

## **APPENDIX G**

### **Section 101**

Outfall 018 – 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: 01/24/08  
Issued: 02/04/08 16:56

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
IRA2369-01	018 EFF-1	Water
IRA2369-02	018 EFF-2	Water
IRA2369-03	018 EFF-3	Water
IRA2369-04	018 EFF-4	Water
IRA2369-05	018 EFF-5	Water
IRA2369-06	018 EFF-6	Water
IRA2369-07	018 EFF-7	Water
IRA2369-08	018 EFF-8	Water
IRA2369-09	018 EFF-9	Water
IRA2369-10	018 EFF-10	Water
IRA2369-11	018 EFF-11	Water
IRA2369-12	018 EFF-12	Water
IRA2369-13	018 EFF-13	Water
IRA2369-14	018 EFF-14	Water
IRA2369-15	018 EFF-15	Water
IRA2369-16	018 EFF-16	Water
IRA2369-17	018 EFF-17	Water
IRA2369-18	018 EFF-18	Water
IRA2369-19	018 EFF-19	Water
IRA2369-20	018 EFF-20	Water
IRA2369-21	018 EFF-21	Water
IRA2369-22	018 EFF-22	Water
IRA2369-23	018 EFF-23	Water

Reviewed By:

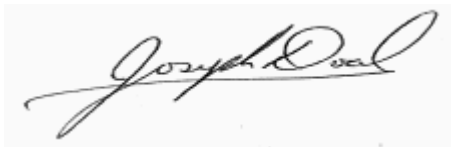
**TestAmerica Irvine**

Joseph Doak  
Project Manager

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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2369

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



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Project Manager

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**NPDES - 3997**

MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2369

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

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2369-01 (018 EFF-1 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-02 (018 EFF-2 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-03 (018 EFF-3 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-04 (018 EFF-4 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-05 (018 EFF-5 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-06 (018 EFF-6 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-07 (018 EFF-7 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-08 (018 EFF-8 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-09 (018 EFF-9 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01088	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-10 (018 EFF-10 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	

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Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2369

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

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2369-11 (018 EFF-11 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-12 (018 EFF-12 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-13 (018 EFF-13 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.98	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-14 (018 EFF-14 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-15 (018 EFF-15 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-16 (018 EFF-16 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-17 (018 EFF-17 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-18 (018 EFF-18 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-19 (018 EFF-19 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-20 (018 EFF-20 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	

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Monitoring Program  
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Sampled: 01/23/08-01/24/08  
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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2369-21 (018 EFF-21 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-22 (018 EFF-22 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-23 (018 EFF-23 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01093	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2369-01 (018 EFF-1 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	42	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25132	10	10	42	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-02 (018 EFF-2 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	10	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	10	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-03 (018 EFF-3 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-04 (018 EFF-4 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-05 (018 EFF-5 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-06 (018 EFF-6 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	

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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2369-07 (018 EFF-7 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-08 (018 EFF-8 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-09 (018 EFF-9 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-10 (018 EFF-10 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-11 (018 EFF-11 - Water)</b>					<b>Sampled: 01/23/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-12 (018 EFF-12 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-13 (018 EFF-13 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-14 (018 EFF-14 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	

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Monitoring Program  
Report Number: IRA2369

Sampled: 01/23/08-01/24/08  
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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2369-15 (018 EFF-15 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-16 (018 EFF-16 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-17 (018 EFF-17 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	12	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	12	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-18 (018 EFF-18 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04081	10	10	11	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	11	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-19 (018 EFF-19 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04083	10	10	ND	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	ND	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-20 (018 EFF-20 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04083	10	10	13	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A25136	10	10	13	1	01/25/08	01/25/08	
<b>Sample ID: IRA2369-21 (018 EFF-21 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04083	10	10	13	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A28114	10	10	13	1	01/28/08	01/28/08	
<b>Sample ID: IRA2369-22 (018 EFF-22 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04083	10	10	17	1	02/04/08	02/04/08	
Total Suspended Solids	EPA 160.2	8A28114	10	10	17	1	01/28/08	01/28/08	

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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2369-23 (018 EFF-23 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
<b>Sediment</b>	ASTM D3977	8B04083	10	10	<b>16</b>	1	02/04/08	02/04/08	
<b>Total Suspended Solids</b>	EPA 160.2	8A28114	10	10	<b>16</b>	1	01/28/08	01/28/08	

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**IRA2369 <Page 8 of 12>**  
**NPDES - 4003**

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 Monitoring Program  
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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><u>Batch: 8A25132 Extracted: 01/25/08</u></b>											
<b>Blank Analyzed: 01/25/2008 (8A25132-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/25/2008 (8A25132-BS1)</b>											
Total Suspended Solids	967	10	10	mg/l	1000		97	85-115			
<b>Duplicate Analyzed: 01/25/2008 (8A25132-DUP1)</b>											
						<b>Source: IRA2326-01</b>					
Total Suspended Solids	12.0	10	10	mg/l		11.0			9	10	
<b><u>Batch: 8A25136 Extracted: 01/25/08</u></b>											
<b>Blank Analyzed: 01/25/2008 (8A25136-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/25/2008 (8A25136-BS1)</b>											
Total Suspended Solids	971	10	10	mg/l	1000		97	85-115			
<b>Duplicate Analyzed: 01/25/2008 (8A25136-DUP1)</b>											
						<b>Source: IRA2369-15</b>					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b><u>Batch: 8A28114 Extracted: 01/28/08</u></b>											
<b>Blank Analyzed: 01/28/2008 (8A28114-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/28/2008 (8A28114-BS1)</b>											
Total Suspended Solids	967	10	10	mg/l	1000		97	85-115			

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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: 8A28114 Extracted: 01/28/08</u></b>											
<b>Duplicate Analyzed: 01/28/2008 (8A28114-DUP1)</b>											
Total Suspended Solids	15.0	10	10	mg/l		15.0			0	10	
<b><u>Batch: 8B01088 Extracted: 02/01/08</u></b>											
<b>Duplicate Analyzed: 02/01/2008 (8B01088-DUP1)</b>											
Density	0.822	NA	N/A	g/cc		0.805			2	20	
<b><u>Batch: 8B01093 Extracted: 02/01/08</u></b>											
<b>Duplicate Analyzed: 02/01/2008 (8B01093-DUP1)</b>											
Density	0.996	NA	N/A	g/cc		0.995			0	20	

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: IRA2369

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

## 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**

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Project Manager

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**IRA2369 <Page 11 of 12>**  
**NPDES - 4006**

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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2369

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

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		
EPA 160.2	Water	X	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)*

### TestAmerica Irvine

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Project Manager

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IRA2309

# CHAIN OF CUSTODY FORM

Test America Version 12/20/07

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

Test America Contact: Joseph Doak  
 Project Manager: Bronwyn Kelly

### ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Suspended Sediment Concentration (SSC, ASTM, D3977-1997)
018 EFF-1	W	500 mL Poly	1	01/23/08 -1315	None	1	X
018 EFF-2	W	500 mL Poly	1	01/23/08-1415	None	2	X
018 EFF-3	W	500 mL Poly	1	01/23/08-1515	None	3	X
018 EFF-4	W	500 mL Poly	1	01/23/08-1615	None	4	X
018 EFF-5	W	500 mL Poly	1	01/23/08-1715	None	5	X
018 EFF-6	W	500 mL Poly	1	01/23/08-1815	None	6	X
018 EFF-7	W	500 mL Poly	1	01/23/08-1915	None	7	X
018 EFF-8	W	500 mL Poly	1	01/23/08-2015	None	8	X
018 EFF-9	W	500 mL Poly	1	01/23/08-2115	None	9	X
018 EFF-10	W	500 mL Poly	1	01/23/08-2215	None	10	X
018 EFF-11	W	500 mL Poly	1	01/23/08-2315	None	11	X
018 EFF-12	W	500 mL Poly	1	01/24/08-0015	None	12	X
018 EFF-13	W	500 mL Poly	1	01/24/08-0115	None	13	X
018 EFF-14	W	500 mL Poly	1	01/24/08-0215	None	14	X
018 EFF-15	W	500 mL Poly	1	01/24/08-0315	None	15	X
018 EFF-16	W	500 mL Poly	1	01/24/08-0415	None	16	X
018 EFF-17	W	500 mL Poly	1	01/24/08-0515	None	17	X
018 EFF-18	W	500 mL Poly	1	01/24/08-0615	None	18	X
018 EFF-19	W	500 mL Poly	1	01/24/08-0715	None	19	X
018 EFF-20	W	500 mL Poly	1	01/24/08-0815	None	20	X
018 EFF-21	W	500 mL Poly	1	01/24/08-0915	None	21	X
018 EFF-22	W	500 mL Poly	1	01/24/08-1015	None	22	X
018 EFF-23	W	500 mL Poly	1	01/24/08-1115	None	23	X
018 EFF-24	W	500 mL Poly	1		None	24	X

