene	25.4	0.50	0.35	ug/l	25.0	ND	101	75-125	2	20	
1,4-Dichlorobenzene	23.4	0.50	0.37	ug/l	25.0	ND	94	75-125	1	20	
Benzene	25.4	0.50	0.28	ug/l	25.0	ND	102	65-125	1	20	
Bromodichloromethane	29.0	0.50	0.30	ug/l	25.0	ND	116	70-135	1	20	
Bromoform	22.6	0.50	0.40	ug/l	25.0	ND	91	55-135	5	25	
Bromomethane	29.3	1.0	0.42	ug/l	25.0	ND	117	55-145	2	25	
Carbon tetrachloride	27.6	0.50	0.28	ug/l	25.0	ND	110	65-140	3	25	
Chlorobenzene	23.7	0.50	0.36	ug/l	25.0	ND	95	75-125	1	20	
Chloroethane	30.2	1.0	0.40	ug/l	25.0	ND	121	55-140	4	25	
Chloroform	28.8	0.50	0.33	ug/l	25.0	ND	115	65-135	0	20	
Chloromethane	30.9	0.50	0.40	ug/l	25.0	ND	124	45-145	7	25	
cis-1,3-Dichloropropene	23.2	0.50	0.22	ug/l	25.0	ND	93	70-130	2	20	
Dibromochloromethane	24.9	0.50	0.28	ug/l	25.0	ND	100	65-140	2	25	
Ethylbenzene	26.2	0.50	0.25	ug/l	25.0	ND	105	65-130	1	20	
Methylene chloride	27.0	1.0	0.95	ug/l	25.0	ND	108	50-135	3	20	
Tetrachloroethene	21.9	0.50	0.32	ug/l	25.0	ND	88	65-130	1	20	
Toluene	25.2	0.50	0.36	ug/l	25.0	ND	101	70-125	0	20	
trans-1,2-Dichloroethene	28.5	0.50	0.27	ug/l	25.0	ND	114	65-130	1	20	
trans-1,3-Dichloropropene	23.4	0.50	0.32	ug/l	25.0	ND	94	65-135	4	25	
Trichloroethene	24.1	0.50	0.26	ug/l	25.0	ND	96	65-125	1	20	
Trichlorofluoromethane	33.1	0.50	0.34	ug/l	25.0	ND	132	60-145	3	25	
Vinyl chloride	30.5	0.50	0.30	ug/l	25.0	ND	122	45-140	3	30	
Xylenes, Total	74.9	1.5	0.90	ug/l	75.0	ND	100	60-130	2	20	
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			

TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04007 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04007-BLK1)</b>											
Acrolein	ND	5.0	4.0	ug/l							
Acrylonitrile	ND	2.0	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	22.9			ug/l	25.0		91	80-120			
<b>LCS Analyzed: 02/04/2008 (8B04007-BS1)</b>											
2-Chloroethyl vinyl ether	29.5	5.0	1.8	ug/l	25.0		118	25-170			
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	26.0			ug/l	25.0		104	80-120			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04007-MS1) Source: IRB0146-01</b>											
2-Chloroethyl vinyl ether	27.8	5.0	1.8	ug/l	25.0	ND	111	25-170			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.7			ug/l	25.0		103	80-120			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04007-MSD1) Source: IRB0146-01</b>											
2-Chloroethyl vinyl ether	31.1	5.0	1.8	ug/l	25.0	ND	124	25-170	11	25	
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			

TestAmerica Irvine

Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B04111-BLK1)</b>											
Acenaphthene	ND	10	3.0	ug/l							
Acenaphthylene	ND	10	3.0	ug/l							
Aniline	ND	10	2.5	ug/l							
Anthracene	ND	10	2.0	ug/l							
Benzidine	ND	20	8.5	ug/l							
Benzoic acid	ND	20	10	ug/l							
Benzo(a)anthracene	ND	10	2.0	ug/l							
Benzo(b)fluoranthene	ND	10	2.0	ug/l							
Benzo(k)fluoranthene	ND	10	2.5	ug/l							
Benzo(g,h,i)perylene	ND	10	4.0	ug/l							
Benzo(a)pyrene	ND	10	2.0	ug/l							
Benzyl alcohol	ND	20	2.5	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.0	ug/l							
Bis(2-chloroethyl)ether	ND	10	3.0	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	2.5	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	4.0	ug/l							
4-Bromophenyl phenyl ether	ND	10	3.0	ug/l							
Butyl benzyl phthalate	ND	20	4.0	ug/l							
4-Chloroaniline	ND	10	2.0	ug/l							
2-Chloronaphthalene	ND	10	3.0	ug/l							
4-Chloro-3-methylphenol	ND	20	2.5	ug/l							
2-Chlorophenol	ND	10	3.0	ug/l							
4-Chlorophenyl phenyl ether	ND	10	2.5	ug/l							
Chrysene	ND	10	2.5	ug/l							
Dibenz(a,h)anthracene	ND	20	3.0	ug/l							
Dibenzofuran	ND	10	4.0	ug/l							
Di-n-butyl phthalate	ND	20	3.0	ug/l							
1,3-Dichlorobenzene	ND	10	3.0	ug/l							
1,4-Dichlorobenzene	ND	10	2.5	ug/l							
1,2-Dichlorobenzene	ND	10	3.0	ug/l							
3,3-Dichlorobenzidine	ND	20	3.0	ug/l							
2,4-Dichlorophenol	ND	10	3.5	ug/l							
Diethyl phthalate	ND	10	3.5	ug/l							
2,4-Dimethylphenol	ND	20	3.5	ug/l							
Dimethyl phthalate	ND	10	2.0	ug/l							

#### TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B04111-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	4.0	ug/l							
2,4-Dinitrophenol	ND	20	8.0	ug/l							
2,4-Dinitrotoluene	ND	10	3.5	ug/l							
2,6-Dinitrotoluene	ND	10	2.0	ug/l							
Di-n-octyl phthalate	ND	20	3.5	ug/l							
Fluoranthene	ND	10	3.0	ug/l							
Fluorene	ND	10	3.0	ug/l							
Hexachlorobenzene	ND	10	3.0	ug/l							
Hexachlorobutadiene	ND	10	4.0	ug/l							
Hexachlorocyclopentadiene	ND	20	5.0	ug/l							
Hexachloroethane	ND	10	3.5	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	3.5	ug/l							
Isophorone	ND	10	2.5	ug/l							
2-Methylnaphthalene	ND	10	2.0	ug/l							
2-Methylphenol	ND	10	3.0	ug/l							
4-Methylphenol	ND	10	3.0	ug/l							
Naphthalene	ND	10	3.0	ug/l							
2-Nitroaniline	ND	20	2.0	ug/l							
3-Nitroaniline	ND	20	3.0	ug/l							
4-Nitroaniline	ND	20	4.0	ug/l							
Nitrobenzene	ND	20	2.5	ug/l							
2-Nitrophenol	ND	10	3.5	ug/l							
4-Nitrophenol	ND	20	5.5	ug/l							
N-Nitrosodiphenylamine	ND	10	2.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.5	ug/l							
Pentachlorophenol	ND	20	3.5	ug/l							
Phenanthrene	ND	10	3.5	ug/l							
Phenol	ND	10	2.0	ug/l							
Pyrene	ND	10	4.0	ug/l							
1,2,4-Trichlorobenzene	ND	10	2.5	ug/l							
2,4,5-Trichlorophenol	ND	20	3.0	ug/l							
2,4,6-Trichlorophenol	ND	20	4.5	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	2.5	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
Surrogate: 2-Fluorophenol	159			ug/l	200		80			30-120	

**TestAmerica Irvine**

Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B04111-BLK1)</b>											
Surrogate: Phenol-d6	166			ug/l	200		83	35-120			
Surrogate: 2,4,6-Tribromophenol	129			ug/l	200		64	40-120			
Surrogate: Nitrobenzene-d5	83.8			ug/l	100		84	45-120			
Surrogate: 2-Fluorobiphenyl	82.4			ug/l	100		82	50-120			
Surrogate: Terphenyl-d14	82.8			ug/l	100		83	50-125			
<b>LCS Analyzed: 02/07/2008 (8B04111-BS1)</b>											
Acenaphthene	92.8	10	3.0	ug/l	100		93	60-120			
Acenaphthylene	97.0	10	3.0	ug/l	100		97	60-120			
Aniline	86.7	10	2.5	ug/l	100		87	35-120			
Anthracene	91.1	10	2.0	ug/l	100		91	65-120			
Benzidine	161	20	8.5	ug/l	100		161	30-160			L6
Benzoic acid	74.5	20	10	ug/l	100		74	25-120			
Benzo(a)anthracene	95.9	10	2.0	ug/l	100		96	65-120			
Benzo(b)fluoranthene	87.2	10	2.0	ug/l	100		87	55-125			
Benzo(k)fluoranthene	88.9	10	2.5	ug/l	100		89	50-125			
Benzo(g,h,i)perylene	83.0	10	4.0	ug/l	100		83	45-135			
Benzo(a)pyrene	91.9	10	2.0	ug/l	100		92	55-130			
Benzyl alcohol	99.9	20	2.5	ug/l	100		100	50-120			
Bis(2-chloroethoxy)methane	92.9	10	3.0	ug/l	100		93	55-120			
Bis(2-chloroethyl)ether	86.4	10	3.0	ug/l	100		86	50-120			
Bis(2-chloroisopropyl)ether	98.4	10	2.5	ug/l	100		98	45-120			
Bis(2-ethylhexyl)phthalate	99.9	50	4.0	ug/l	100		100	65-130			
4-Bromophenyl phenyl ether	86.0	10	3.0	ug/l	100		86	60-120			
Butyl benzyl phthalate	104	20	4.0	ug/l	100		104	55-130			
4-Chloroaniline	95.8	10	2.0	ug/l	100		96	55-120			
2-Chloronaphthalene	91.9	10	3.0	ug/l	100		92	60-120			
4-Chloro-3-methylphenol	97.9	20	2.5	ug/l	100		98	60-120			
2-Chlorophenol	86.3	10	3.0	ug/l	100		86	45-120			
4-Chlorophenyl phenyl ether	89.9	10	2.5	ug/l	100		90	65-120			
Chrysene	92.3	10	2.5	ug/l	100		92	65-120			
Dibenz(a,h)anthracene	84.8	20	3.0	ug/l	100		85	50-135			
Dibenzofuran	93.2	10	4.0	ug/l	100		93	65-120			
Di-n-butyl phthalate	85.8	20	3.0	ug/l	100		86	60-125			
1,3-Dichlorobenzene	74.9	10	3.0	ug/l	100		75	35-120			
1,4-Dichlorobenzene	79.8	10	2.5	ug/l	100		80	35-120			

#### TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B04111-BS1)</b>											
1,2-Dichlorobenzene	80.6	10	3.0	ug/l	100		81	40-120			
3,3-Dichlorobenzidine	84.1	20	3.0	ug/l	100		84	45-135			
2,4-Dichlorophenol	91.0	10	3.5	ug/l	100		91	55-120			
Diethyl phthalate	92.2	10	3.5	ug/l	100		92	55-120			
2,4-Dimethylphenol	80.5	20	3.5	ug/l	100		81	40-120			
Dimethyl phthalate	89.5	10	2.0	ug/l	100		90	30-120			
4,6-Dinitro-2-methylphenol	85.8	20	4.0	ug/l	100		86	45-120			
2,4-Dinitrophenol	94.2	20	8.0	ug/l	100		94	40-120			
2,4-Dinitrotoluene	101	10	3.5	ug/l	100		101	65-120			
2,6-Dinitrotoluene	98.1	10	2.0	ug/l	100		98	65-120			
Di-n-octyl phthalate	89.3	20	3.5	ug/l	100		89	65-135			
Fluoranthene	82.3	10	3.0	ug/l	100		82	60-120			
Fluorene	95.6	10	3.0	ug/l	100		96	65-120			
Hexachlorobenzene	80.7	10	3.0	ug/l	100		81	60-120			
Hexachlorobutadiene	76.8	10	4.0	ug/l	100		77	40-120			
Hexachlorocyclopentadiene	105	20	5.0	ug/l	100		105	25-120			
Hexachloroethane	76.5	10	3.5	ug/l	100		77	35-120			
Indeno(1,2,3-cd)pyrene	85.2	20	3.5	ug/l	100		85	45-135			
Isophorone	93.8	10	2.5	ug/l	100		94	50-120			
2-Methylnaphthalene	91.2	10	2.0	ug/l	100		91	55-120			
2-Methylphenol	90.9	10	3.0	ug/l	100		91	50-120			
4-Methylphenol	90.3	10	3.0	ug/l	100		90	50-120			
Naphthalene	87.4	10	3.0	ug/l	100		87	55-120			
2-Nitroaniline	105	20	2.0	ug/l	100		105	65-120			
3-Nitroaniline	97.2	20	3.0	ug/l	100		97	60-120			
4-Nitroaniline	99.5	20	4.0	ug/l	100		99	55-125			
Nitrobenzene	93.5	20	2.5	ug/l	100		94	55-120			
2-Nitrophenol	90.9	10	3.5	ug/l	100		91	50-120			
4-Nitrophenol	90.3	20	5.5	ug/l	100		90	45-120			
N-Nitrosodiphenylamine	94.4	10	2.0	ug/l	100		94	60-120			
N-Nitroso-di-n-propylamine	94.6	10	3.5	ug/l	100		95	45-120			
Pentachlorophenol	76.0	20	3.5	ug/l	100		76	50-120			
Phenanthrene	87.8	10	3.5	ug/l	100		88	65-120			
Phenol	84.3	10	2.0	ug/l	100		84	40-120			
Pyrene	112	10	4.0	ug/l	100		112	55-125			

#### TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B04111-BS1)</b>											
1,2,4-Trichlorobenzene	82.1	10	2.5	ug/l	100		82	45-120			
2,4,5-Trichlorophenol	94.0	20	3.0	ug/l	100		94	55-120			
2,4,6-Trichlorophenol	91.5	20	4.5	ug/l	100		92	55-120			
1,2-Diphenylhydrazine/Azobenzene	97.8	20	2.5	ug/l	100		98	60-120			
N-Nitrosodimethylamine	98.9	20	2.5	ug/l	100		99	45-120			
Surrogate: 2-Fluorophenol	167			ug/l	200		83	30-120			
Surrogate: Phenol-d6	171			ug/l	200		86	35-120			
Surrogate: 2,4,6-Tribromophenol	153			ug/l	200		77	40-120			
Surrogate: Nitrobenzene-d5	89.0			ug/l	100		89	45-120			
Surrogate: 2-Fluorobiphenyl	87.6			ug/l	100		88	50-120			
Surrogate: Terphenyl-d14	100			ug/l	100		100	50-125			