Field readings:  
 Temp = N/A  
 pH = N/A  
 Time of readings = N/A

Comments  
 IRA2369

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

Sample Integrity: (check)  
 Intact \_\_\_\_\_ On Ice: \_\_\_\_\_

Received By: *Joseph Doak* Date/Time: 01/24/08 1555  
 Received By: *Bronwyn Kelly* Date/Time: 1/24/08 1555  
 Received By: *Joseph Doak* Date/Time: 1/24/08 1815  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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## **APPENDIX G**

### **Section 102**

Outfall 018 – BMP Effectiveness, January 24-25, 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: 01/24/08-01/25/08  
Received: 01/26/08  
Issued: 02/06/08 18:14

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
IRA2571-01	018 EFF-1	Water
IRA2571-02	018 EFF-2	Water
IRA2571-03	018 EFF-3	Water
IRA2571-04	018 EFF-4	Water
IRA2571-05	018 EFF-5	Water
IRA2571-06	018 EFF-6	Water
IRA2571-07	018 EFF-7	Water
IRA2571-08	018 EFF-8	Water
IRA2571-09	018 EFF-9	Water
IRA2571-10	018 EFF-10	Water
IRA2571-11	018 EFF-11	Water
IRA2571-12	018 EFF-12	Water
IRA2571-13	018 EFF-13	Water
IRA2571-14	018 EFF-14	Water
IRA2571-15	018 EFF-15	Water
IRA2571-16	018 EFF-16	Water
IRA2571-17	018 EFF-17	Water
IRA2571-18	018 EFF-18	Water
IRA2571-19	018 EFF-19	Water
IRA2571-20	018 EFF-20	Water
IRA2571-21	018 EFF-21	Water
IRA2571-22	018 EFF-22	Water
IRA2571-23	018 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: IRA2571

Sampled: 01/24/08-01/25/08  
Received: 01/26/08

**LABORATORY ID**

IRA2571-24

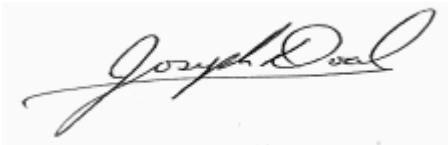
**CLIENT ID**

018 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: IRA2571

Sampled: 01/24/08-01/25/08  
 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: IRA2571-01 (018 EFF-1 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-02 (018 EFF-2 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-03 (018 EFF-3 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-04 (018 EFF-4 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-05 (018 EFF-5 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-06 (018 EFF-6 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-07 (018 EFF-7 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-08 (018 EFF-8 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-09 (018 EFF-9 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-10 (018 EFF-10 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	1.0	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: IRA2571

Sampled: 01/24/08-01/25/08  
 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: IRA2571-11 (018 EFF-11 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-12 (018 EFF-12 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-13 (018 EFF-13 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-14 (018 EFF-14 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-15 (018 EFF-15 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-16 (018 EFF-16 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-17 (018 EFF-17 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-18 (018 EFF-18 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-19 (018 EFF-19 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-20 (018 EFF-20 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	

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 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2571

Sampled: 01/24/08-01/25/08  
 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: IRA2571-21 (018 EFF-21 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-22 (018 EFF-22 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-23 (018 EFF-23 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	0.99	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-24 (018 EFF-24 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: g/cc									
Density	Displacement	8B01117	N/A	NA	1.0	1	02/01/08	02/01/08	
<b>Sample ID: IRA2571-01 (018 EFF-1 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	23	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-02 (018 EFF-2 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	20	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-03 (018 EFF-3 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	20	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-04 (018 EFF-4 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	18	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-05 (018 EFF-5 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	16	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-06 (018 EFF-6 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	19	1	02/04/08	02/05/08	

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 Project Manager

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

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2571

Sampled: 01/24/08-01/25/08  
 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: IRA2571-07 (018 EFF-7 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	17	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-08 (018 EFF-8 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	15	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-09 (018 EFF-9 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	180	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-10 (018 EFF-10 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	230	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-11 (018 EFF-11 - Water)</b>					<b>Sampled: 01/24/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	210	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-12 (018 EFF-12 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	200	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-13 (018 EFF-13 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	190	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-14 (018 EFF-14 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	170	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-15 (018 EFF-15 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	160	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-16 (018 EFF-16 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	160	1	02/04/08	02/05/08	

### TestAmerica Irvine

Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2571

Sampled: 01/24/08-01/25/08  
 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: IRA2571-17 (018 EFF-17 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	150	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-18 (018 EFF-18 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	130	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-19 (018 EFF-19 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	99	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-20 (018 EFF-20 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	85	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-21 (018 EFF-21 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	73	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-22 (018 EFF-22 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	66	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-23 (018 EFF-23 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	66	1	02/04/08	02/05/08	
<b>Sample ID: IRA2571-24 (018 EFF-24 - Water)</b>					<b>Sampled: 01/25/08</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04107	10	10	50	1	02/04/08	02/05/08	

TestAmerica Irvine

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 Project Manager

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness  
 Monitoring Program  
 Report Number: IRA2571

Sampled: 01/24/08-01/25/08  
 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: 8B01116 Extracted: 02/01/08</u></b>											
<b>Duplicate Analyzed: 02/01/2008 (8B01116-DUP1)</b>											
Density	0.999	NA	N/A	g/cc		1.00			0	20	
<b><u>Batch: 8B01117 Extracted: 02/01/08</u></b>											
<b>Duplicate Analyzed: 02/01/2008 (8B01117-DUP1)</b>											
Density	0.996	NA	N/A	g/cc		0.998			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: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2571

Sampled: 01/24/08-01/25/08  
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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**IRA2571 <Page 9 of 10>**  
**NPDES - 4018**



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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: IRA2571

Sampled: 01/24/08-01/25/08  
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

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.*

CHAIN OF CUSTODY FORM

<p>Test America Version 12/20/07</p>		<p>Project: Boeing BMP Effectiveness Monitoring Program</p>		<p>ANALYSIS REQUIRED</p>			
<p>Client Name/Address: MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007</p>		<p>Phone Number: (626) 568-6691 Fax Number: (626) 568-6515</p>		<p>Field readings: Temp = <i>N/A</i> pH = <i>N/A</i> Time of readings = <i>N/A</i></p>			
<p>Test America Contact: Joseph Doak</p>		<p>Project Manager: Bronwyn Kelly <i>S. M... ..</i> <i>il B... ..</i></p>		<p>Comments</p>			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Suspended Sediment Concentration (SSC, ASTM-D3977-1997)
018 EFF-1	W	500 mL Poly	1	01/24/08-1221	None	1	X
018 EFF-2	W	500 mL Poly	1	01/24/08-1321	None	2	X
018 EFF-3	W	500 mL Poly	1	01/24/08-1421	None	3	X
018 EFF-4	W	500 mL Poly	1	01/24/08-1521	None	4	X
018 EFF-5	W	500 mL Poly	1	01/24/08-1621	None	5	X
018 EFF-6	W	500 mL Poly	1	01/24/08-1721	None	6	X
018 EFF-7	W	500 mL Poly	1	01/24/08-1821	None	7	X
018 EFF-8	W	500 mL Poly	1	01/24/08-1921	None	8	X
018 EFF-9	W	500 mL Poly	1	01/24/08-2021	None	9	X
018 EFF-10	W	500 mL Poly	1	01/24/08-2121	None	10	X
018 EFF-11	W	500 mL Poly	1	01/24/08-2221	None	11	X
018 EFF-12	W	500 mL Poly	1	01/25/08-2321	None	12	X
018 EFF-13	W	500 mL Poly	1	01/25/08-0021	None	13	X
018 EFF-14	W	500 mL Poly	1	01/25/08-0121	None	14	X
018 EFF-15	W	500 mL Poly	1	01/25/08-0221	None	15	X
018 EFF-16	W	500 mL Poly	1	01/25/08-0321	None	16	X
018 EFF-17	W	500 mL Poly	1	01/25/08-0421	None	17	X
018 EFF-18	W	500 mL Poly	1	01/25/08-0521	None	18	X
018 EFF-19	W	500 mL Poly	1	01/25/08-0621	None	19	X
018 EFF-20	W	500 mL Poly	1	01/25/08-0721	None	20	X
018 EFF-21	W	500 mL Poly	1	01/25/08-0821	None	21	X
018 EFF-22	W	500 mL Poly	1	01/25/08-0921	None	22	X
018 EFF-23	W	500 mL Poly	1	01/25/08-1021	None	23	X
018 EFF-24	W	500 mL Poly	1	01/25/08-1121	None	24	X
Relinquished By	<i>li Bin</i>	Date/Time	1245	Received By	<i>[Signature]</i>	Date/Time	1-26-08 1245
Relinquished By	<i>[Signature]</i>	Date/Time	1530	Received By	<i>[Signature]</i>	Date/Time	1-26-08 1530
Relinquished By	<i>[Signature]</i>	Date/Time	1700	Received By	<i>[Signature]</i>	Date/Time	1-26-08 1700

## **APPENDIX G**

### **Section 103**

Outfall 018, February 3, 2008

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



# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB0156

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: IRB0156  
 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 018	IRB0156-01	30240-001, 973190, 8603-001, 8020450-01	Water	02/03/08 1445	120.1, 180.1, 330.5, 200.7, 200.8, 245.1, 415.1, 625, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 1613, 8315M, ASTM D- 5174

**II. Sample Management**

No anomalies were observed regarding sample management. The sample in this SDG was received at TestAmerica-Irvine above the temperature limits; however, the sample has insufficient time to cool in transit. The sample was received below the temperature limits at Eberline, Vista, and Weck; however, the sample was not noted to have been frozen. The sample was received within the temperature limits of  $4 \pm 2^{\circ}\text{C}$  at Truesdail. According to the case narrative for this SDG, the sample was received intact at all laboratories. The FedEx courier did not relinquish 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, Truesdail, and Weck, custody seals were not required. Container 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: K. Shadowlight

Date Reviewed: March 24, 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; however, the concentration of OCDD in the sample exceeded five times the amount in the method blank

and required no qualifications. 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.

- 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 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 was detected at a slightly higher concentration in the dissolved metals sample fraction and that cadmium was detected slightly above the MDL in the dissolved metals fraction but was not detected in the total metals fraction. In both 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. 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, nondetected gross alpha in the sample was qualified as an estimated nondetect, “UJ.” 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.

#### D. EPA METHOD 625—Semivolatile Organic Compounds (SVOCs)

Reviewed By: L. Calvin

Date Reviewed: April 2, 2008

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 625* and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted within seven days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. Samples were analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria were met. Initial calibration average RRFs were  $\geq 0.05$  and %RSDs  $\leq 35\%$  or  $r^2 > 0.995$  for all target compounds. The sample was analyzed immediately following the initial calibration. The midpoint of the initial calibration, processed as a continuing calibration, had a %D  $> 20\%$  for hexachlorocyclopentadiene. The nondetect for hexachlorocyclopentadiene was qualified as estimated, "UJ," in the sample.
- Blanks: The method blank had detects between the MDL and the RL for bis(2-ethylhexyl)phthalate at 2.82  $\mu\text{g/L}$ , butyl benzyl phthalate at 2.46  $\mu\text{g/L}$ , and diethyl phthalate at 0.160  $\mu\text{g/L}$ . Sample detects between the MDL and the RL for bis(2-ethylhexyl)phthalate and butyl benzyl phthalate were qualified as nondetects, "U," at the reporting limit.

- Blank Spikes and Laboratory Control Samples: Benzidine was recovered below the QC limits but  $\geq 10\%$  in the LCS only, and the RPD for benzidine exceeded the QC limit. The nondetect for benzidine was qualified as estimated, "UJ," in the sample for the RPD outlier. Remaining 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 of this SDG. Evaluation of method accuracy and precision was based on LSC/LSCD 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 control limits established by the continuing calibration standards:  $-50\%/+100\%$  for internal standard areas and  $\pm 30$  seconds for retention times.
- Compound Identification: Compound identification was verified. The laboratory analyzed for semivolatile compounds by EPA Method 625. 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. Any results reported between the MDL and 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 reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review of the raw data indicated no problems with system performance.

## E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 31, 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 Methods 120.1, 180.1, 330.5, 415.1, 8315M, Standard Method SM5540-C*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- **Holding Times:** Analytical holding times, 24 hours for conductivity, 48 hours for turbidity, and 28 days for TOC were met. The hydrazine aliquot was derivitized within three days of collection and analyzed within three days of derivitization. The holding time for residual chlorine is immediate; therefore, residual chlorine detected in the sample was qualified as an estimated detect, "J."
- **Calibration:** The hydrazines and TOC initial calibration  $r^2$  were  $\geq 0.995$  and the ICV and CCV recoveries and the hydrazines QCS recoveries were within the laboratory-established control limits. Check standard recoveries for the remaining applicable methods were acceptable.
- **Blanks:** Turbidity was detected in the method blank but not at a concentration sufficient to qualify the site sample. A bracketing TOC CCB was reported as the TOC method blank; however, a single standard cannot be reported as both a method blank and a CCB. As the method blank and CCB would have been prepared from the same high-purity water, the reviewer chose to report the standard as the CCB. Method blanks and CCBs had no other detects.
- **Blank Spikes and Laboratory Control Samples:** Recoveries were within laboratory-established QC limits. The LCS is not applicable to conductivity or turbidity. An LCS was not reported for residual chlorine; however, as the check standards were acceptably recovered, no qualifications were required. A bracketing TOC CCV was reported as the TOC LCS; however, a single standard cannot be reported as both a CCV and a CCB. As the LCS and CCV would have been prepared from the same high-purity water and stock solutions, the reviewer chose to report the standard as the CCV.
- **Laboratory Duplicates:** No laboratory duplicate analyses were performed for the sample in this SDG.
- **Matrix Spike/Matrix Spike Duplicate:** MS/MSD analyses were performed on the sample in this SDG for MBAS only. The recoveries and RPD were within the laboratory-established control limit. For the remaining applicable methods, method accuracy was evaluated based on the LCS results.

- Sample Result Verification: Review is not applicable at a Level V validation. Detects reported below the reporting limit were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. 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.



**Sample ID:** IRB0156-01 *outfall 08* **EPA Method 1613**

Client Data		Sample Data		Laboratory Data	
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30240-001
Project:	IRB0156	Sample Size:	0.987 L	QC Batch No.:	9953
Date Collected:	3-Feb-08			Date Analyzed DB-5:	19-Feb-08
Time Collected:	1445			Date Analyzed DB-225:	NA
				Date Received:	5-Feb-08
				Date Extracted:	15-Feb-08

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	0.00000631			IS 13C-2,3,7,8-TCDD	81.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000114			13C-1,2,3,7,8-PeCDD	70.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000157			13C-1,2,3,4,7,8-HxCDD	75.7	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000177			J	13C-1,2,3,6,7,8-HxCDD	75.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000192			13C-1,2,3,4,6,7,8-HpCDD	75.7	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000309				13C-OCDD	68.7	17 - 157	
OCDD	0.000323			B	13C-2,3,7,8-TCDF	85.2	24 - 169	
2,3,7,8-TCDF	ND	0.000000569			13C-1,2,3,7,8-PeCDF	67.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000779			13C-2,3,4,7,8-PeCDF	70.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000771			13C-1,2,3,4,7,8-HxCDF	69.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000876			13C-1,2,3,6,7,8-HxCDF	71.5	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000910			13C-2,3,4,6,7,8-HxCDF	70.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000954			13C-1,2,3,7,8,9-HxCDF	71.7	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000133			13C-1,2,3,4,6,7,8-HpCDF	68.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000629			J	13C-1,2,3,4,7,8,9-HpCDF	71.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000112			13C-OCDF	69.0	17 - 157	
OCDF	0.0000156			J	CRS 37Cl-2,3,7,8-TCDD	88.7	35 - 197	

Totals		Footnotes	
Total TCDD	ND	a. Sample specific estimated detection limit	
Total PeCDD	ND	b. Estimated maximum possible concentration.	
Total HxCDD	0.00000881	c. Method detection limit.	
Total HpCDD	0.0000631	d. Lower control limit - upper control limit.	
Total TCDF	0.00000189		
Total PeCDF	0.000000643		
Total HxCDF	0.00000514		
Total HpCDF	0.0000148		

Analyst: MAS *Level IV* Approved By: William J. Luksemburg 22-Feb-2008 15:52

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	130	1	02/04/08	02/04/08	
Barium	EPA 200.7	8B04079	0.0060	0.010	0.019	1	02/04/08	02/04/08	
Boron	EPA 200.7	8B04079	0.020	0.050	0.065	1	02/04/08	02/04/08	
Calcium	EPA 200.7	8B04079	0.050	0.10	37	1	02/04/08	02/04/08	
Iron	EPA 200.7	8B04079	0.015	0.040	0.66	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	9.5	1	02/04/08	02/04/08	