### Matrix Spike Analyzed: 02/07/2008 (8B04111-MS1)

Source: IRA3018-06

Acenaphthene	93.7	48	14	ug/l	95.2	ND	98	60-120			
Acenaphthylene	40.8	48	14	ug/l	95.2	ND	43	60-120			M2, Ja
Aniline	53.5	48	12	ug/l	95.2	ND	56	35-120			
Anthracene	84.9	48	9.5	ug/l	95.2	ND	89	65-120			
Benzidine	ND	95	40	ug/l	95.2	ND		30-160			M2
Benzoic acid	107	95	48	ug/l	95.2	ND	112	25-125			
Benzo(a)anthracene	89.0	48	9.5	ug/l	95.2	ND	94	65-120			
Benzo(b)fluoranthene	83.0	48	9.5	ug/l	95.2	ND	87	55-125			
Benzo(k)fluoranthene	95.6	48	12	ug/l	95.2	ND	100	55-125			
Benzo(g,h,i)perylene	68.7	48	19	ug/l	95.2	ND	72	45-135			
Benzo(a)pyrene	90.1	48	9.5	ug/l	95.2	ND	95	55-130			
Benzyl alcohol	34.9	95	12	ug/l	95.2	ND	37	40-120			M2, Ja
Bis(2-chloroethoxy)methane	76.3	48	14	ug/l	95.2	ND	80	50-120			
Bis(2-chloroethyl)ether	106	48	14	ug/l	95.2	ND	112	50-120			
Bis(2-chloroisopropyl)ether	86.9	48	12	ug/l	95.2	ND	91	45-120			
Bis(2-ethylhexyl)phthalate	91.0	240	19	ug/l	95.2	ND	96	65-130			Ja
4-Bromophenyl phenyl ether	75.0	48	14	ug/l	95.2	ND	79	60-120			
Butyl benzyl phthalate	92.6	95	19	ug/l	95.2	ND	97	55-130			Ja
4-Chloroaniline	19.6	48	9.5	ug/l	95.2	ND	21	55-120			M2, Ja
2-Chloronaphthalene	83.3	48	14	ug/l	95.2	ND	87	60-120			
4-Chloro-3-methylphenol	84.0	95	12	ug/l	95.2	ND	88	60-120			Ja
2-Chlorophenol	77.2	48	14	ug/l	95.2	ND	81	45-120			
4-Chlorophenyl phenyl ether	92.5	48	12	ug/l	95.2	ND	97	65-120			

### TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/07/2008 (8B04111-MS1)</b>					<b>Source: IRA3018-06</b>						
Chrysene	85.3	48	12	ug/l	95.2	ND	90	65-120			
Dibenz(a,h)anthracene	71.9	95	14	ug/l	95.2	ND	76	45-135			Ja
Dibenzofuran	89.2	48	19	ug/l	95.2	ND	94	65-120			
Di-n-butyl phthalate	80.5	95	14	ug/l	95.2	ND	84	60-125			Ja
1,3-Dichlorobenzene	71.9	48	14	ug/l	95.2	ND	76	35-120			
1,4-Dichlorobenzene	181	48	12	ug/l	95.2	ND	190	35-120			M1
1,2-Dichlorobenzene	139	48	14	ug/l	95.2	65.3	78	40-120			
3,3-Dichlorobenzidine	ND	95	14	ug/l	95.2	ND		45-135			M2
2,4-Dichlorophenol	81.7	48	17	ug/l	95.2	ND	86	55-120			
Diethyl phthalate	89.8	48	17	ug/l	95.2	ND	94	55-120			
2,4-Dimethylphenol	83.3	95	17	ug/l	95.2	ND	87	40-120			Ja
Dimethyl phthalate	93.8	48	9.5	ug/l	95.2	ND	98	30-120			
4,6-Dinitro-2-methylphenol	121	95	19	ug/l	95.2	ND	128	45-120			M1
2,4-Dinitrophenol	112	95	38	ug/l	95.2	ND	118	40-120			
2,4-Dinitrotoluene	81.5	48	17	ug/l	95.2	ND	86	65-120			
2,6-Dinitrotoluene	81.5	48	9.5	ug/l	95.2	ND	86	65-120			
Di-n-octyl phthalate	87.2	95	17	ug/l	95.2	ND	92	65-135			Ja
Fluoranthene	82.8	48	14	ug/l	95.2	ND	87	60-120			
Fluorene	93.2	48	14	ug/l	95.2	ND	98	65-120			
Hexachlorobenzene	70.5	48	14	ug/l	95.2	ND	74	60-120			
Hexachlorobutadiene	73.3	48	19	ug/l	95.2	ND	77	40-120			
Hexachlorocyclopentadiene	67.8	95	24	ug/l	95.2	ND	71	25-120			Ja
Hexachloroethane	68.9	48	17	ug/l	95.2	ND	72	35-120			
Indeno(1,2,3-cd)pyrene	71.6	95	17	ug/l	95.2	ND	75	40-135			Ja
Isophorone	49.0	48	12	ug/l	95.2	ND	52	50-120			
2-Methylnaphthalene	86.2	48	9.5	ug/l	95.2	ND	90	55-120			
2-Methylphenol	84.3	48	14	ug/l	95.2	ND	88	50-120			
4-Methylphenol	75.9	48	14	ug/l	95.2	ND	80	50-120			
Naphthalene	82.8	48	14	ug/l	95.2	ND	87	55-120			
2-Nitroaniline	91.7	95	9.5	ug/l	95.2	ND	96	65-120			Ja
3-Nitroaniline	27.3	95	14	ug/l	95.2	ND	29	60-120			M2, Ja
4-Nitroaniline	51.6	95	19	ug/l	95.2	ND	54	55-125			M2, Ja
Nitrobenzene	80.4	95	12	ug/l	95.2	ND	84	55-120			Ja
2-Nitrophenol	75.0	48	17	ug/l	95.2	ND	79	50-120			
4-Nitrophenol	110	95	26	ug/l	95.2	ND	115	45-120			

#### TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/07/2008 (8B04111-MS1)</b>						<b>Source: IRA3018-06</b>					
N-Nitrosodiphenylamine	78.2	48	9.5	ug/l	95.2	ND	82	60-120			
N-Nitroso-di-n-propylamine	ND	48	17	ug/l	95.2	ND		45-120			M2
Pentachlorophenol	81.0	95	17	ug/l	95.2	ND	85	50-120			Ja
Phenanthrene	84.2	48	17	ug/l	95.2	ND	88	65-120			
Phenol	79.1	48	9.5	ug/l	95.2	ND	83	40-120			
Pyrene	100	48	19	ug/l	95.2	ND	105	55-125			
1,2,4-Trichlorobenzene	197	48	12	ug/l	95.2	130	71	45-120			
2,4,5-Trichlorophenol	88.3	95	14	ug/l	95.2	ND	93	55-120			Ja
2,4,6-Trichlorophenol	88.8	95	21	ug/l	95.2	ND	93	55-120			Ja
1,2-Diphenylhydrazine/Azobenzene	ND	95	12	ug/l	95.2	ND		60-120			M2
N-Nitrosodimethylamine	ND	95	12	ug/l	95.2	ND		45-120			M2
Surrogate: 2-Fluorophenol	148			ug/l	190		77	30-120			
Surrogate: Phenol-d6	150			ug/l	190		78	35-120			
Surrogate: 2,4,6-Tribromophenol	147			ug/l	190		77	40-120			
Surrogate: Nitrobenzene-d5	74.0			ug/l	95.2		78	45-120			
Surrogate: 2-Fluorobiphenyl	80.5			ug/l	95.2		84	50-120			
Surrogate: Terphenyl-d14	92.3			ug/l	95.2		97	50-125			
<b>Matrix Spike Dup Analyzed: 02/07/2008 (8B04111-MSD1)</b>						<b>Source: IRA3018-06</b>					
Acenaphthene	91.1	48	14	ug/l	95.2	ND	96	60-120	3	25	
Acenaphthylene	53.7	48	14	ug/l	95.2	ND	56	60-120	27	25	M2, R-3
Aniline	49.4	48	12	ug/l	95.2	ND	52	35-120	8	30	
Anthracene	82.0	48	9.5	ug/l	95.2	ND	86	65-120	3	25	
Benzidine	ND	95	40	ug/l	95.2	ND		30-160		35	M2
Benzoic acid	104	95	48	ug/l	95.2	ND	110	25-125	3	30	
Benzo(a)anthracene	83.4	48	9.5	ug/l	95.2	ND	88	65-120	7	20	
Benzo(b)fluoranthene	79.0	48	9.5	ug/l	95.2	ND	83	55-125	5	25	
Benzo(k)fluoranthene	87.0	48	12	ug/l	95.2	ND	91	55-125	9	30	
Benzo(g,h,i)perylene	65.9	48	19	ug/l	95.2	ND	69	45-135	4	30	
Benzo(a)pyrene	85.2	48	9.5	ug/l	95.2	ND	90	55-130	6	25	
Benzyl alcohol	36.6	95	12	ug/l	95.2	ND	38	40-120	5	30	M2, Ja
Bis(2-chloroethoxy)methane	70.4	48	14	ug/l	95.2	ND	74	50-120	8	25	
Bis(2-chloroethyl)ether	68.1	48	14	ug/l	95.2	ND	72	50-120	44	25	R
Bis(2-chloroisopropyl)ether	83.1	48	12	ug/l	95.2	ND	87	45-120	4	25	
Bis(2-ethylhexyl)phthalate	86.8	240	19	ug/l	95.2	ND	91	65-130	5	25	Ja
4-Bromophenyl phenyl ether	69.8	48	14	ug/l	95.2	ND	73	60-120	7	25	

#### TestAmerica Irvine

Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Matrix Spike Dup Analyzed: 02/07/2008 (8B04111-MSD1)</b>						<b>Source: IRA3018-06</b>					
Butyl benzyl phthalate	90.5	95	19	ug/l	95.2	ND	95	55-130	2	25	Ja
4-Chloroaniline	39.1	48	9.5	ug/l	95.2	ND	41	55-120	66	25	M2, R-3, Ja
2-Chloronaphthalene	78.2	48	14	ug/l	95.2	ND	82	60-120	6	20	
4-Chloro-3-methylphenol	82.4	95	12	ug/l	95.2	ND	86	60-120	2	25	Ja
2-Chlorophenol	69.2	48	14	ug/l	95.2	ND	73	45-120	11	25	
4-Chlorophenyl phenyl ether	84.3	48	12	ug/l	95.2	ND	88	65-120	9	25	
Chrysene	83.3	48	12	ug/l	95.2	ND	87	65-120	2	25	
Dibenz(a,h)anthracene	69.2	95	14	ug/l	95.2	ND	73	45-135	4	30	Ja
Dibenzofuran	82.9	48	19	ug/l	95.2	ND	87	65-120	7	25	
Di-n-butyl phthalate	77.4	95	14	ug/l	95.2	ND	81	60-125	4	25	Ja
1,3-Dichlorobenzene	64.5	48	14	ug/l	95.2	ND	68	35-120	11	25	
1,4-Dichlorobenzene	168	48	12	ug/l	95.2	ND	177	35-120	7	25	M1
1,2-Dichlorobenzene	123	48	14	ug/l	95.2	65.3	61	40-120	12	25	
3,3-Dichlorobenzidine	ND	95	14	ug/l	95.2	ND		45-135		25	M2
2,4-Dichlorophenol	76.4	48	17	ug/l	95.2	ND	80	55-120	7	25	
Diethyl phthalate	85.0	48	17	ug/l	95.2	ND	89	55-120	6	30	
2,4-Dimethylphenol	75.8	95	17	ug/l	95.2	ND	80	40-120	9	25	Ja
Dimethyl phthalate	87.5	48	9.5	ug/l	95.2	ND	92	30-120	7	30	
4,6-Dinitro-2-methylphenol	112	95	19	ug/l	95.2	ND	118	45-120	8	25	
2,4-Dinitrophenol	91.4	95	38	ug/l	95.2	ND	96	40-120	20	25	Ja
2,4-Dinitrotoluene	69.1	48	17	ug/l	95.2	ND	73	65-120	16	25	
2,6-Dinitrotoluene	77.2	48	9.5	ug/l	95.2	ND	81	65-120	5	20	
Di-n-octyl phthalate	81.3	95	17	ug/l	95.2	ND	85	65-135	7	20	Ja
Fluoranthene	79.0	48	14	ug/l	95.2	ND	83	60-120	5	25	
Fluorene	88.1	48	14	ug/l	95.2	ND	92	65-120	6	25	
Hexachlorobenzene	69.5	48	14	ug/l	95.2	ND	73	60-120	1	25	
Hexachlorobutadiene	66.5	48	19	ug/l	95.2	ND	70	40-120	10	25	
Hexachlorocyclopentadiene	41.9	95	24	ug/l	95.2	ND	44	25-120	47	30	R, Ja
Hexachloroethane	58.5	48	17	ug/l	95.2	ND	61	35-120	16	25	
Indeno(1,2,3-cd)pyrene	67.4	95	17	ug/l	95.2	ND	71	40-135	6	30	Ja
Isophorone	50.0	48	12	ug/l	95.2	ND	52	50-120	2	25	
2-Methylnaphthalene	79.4	48	9.5	ug/l	95.2	ND	83	55-120	8	20	
2-Methylphenol	73.3	48	14	ug/l	95.2	ND	77	50-120	14	25	
4-Methylphenol	70.0	48	14	ug/l	95.2	ND	74	50-120	8	25	
Naphthalene	82.0	48	14	ug/l	95.2	ND	86	55-120	1	25	