LEVEL IV

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MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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
Sample ID: IRB0156-01 (Outfall 018 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	8B04080	0.20	2.0	0.45	1	02/04/08	02/05/08	J
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	
Chromium	EPA 200.7	8B04079	2.0	5.0	ND	1	02/04/08	02/04/08	
Cobalt	EPA 200.7	8B04079	2.0	10	ND	1	02/04/08	02/04/08	
Copper	EPA 200.8	8B04080	0.75	2.0	3.5	1	02/04/08	02/04/08	
Lead	EPA 200.8	8B04080	0.30	1.0	0.49	1	02/04/08	02/04/08	J
Manganese	EPA 200.7	8B04079	7.0	20	18	1	02/04/08	02/04/08	J
Nickel	EPA 200.7	8B04079	2.0	10	2.6	1	02/04/08	02/04/08	J
Selenium	EPA 200.8	8B04080	0.30	2.0	ND	1	02/04/08	02/04/08	
Silver	EPA 200.8	8B04080	0.30	1.0	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	EPA 200.7	8B04079	3.0	10	3.9	1	02/04/08	02/04/08	J
Zinc	EPA 200.7	8B04079	6.0	20	14	1	02/04/08	02/04/08	J

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Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: mg/l									
Barium	EPA 200.7-Diss	8B04145	0.0060	0.010	<b>0.015</b>	1	02/04/08	02/05/08	
Boron	EPA 200.7-Diss	8B04145	0.020	0.050	<b>0.057</b>	1	02/04/08	02/05/08	
Calcium	EPA 200.7-Diss	8B04145	0.050	0.10	<b>36</b>	1	02/04/08	02/05/08	
Iron	EPA 200.7-Diss	8B04145	0.015	0.040	<b>0.067</b>	1	02/04/08	02/05/08	
Magnesium	EPA 200.7-Diss	8B04145	0.012	0.020	<b>9.4</b>	1	02/04/08	02/05/08	
Hardness (as CaCO3)	SM2340B	8B04145	1.0	1.0	<b>130</b>	1	02/04/08	02/05/08	

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Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	8B05112	0.20	2.0	0.46	1	02/05/08	02/05/08	J
Arsenic	EPA 200.7-Diss	8B04145	7.0	10	ND	1	02/04/08	02/05/08	
Beryllium	EPA 200.7-Diss	8B04145	0.90	2.0	ND	1	02/04/08	02/05/08	
Cadmium	EPA 200.8-Diss	8B05112	0.11	1.0	0.17	1	02/05/08	02/05/08	J
Chromium	EPA 200.7-Diss	8B04145	2.0	5.0	ND	1	02/04/08	02/05/08	
Cobalt	EPA 200.7-Diss	8B04145	2.0	10	ND	1	02/04/08	02/05/08	
Copper	EPA 200.8-Diss	8B05112	0.75	2.0	3.1	1	02/05/08	02/05/08	
Lead	EPA 200.8-Diss	8B05112	0.30	1.0	ND	1	02/05/08	02/05/08	
Manganese	EPA 200.7-Diss	8B04145	7.0	20	ND	1	02/04/08	02/05/08	
Nickel	EPA 200.7-Diss	8B04145	2.0	10	ND	1	02/04/08	02/05/08	
Selenium	EPA 200.8-Diss	8B05112	0.30	2.0	ND	1	02/05/08	02/05/08	
Silver	EPA 200.8-Diss	8B05112	0.30	1.0	ND	1	02/05/08	02/05/08	
Thallium	EPA 200.8-Diss	8B05112	0.20	1.0	ND	1	02/05/08	02/05/08	
Vanadium	EPA 200.7-Diss	8B04145	3.0	10	ND	1	02/04/08	02/05/08	
Zinc	EPA 200.7-Diss	8B04145	6.0	20	7.5	1	02/04/08	02/05/08	J

Handwritten notes in left margin:  
 Antimony: J/DNQ  
 Arsenic: U  
 Beryllium: ↓  
 Cadmium: J/DNQ  
 Chromium: ↓  
 Cobalt: ↓  
 Copper: ↓  
 Lead: U  
 Manganese: ↓  
 Nickel: ↓  
 Selenium: ↓  
 Silver: ↓  
 Thallium: ↓  
 Vanadium: ↓  
 Zinc: J/DNQ

Handwritten mark: X

LEVEL 10

pm 3/26/08

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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: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	EPA 245.1	W8B0147	0.050	0.20	ND	1	02/05/08	02/07/08	
Mercury, Total	EPA 245.1	W8B0147	0.050	0.20	ND	1	02/05/08	02/07/08	

LEVEL IV

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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
Sample ID: IRB0156-01 (Outfall 018 - Water)									
Reporting Units: ug/l									
1,2,4-Trichlorobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
1,2-Dichlorobenzene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
1,3-Dichlorobenzene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
1,4-Dichlorobenzene	EPA 625	8B03026	0.19	0.47	ND	0.943	02/03/08	02/07/08	
Acenaphthene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Acenaphthylene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Anthracene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Benzidine	EPA 625	8B03026	0.94	4.7	ND	0.943	02/03/08	02/07/08	L6
Benzo(a)anthracene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Hexachlorobutadiene	EPA 625	8B03026	0.19	1.9	ND	0.943	02/03/08	02/07/08	
Benzo(a)pyrene	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Naphthalene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Benzo(b)fluoranthene	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Benzo(g,h,i)perylene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Benzo(k)fluoranthene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Bis(2-chloroethoxy)methane	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Bis(2-chloroethyl)ether	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Bis(2-chloroisopropyl)ether	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
<b>Bis(2-ethylhexyl)phthalate</b>	EPA 625	8B03026	1.6	4.7	<b>1.7</b>	0.943	02/03/08	02/07/08	J, B, L1
4-Bromophenyl phenyl ether	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
<b>Butyl benzyl phthalate</b>	EPA 625	8B03026	0.66	4.7	<b>1.8</b>	0.943	02/03/08	02/07/08	J, B
2-Chloronaphthalene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
4-Chlorophenyl phenyl ether	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Chrysene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Dibenz(a,h)anthracene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Di-n-butyl phthalate	EPA 625	8B03026	0.19	1.9	ND	0.943	02/03/08	02/07/08	
3,3-Dichlorobenzidine	EPA 625	8B03026	0.38	4.7	ND	0.943	02/03/08	02/07/08	
Diethyl phthalate	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Dimethyl phthalate	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
2,4-Dinitrophenol	EPA 625	8B03026	0.85	4.7	ND	0.943	02/03/08	02/07/08	
2,4-Dinitrotoluene	EPA 625	8B03026	0.19	4.7	ND	0.943	02/03/08	02/07/08	
2,6-Dinitrotoluene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Di-n-octyl phthalate	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Fluoranthene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Fluorene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Hexachlorobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Hexachlorocyclopentadiene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Hexachloroethane	EPA 625	8B03026	0.19	2.8	ND	0.943	02/03/08	02/07/08	
Indeno(1,2,3-cd)pyrene	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Isophorone	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	

Handwritten annotations in the table include:  
 - A vertical line with arrows pointing down, labeled 'UJ/\*III' and 'u' at the top and bottom.  
 - 'B' written next to the rows for Bis(2-ethylhexyl)phthalate and Butyl benzyl phthalate.  
 - 'K/C' written next to the row for Hexachlorocyclopentadiene.

**TestAmerica Irvine**

Joseph Doak  
Project Manager

Handwritten notes: 'OK 02-02-08' and 'Level IV'.