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>Matrix Spike Dup Analyzed: 02/07/2008 (8B04111-MSD1)</b>						<b>Source: IRA3018-06</b>					
2-Nitroaniline	85.6	95	9.5	ug/l	95.2	ND	90	65-120	7	25	Ja
3-Nitroaniline	18.4	95	14	ug/l	95.2	ND	19	60-120	39	25	M2, R-3, Ja
4-Nitroaniline	31.6	95	19	ug/l	95.2	ND	33	55-125	48	25	M2, R-3, Ja
Nitrobenzene	80.5	95	12	ug/l	95.2	ND	84	55-120	0	25	Ja
2-Nitrophenol	72.8	48	17	ug/l	95.2	ND	76	50-120	3	25	
4-Nitrophenol	134	95	26	ug/l	95.2	ND	141	45-120	20	30	M1
N-Nitrosodiphenylamine	60.8	48	9.5	ug/l	95.2	ND	64	60-120	25	25	
N-Nitroso-di-n-propylamine	ND	48	17	ug/l	95.2	ND		45-120		25	M2
Pentachlorophenol	76.7	95	17	ug/l	95.2	ND	80	50-120	5	25	Ja
Phenanthrene	79.1	48	17	ug/l	95.2	ND	83	65-120	6	25	
Phenol	69.3	48	9.5	ug/l	95.2	ND	73	40-120	13	25	
Pyrene	96.9	48	19	ug/l	95.2	ND	102	55-125	3	25	
1,2,4-Trichlorobenzene	182	48	12	ug/l	95.2	130	55	45-120	8	20	
2,4,5-Trichlorophenol	75.5	95	14	ug/l	95.2	ND	79	55-120	16	30	Ja
2,4,6-Trichlorophenol	80.5	95	21	ug/l	95.2	ND	84	55-120	10	30	Ja
1,2-Diphenylhydrazine/Azobenzene	ND	95	12	ug/l	95.2	ND		60-120		25	M2
N-Nitrosodimethylamine	ND	95	12	ug/l	95.2	ND		45-120		25	M2
Surrogate: 2-Fluorophenol	138			ug/l	190		72	30-120			
Surrogate: Phenol-d6	132			ug/l	190		70	35-120			
Surrogate: 2,4,6-Tribromophenol	134			ug/l	190		70	40-120			
Surrogate: Nitrobenzene-d5	72.5			ug/l	95.2		76	45-120			
Surrogate: 2-Fluorobiphenyl	77.3			ug/l	95.2		81	50-120			
Surrogate: Terphenyl-d14	86.6			ug/l	95.2		91	50-125			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B05099 Extracted: 02/05/08</b>											
<b>Blank Analyzed: 02/06/2008 (8B05099-BLK1)</b>											
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
gamma-BHC (Lindane)	ND	0.010	0.0030	ug/l							
Chlordane	ND	0.10	0.030	ug/l							
4,4'-DDD	ND	0.0050	0.0020	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
Endrin ketone	ND	0.010	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Methoxychlor	ND	0.0050	0.0035	ug/l							
Toxaphene	ND	0.10	0.070	ug/l							
Surrogate: Decachlorobiphenyl	0.419			ug/l	0.500		84	45-120			
Surrogate: Tetrachloro-m-xylene	0.419			ug/l	0.500		84	35-115			

### LCS Analyzed: 02/07/2008 (8B05099-BS1)

Aldrin	0.417	0.0050	0.0015	ug/l	0.500		83	40-115			
alpha-BHC	0.404	0.0050	0.0025	ug/l	0.500		81	45-115			
beta-BHC	0.419	0.010	0.0040	ug/l	0.500		84	55-115			
delta-BHC	0.453	0.0050	0.0035	ug/l	0.500		91	55-115			
gamma-BHC (Lindane)	0.433	0.010	0.0030	ug/l	0.500		87	45-115			
4,4'-DDD	0.496	0.0050	0.0020	ug/l	0.500		99	55-120			
4,4'-DDE	0.488	0.0050	0.0030	ug/l	0.500		98	50-120			
4,4'-DDT	0.491	0.010	0.0040	ug/l	0.500		98	55-120			
Dieldrin	0.455	0.0050	0.0020	ug/l	0.500		91	55-115			
Endosulfan I	0.464	0.0050	0.0020	ug/l	0.500		93	55-115			
Endosulfan II	0.439	0.0050	0.0030	ug/l	0.500		88	55-120			
Endosulfan sulfate	0.506	0.010	0.0030	ug/l	0.500		101	60-120			

MNR1

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B05099 Extracted: 02/05/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B05099-BS1)</b>											
Endrin	0.511	0.0050	0.0020	ug/l	0.500		102	55-115			MNR1
Endrin aldehyde	0.483	0.010	0.0020	ug/l	0.500		97	50-120			
Endrin ketone	0.520	0.010	0.0030	ug/l	0.500		104	55-120			
Heptachlor	0.406	0.010	0.0030	ug/l	0.500		81	45-115			
Heptachlor epoxide	0.442	0.0050	0.0025	ug/l	0.500		88	55-115			
Methoxychlor	0.508	0.0050	0.0035	ug/l	0.500		102	60-120			
Surrogate: Decachlorobiphenyl	0.436			ug/l	0.500		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.414			ug/l	0.500		83	35-115			
<b>LCS Dup Analyzed: 02/07/2008 (8B05099-BSD1)</b>											
Aldrin	0.381	0.0050	0.0015	ug/l	0.500		76	40-115	9	30	
alpha-BHC	0.386	0.0050	0.0025	ug/l	0.500		77	45-115	5	30	
beta-BHC	0.398	0.010	0.0040	ug/l	0.500		80	55-115	5	30	
delta-BHC	0.409	0.0050	0.0035	ug/l	0.500		82	55-115	10	30	
gamma-BHC (Lindane)	0.408	0.010	0.0030	ug/l	0.500		82	45-115	6	30	
4,4'-DDD	0.455	0.0050	0.0020	ug/l	0.500		91	55-120	9	30	
4,4'-DDE	0.444	0.0050	0.0030	ug/l	0.500		89	50-120	9	30	
4,4'-DDT	0.451	0.010	0.0040	ug/l	0.500		90	55-120	9	30	
Dieldrin	0.421	0.0050	0.0020	ug/l	0.500		84	55-115	8	30	
Endosulfan I	0.430	0.0050	0.0020	ug/l	0.500		86	55-115	8	30	
Endosulfan II	0.406	0.0050	0.0030	ug/l	0.500		81	55-120	8	30	
Endosulfan sulfate	0.463	0.010	0.0030	ug/l	0.500		93	60-120	9	30	
Endrin	0.471	0.0050	0.0020	ug/l	0.500		94	55-115	8	30	
Endrin aldehyde	0.442	0.010	0.0020	ug/l	0.500		88	50-120	9	30	
Endrin ketone	0.477	0.010	0.0030	ug/l	0.500		95	55-120	8	30	
Heptachlor	0.373	0.010	0.0030	ug/l	0.500		75	45-115	8	30	
Heptachlor epoxide	0.410	0.0050	0.0025	ug/l	0.500		82	55-115	8	30	
Methoxychlor	0.458	0.0050	0.0035	ug/l	0.500		92	60-120	11	30	
Surrogate: Decachlorobiphenyl	0.403			ug/l	0.500		81	45-120			
Surrogate: Tetrachloro-m-xylene	0.382			ug/l	0.500		76	35-115			

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B05099 Extracted: 02/05/08</b>											
<b>Blank Analyzed: 02/06/2008 (8B05099-BLK1)</b>											
Aroclor 1016	ND	0.50	0.45	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.30	ug/l							
Surrogate: Decachlorobiphenyl	0.420			ug/l	0.500		84	45-120			
<b>LCS Analyzed: 02/06/2008 (8B05099-BS2)</b>											
Aroclor 1016	3.28	0.50	0.45	ug/l	4.00		82	50-115			MNR1
Aroclor 1260	3.60	0.50	0.30	ug/l	4.00		90	60-120			
Surrogate: Decachlorobiphenyl	0.440			ug/l	0.500		88	45-120			
<b>LCS Dup Analyzed: 02/06/2008 (8B05099-BSD2)</b>											
Aroclor 1016	3.13	0.50	0.45	ug/l	4.00		78	50-115	5	30	
Aroclor 1260	3.56	0.50	0.30	ug/l	4.00		89	60-120	1	25	
Surrogate: Decachlorobiphenyl	0.435			ug/l	0.500		87	45-120			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04079 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04079-BLK1)</b>											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Silver	ND	10	6.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							
<b>LCS Analyzed: 02/04/2008 (8B04079-BS1)</b>											
Aluminum	524	50	40	ug/l	500		105	85-115			
Arsenic	504	10	7.0	ug/l	500		101	85-115			
Beryllium	510	2.0	0.90	ug/l	500		102	85-115			
Boron	0.514	0.050	0.020	mg/l	0.500		103	85-115			
Calcium	2.65	0.10	0.050	mg/l	2.50		106	85-115			
Chromium	517	5.0	2.0	ug/l	500		103	85-115			
Iron	0.529	0.040	0.015	mg/l	0.500		106	85-115			
Magnesium	2.63	0.020	0.012	mg/l	2.50		105	85-115			
Nickel	513	10	2.0	ug/l	500		103	85-115			
Selenium	492	10	8.0	ug/l	500		98	85-115			
Silver	262	10	6.0	ug/l	250		105	85-115			
Vanadium	503	10	3.0	ug/l	500		101	85-115			
Zinc	507	20	6.0	ug/l	500		101	85-115			

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Report Number: IRB0149

Sampled: 02/03/08  
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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04079 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/04/2008 (8B04079-MS1)</b>						<b>Source: IRB0153-01</b>					
Aluminum	611	50	40	ug/l	500	94.8	103	70-130			
Arsenic	496	10	7.0	ug/l	500	ND	99	70-130			
Beryllium	503	2.0	0.90	ug/l	500	ND	101	70-130			
Boron	0.503	0.050	0.020	mg/l	0.500	ND	101	70-130			
Calcium	53.7	0.10	0.050	mg/l	2.50	52.8	38	70-130			MHA
Chromium	502	5.0	2.0	ug/l	500	2.15	100	70-130			
Iron	0.590	0.040	0.015	mg/l	0.500	0.0952	99	70-130			
Magnesium	9.71	0.020	0.012	mg/l	2.50	7.62	84	70-130			
Nickel	495	10	2.0	ug/l	500	ND	99	70-130			
Selenium	470	10	8.0	ug/l	500	ND	94	70-130			
Silver	256	10	6.0	ug/l	250	ND	103	70-130			
Vanadium	487	10	3.0	ug/l	500	ND	97	70-130			
Zinc	496	20	6.0	ug/l	500	9.15	97	70-130			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04079-MS2)</b>						<b>Source: IRB0155-01</b>					
Aluminum	1190	50	40	ug/l	500	692	100	70-130			
Arsenic	509	10	7.0	ug/l	500	ND	102	70-130			
Beryllium	515	2.0	0.90	ug/l	500	ND	103	70-130			
Boron	0.503	0.050	0.020	mg/l	0.500	ND	101	70-130			
Calcium	8.02	0.10	0.050	mg/l	2.50	5.65	95	70-130			
Chromium	522	5.0	2.0	ug/l	500	ND	104	70-130			
Iron	0.872	0.040	0.015	mg/l	0.500	0.382	98	70-130			
Magnesium	3.33	0.020	0.012	mg/l	2.50	0.768	102	70-130			
Nickel	515	10	2.0	ug/l	500	ND	103	70-130			
Selenium	487	10	8.0	ug/l	500	ND	97	70-130			
Silver	260	10	6.0	ug/l	250	ND	104	70-130			
Vanadium	501	10	3.0	ug/l	500	ND	100	70-130			
Zinc	538	20	6.0	ug/l	500	32.2	101	70-130			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04079 Extracted: 02/04/08</b>											
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04079-MSD1)</b>						<b>Source: IRB0153-01</b>					
Aluminum	600	50	40	ug/l	500	94.8	101	70-130	2	20	
Arsenic	506	10	7.0	ug/l	500	ND	101	70-130	2	20	
Beryllium	516	2.0	0.90	ug/l	500	ND	103	70-130	3	20	
Boron	0.499	0.050	0.020	mg/l	0.500	ND	100	70-130	1	20	
Calcium	53.2	0.10	0.050	mg/l	2.50	52.8	19	70-130	1	20	MHA
Chromium	512	5.0	2.0	ug/l	500	2.15	102	70-130	2	20	
Iron	0.596	0.040	0.015	mg/l	0.500	0.0952	100	70-130	1	20	
Magnesium	9.64	0.020	0.012	mg/l	2.50	7.62	81	70-130	1	20	
Nickel	507	10	2.0	ug/l	500	ND	101	70-130	2	20	
Selenium	491	10	8.0	ug/l	500	ND	98	70-130	4	20	
Silver	256	10	6.0	ug/l	250	ND	102	70-130	0	20	
Vanadium	497	10	3.0	ug/l	500	ND	99	70-130	2	20	
Zinc	513	20	6.0	ug/l	500	9.15	101	70-130	3	20	

**Batch: 8B04080 Extracted: 02/04/08**

**Blank Analyzed: 02/04/2008-02/05/2008 (8B04080-BLK1)**

Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							

**LCS Analyzed: 02/04/2008-02/05/2008 (8B04080-BS1)**

Antimony	84.2	2.0	0.20	ug/l	80.0		105	85-115			
Cadmium	83.7	1.0	0.11	ug/l	80.0		105	85-115			
Copper	83.0	2.0	0.75	ug/l	80.0		104	85-115			
Lead	83.3	1.0	0.30	ug/l	80.0		104	85-115			
Thallium	83.4	1.0	0.20	ug/l	80.0		104	85-115			

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 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04080 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/04/2008-02/05/2008 (8B04080-MS1)</b>						<b>Source: IRB0150-01</b>					
Antimony	82.0	2.0	0.20	ug/l	80.0	0.423	102	70-130			
Cadmium	80.7	1.0	0.11	ug/l	80.0	0.208	101	70-130			
Copper	78.5	2.0	0.75	ug/l	80.0	1.69	96	70-130			
Lead	76.9	1.0	0.30	ug/l	80.0	0.512	96	70-130			
Thallium	79.0	1.0	0.20	ug/l	80.0	ND	99	70-130			
<b>Matrix Spike Analyzed: 02/04/2008-02/05/2008 (8B04080-MS2)</b>						<b>Source: IRB0152-01</b>					
Antimony	80.5	2.0	0.20	ug/l	80.0	1.58	99	70-130			
Cadmium	79.1	1.0	0.11	ug/l	80.0	0.164	99	70-130			
Copper	82.5	2.0	0.75	ug/l	80.0	4.75	97	70-130			
Lead	84.1	1.0	0.30	ug/l	80.0	6.01	98	70-130			
Thallium	80.7	1.0	0.20	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 02/04/2008-02/05/2008 (8B04080-MSD1)</b>						<b>Source: IRB0150-01</b>					
Antimony	83.6	2.0	0.20	ug/l	80.0	0.423	104	70-130	2	20	
Cadmium	81.2	1.0	0.11	ug/l	80.0	0.208	101	70-130	1	20	
Copper	79.1	2.0	0.75	ug/l	80.0	1.69	97	70-130	1	20	
Lead	78.6	1.0	0.30	ug/l	80.0	0.512	98	70-130	2	20	
Thallium	80.1	1.0	0.20	ug/l	80.0	ND	100	70-130	1	20	

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 Received: 02/03/08

## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04144 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/05/2008 (8B04144-BLK1)</b>											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
<b>LCS Analyzed: 02/05/2008 (8B04144-BS1)</b>											
Antimony	84.8	2.0	0.20	ug/l	80.0		106	85-115			
Cadmium	82.9	1.0	0.11	ug/l	80.0		104	85-115			
Copper	80.0	2.0	0.75	ug/l	80.0		100	85-115			
Lead	80.0	1.0	0.30	ug/l	80.0		100	85-115			
Thallium	82.5	1.0	0.20	ug/l	80.0		103	85-115			
<b>Matrix Spike Analyzed: 02/05/2008 (8B04144-MS1) Source: IRB0073-01</b>											
Antimony	84.0	2.0	0.20	ug/l	80.0	0.305	105	70-130			
Cadmium	84.5	1.0	0.11	ug/l	80.0	0.221	105	70-130			
Copper	77.7	2.0	0.75	ug/l	80.0	1.70	95	70-130			
Lead	74.3	1.0	0.30	ug/l	80.0	ND	93	70-130			
Thallium	76.6	1.0	0.20	ug/l	80.0	ND	96	70-130			
<b>Matrix Spike Dup Analyzed: 02/05/2008 (8B04144-MSD1) Source: IRB0073-01</b>											
Antimony	83.1	2.0	0.20	ug/l	80.0	0.305	103	70-130	1	20	
Cadmium	84.2	1.0	0.11	ug/l	80.0	0.221	105	70-130	0	20	
Copper	79.5	2.0	0.75	ug/l	80.0	1.70	97	70-130	2	20	
Lead	74.4	1.0	0.30	ug/l	80.0	ND	93	70-130	0	20	
Thallium	76.2	1.0	0.20	ug/l	80.0	ND	95	70-130	0	20	

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Sampled: 02/03/08  
 Received: 02/03/08

## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B05111 Extracted: 02/05/08</b>											
<b>Blank Analyzed: 02/06/2008 (8B05111-BLK1)</b>											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Hardness (as CaCO3)	ND	1.0	1.0	mg/l							
Silver	ND	10	6.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							
<b>LCS Analyzed: 02/06/2008 (8B05111-BS1)</b>											
Aluminum	563	50	40	ug/l	500		113	85-115			
Arsenic	525	10	7.0	ug/l	500		105	85-115			
Beryllium	519	2.0	0.90	ug/l	500		104	85-115			
Boron	0.520	0.050	0.020	mg/l	0.500		104	85-115			
Calcium	2.67	0.10	0.050	mg/l	2.50		107	85-115			
Chromium	512	5.0	2.0	ug/l	500		102	85-115			
Iron	0.526	0.040	0.015	mg/l	0.500		105	85-115			
Magnesium	2.60	0.020	0.012	mg/l	2.50		104	85-115			
Nickel	515	10	2.0	ug/l	500		103	85-115			
Selenium	491	10	8.0	ug/l	500		98	85-115			
Silver	256	10	6.0	ug/l	250		102	85-115			
Vanadium	509	10	3.0	ug/l	500		102	85-115			
Zinc	509	20	6.0	ug/l	500		102	85-115			

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## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B05111 Extracted: 02/05/08</b>											
<b>Matrix Spike Analyzed: 02/06/2008 (8B05111-MS1)</b>					<b>Source: IRB0073-01</b>						
Aluminum	564	50	40	ug/l	500	62.5	100	70-130			
Arsenic	519	10	7.0	ug/l	500	ND	104	70-130			
Beryllium	513	2.0	0.90	ug/l	500	ND	103	70-130			
Boron	0.549	0.050	0.020	mg/l	0.500	0.0311	104	70-130			
Calcium	58.9	0.10	0.050	mg/l	2.50	55.2	147	70-130			MHA
Chromium	502	5.0	2.0	ug/l	500	ND	100	70-130			
Iron	0.554	0.040	0.015	mg/l	0.500	0.0302	105	70-130			
Magnesium	10.3	0.020	0.012	mg/l	2.50	7.52	112	70-130			
Nickel	514	10	2.0	ug/l	500	11.5	101	70-130			
Selenium	486	10	8.0	ug/l	500	ND	97	70-130			
Silver	257	10	6.0	ug/l	250	ND	103	70-130			
Vanadium	507	10	3.0	ug/l	500	ND	101	70-130			
Zinc	509	20	6.0	ug/l	500	11.6	99	70-130			
<b>Matrix Spike Dup Analyzed: 02/06/2008 (8B05111-MSD1)</b>					<b>Source: IRB0073-01</b>						
Aluminum	587	50	40	ug/l	500	62.5	105	70-130	4	20	
Arsenic	541	10	7.0	ug/l	500	ND	108	70-130	4	20	
Beryllium	518	2.0	0.90	ug/l	500	ND	104	70-130	1	20	
Boron	0.554	0.050	0.020	mg/l	0.500	0.0311	105	70-130	1	20	
Calcium	58.4	0.10	0.050	mg/l	2.50	55.2	125	70-130	1	20	MHA
Chromium	517	5.0	2.0	ug/l	500	ND	103	70-130	3	20	
Iron	0.565	0.040	0.015	mg/l	0.500	0.0302	107	70-130	2	20	
Magnesium	10.3	0.020	0.012	mg/l	2.50	7.52	112	70-130	0	20	
Nickel	530	10	2.0	ug/l	500	11.5	104	70-130	3	20	
Selenium	503	10	8.0	ug/l	500	ND	101	70-130	3	20	
Silver	262	10	6.0	ug/l	250	ND	105	70-130	2	20	
Vanadium	518	10	3.0	ug/l	500	ND	104	70-130	2	20	
Zinc	528	20	6.0	ug/l	500	11.6	103	70-130	4	20	

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Sampled: 02/03/08  
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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04043 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04043-BLK1)</b>											
Chloride	ND	0.50	0.25	mg/l							
Fluoride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
<b>LCS Analyzed: 02/04/2008 (8B04043-BS1)</b>											
Chloride	5.33	0.50	0.25	mg/l	5.00		107	90-110			
Fluoride	5.14	0.50	0.15	mg/l	5.00		103	90-110			
Sulfate	10.6	0.50	0.20	mg/l	10.0		106	90-110			M-3
<b>Matrix Spike Analyzed: 02/04/2008 (8B04043-MS1) Source: IRB0146-01</b>											
Chloride	27.0	0.50	0.25	mg/l	5.00	21.6	109	80-120			
Fluoride	5.30	0.50	0.15	mg/l	5.00	0.288	100	80-120			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04043-MS2) Source: IRB0156-01</b>											
Chloride	27.7	0.50	0.25	mg/l	5.00	22.9	96	80-120			
Fluoride	5.01	0.50	0.15	mg/l	5.00	0.306	94	80-120			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04043-MSD1) Source: IRB0146-01</b>											
Chloride	27.2	0.50	0.25	mg/l	5.00	21.6	112	80-120	1	20	
Fluoride	5.46	0.50	0.15	mg/l	5.00	0.288	103	80-120	3	20	
<b>Batch: 8B04112 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04112-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							

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Sampled: 02/03/08  
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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8B04112 Extracted: 02/04/08</u></b>											
<b>LCS Analyzed: 02/04/2008 (8B04112-BS1)</b>											
Total Cyanide	184	5.0	2.2	ug/l	200		92	90-110			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04112-MS1)</b>											
						<b>Source: IRA3072-06</b>					
Total Cyanide	189	5.0	2.2	ug/l	200	ND	94	70-115			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04112-MSD1)</b>											
						<b>Source: IRA3072-06</b>					
Total Cyanide	189	5.0	2.2	ug/l	200	ND	95	70-115	0	15	
<b><u>Batch: 8B04128 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/04/2008 (8B04128-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/04/2008 (8B04128-BS1)</b>											
Total Suspended Solids	971	10	10	mg/l	1000		97	85-115			
<b>Duplicate Analyzed: 02/04/2008 (8B04128-DUP1)</b>											
						<b>Source: IRB0070-02</b>					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b><u>Batch: 8B07122 Extracted: 02/07/08</u></b>											
<b>Blank Analyzed: 02/07/2008 (8B07122-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/07/2008 (8B07122-BS1)</b>											
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			

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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B07122 Extracted: 02/07/08</b>											
<b>Duplicate Analyzed: 02/07/2008 (8B07122-DUP1)</b>						<b>Source: IRB0146-01</b>					
Total Dissolved Solids	296	10	10	mg/l		292			1	10	
<b>Batch: 8B12073 Extracted: 02/12/08</b>											
<b>Blank Analyzed: 02/12/2008 (8B12073-BLK1)</b>											
Perchlorate	ND	1.0	0.65	ug/l							
<b>LCS Analyzed: 02/12/2008 (8B12073-BS1)</b>											
Perchlorate	55.4	1.0	0.65	ug/l	50.0		111	85-115			
<b>Matrix Spike Analyzed: 02/12/2008 (8B12073-MS1)</b>						<b>Source: IRB0150-01</b>					
Perchlorate	50.5	1.0	0.65	ug/l	50.0	ND	101	80-120			
<b>Matrix Spike Dup Analyzed: 02/12/2008 (8B12073-MSD1)</b>						<b>Source: IRB0150-01</b>					
Perchlorate	50.8	1.0	0.65	ug/l	50.0	ND	102	80-120	1	20	
<b>Batch: 8B12074 Extracted: 02/12/08</b>											
<b>Blank Analyzed: 02/12/2008 (8B12074-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
<b>LCS Analyzed: 02/12/2008 (8B12074-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	20.0	5.0	1.4	mg/l	20.2		99	78-114			MNRI
<b>LCS Dup Analyzed: 02/12/2008 (8B12074-BSD1)</b>											
Hexane Extractable Material (Oil & Grease)	18.5	5.0	1.4	mg/l	20.2		92	78-114	8	11	

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## METHOD BLANK/QC DATA

### ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: C8B0516 Extracted: 02/05/08</b>											
<b>Blank Analyzed: 02/07/2008 (C8B0516-BLK1)</b>											
Chlorpyrifos	ND	1.0	0.10	ug/l							
Diazinon	ND	0.25	0.24	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.76			ug/l	5.00		95	70-130			
Surrogate: Triphenylphosphate	5.79			ug/l	5.00		116	70-130			
Surrogate: Perylene-d12	5.00			ug/l	5.00		100	70-130			
<b>LCS Analyzed: 02/07/2008 (C8B0516-BS1)</b>											
Chlorpyrifos	5.48	1.0	0.10	ug/l	5.00		110	70-130			
Diazinon	3.82	0.25	0.24	ug/l	5.00		76	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.66			ug/l	5.00		93	70-130			
Surrogate: Triphenylphosphate	5.66			ug/l	5.00		113	70-130			
Surrogate: Perylene-d12	4.87			ug/l	5.00		97	70-130			
<b>LCS Dup Analyzed: 02/07/2008 (C8B0516-BSD1)</b>											
Chlorpyrifos	4.90	1.0	0.10	ug/l	5.00		98	70-130	11	10	R-7
Diazinon	3.82	0.25	0.24	ug/l	5.00		76	70-130	0	50	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.50			ug/l	5.00		90	70-130			
Surrogate: Triphenylphosphate	5.52			ug/l	5.00		110	70-130			
Surrogate: Perylene-d12	4.79			ug/l	5.00		96	70-130			

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## METHOD BLANK/QC DATA

### Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: W8B0171 Extracted: 02/06/08</b>											
<b>Blank Analyzed: 02/07/2008 (W8B0171-BLK1)</b>											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 02/07/2008 (W8B0171-BS1)</b>											
Mercury, Dissolved	1.04	0.20	0.050	ug/l	1.00		104	85-115			
Mercury, Total	1.04	0.20	0.050	ug/l	1.00		104	85-115			
<b>Matrix Spike Analyzed: 02/07/2008 (W8B0171-MS1) Source: 8020543-01</b>											
Mercury, Dissolved	1.02	0.20	0.050	ug/l	1.00	ND	102	70-130			
Mercury, Total	1.02	0.20	0.050	ug/l	1.00	ND	102	70-130			
<b>Matrix Spike Analyzed: 02/07/2008 (W8B0171-MS2) Source: 8020544-01</b>											
Mercury, Dissolved	1.05	0.20	0.050	ug/l	1.00	ND	105	70-130			
Mercury, Total	1.05	0.20	0.050	ug/l	1.00	ND	105	70-130			
<b>Matrix Spike Dup Analyzed: 02/07/2008 (W8B0171-MSD1) Source: 8020543-01</b>											
Mercury, Dissolved	1.04	0.20	0.050	ug/l	1.00	ND	104	70-130	2	20	
Mercury, Total	1.04	0.20	0.050	ug/l	1.00	ND	104	70-130	2	20	
<b>Matrix Spike Dup Analyzed: 02/07/2008 (W8B0171-MSD2) Source: 8020544-01</b>											
Mercury, Dissolved	1.05	0.20	0.050	ug/l	1.00	ND	105	70-130	0	20	
Mercury, Total	1.05	0.20	0.050	ug/l	1.00	ND	105	70-130	0	20	

TestAmerica Irvine

Joseph Doak  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IRB0149-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	2.10	4.8	15
IRB0149-01	Antimony-200.8	Antimony	ug/l	0.72	2.0	6
IRB0149-01	Boron-200.7	Boron	mg/l	0.021	0.050	1
IRB0149-01	Cadmium-200.8	Cadmium	ug/l	0.070	1.0	4
IRB0149-01	Chloride - 300.0	Chloride	mg/l	8.00	0.50	150
IRB0149-01	Copper-200.8	Copper	ug/l	2.91	2.0	14
IRB0149-01	Fluoride-300.0	Fluoride	mg/l	0.24	0.50	1.6
IRB0149-01	Hg_w 245.1	Mercury, Total	ug/l	0.068	0.20	0.2
IRB0149-01	Lead-200.8	Lead	ug/l	1.42	1.0	5.2
IRB0149-01	Nickel-200.7	Nickel	ug/l	1.42	10	100
IRB0149-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.59	0.26	10
IRB0149-01	Perchlorate 314.0 (1ppb_IC6)	Perchlorate	ug/l	0	4.0	6
IRB0149-01	Sulfate-300.0	Sulfate	mg/l	9.45	0.50	250
IRB0149-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	128	10	850
IRB0149-01	Thallium-200.8	Thallium	ug/l	0.037	1.0	2

## Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## DATA QUALIFIERS AND DEFINITIONS

<b>J</b>	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
<b>Ja</b>	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
<b>L6</b>	Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
<b>M1</b>	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
<b>M2</b>	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
<b>M-3</b>	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
<b>MHA</b>	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
<b>MNR1</b>	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
<b>P</b>	The sample, as received, was not preserved in accordance to the referenced analytical method.
<b>pH</b>	pH = 7
<b>R</b>	The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
<b>R-3</b>	The RPD exceeded the acceptance limit due to sample matrix effects.
<b>R-7</b>	LFB/LFBD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
<b>ND</b>	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
<b>RPD</b>	Relative Percent Difference

## ADDITIONAL COMMENTS

### For 1,2-Diphenylhydrazine:

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.