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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
Sample ID: IRB0156-01 (Outfall 018 - Water) - cont.									
Reporting Units: ug/l									
Nitrobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
N-Nitrosodimethylamine	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
N-Nitroso-di-n-propylamine	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
N-Nitrosodiphenylamine	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Pentachlorophenol	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Phenanthrene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Pyrene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
2,4,6-Trichlorophenol	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Surrogate: 2-Fluorophenol (30-120%)					66 %				
Surrogate: Phenol-d6 (35-120%)					79 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					110 %				
Surrogate: Nitrobenzene-d5 (45-120%)					88 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					88 %				
Surrogate: Terphenyl-d14 (50-125%)					94 %				

Level IV

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Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B12074	1.3	4.8	ND	1	02/12/08	02/12/08	
Ammonia-N (Distilled)	EPA 350.2	8B07098	0.30	0.50	ND	1	02/07/08	02/08/08	
Biochemical Oxygen Demand	EPA 405.1	8B04070	0.59	2.0	1.1	1	02/04/08	02/09/08	J
Chloride	EPA 300.0	8B04043	0.25	0.50	23	1	02/04/08	02/04/08	
Fluoride	EPA 300.0	8B04043	0.15	0.50	0.31	1	02/04/08	02/04/08	J
Nitrate-N	EPA 300.0	8B04043	0.060	0.11	1.7	1	02/04/08	02/04/08	
Nitrite-N	EPA 300.0	8B04043	0.090	0.15	ND	1	02/04/08	02/04/08	
Nitrate/Nitrite-N	EPA 300.0	8B04043	0.15	0.26	1.7	1	02/04/08	02/04/08	
Residual Chlorine	EPA 330.5	8B04074	0.10	0.10	0.14	1	02/04/08	02/04/08	HFT
Sulfate	EPA 300.0	8B04043	1.0	2.5	67	5	02/04/08	02/04/08	M-3
Surfactants (MBAS)	SM5540-C	8B04097	0.044	0.10	ND	1	02/04/08	02/04/08	
Total Dissolved Solids	SM2540C	8B07123	10	10	260	1	02/07/08	02/07/08	
Total Organic Carbon	EPA 415.1	8B13116	0.50	1.0	9.8	1	02/13/08	02/13/08	
Total Suspended Solids	EPA 160.2	8B05134	10	10	ND	1	02/05/08	02/05/08	

\* Analysis not Validated

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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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B04067	0.040	1.0	15	1	02/04/08	02/04/08	

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Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8B08056	1.0	1.0	380	1	02/07/08	02/07/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak  
Project Manager

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IRB0156 <Page 21 of 67>

# TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008  
(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

**Client:** TestAmerica Analytical-Irvine  
17461 Deñan Avenue, Suite 100  
Irvine, CA 92614-5817

**Attention:** Joseph Doak  
**Sample:** Water / 1 Sample  
**Project Name:** IRB0156  
**P.O. Number:** IRB0156  
**Method Number:** 8315 (Modified)  
**Investigation:** Hydrazines

## REPORT

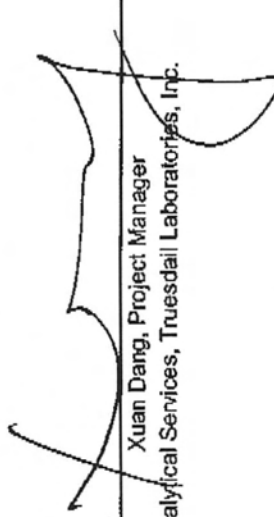
**Laboratory No:** 973190  
**Report Date:** February 19, 2008  
**Sampling Date:** February 3, 2008  
**Receiving Date:** February 4, 2008  
**Extraction Date:** February 5, 2008  
**Analysis Date:** February 6, 2008  
**Units:** µg/L  
**Reported By:** JS

### Analytical Results

Sample ID	Sample Descript	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
707223-MB	* Method Blank	100	1	ND	ND	ND	None
973190 Outfall 018	IRB0156-01	100	1	ND	ND	ND	None
MDL				0.56	0.32	0.15	
PQL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

\* Analysis not validated  
LEVEL IV

Note: Results based on detector #1 (UV=365nm) data.

  
Xuan Dang, Project Manager  
Analytical Services, Truesdail Laboratories, Inc.

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

# **APPENDIX G**

## **Section 104**

Outfall 018, 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 018

Sampled: 02/03/08  
Received: 02/03/08  
Issued: 03/07/08 12:10

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(s) of Custody, 2 pages, are included and are an integral part of this report.*

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

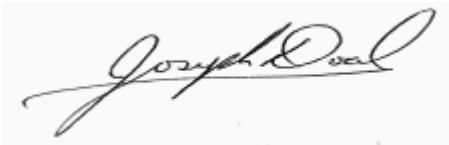
## SAMPLE CROSS REFERENCE

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

ADDITIONAL INFORMATION: This is a revised report to include hardness data.

LABORATORY ID	CLIENT ID	MATRIX
IRB0156-01	Outfall 018	Water
IRB0156-02	Trip Blank	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 018

Report Number: IRB0156

Sampled: 02/03/08

Received: 02/03/08

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0156-01 (Outfall 018 - Water)</b>									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	8B04063	0.094	0.47	ND	0.943	02/04/08	02/05/08	
Surrogate: n-Octacosane (40-125%)					62 %				

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Joseph Doak  
Project Manager

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**IRB0156 <Page 2 of 67>**  
**NPDES - 4050**



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

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015 Mod.	8B07041	25	100	ND	1	02/07/08	02/07/08	
Surrogate: 4-BFB (FID) (65-140%)					98 %				

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Project Manager

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IRB0156 <Page 3 of 67>  
NPDES - 4051

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

Project ID: Annual Outfall 018

Report Number: IRB0156

Sampled: 02/03/08

Received: 02/03/08

## VOLATILE ORGANICS by GCMS SIM

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B-SIM	8B04013	1.0	2.0	ND	1	02/04/08	02/04/08	
Surrogate: Dibromofluoromethane (80-120%)					100 %				

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Project Manager

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IRB0156 <Page 4 of 67>  
NPDES - 4052

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B07016	0.30	0.50	ND	1	02/07/08	02/08/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B07016	0.24	0.50	ND	1	02/07/08	02/08/08	
1,1,2-Trichloroethane	EPA 624	8B07016	0.30	0.50	ND	1	02/07/08	02/08/08	
1,1-Dichloroethane	EPA 624	8B07016	0.27	0.50	ND	1	02/07/08	02/08/08	
1,1-Dichloroethene	EPA 624	8B07016	0.42	0.50	ND	1	02/07/08	02/08/08	
1,2-Dichloroethane	EPA 624	8B07016	0.28	0.50	ND	1	02/07/08	02/08/08	
Benzene	EPA 624	8B07016	0.28	0.50	ND	1	02/07/08	02/08/08	
1,2-Dichlorobenzene	EPA 624	8B07016	0.32	0.50	ND	1	02/07/08	02/08/08	
Carbon tetrachloride	EPA 624	8B07016	0.28	0.50	ND	1	02/07/08	02/08/08	
1,2-Dichloropropane	EPA 624	8B07016	0.35	0.50	ND	1	02/07/08	02/08/08	
Chloroform	EPA 624	8B07016	0.33	0.50	ND	1	02/07/08	02/08/08	
1,3-Dichlorobenzene	EPA 624	8B07016	0.35	0.50	ND	1	02/07/08	02/08/08	
Ethylbenzene	EPA 624	8B07016	0.25	0.50	ND	1	02/07/08	02/08/08	
1,4-Dichlorobenzene	EPA 624	8B07016	0.37	0.50	ND	1	02/07/08	02/08/08	
Tetrachloroethene	EPA 624	8B07016	0.32	0.50	ND	1	02/07/08	02/08/08	
Toluene	EPA 624	8B07016	0.36	0.50	ND	1	02/07/08	02/08/08	
Bromodichloromethane	EPA 624	8B07016	0.30	0.50	ND	1	02/07/08	02/08/08	
Trichloroethene	EPA 624	8B07016	0.26	0.50	ND	1	02/07/08	02/08/08	
Bromoform	EPA 624	8B07016	0.40	0.50	ND	1	02/07/08	02/08/08	
Trichlorofluoromethane	EPA 624	8B07016	0.34	0.50	ND	1	02/07/08	02/08/08	
Bromomethane	EPA 624	8B07016	0.42	1.0	ND	1	02/07/08	02/08/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B07016	0.50	5.0	ND	1	02/07/08	02/08/08	
Vinyl chloride	EPA 624	8B07016	0.30	0.50	ND	1	02/07/08	02/08/08	
Chlorobenzene	EPA 624	8B07016	0.36	0.50	ND	1	02/07/08	02/08/08	
Xylenes, Total	EPA 624	8B07016	0.90	1.5	ND	1	02/07/08	02/08/08	
Chloroethane	EPA 624	8B07016	0.40	1.0	ND	1	02/07/08	02/08/08	
Chloromethane	EPA 624	8B07016	0.40	0.50	ND	1	02/07/08	02/08/08	
cis-1,3-Dichloropropene	EPA 624	8B07016	0.22	0.50	ND	1	02/07/08	02/08/08	
Dibromochloromethane	EPA 624	8B07016	0.28	0.50	ND	1	02/07/08	02/08/08	
Methylene chloride	EPA 624	8B07016	0.95	1.0	ND	1	02/07/08	02/08/08	
trans-1,2-Dichloroethene	EPA 624	8B07016	0.27	0.50	ND	1	02/07/08	02/08/08	
trans-1,3-Dichloropropene	EPA 624	8B07016	0.32	0.50	ND	1	02/07/08	02/08/08	
Surrogate: Dibromofluoromethane (80-120%)					114 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				