**TestAmerica Irvine**

Joseph Doak  
Project Manager

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**IRB0149** <Page 48 of 50>  
NPDES - 1108

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
[CALC]	Water		
EPA 160.2	Water	X	X
EPA 1664A	Water		
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 335.2	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM2340B	Water	X	X
SM2540C	Water	X	

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at [www.testamericainc.com](http://www.testamericainc.com)*

### Subcontracted Laboratories

#### Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr

Samples: IRB0149-01

### TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IRB0149

Sampled: 02/03/08  
Received: 02/03/08

## Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec  
Samples: IRB0149-01

Analysis Performed: Gross Alpha  
Samples: IRB0149-01

Analysis Performed: Gross Beta  
Samples: IRB0149-01

Analysis Performed: Radium, Combined  
Samples: IRB0149-01

Analysis Performed: Strontium 90  
Samples: IRB0149-01

Analysis Performed: Tritium  
Samples: IRB0149-01

Analysis Performed: Uranium, Combined  
Samples: IRB0149-01

## TestAmerica - Ontario, CA *California Cert #1169, Arizona Cert #AZ0062, Nevada Cert #CA-242*

1014 E. Cooley Drive, Suite AB - Colton, CA 92324

Method Performed: EPA 525.2  
Samples: IRB0149-01

## Vista Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
Samples: IRB0149-01

## Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 245.1  
Samples: IRB0149-01

## TestAmerica Irvine

Joseph Doak  
Project Manager



# LABORATORY REPORT



*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** February 9, 2008

**Client:** Test America – Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Joseph Doak

**Laboratory No.:** A-08020405-001  
**Sample ID.:** IRB0149-01 (Outfall 004)

**Sample Control:** The sample was received by ATL in a chilled state, within the recommended hold time and with the chain of custody record attached.

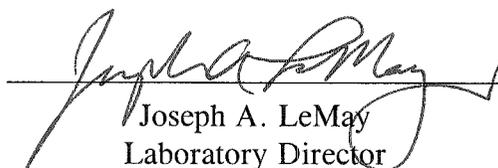
Date Sampled: 02/03/08  
Date Received: 02/04/08  
Temp. Received: 4°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 02/04/08 to 02/08/08

**Sample Analysis:** The following analyses were performed on your sample:  
  
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).  
  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IRB0149-01	100% Survival (TUa = 0.0)

**Quality Control:** Reviewed and approved by:

  
Joseph A. LeMay  
Laboratory Director

**FATHEAD MINNOW PERCENT SURVIVAL TEST**  
**EPA Method 2000.0**



Lab No.: A-08020405-001

Client/ID: TestAmerica - IRB0149-01 (Outfall 004)

Start Date: 02/04/2008

**TEST SUMMARY**

Species: *Pimephales promelas*.

Age: 14 (1-14) days.

Regulations: NPDES.

Test solution volume: 250 ml.

Feeding: prior to renewal at 48 hrs.

Number of replicates: 2.

Dilution water: Moderately hard reconstituted water.

Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.

Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012.

Endpoints: Percent Survival at 96 hrs.

Test chamber: 600 ml beakers.

Temperature: 20 +/- 1°C.

Number of fish per chamber: 10.

QA/QC Batch No.: RT-080204.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.1	8.6	7.8	0	0	J 1402
	100%	19.4	10.0	7.2	0	0	
24 Hr	Control	19.3	7.8	7.5	0	0	R 1330
	100%	19.2	8.0	7.4	0	0	
48 Hr	Control	19.5	7.6	7.7	0	0	R 1400
	100%	19.4	7.5	7.5	0	0	
Renewal	Control	20.5	8.8	7.8	0	0	R 1400
	100%	19.2	11.9	7.3	0	0	
72 Hr	Control	19.3	8.0	7.4	0	0	R 1200
	100%	19.5	8.1	7.4	0	0	
96 Hr	Control	19.5	8.2	7.3	0	0	R 1300
	100%	19.7	8.1	7.4	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.2; Conductivity: 134 umho; Temp: 4°C;

DO: 10.0 mg/l; Alkalinity: 42 mg/l; Hardness: 48 mg/l; NH<sub>3</sub>-N: 0.2 mg/l.

Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No

Control: Alkalinity: 64 mg/l; Hardness: 46 mg/l; Conductivity: 290 umho.

Test solution aerated (not to exceed 100 bubbles/min) to maintain DO > 4.0 mg/l? Yes / No

Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

Dissolved Oxygen (DO) readings in mg/l O<sub>2</sub>.

**RESULTS**

Percent Survival In: Control: 100 %    100% Sample: 100 %

**SUBCONTRACT ORDER**

**TestAmerica Irvine  
IRB0149**

**SENDING LABORATORY:**

TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

**RECEIVING LABORATORY:**

Aquatic Testing Laboratories-SUB  
4350 Transport Street, Unit 107  
Ventura, CA 93003  
Phone : (805) 650-0546  
Fax: (805) 650-0756  
Project Location: California  
Receipt Temperature: 21 °C      Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0149-01</b>	<b>Water</b>		<b>Sampled: 02/03/08 13:45</b>	
Bioassay-Acute 96hr	% Survival	02/13/08	02/05/08 01:45	FH minnow, EPA/821-R02-012, Sub to AqTox Labs
Level 4 Data Package - Out	N/A	02/13/08	03/02/08 13:45	
<i>Containers Supplied:</i>				
1 gal Poly (W)		1 gal Poly (X)		

Released By [Signature] Date/Time 2/4/08 1100  
Released By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received By [Signature] Date/Time 2/4/08 705  
Received By [Signature] Date/Time 2-4-08 1102



***REFERENCE  
TOXICANT  
DATA***

# FATHEAD MINNOW ACUTE

## Method 2000.0

### Reference Toxicant - SDS



QA/QC Batch No.: RT-080204

#### TEST SUMMARY

Species: *Pimephales promelas*.

Age: 14 days old.

Regulations: NPDES.

Test chamber volume: 250 ml.

Feeding: Prior to renewal at 48 hrs.

Temperature: 20 +/- 1°C.

Number of replicates: 2.

Dilution water: MHSF.

Source: In-lab culture.

Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012.

Endpoints: LC50 at 96 hrs.

Test chamber: 600 ml glass beakers.

Aeration: None.

Number of organisms per chamber: 10.

Photoperiod: 16/8 hrs light/dark.

#### TEST DATA

Date/Time:	INITIAL			24 Hr					48 Hr				
	<u>2-4-08 1430</u>			<u>2-5-08 1330</u>					<u>2-6-08 1430</u>				
	<u>Rn</u>			<u>Rn</u>					<u>Rn</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
						A	B				A	B	
Control	<u>19.8</u>	<u>8.4</u>	<u>7.4</u>	<u>19.1</u>	<u>7.9</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.4</u>	<u>7.2</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>19.9</u>	<u>8.4</u>	<u>7.5</u>	<u>19.1</u>	<u>7.8</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.4</u>	<u>6.9</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>19.9</u>	<u>8.5</u>	<u>7.5</u>	<u>19.0</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.4</u>	<u>6.6</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>20.0</u>	<u>8.5</u>	<u>7.5</u>	<u>19.0</u>	<u>8.0</u>	<u>7.4</u>	<u>0</u>	<u>1</u>	<u>19.4</u>	<u>6.7</u>	<u>7.5</u>	<u>2</u>	<u>0</u>
8.0 mg/l	<u>20.0</u>	<u>8.6</u>	<u>7.5</u>	<u>19.1</u>	<u>8.0</u>	<u>7.4</u>	<u>10</u>	<u>10</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Date/Time:	RENEWAL			72 Hr					96 Hr				
	<u>2-6-08 1430</u>			<u>2-7-08 1200</u>					<u>2-8-08 1300</u>				
	<u>Rn</u>			<u>Rn</u>					<u>Rn</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
						A	B				A	B	
Control	<u>20.3</u>	<u>8.9</u>	<u>7.8</u>	<u>19.4</u>	<u>7.5</u>	<u>7.7</u>	<u>0</u>	<u>0</u>	<u>19.2</u>	<u>8.0</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>20.3</u>	<u>8.9</u>	<u>7.8</u>	<u>19.3</u>	<u>7.5</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.2</u>	<u>8.0</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>20.3</u>	<u>8.8</u>	<u>7.8</u>	<u>19.3</u>	<u>7.7</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.3</u>	<u>8.1</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>20.3</u>	<u>8.8</u>	<u>7.8</u>	<u>19.3</u>	<u>7.6</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.3</u>	<u>8.2</u>	<u>7.4</u>	<u>0</u>	<u>1</u>
8.0 mg/l	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Comments: Control: Alkalinity: 64 mg/l; Hardness: 96 mg/l; Conductivity: 289 umho.

SDS: Alkalinity: 64 mg/l; Hardness: 47 mg/l; Conductivity: 290 umho.

Concentration-response relationship acceptable? (see attached computer analysis):

Yes (response curve normal)

No (dose interrupted indicated or non-normal)

**Acute Fish Test-96 Hr Survival**

Start Date: 2/4/2008 14:30    Test ID: RT-080204    Sample ID: REF-Ref Toxicant  
 End Date: 2/8/2008 13:00    Lab ID: CAATL-Aquatic Testing Labs    Sample Type: SDS-Sodium dodecyl sulfate  
 Sample Date: 2/4/2008    Protocol: ACUTE-EPA-821-R-02-012    Test Species: PP-Pimephales promelas

Comments:

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	0.8000	0.8000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root					N	Number Resp	Total Number
			Mean	Min	Max	CV%	N			
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
4	0.8000	0.8000	1.1071	1.1071	1.1071	0.000	2	4	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20	

**Auxiliary Tests**

Statistic

Critical

Skew

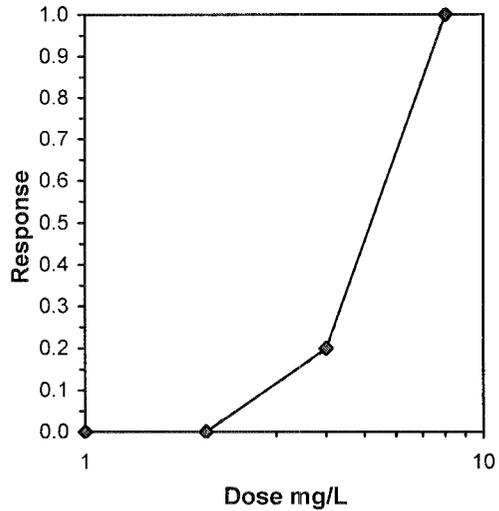
Kurt

Normality of the data set cannot be confirmed

Equality of variance cannot be confirmed

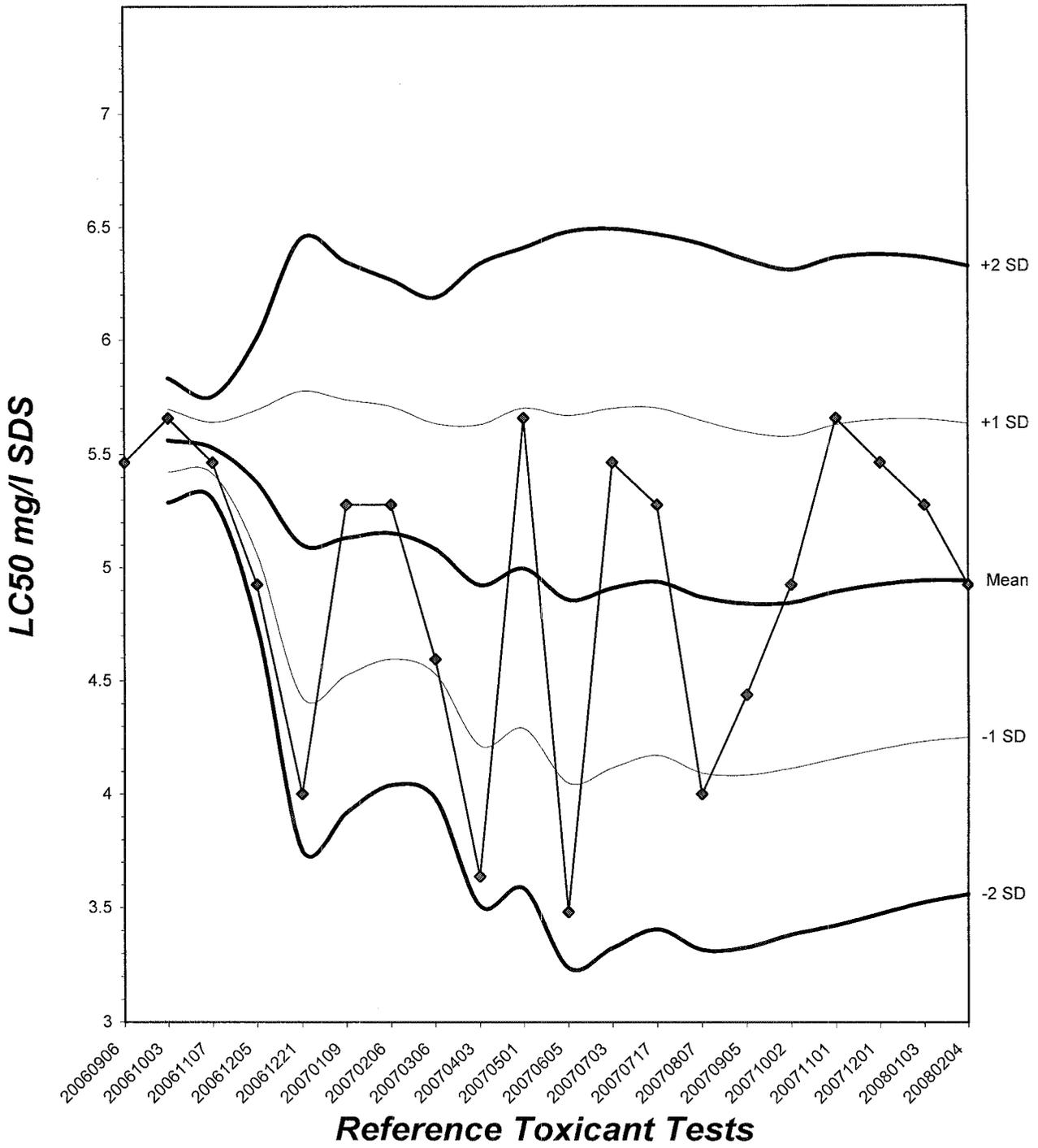
**Trimmed Spearman-Kärber**

Trim Level	EC50	95% CL	
0.0%	4.9246	4.3503	5.5747
5.0%	5.0215	4.3576	5.7866
10.0%	5.1038	4.2923	6.0686
20.0%	5.1874	4.7084	5.7150
Auto-0.0%	4.9246	4.3503	5.5747



# Fathead Minnow Acute Laboratory Control Chart

CV% = 14



# TEST ORGANISM LOG



## FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT-080204

SOURCE: In-Lab Culture

DATE HATCHED: 01-21-08

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATE USED IN LAB: 2/4/08

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit

250 ml test solution volume = 0.016 gm mean fish weight limit

### ACCLIMATION WATER QUALITY:

Temp.: 19.8 °C

pH: 7.4

Ammonia: 0.1 mg/l NH<sub>3</sub>-N

DO: 8.4 mg/l

Alkalinity: 64 mg/l

Hardness: 96 mg/l

READINGS RECORDED BY: [Signature]

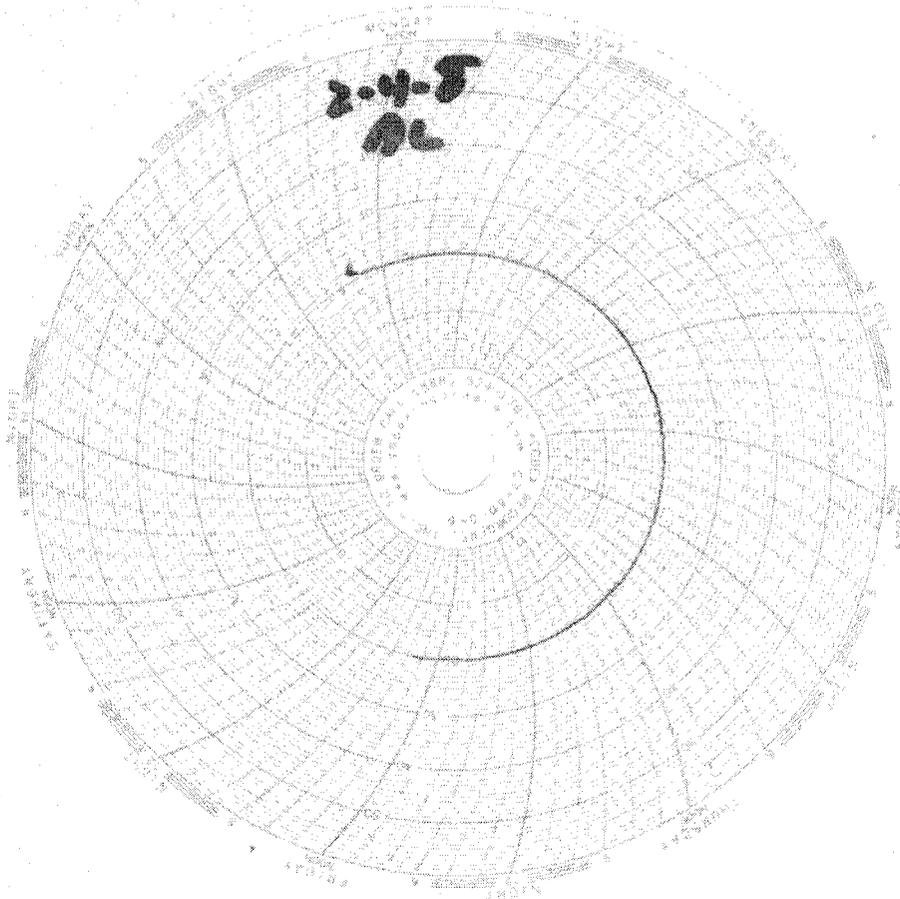
DATE: 2-4-8

# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-080202*

*Date Tested: 02/02/08 to 02/06/08*

*Acceptable Range: 20 $\pm$  1 $^{\circ}$ C*



February 23, 2008

**Vista Project I.D.: 30227**

Mr. Joseph Doak  
Test America-Irvine, CA  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

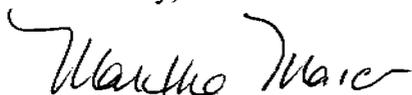
Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on February 05, 2008 under your Project Name "IRB0149". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha M. Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.*



**Section I: Sample Inventory Report**

**Date Received: 2/5/2008**

Vista Lab. ID

Client Sample ID

30227-001

IRB0149-01

## SECTION II

Method Blank					EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	9953	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	15-Feb-08	Date Analyzed DB-5:	19-Feb-08	Date Analyzed DB-225:	NA	
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.000000705			<b>IS</b> 13C-2,3,7,8-TCDD	82.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000681			13C-1,2,3,7,8-PeCDD	75.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000165			13C-1,2,3,4,7,8-HxCDD	81.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000174			13C-1,2,3,6,7,8-HxCDD	83.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000162			13C-1,2,3,4,6,7,8-HpCDD	85.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000511			13C-OCDD	73.4	17 - 157	
OCDD	0.00000899			J	13C-2,3,7,8-TCDF	88.8	24 - 169	
2,3,7,8-TCDF	ND	0.000000647			13C-1,2,3,7,8-PeCDF	74.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000731			13C-2,3,4,7,8-PeCDF	77.1	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000752			13C-1,2,3,4,7,8-HxCDF	75.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000943			13C-1,2,3,6,7,8-HxCDF	77.6	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000974			13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000105			13C-1,2,3,7,8,9-HxCDF	81.9	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000136			13C-1,2,3,4,6,7,8-HpCDF	75.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000333			13C-1,2,3,4,7,8,9-HpCDF	82.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000202			13C-OCDF	76.2	17 - 157	
OCDF	ND	0.00000591			<b>CRS</b> 37Cl-2,3,7,8-TCDD	85.1	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000705			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000122			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000167			c. Method detection limit.			
Total HpCDD	ND	0.00000511			d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000647						
Total PeCDF	ND	0.000000742						
Total HxCDF	ND	0.00000107						
Total HpCDF	ND	0.00000335						

Analyst: MAS

Approved By: William J. Luksemburg 22-Feb-2008 15:48

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	9953	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	15-Feb-08	Date Analyzed DB-5:	18-Feb-08	Date Analyzed DB-225:	NA
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.20	6.7 - 15.8	<b>IS</b> 13C-2,3,7,8-TCDD	85.8	25 - 164	
1,2,3,7,8-PeCDD	50.0	46.7	35 - 71	13C-1,2,3,7,8-PeCDD	77.1	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	47.0	35 - 82	13C-1,2,3,4,7,8-HxCDD	82.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	47.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	84.0	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	47.7	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	88.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	46.1	35 - 70	13C-OCDD	78.1	17 - 157	
OCDD	100	94.4	78 - 144	13C-2,3,7,8-TCDF	90.2	24 - 169	
2,3,7,8-TCDF	10.0	8.71	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	76.3	24 - 185	
1,2,3,7,8-PeCDF	50.0	45.3	40 - 67	13C-2,3,4,7,8-PeCDF	79.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	45.1	34 - 80	13C-1,2,3,4,7,8-HxCDF	78.9	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	46.8	36 - 67	13C-1,2,3,6,7,8-HxCDF	80.4	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	46.8	42 - 65	13C-2,3,4,6,7,8-HxCDF	79.1	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	47.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	84.1	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	46.1	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	78.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	46.8	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	85.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	46.7	39 - 69	13C-OCDF	82.2	17 - 157	
OCDF	100	93.5	63 - 170	<b>CRS</b> 37Cl-2,3,7,8-TCDD	88.4	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 22-Feb-2008 15:48

**Sample ID: IRB0149-01** **EPA Method 1613**

<u>Client Data</u>		<u>Sample Data</u>		<u>Laboratory Data</u>			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30227-001	Date Received:	5-Feb-08
Project:	IRB0149	Sample Size:	0.976 L	QC Batch No.:	9953	Date Extracted:	15-Feb-08
Date Collected:	3-Feb-08			Date Analyzed DB-5:	19-Feb-08	Date Analyzed DB-225:	NA
Time Collected:	1345						

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000503			<b>IS</b> 13C-2,3,7,8-TCDD	86.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000886			13C-1,2,3,7,8-PeCDD	76.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000167			13C-1,2,3,4,7,8-HxCDD	81.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000282			13C-1,2,3,6,7,8-HxCDD	81.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000161			13C-1,2,3,4,6,7,8-HpCDD	86.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000230			J	13C-OCDD	77.4	17 - 157	
OCDD	0.000379			B	13C-2,3,7,8-TCDF	90.4	24 - 169	
2,3,7,8-TCDF	ND	0.00000121			13C-1,2,3,7,8-PeCDF	75.8	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000953			13C-2,3,4,7,8-PeCDF	77.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000976			13C-1,2,3,4,7,8-HxCDF	77.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000590			13C-1,2,3,6,7,8-HxCDF	77.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000589			13C-2,3,4,6,7,8-HxCDF	77.3	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000666			13C-1,2,3,7,8,9-HxCDF	82.7	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000855			13C-1,2,3,4,6,7,8-HpCDF	76.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000377			J	13C-1,2,3,4,7,8,9-HpCDF	81.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000155			13C-OCDF	80.8	17 - 157	
OCDF	0.0000103			J	<b>CRS</b> 37Cl-2,3,7,8-TCDD	89.7	35 - 197	

<b>Totals</b>				<b>Footnotes</b>			
Total TCDD	ND	0.00000503		a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000139		b. Estimated maximum possible concentration.			
Total HxCDD	0.00000302			c. Method detection limit.			
Total HpCDD	0.0000443			d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000121					
Total PeCDF	ND	0.000000964					
Total HxCDF	0.00000185						
Total HpCDF	0.0000138						

Analyst: MAS

Approved By: William J. Luksemburg 22-Feb-2008 15:48

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The amount detected is above the High Calibration Limit.</b>
<b>P</b>	<b>The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.</b>
<b>H</b>	<b>The signal-to-noise ratio is greater than 10:1.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Low Calibration Limit.</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>DL</b>	<b>Sample-specific estimated detection limit</b>
<b>MDL</b>	<b>The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.</b>
<b>EMPC</b>	<b>Estimated Maximum Possible Concentration</b>
<b>NA</b>	<b>Not applicable</b>
<b>RL</b>	<b>Reporting Limit – concentrations that correspond to low calibration point</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**

## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

SUBCONTRACT ORDER

TestAmerica Irvine

IRB0149

30227

SENDING LABORATORY:

TestAmerica Irvine  
17461 Derian Avenue. Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

RECEIVING LABORATORY:

Vista Analytical Laboratory- SUB  
1104 Windfield Way  
El Dorado Hills, CA 95762  
Phone : (916) 673-1520  
Fax: (916) 673-0106  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C

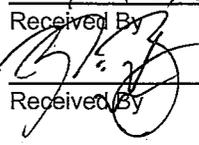
1.6 °C

Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0149-01</b>	<b>Water</b>			
			Sampled: 02/03/08 13:45	
1613-Dioxin-HR-Alta	ug/l	02/13/08	02/10/08 13:45	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Level 4 + EDD-OUT	N/A	02/13/08	03/02/08 13:45	Excel EDD email to pm,Include Std logs for Lvl IV
<i>Containers Supplied:</i>				
1 L Amber (C)		1 L Amber (D)		

 \_\_\_\_\_  
Released By Date/Time 2/4/08 1700

\_\_\_\_\_  
Released By Date/Time

FedEx \_\_\_\_\_  
Received By Date/Time 2/4/08 1700  
 \_\_\_\_\_  
Received By Date/Time 2-5-08/0129

SAMPLE LOG-IN CHECKLIST



Vista Project #: 30227

TAT Standard

Samples Arrival:	Date/Time <u>2/5/08 0929</u>		Initials: <u>YBSB</u>		Location: <u>WR-2</u>	
	Shelf/Rack: <u>N/A</u>					
Logged In:	Date/Time <u>2/6/08 0839</u>		Initials: <u>YBSB</u>		Location: <u>WR-2</u>	
	Shelf/Rack: <u>B4</u>					
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None		
Temp °C	<u>1.6 °C</u>		Time:	<u>0956</u>		Thermometer ID: IR-1

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill	Trk # <u>799795973118</u>		
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain <input type="checkbox"/> Return <input checked="" type="checkbox"/> Dispose <input type="checkbox"/>

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine

IRB0149

8020438

**SENDING LABORATORY:**

TestAmerica Irvine  
17461 Derian Avenue. Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