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 018

Report Number: IRB0156

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: IRB0156-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/05/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B04024	0.24	0.50	ND	1	02/04/08	02/05/08	
1,1,2-Trichloroethane	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/05/08	
1,1-Dichloroethane	EPA 624	8B04024	0.27	0.50	ND	1	02/04/08	02/05/08	
<b>1,1-Dichloroethene</b>	EPA 624	8B04024	0.42	0.50	<b>0.43</b>	1	02/04/08	02/05/08	J
1,2-Dichloroethane	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/05/08	
Benzene	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/05/08	
1,2-Dichlorobenzene	EPA 624	8B04024	0.32	0.50	ND	1	02/04/08	02/05/08	
Carbon tetrachloride	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/05/08	
1,2-Dichloropropane	EPA 624	8B04024	0.35	0.50	ND	1	02/04/08	02/05/08	
Chloroform	EPA 624	8B04024	0.33	0.50	ND	1	02/04/08	02/05/08	
1,3-Dichlorobenzene	EPA 624	8B04024	0.35	0.50	ND	1	02/04/08	02/05/08	
Ethylbenzene	EPA 624	8B04024	0.25	0.50	ND	1	02/04/08	02/05/08	
1,4-Dichlorobenzene	EPA 624	8B04024	0.37	0.50	ND	1	02/04/08	02/05/08	
Tetrachloroethene	EPA 624	8B04024	0.32	0.50	ND	1	02/04/08	02/05/08	
Toluene	EPA 624	8B04024	0.36	0.50	ND	1	02/04/08	02/05/08	
Bromodichloromethane	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/05/08	
Trichloroethene	EPA 624	8B04024	0.26	0.50	ND	1	02/04/08	02/05/08	
Bromoform	EPA 624	8B04024	0.40	0.50	ND	1	02/04/08	02/05/08	
Trichlorofluoromethane	EPA 624	8B04024	0.34	0.50	ND	1	02/04/08	02/05/08	
Bromomethane	EPA 624	8B04024	0.42	1.0	ND	1	02/04/08	02/05/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B04024	0.50	5.0	ND	1	02/04/08	02/05/08	
Vinyl chloride	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/05/08	
Chlorobenzene	EPA 624	8B04024	0.36	0.50	ND	1	02/04/08	02/05/08	
Xylenes, Total	EPA 624	8B04024	0.90	1.5	ND	1	02/04/08	02/05/08	
Chloroethane	EPA 624	8B04024	0.40	1.0	ND	1	02/04/08	02/05/08	
Chloromethane	EPA 624	8B04024	0.40	0.50	ND	1	02/04/08	02/05/08	
cis-1,3-Dichloropropene	EPA 624	8B04024	0.22	0.50	ND	1	02/04/08	02/05/08	
Dibromochloromethane	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/05/08	
Methylene chloride	EPA 624	8B04024	0.95	1.0	ND	1	02/04/08	02/05/08	
trans-1,2-Dichloroethene	EPA 624	8B04024	0.27	0.50	ND	1	02/04/08	02/05/08	
trans-1,3-Dichloropropene	EPA 624	8B04024	0.32	0.50	ND	1	02/04/08	02/05/08	
Surrogate: Dibromofluoromethane (80-120%)					115 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

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 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B04024	4.0	5.0	ND	1	02/04/08	02/05/08	
Acrylonitrile	EPA 624	8B04024	0.70	2.0	ND	1	02/04/08	02/05/08	
2-Chloroethyl vinyl ether	EPA 624	8B04024	1.8	5.0	ND	1	02/04/08	02/05/08	
Surrogate: Dibromofluoromethane (80-120%)					115 %				
Surrogate: Toluene-d8 (80-120%)					102 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				
<b>Sample ID: IRB0156-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B04024	4.0	5.0	ND	1	02/04/08	02/05/08	
Acrylonitrile	EPA 624	8B04024	0.70	2.0	ND	1	02/04/08	02/05/08	
2-Chloroethyl vinyl ether	EPA 624	8B04024	1.8	5.0	ND	1	02/04/08	02/05/08	
Surrogate: Dibromofluoromethane (80-120%)					115 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

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 Project Manager

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0156-01 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	8B04024	N/A	2.5	ND	1	02/04/08	02/05/08	
Cyclohexane	EPA 624 (MOD.)	8B04024	N/A	2.5	ND	1	02/04/08	02/05/08	
<b>Sample ID: IRB0156-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	8B04024	N/A	2.5	ND	1	02/04/08	02/05/08	
Cyclohexane	EPA 624 (MOD.)	8B04024	N/A	2.5	ND	1	02/04/08	02/05/08	

**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 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,2,4-Trichlorobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
1,2-Dichlorobenzene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
1,3-Dichlorobenzene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
1,4-Dichlorobenzene	EPA 625	8B03026	0.19	0.47	ND	0.943	02/03/08	02/07/08	
Acenaphthene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Acenaphthylene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Anthracene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Benzidine	EPA 625	8B03026	0.94	4.7	ND	0.943	02/03/08	02/07/08	L6
Benzo(a)anthracene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Hexachlorobutadiene	EPA 625	8B03026	0.19	1.9	ND	0.943	02/03/08	02/07/08	
Benzo(a)pyrene	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Naphthalene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Benzo(b)fluoranthene	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Benzo(g,h,i)perylene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Benzo(k)fluoranthene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Bis(2-chloroethoxy)methane	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Bis(2-chloroethyl)ether	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Bis(2-chloroisopropyl)ether	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
<b>Bis(2-ethylhexyl)phthalate</b>	EPA 625	8B03026	1.6	4.7	<b>1.7</b>	0.943	02/03/08	02/07/08	J, B, L1
4-Bromophenyl phenyl ether	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
<b>Butyl benzyl phthalate</b>	EPA 625	8B03026	0.66	4.7	<b>1.8</b>	0.943	02/03/08	02/07/08	J, B
2-Chloronaphthalene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
4-Chlorophenyl phenyl ether	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Chrysene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Dibenz(a,h)anthracene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Di-n-butyl phthalate	EPA 625	8B03026	0.19	1.9	ND	0.943	02/03/08	02/07/08	
3,3-Dichlorobenzidine	EPA 625	8B03026	0.38	4.7	ND	0.943	02/03/08	02/07/08	
Diethyl phthalate	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Dimethyl phthalate	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
2,4-Dinitrophenol	EPA 625	8B03026	0.85	4.7	ND	0.943	02/03/08	02/07/08	
2,4-Dinitrotoluene	EPA 625	8B03026	0.19	4.7	ND	0.943	02/03/08	02/07/08	
2,6-Dinitrotoluene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Di-n-octyl phthalate	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Fluoranthene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Fluorene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Hexachlorobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Hexachlorocyclopentadiene	EPA 625	8B03026	0.094	4.7	ND	0.943	02/03/08	02/07/08	
Hexachloroethane	EPA 625	8B03026	0.19	2.8	ND	0.943	02/03/08	02/07/08	
Indeno(1,2,3-cd)pyrene	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Isophorone	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Nitrobenzene	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
N-Nitrosodimethylamine	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
N-Nitroso-di-n-propylamine	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
N-Nitrosodiphenylamine	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Pentachlorophenol	EPA 625	8B03026	0.094	1.9	ND	0.943	02/03/08	02/07/08	
Phenanthrene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
Pyrene	EPA 625	8B03026	0.094	0.47	ND	0.943	02/03/08	02/07/08	
2,4,6-Trichlorophenol	EPA 625	8B03026	0.094	0.94	ND	0.943	02/03/08	02/07/08	
Surrogate: 2-Fluorophenol (30-120%)					66 %				
Surrogate: Phenol-d6 (35-120%)					79 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					110 %				
Surrogate: Nitrobenzene-d5 (45-120%)					88 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					88 %				
Surrogate: Terphenyl-d14 (50-125%)					94 %				