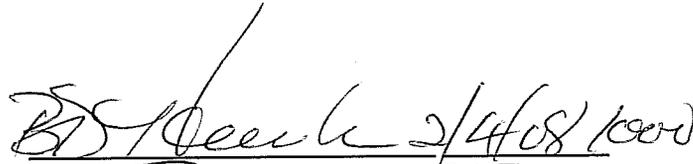
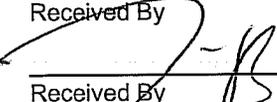
**RECEIVING LABORATORY:**

Weck Laboratories, Inc  
14859 E. Clark Avenue  
City of Industry, CA 91745  
Phone : (626) 336-2139  
Fax: (626) 336-2634  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C      Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRB0149-01		Water		
		Sampled: 02/03/08 13:45		
Level 4 Data Package - Wec	N/A	02/13/08	03/02/08 13:45	Provide Element transfer file
Mercury - 245.1, Diss -OUT	mg/l	02/13/08	03/02/08 13:45	Boeing, J flags, sub to Weck
Mercury - 245.1-OUT	mg/l	02/13/08	03/02/08 13:45	Boeing, J flags, sub to Weck
<i>Containers Supplied:</i>				
125 mL Poly (AA)	125 mL Poly w/HNO <sub>3</sub>			
<i>HNO<sub>3</sub></i>	(AB)			

*Diss. Mercury is filtered and pres.*

  
 Released By \_\_\_\_\_ Date/Time 2/4/08 10:00  
  
 Released By \_\_\_\_\_ Date/Time 2/4/08 13:45

  
 Received By \_\_\_\_\_ Date/Time 2/4/08 10:00  
  
 Received By \_\_\_\_\_ Date/Time 02/04/08 13:45



### CERTIFICATE OF ANALYSIS

**Client:** TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine, CA 92614  
Attention: Joseph Doak

**Report Date:** 02/11/08 16:22  
**Received Date:** 02/04/08 13:45  
**Turn Around:** Normal

Phone: (949) 261-1022

Fax: (949) 260-3297

**Work Order #:** 8020458

**Client Project:** IRB0149

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

*The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.*

Dear Joseph Doak :

Enclosed are the results of analyses for samples received 02/04/08 13:45 with the Chain of Custody document. The samples were received in good condition. The samples were received at 1.9 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Kim G Tu

Project Manager



Page 1 of 6





Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 8020458  
Project ID: IRB0149

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:22

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRB0149-01	Client		8020458-01	Water	02/03/08 13:45



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 8020458  
Project ID: IRB0149

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:22

**IRB0149-01 8020458-01 (Water)**

Date Sampled: 02/03/08 13:45

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W8B0171	02/06/08	02/07/08	jlp
<b>Mercury, Total</b>	<b>0.068</b>	0.050	ug/l	0.20	1	EPA 245.1	W8B0171	02/06/08	02/07/08	jlp J



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 8020458  
Project ID: IRB0149

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:22

# QUALITY CONTROL SECTION



Weck Laboratories, Inc.  
 14859 E. Clark Ave.  
 Industry, CA 91745  
 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 8020458  
 Project ID: IRB0149

Date Received: 02/04/08 13:45  
 Date Reported: 02/11/08 16:22

**Metals by EPA 200 Series Methods - Quality Control**

%REC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-----------------

**Batch W8B0171 - EPA 245.1**

**Blank (W8B0171-BLK1)**

Analyzed: 02/07/08

Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.20	ug/l							

**LCS (W8B0171-BS1)**

Analyzed: 02/07/08

Mercury, Dissolved	1.04	0.20	ug/l	1.00		104	85-115			
Mercury, Total	1.04	0.20	ug/l	1.00		104	85-115			

**Matrix Spike (W8B0171-MS1)**

Source: 8020543-01

Analyzed: 02/07/08

Mercury, Dissolved	1.02	0.20	ug/l	1.00	ND	102	70-130			
Mercury, Total	1.02	0.20	ug/l	1.00	ND	102	70-130			

**Matrix Spike (W8B0171-MS2)**

Source: 8020544-01

Analyzed: 02/07/08

Mercury, Dissolved	1.05	0.20	ug/l	1.00	ND	105	70-130			
Mercury, Total	1.05	0.20	ug/l	1.00	ND	105	70-130			

**Matrix Spike Dup (W8B0171-MSD1)**

Source: 8020543-01

Analyzed: 02/07/08

Mercury, Dissolved	1.04	0.20	ug/l	1.00	ND	104	70-130	2	20	
Mercury, Total	1.04	0.20	ug/l	1.00	ND	104	70-130	2	20	

**Matrix Spike Dup (W8B0171-MSD2)**

Source: 8020544-01

Analyzed: 02/07/08

Mercury, Dissolved	1.05	0.20	ug/l	1.00	ND	105	70-130	0	20	
Mercury, Total	1.05	0.20	ug/l	1.00	ND	105	70-130	0	20	



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 8020458  
Project ID: IRB0149

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:22

### Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



# EBERLINE SERVICES

March 10, 2008

Mr. Joseph Doak  
Test America, Inc.  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Reference: Test America Project Nos. IRB0073, IRB0146, IRB0147, IRB0148, IRB0149,  
IRB0150, IRB0151, IRB0152, IRB0153, IRB0154  
IRB0156, IRB0480, IRB0751  
Eberline Services NELAP Cert #01120CA  
Eberline Services Reports R802024-8693, R802040-8694, R802041-8695,  
R802042-8696, R802043-8697, R802044-8698  
R802045-8699, R802046-8600, R802047-8601  
R802048-8602, R802049-8603, R802054-8604  
R802084-8608

Dear Mr. Doak:

Attached are data reports for thirteen water samples. Eleven of the samples were received at Eberline Services on February 5, one on February 7, and one on February 9, 2008. The samples were analyzed according to the accompanying Test America Subcontract Order Forms, the requested analyses were: gross alpha/gross beta (EPA 900.0), tritium (H-3, EPA906.0), Sr-90 (EPA905.0), Ra-226 (EPA903.1), Ra-228 (EPA 904.0), total uranium (ASTM D-5174), and gamma spectroscopy (EPA901.1, K-40 and Cs-137 only). The parenthetical G after a nuclide indicates that the result was obtained by gamma spectroscopy; a "U" in the results column indicates that the nuclide was not detected greater than the indicated minimum detectable activity (MDA). The samples were not filtered prior to analysis. The samples were analyzed in batches with common QC samples. Batch quality control samples consisted of LCS's, blank analyses, duplicate analyses, and matrix spike analyses (gross alpha/gross beta, H-3, Ra-226, Total-U only). All samples were batched with QC samples 8693-002, 003, 004, and 005 for all analyses. All QC sample results were within the limits defined in Eberline Services Quality Control Procedures Manual.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv

Enclosure: Report on CD

Analytical Services  
2030 Wright Avenue  
P.O. Box 4040  
Richmond, California 94804-0040  
(510) 235-2633 Fax (510) 235-0438  
Toll Free (800) 841-5487  
www.eberlineservices.com



# Eberline Services

## QC RESULTS

SDG <u>8697</u>	Client <u>TA IRVINE</u>
Work Order <u>R802043-01</u>	Contract <u>PROJECT# IRB0149</u>
Received Date <u>02/05/08</u>	Matrix <u>WATER</u>

Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8693-002	GrossAlpha	10.6 ± 0.82	pCi/Smpl	10.2	0.31	104% recovery
		Gross Beta	9.07 ± 0.36	pCi/Smpl	9.38	0.28	97% recovery
		Ra-228	8.40 ± 0.59	pCi/Smpl	8.66	0.88	97% recovery
		Co-60 (G)	214 ± 14	pCi/Smpl	224	9.1	96% recovery
		Cs-137 (G)	240 ± 12	pCi/Smpl	236	9.2	102% recovery
		Am-241 (G)	255 ± 26	pCi/Smpl	254	31	100% recovery
		H-3	222 ± 12	pCi/Smpl	239	13	93% recovery
		Ra-226	5.35 ± 0.24	pCi/Smpl	5.02	0.076	107% recovery
		Sr-90	10.7 ± 0.80	pCi/Smpl	9.39	0.37	114% recovery
		Total U	1.12 ± 0.13	pCi/Smpl	1.13	0.004	99% recovery

<u>BLANK</u>							
	8693-003	GrossAlpha	-0.103 ± 0.17	pCi/Smpl	NA	0.34	<MDA
		Gross Beta	-0.111 ± 0.15	pCi/Smpl	NA	0.27	<MDA
		Ra-228	0.239 ± 0.48	pCi/Smpl	NA	0.68	<MDA
		K-40 (G)	U	pCi/Smpl	NA	110	<MDA
		Cs-137 (G)	U	pCi/Smpl	NA	5.4	<MDA
		H-3	-1.64 ± 8.3	pCi/Smpl	NA	15	<MDA
		Ra-226	0.016 ± 0.034	pCi/Smpl	NA	0.062	<MDA
		Sr-90	0.099 ± 0.15	pCi/Smpl	NA	0.27	<MDA
		Total U	0.00E 00 ± 1.9E-04	pCi/Smpl	NA	4.5E-04	<MDA

<u>DUPLICATES</u>				<u>ORIGINALS</u>				
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	RPD (Tot)	Eval
8693-004	GrossAlpha	1.03 ± 1.0	1.5	8693-001	0.763 ± 0.99	1.3	-	0 satis.
	Gross Beta	15.0 ± 1.2	1.6		14.2 ± 0.93	0.97	5	46 satis.
	Ra-228	0.099 ± 0.18	0.48		0.295 ± 0.19	0.49	-	0 satis.
	K-40 (G)	24.8 ± 7.8	4.9		24.0 ± 11	8.2	3	86 satis.
	Cs-137 (G)	U	0.53		U	0.86	-	0 satis.
	H-3	-6.31 ± 84	150		7.12 ± 78	130	-	0 satis.
	Ra-226	0.583 ± 0.52	0.81		0.426 ± 0.44	0.70	-	0 satis.
	Sr-90	-0.021 ± 0.29	0.71		0.026 ± 0.31	0.72	-	0 satis.
	Total U	0.611 ± 0.067	0.022		0.578 ± 0.064	0.022	6	30 satis.

Certified by \_\_\_\_\_

Report Date 03/11/08

Page 2

# Eberline Services

## QC RESULTS

SDG <u>8697</u>	Client <u>TA IRVINE</u>
Work Order <u>R802043-01</u>	Contract <u>PROJECT# IRB0149</u>
Received Date <u>02/05/08</u>	Matrix <u>WATER</u>

<u>SPIKED SAMPLE</u>				<u>ORIGINAL SAMPLE</u>				
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Added</u>	<u>%Recv</u>
8693-005	GrossAlpha	95.8 ± 5.5	1.4	8693-001	0.763 ± 0.99	1.3	71.2	133
	Gross Beta	77.9 ± 2.0	1.5		14.2 ± 0.93	0.97	62.5	102
	H-3	15500 ± 300	150		7.12 ± 78	130	16000	97
	Ra-226	120 ± 4.8	0.69		0.426 ± 0.44	0.70	112	107
	Total U	109 ± 13	2.2		0.578 ± 0.064	0.022	113	96

Certified by <u></u>
Report Date <u>03/11/08</u>
Page 3

**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**IRB0149**

**SENDING LABORATORY:**

TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

**RECEIVING LABORATORY:**

Eberline Services  
2030 Wright Avenue  
Richmond, CA 94804  
Phone : (510) 235-2633  
Fax: (510) 235-0438  
Project Location: California  
Receipt Temperature: 4.0 °C      Ice: (Y) / N

---

<b>Analysis</b>	<b>Units</b>	<b>Due</b>	<b>Expires</b>	<b>Comments</b>
-----------------	--------------	------------	----------------	-----------------

---

<b>Sample ID: IRB0149-01</b>	<b>Water</b>	Sampled: <b>02/03/08 13:45</b>		
EDD + Level 4	N/A	02/13/08	03/02/08 13:45	
Gamma Spec-O	mg/kg	02/13/08	02/02/09 13:45	Out to Eberline, k-40 and cs-137 only
Gross Alpha-O	pCi/L	02/13/08	08/01/08 13:45	Out to Eberline, Boeing
Gross Beta-O	pCi/L	02/13/08	08/01/08 13:45	Out to Eberline, Boeing
Radium, Combined-O	pCi/L	02/13/08	02/02/09 13:45	Out to Eberline, Boeing
Strontium 90-O	pCi/L	02/13/08	02/02/09 13:45	Out to Eberline, Boeing
Tritium-O	pCi/L	02/13/08	02/02/09 13:45	Out to Eberline, Boeing
Uranium, Combined-O	pCi/L	02/13/08	02/02/09 13:45	Out to Eberline, Boeing
<i>Containers Supplied:</i>				
2.5 gal Poly (S)	500 mL Amber (T)			

---

 2/4/08 1700  
Released By \_\_\_\_\_ Date/Time \_\_\_\_\_

FedEx 2/4/08 1700  
Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

MFW 02/05/08 09:30  
Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Released By \_\_\_\_\_ Date/Time \_\_\_\_\_

*Je 2/5/08*

Client: TEST AMERICA City: IRVINE State: CA

Date/Time received: 02/05/08 09:30 Soc No: 1RB0149

Container ID No: ICE CHEST Requested TAT (Days): \_\_\_\_\_ P.O. Received: Yes  No

INSPECTION

- 1 Custody seals on shipping container intact? Yes  No  N/A
- 2 Custody seals on shipping container dated & signed? Yes  No  N/A
- 3 Custody seals on sample containers intact? Yes  No  N/A
- 4 Custody seals on sample containers dated & signed? Yes  No  N/A
- 5 Packing material: \_\_\_\_\_ Weigh
- 6 Number of samples in shipping container: 1 Sample Matrix: W
- 7 Number of containers per sample: 2 (Or see Soc) \_\_\_\_\_
- 8 Samples are in correct container? Yes  No
- 9 Paperwork address with samples? Yes  No
- 10 Samples have Tape  Hazard labels  Rad labels  Appropriate sample labels
- 11 Samples are in good condition? Leaking  Broken Container  Missing
- 12 Samples are Preserved  Not preserved  Preservative: \_\_\_\_\_
- 13 Describe any anomalies: \_\_\_\_\_

14 Was E-M notified of any anomalies? Yes  No  Date: \_\_\_\_\_

15 Inspected by: M. Fry Date: 02/05/08 Time: 10:45

Customer Sample No	Beta/Gamma con	Ion Chamber mR/hr	Wipe	Customer Sample No	Beta/Gamma con	Ion Chamber mR/hr	Wipe
1RB0149-1	<60						

Ion Chamber Ser. No: \_\_\_\_\_  
Alpha Meter Ser. No: \_\_\_\_\_  
Beta/Gamma Meter Ser. No: 100482

Calibration date: \_\_\_\_\_  
Calibration date: \_\_\_\_\_  
Calibration date: 09 MAY 07

## **APPENDIX G**

### **Section 26**

Outfall 004 - BMP Effectiveness, February 5, 2008

Test America Analytical Laboratory Report

## LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project: Boeing BMP Effectiveness  
Monitoring Program

Sampled: 02/05/08  
Received: 02/05/08  
Issued: 02/14/08 15:08

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

## SAMPLE CROSS REFERENCE

**LABORATORY ID**

IRB0422-01

**CLIENT ID**

004 EFF-1

**MATRIX**

Water

Reviewed By:



**TestAmerica Irvine**

Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Boeing BMP Effectiveness Monitoring Program

Report Number: IRB0422

Sampled: 02/05/08  
Received: 02/05/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0422-01 (004 EFF-1 - Water)</b>									
Reporting Units: g/cc									
Density	Displacement	8B11085	N/A	NA	1.0	1	02/11/08	02/11/08	
<b>Sample ID: IRB0422-01 (004 EFF-1 - Water)</b>									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B14087	10	10	32	1	02/14/08	02/14/08	

TestAmerica Irvine

Joseph Doak  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

IRB0422 <Page 2 of 5>  
NPDES - 1147

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Boeing BMP Effectiveness Monitoring Program

Report Number: IRB0422

Sampled: 02/05/08

Received: 02/05/08

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B11085 Extracted: 02/11/08</b>										
<b>Duplicate Analyzed: 02/11/2008 (8B11085-DUP1)</b>										
Density	0.999	NA	N/A	g/cc		Source: IRA3091-01 1.00		0	20	

TestAmerica Irvine

Joseph Doak  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

IRB0422 <Page 3 of 5>  
NPDES - 1148

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Boeing BMP Effectiveness Monitoring Program

Report Number: IRB0422

Sampled: 02/05/08

Received: 02/05/08

## DATA QUALIFIERS AND DEFINITIONS

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

**RPD** Relative Percent Difference

**TestAmerica Irvine**

Joseph Doak  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

**IRB0422 <Page 4 of 5>**  
**NPDES - 1149**

MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Boeing BMP Effectiveness Monitoring Program

Report Number: IRB0422

Sampled: 02/05/08

Received: 02/05/08

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at [www.testamericainc.com](http://www.testamericainc.com)*

### TestAmerica Irvine

Joseph Doak  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

IRB0422

# CHAIN OF CUSTODY FORM

LYSOUTH

Version 12/20/07

Client Name/Address:  
**MWH-Arcadia**  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007

Project: **Boeing BMP Effectiveness Monitoring Program**

Project Man ager: **Bronwyn Kelly**  
 Phone Number: (626) 568-6691  
 Fax Number: (626) 568-6515

Sampler: **MARISAL J. BARROSO, R.**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Field readings:	Comments
004 EFF-1	W	500 mL Poly	1	2/10/08 11:30	None	1	Temp = N/A pH = N/A Time of readings = N/A	GRAB
004 EFF-2	W	500 mL Poly	1	2/10/08 11:30	None	2		
004 EFF-3	W	500 mL Poly	1		None	3		
004 EFF-4	W	500 mL Poly	1		None	4		
004 EFF-5	W	500 mL Poly	1		None	5		
004 EFF-6	W	500 mL Poly	1		None	6		
004 EFF-7	W	500 mL Poly	1		None	7		
004 EFF-8	W	500 mL Poly	1		None	8		
004 EFF-9	W	500 mL Poly	1		None	9		
004 EFF-10	W	500 mL Poly	1		None	10		
004 EFF-11	W	500 mL Poly	1		None	11		
004 EFF-12	W	500 mL Poly	1		None	12		
004 EFF-13	W	500 mL Poly	1		None	13		
004 EFF-14	W	500 mL Poly	1		None	14		
004 EFF-15	W	500 mL Poly	1		None	15		
004 EFF-16	W	500 mL Poly	1		None	16		
004 EFF-17	W	500 mL Poly	1		None	17		
004 EFF-18	W	500 mL Poly	1		None	18		
004 EFF-19	W	500 mL Poly	1		None	19		
004 EFF-20	W	500 mL Poly	1		None	20		
004 EFF-21	W	500 mL Poly	1		None	21		
004 EFF-22	W	500 mL Poly	1		None	22		
004 EFF-23	W	500 mL Poly	1		None	23		
004 EFF-24	W	500 mL Poly	1		None	24		

ANALYSIS REQUIRED

Turn around Time: (check)  
 24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 72 Hours \_\_\_\_\_ Normal  X

Sample Integrity: (check)  
 Intact  On Ice:  5/13°C

Relinquished By: *[Signature]* Date/Time: 2/10/08 11:30  
 Relinquished By: *[Signature]* Date/Time: 2/10/08 11:30  
 Relinquished By: *[Signature]* Date/Time: 2/10/08 11:30

Received By: *[Signature]* Date/Time: 2/10/08 18:55

Received By: *[Signature]* Date/Time: 2/10/08 18:55

Rg 2/10/08 8:10

## **APPENDIX G**

### **Section 27**

Outfall 004, February 24, 2008

MEC<sup>X</sup> Data Validation Reports



# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB2400

Prepared by

MEC<sup>X</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

**I. INTRODUCTION**

Task Order Title: Boeing SSFL NPDES  
 Contract Task Order: 1261.100D.00  
 Sample Delivery Group: IRB2400  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 1  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 004	IRB2400-01	30302-001, 8022631-01, 8614- 001	Water	02/24/08 1045	200.8, 245.1, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 1613, ASTM D-5174, SM2340-B

**II. Sample Management**

No anomalies were observed regarding sample management. The samples were received at Weck and Vista within the temperature limits of 4°C ±2°C. The samples were received at TestAmerica-Irvine below the temperature limit; however, the samples were not noted to be damaged or frozen. Eberline did not provide temperature information; however, radiological samples are not required to be chilled. According to the case narrative for this SDG, the samples were received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, Eberline, and Weck, custody seals were not required. Custody seals were intact upon arrival at Vista. If necessary, the client ID was added to the sample result summary by the reviewer.

---

### Data Qualifier Reference Table

---

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

---

### Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

**Qualification Code Reference Table Cont.**

---

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: April 7, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review (8/02)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had no target compound detects above the EDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Nondetects are valid to the estimated detection limit (EDL).

## **B. EPA METHODS 200.8, 245.1—Metals and Mercury**

Reviewed By: P. Meeks

Date Reviewed: April 1, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding times, 6 months for metals and 28 days for mercury, were met.
- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were  $\leq 5\%$ , and all masses of interest were calibrated to  $\leq 0.1$  amu and  $\leq 0.9$  amu at 10% peak height.
- Calibration: Calibration criteria were met. Mercury initial calibration  $r^2$  values were  $\geq 0.995$  and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS

metals and 85-115% for mercury. All CRI/CRA and check standard recoveries were within the control limits of 70-130%.

- Blanks: There were no applicable detects in the method blanks or CCBs.
- Interference Check Samples: ICSA/B analyses were performed in association with the total ICP-MS analyses only. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solution; however, the reviewer was not able to ascertain if the detections were indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for the total metals fraction. The recoveries and RPDs were within the laboratory-established control limits. Mercury method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. The bracketing CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

## C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 2, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0, ASTM Method D-5174*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- **Holding Times:** The tritium sample was analyzed within 180 days of collection. Aliquots for gross alpha and gross beta were prepared within the five-day analytical holding time for unpreserved samples. Aliquots for radium-226, radium-228, strontium-90, total uranium, and gamma spectroscopy were prepared beyond the five-day holding time for unpreserved samples; therefore, results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects.
- **Calibration:** The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability.

The gross alpha detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as an estimated detect, "J." The gross beta detector efficiency was greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The tritium detector efficiency for the sample was marginally less than 20%; therefore, nondetected tritium was qualified as an estimated nondetect, "UJ." The strontium chemical yield was at least 70% and was considered acceptable. The strontium and radium-226 continuing calibration results were within the laboratory control limits. The radium-228 tracer, yttrium oxalate, yields were greater than 70%. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- **Blanks:** There were no analytes detected in the method blanks.
- **Blank Spikes and Laboratory Control Samples:** The recoveries were within laboratory-established control limits.
- **Laboratory Duplicates:** No laboratory duplicate analyses were performed on the sample in this SDG.
- **Matrix Spike/Matrix Spike Duplicate:** No MS/MSD analyses were performed for the sample in this SDG.

- **Sample Result Verification:** An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Reported nondetects are valid to the MDA.
- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - **Field Blanks and Equipment Rinsates:** This SDG had no identified field blank or equipment rinsate samples.
  - **Field Duplicates:** There were no field duplicate samples identified for this SDG.

Client Data		Sample Data		Laboratory Data			
Sample ID: <b>IRB2400-01</b>	Test America-Irvine, CA	Matrix: Aqueous	Lab Sample: 30302-001	Date Received: 26-Feb-08	<b>EPA Method 1613</b>		
Project: IRB2400	24-Feb-08	Sample Size: 1.02 L	QC Batch No.: 9997	Date Extracted: 9-Mar-08			
Date Collected: 1045			Date Analyzed DB-5: 10-Mar-08	Date Analyzed DB-225: NA			
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000593		IS 13C-2,3,7,8-TCDD	76.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000104		13C-1,2,3,7,8-PeCDD	71.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000334		13C-1,2,3,4,7,8-HxCDD	67.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000337		13C-1,2,3,6,7,8-HxCDD	76.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000322		13C-1,2,3,4,6,7,8-HpCDD	72.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000326			13C-OCDD	66.4	17 - 157	
OCDD	0.000536			13C-2,3,7,8-TCDF	120	24 - 169	
2,3,7,8-TCDF	ND	0.00000108		13C-1,2,3,7,8-PeCDF	100	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000112		13C-2,3,4,7,8-PeCDF	100	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000116		13C-1,2,3,4,7,8-HxCDF	67.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000726		13C-1,2,3,6,7,8-HxCDF	82.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000717		13C-2,3,4,6,7,8-HxCDF	73.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000844		13C-1,2,3,7,8,9-HxCDF	72.4	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000108		13C-1,2,3,4,6,7,8-HpCDF	67.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000409			13C-1,2,3,4,7,8,9-HpCDF	68.2	26 - 138	J
1,2,3,4,7,8,9-HpCDF	ND	0.00000148		13C-OCDF	66.1	17 - 157	
OCDF	0.0000127			CRS 37Cl-2,3,7,8-TCDD	113	35 - 197	J
<b>Totals</b>							
Total TCDD	ND	0.00000112					
Total PeCDD	ND	0.00000217					
Total HxCDD	ND	0.00000559					
Total HpCDD	0.0000651						
Total TCDF	ND	0.00000108					
Total PeCDF	ND	0.00000114					
Total HxCDF	0.00000240						
Total HpCDF	0.0000188						

**Footnotes**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

IRB2400-01 Out-fall 004

Analyst: MAS *Level IV* Approved By: Martha M. Maier 14-Mar-2008 10:42

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 004

Report Number: IRB2400

Sampled: 02/24/08  
Received: 02/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2400-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	8C04064	0.20	2.0	0.68	1	03/04/08	03/04/08	Ja
Cadmium	EPA 200.8	8C04064	0.11	1.0	ND	1	03/04/08	03/04/08	
Copper	EPA 200.8	8C04064	0.75	2.0	2.3	1	03/04/08	03/04/08	
Lead	EPA 200.8	8C04064	0.30	1.0	1.0	1	03/04/08	03/04/08	
Thallium	EPA 200.8	8C04064	0.20	1.0	ND	1	03/04/08	03/04/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 004  
 Report Number: IRB2400

Sampled: 02/24/08  
 Received: 02/25/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2400-01 (Outfall 004 - Water) - cont.</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	8B25123	0.20	2.0	<b>0.58</b>	1	02/25/08	02/26/08	Ja
Cadmium	EPA 200.8-Diss	8B25123	0.11	1.0	ND	1	02/25/08	02/26/08	
Copper	EPA 200.8-Diss	8B25123	0.75	2.0	ND	1	02/25/08	02/26/08	
Lead	EPA 200.8-Diss	8B25123	0.30	1.0	ND	1	02/25/08	02/26/08	
Thallium	EPA 200.8-Diss	8B25123	0.20	1.0	ND	1	02/25/08	02/26/08	

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 Project Manager

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MWH-Pasadena/Boeing  
618 Michillinda Avenue, Suite 200  
Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 004

Report Number: IRB2400

Sampled: 02/24/08  
Received: 02/25/08

### Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2400-01 (Outfall 004 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	
Mercury, Total	EPA 245.1	W8B0982	0.050	0.20	0.095	1	02/26/08	02/27/08	J

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Eberline Services

ANALYSIS RESULTS

SDG <u>8614</u>	Client <u>TA IRVINE</u>
Work Order <u>R802173-01</u>	Contract <u>PROJECT# IRB2400</u>
Received Date <u>02/26/08</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
Client <u>Sample ID</u> Outfall 004 IRB2400-01	8614-001	02/24/08	03/16/08	03/16/08	GrossAlpha	1.22 ± 0.69	pCi/L	0.94 J/R
			03/16/08	03/16/08	Gross Beta	0.262 ± 0.53	pCi/L	0.91 U
			03/10/08	03/10/08	Ra-228	0.138 ± 0.16	pCi/L	0.43 UJ/H
			03/12/08	03/12/08	K-40 (G)	U	pCi/L	36 ↓
			03/12/08	03/12/08	Cs-137 (G)	U	pCi/L	1.4 UJ/R
			03/14/08	03/14/08	H-3	-41.9 ± 86	pCi/L	150 J/H
			03/14/08	03/14/08	Ra-226	1.44 ± 0.63	pCi/L	0.75 J/H
			03/10/08	03/10/08	Sr-90	-0.251 ± 0.32	pCi/L	0.91 UJ/H
			03/05/08	03/05/08	Total U	0.297 ± 0.035	pCi/L	0.023 J/H

Level IV

Certified by <u></u>
Report Date <u>03/20/08</u>
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