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Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
Aldrin	EPA 608	8B05099	0.0014	0.0047	ND	0.943	02/05/08	02/06/08	
alpha-BHC	EPA 608	8B05099	0.0024	0.0047	ND	0.943	02/05/08	02/06/08	
beta-BHC	EPA 608	8B05099	0.0038	0.0094	ND	0.943	02/05/08	02/06/08	
delta-BHC	EPA 608	8B05099	0.0033	0.0047	ND	0.943	02/05/08	02/06/08	
gamma-BHC (Lindane)	EPA 608	8B05099	0.0028	0.0094	ND	0.943	02/05/08	02/06/08	
Chlordane	EPA 608	8B05099	0.028	0.094	ND	0.943	02/05/08	02/06/08	
4,4'-DDD	EPA 608	8B05099	0.0019	0.0047	ND	0.943	02/05/08	02/06/08	
4,4'-DDE	EPA 608	8B05099	0.0028	0.0047	ND	0.943	02/05/08	02/06/08	
4,4'-DDT	EPA 608	8B05099	0.0038	0.0094	ND	0.943	02/05/08	02/06/08	
Dieldrin	EPA 608	8B05099	0.0019	0.0047	ND	0.943	02/05/08	02/06/08	
Endosulfan I	EPA 608	8B05099	0.0019	0.0047	ND	0.943	02/05/08	02/06/08	
Endosulfan II	EPA 608	8B05099	0.0028	0.0047	ND	0.943	02/05/08	02/06/08	
Endosulfan sulfate	EPA 608	8B05099	0.0028	0.0094	ND	0.943	02/05/08	02/06/08	
Endrin	EPA 608	8B05099	0.0019	0.0047	ND	0.943	02/05/08	02/06/08	
Endrin aldehyde	EPA 608	8B05099	0.0019	0.0094	ND	0.943	02/05/08	02/06/08	
Endrin ketone	EPA 608	8B05099	0.0028	0.0094	ND	0.943	02/05/08	02/06/08	
Heptachlor	EPA 608	8B05099	0.0028	0.0094	ND	0.943	02/05/08	02/06/08	
Heptachlor epoxide	EPA 608	8B05099	0.0024	0.0047	ND	0.943	02/05/08	02/06/08	
Methoxychlor	EPA 608	8B05099	0.0033	0.0047	ND	0.943	02/05/08	02/06/08	
Toxaphene	EPA 608	8B05099	0.066	0.094	ND	0.943	02/05/08	02/06/08	
Surrogate: Decachlorobiphenyl (45-120%)					76 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					65 %				

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Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	8B05099	0.42	0.47	ND	0.943	02/05/08	02/07/08	
Aroclor 1221	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/07/08	
Aroclor 1232	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/07/08	
Aroclor 1242	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/07/08	
Aroclor 1248	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/07/08	
Aroclor 1254	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/07/08	
Aroclor 1260	EPA 608	8B05099	0.28	0.47	ND	0.943	02/05/08	02/07/08	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					83 %				

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Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	<b>130</b>	1	02/04/08	02/04/08	
Barium	EPA 200.7	8B04079	0.0060	0.010	<b>0.019</b>	1	02/04/08	02/04/08	
Boron	EPA 200.7	8B04079	0.020	0.050	<b>0.065</b>	1	02/04/08	02/04/08	
Calcium	EPA 200.7	8B04079	0.050	0.10	<b>37</b>	1	02/04/08	02/04/08	
Iron	EPA 200.7	8B04079	0.015	0.040	<b>0.66</b>	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	<b>9.5</b>	1	02/04/08	02/04/08	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Antimony</b>	EPA 200.8	8B04080	0.20	2.0	<b>0.45</b>	1	02/04/08	02/05/08	J
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	
Chromium	EPA 200.7	8B04079	2.0	5.0	ND	1	02/04/08	02/04/08	
Cobalt	EPA 200.7	8B04079	2.0	10	ND	1	02/04/08	02/04/08	
<b>Copper</b>	EPA 200.8	8B04080	0.75	2.0	<b>3.5</b>	1	02/04/08	02/04/08	
<b>Lead</b>	EPA 200.8	8B04080	0.30	1.0	<b>0.49</b>	1	02/04/08	02/04/08	J
<b>Manganese</b>	EPA 200.7	8B04079	7.0	20	<b>18</b>	1	02/04/08	02/04/08	J
<b>Nickel</b>	EPA 200.7	8B04079	2.0	10	<b>2.6</b>	1	02/04/08	02/04/08	J
Selenium	EPA 200.8	8B04080	0.30	2.0	ND	1	02/04/08	02/04/08	
Silver	EPA 200.8	8B04080	0.30	1.0	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>3.9</b>	1	02/04/08	02/04/08	J
<b>Zinc</b>	EPA 200.7	8B04079	6.0	20	<b>14</b>	1	02/04/08	02/04/08	J

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: mg/l									
<b>Barium</b>	EPA 200.7-Diss	8B04145	0.0060	0.010	<b>0.015</b>	1	02/04/08	02/05/08	
<b>Boron</b>	EPA 200.7-Diss	8B04145	0.020	0.050	<b>0.057</b>	1	02/04/08	02/05/08	
<b>Calcium</b>	EPA 200.7-Diss	8B04145	0.050	0.10	<b>36</b>	1	02/04/08	02/05/08	
<b>Iron</b>	EPA 200.7-Diss	8B04145	0.015	0.040	<b>0.067</b>	1	02/04/08	02/05/08	
<b>Magnesium</b>	EPA 200.7-Diss	8B04145	0.012	0.020	<b>9.4</b>	1	02/04/08	02/05/08	
<b>Hardness (as CaCO3)</b>	SM2340B	8B04145	1.0	1.0	<b>130</b>	1	02/04/08	02/05/08	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Antimony</b>	EPA 200.8-Diss	8B05112	0.20	2.0	<b>0.46</b>	1	02/05/08	02/05/08	J
Arsenic	EPA 200.7-Diss	8B04145	7.0	10	ND	1	02/04/08	02/05/08	
Beryllium	EPA 200.7-Diss	8B04145	0.90	2.0	ND	1	02/04/08	02/05/08	
<b>Cadmium</b>	EPA 200.8-Diss	8B05112	0.11	1.0	<b>0.17</b>	1	02/05/08	02/05/08	J
Chromium	EPA 200.7-Diss	8B04145	2.0	5.0	ND	1	02/04/08	02/05/08	
Cobalt	EPA 200.7-Diss	8B04145	2.0	10	ND	1	02/04/08	02/05/08	
<b>Copper</b>	EPA 200.8-Diss	8B05112	0.75	2.0	<b>3.1</b>	1	02/05/08	02/05/08	
Lead	EPA 200.8-Diss	8B05112	0.30	1.0	ND	1	02/05/08	02/05/08	
Manganese	EPA 200.7-Diss	8B04145	7.0	20	ND	1	02/04/08	02/05/08	
Nickel	EPA 200.7-Diss	8B04145	2.0	10	ND	1	02/04/08	02/05/08	
Selenium	EPA 200.8-Diss	8B05112	0.30	2.0	ND	1	02/05/08	02/05/08	
Silver	EPA 200.8-Diss	8B05112	0.30	1.0	ND	1	02/05/08	02/05/08	
Thallium	EPA 200.8-Diss	8B05112	0.20	1.0	ND	1	02/05/08	02/05/08	
Vanadium	EPA 200.7-Diss	8B04145	3.0	10	ND	1	02/04/08	02/05/08	
<b>Zinc</b>	EPA 200.7-Diss	8B04145	6.0	20	<b>7.5</b>	1	02/04/08	02/05/08	J

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B12074	1.3	4.8	ND	1	02/12/08	02/12/08	
Ammonia-N (Distilled)	EPA 350.2	8B07098	0.30	0.50	ND	1	02/07/08	02/08/08	
<b>Biochemical Oxygen Demand</b>	EPA 405.1	8B04070	0.59	2.0	<b>1.1</b>	1	02/04/08	02/09/08	J
<b>Chloride</b>	EPA 300.0	8B04043	0.25	0.50	<b>23</b>	1	02/04/08	02/04/08	
<b>Fluoride</b>	EPA 300.0	8B04043	0.15	0.50	<b>0.31</b>	1	02/04/08	02/04/08	J
<b>Nitrate-N</b>	EPA 300.0	8B04043	0.060	0.11	<b>1.7</b>	1	02/04/08	02/04/08	
Nitrite-N	EPA 300.0	8B04043	0.090	0.15	ND	1	02/04/08	02/04/08	
<b>Nitrate/Nitrite-N</b>	EPA 300.0	8B04043	0.15	0.26	<b>1.7</b>	1	02/04/08	02/04/08	
<b>Residual Chlorine</b>	EPA 330.5	8B04074	0.10	0.10	<b>0.14</b>	1	02/04/08	02/04/08	HFT
<b>Sulfate</b>	EPA 300.0	8B04043	1.0	2.5	<b>67</b>	5	02/04/08	02/04/08	M-3
Surfactants (MBAS)	SM5540-C	8B04097	0.044	0.10	ND	1	02/04/08	02/04/08	
<b>Total Dissolved Solids</b>	SM2540C	8B07123	10	10	<b>260</b>	1	02/07/08	02/07/08	
<b>Total Organic Carbon</b>	EPA 415.1	8B13116	0.50	1.0	<b>9.8</b>	1	02/13/08	02/13/08	
Total Suspended Solids	EPA 160.2	8B05134	10	10	ND	1	02/05/08	02/05/08	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8B04066	0.10	0.10	ND	1	02/04/08	02/04/08	

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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B04067	0.040	1.0	15	1	02/04/08	02/04/08	

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Project ID: Annual Outfall 018

Report Number: IRB0156

Sampled: 02/03/08  
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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
Chromium VI	EPA 218.6	8B04054	0.20	1.0	ND	1	02/04/08	02/04/08	
Total Cyanide	EPA 335.2	8B04112	2.2	5.0	ND	1	02/04/08	02/04/08	
Perchlorate	EPA 314.0	8B12073	1.5	4.0	ND	1	02/12/08	02/12/08	

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Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8B08056	1.0	1.0	380	1	02/07/08	02/07/08	

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NPDES - 4069

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: IRB0156-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0147	0.050	0.20	ND	1	02/05/08	02/07/08	
Mercury, Total	EPA 245.1	W8B0147	0.050	0.20	ND	1	02/05/08	02/07/08	

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**IRB0156** <Page 22 of 67>  
NPDES - 4070

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 018 (IRB0156-01) - Water</b>					
EPA 160.5	2	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 09:00	02/04/2008 09:00
EPA 180.1	2	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 09:00	02/04/2008 09:00
EPA 218.6	1	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 07:00	02/04/2008 08:03
EPA 300.0	2	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 05:00	02/04/2008 10:31
EPA 330.5	1	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 10:00	02/04/2008 10:00
EPA 405.1	2	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 16:00	02/09/2008 13:30
EPA 624	3	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 00:00	02/05/2008 04:37
Filtration	1	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 07:00	02/04/2008 07:00
SM5540-C	2	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 13:33	02/04/2008 20:15
<b>Sample ID: Trip Blank (IRB0156-02) - Water</b>					
EPA 624	3	02/03/2008 14:45	02/03/2008 18:25	02/04/2008 00:00	02/05/2008 04:08

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Report Number: IRB0156

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

## METHOD BLANK/QC DATA

### EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04063 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/05/2008 (8B04063-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.10	mg/l							
Surrogate: n-Octacosane	0.138			mg/l	0.200		69	40-125			
<b>LCS Analyzed: 02/05/2008 (8B04063-BS1)</b>											
EFH (C13 - C40)	0.573	0.50	0.10	mg/l	0.750		76	40-115			MNR1
Surrogate: n-Octacosane	0.141			mg/l	0.200		70	40-125			
<b>LCS Dup Analyzed: 02/05/2008 (8B04063-BSD1)</b>											
EFH (C13 - C40)	0.660	0.50	0.10	mg/l	0.750		88	40-115	14	25	
Surrogate: n-Octacosane	0.152			mg/l	0.200		76	40-125			

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Project ID: Annual Outfall 018

Report Number: IRB0156

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

## METHOD BLANK/QC DATA

### VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B07041 Extracted: 02/07/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B07041-BLK1)</b>											
GRO (C4 - C12)	ND	100	25	ug/l							
Surrogate: 4-BFB (FID)	11.5			ug/l	10.0		115	65-140			
<b>LCS Analyzed: 02/07/2008 (8B07041-BS1)</b>											
GRO (C4 - C12)	801	100	25	ug/l	800		100	80-120			
Surrogate: 4-BFB (FID)	19.0			ug/l	10.0		190	65-140			ZX
<b>Matrix Spike Analyzed: 02/07/2008 (8B07041-MS1) Source: IRB0223-05</b>											
GRO (C4 - C12)	237	100	25	ug/l	220	ND	108	65-140			
Surrogate: 4-BFB (FID)	14.0			ug/l	10.0		140	65-140			
<b>Matrix Spike Dup Analyzed: 02/07/2008 (8B07041-MSD1) Source: IRB0223-05</b>											
GRO (C4 - C12)	242	100	25	ug/l	220	ND	110	65-140	2	20	
Surrogate: 4-BFB (FID)	13.8			ug/l	10.0		138	65-140			

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

## METHOD BLANK/QC DATA

### VOLATILE ORGANICS by GCMS SIM

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04013 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04013-BLK1)</b>											
1,4-Dioxane	ND	2.0	1.0	ug/l							
Surrogate: Dibromofluoromethane	0.980			ug/l	1.00		98	80-120			
<b>LCS Analyzed: 02/04/2008 (8B04013-BS1)</b>											
1,4-Dioxane	8.78	2.0	1.0	ug/l	10.0		88	70-125			
Surrogate: Dibromofluoromethane	0.970			ug/l	1.00		97	80-120			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04013-MS1) Source: IRA2967-02</b>											
1,4-Dioxane	9.74	2.0	1.0	ug/l	10.0	1.95	78	70-130			
Surrogate: Dibromofluoromethane	1.02			ug/l	1.00		102	80-120			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04013-MSD1) Source: IRA2967-02</b>											
1,4-Dioxane	10.7	2.0	1.0	ug/l	10.0	1.95	88	70-130	9	30	
Surrogate: Dibromofluoromethane	1.01			ug/l	1.00		101	80-120			

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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	RPD Limit	Data Qualifiers
<b>Batch: 8B04024 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04024-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							
Benzene	ND	0.50	0.28	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.30	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Chloroethane	ND	1.0	0.40	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							
Methylene chloride	ND	1.0	0.95	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.27	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Surrogate: Dibromofluoromethane	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			

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## 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: 8B04024 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04024-BLK1)</b>											
<i>Surrogate: 4-Bromofluorobenzene</i>	23.1			ug/l	25.0		92	80-120			
<b>LCS Analyzed: 02/04/2008 (8B04024-BS1)</b>											
1,1,1-Trichloroethane	29.2	0.50	0.30	ug/l	25.0		117	65-135			
1,1,2,2-Tetrachloroethane	26.4	0.50	0.24	ug/l	25.0		106	55-130			
1,1,2-Trichloroethane	25.0	0.50	0.30	ug/l	25.0		100	70-125			
1,1-Dichloroethane	28.6	0.50	0.27	ug/l	25.0		114	70-125			
1,1-Dichloroethene	24.7	0.50	0.42	ug/l	25.0		99	70-125			
1,2-Dichloroethane	25.7	0.50	0.28	ug/l	25.0		103	60-140			
Benzene	24.7	0.50	0.28	ug/l	25.0		99	70-120			
1,2-Dichlorobenzene	25.3	0.50	0.32	ug/l	25.0		101	75-120			
Carbon tetrachloride	27.1	0.50	0.28	ug/l	25.0		109	65-140			
1,2-Dichloropropane	25.1	0.50	0.35	ug/l	25.0		100	70-125			
Chloroform	29.1	0.50	0.33	ug/l	25.0		116	70-130			
1,3-Dichlorobenzene	25.0	0.50	0.35	ug/l	25.0		100	75-120			
Ethylbenzene	25.8	0.50	0.25	ug/l	25.0		103	75-125			
1,4-Dichlorobenzene	23.2	0.50	0.37	ug/l	25.0		93	75-120			
Tetrachloroethene	21.4	0.50	0.32	ug/l	25.0		86	70-125			
Toluene	24.6	0.50	0.36	ug/l	25.0		99	70-120			
Bromodichloromethane	28.2	0.50	0.30	ug/l	25.0		113	70-135			
Trichloroethene	22.9	0.50	0.26	ug/l	25.0		92	70-125			
Bromoform	21.2	0.50	0.40	ug/l	25.0		85	55-130			
Trichlorofluoromethane	33.5	0.50	0.34	ug/l	25.0		134	65-145			
Bromomethane	29.0	1.0	0.42	ug/l	25.0		116	65-140			
Vinyl chloride	29.4	0.50	0.30	ug/l	25.0		118	55-135			
Chlorobenzene	23.6	0.50	0.36	ug/l	25.0		94	75-120			
Xylenes, Total	73.8	1.5	0.90	ug/l	75.0		98	70-125			
Chloroethane	29.2	1.0	0.40	ug/l	25.0		117	60-140			
Chloromethane	29.7	0.50	0.40	ug/l	25.0		119	50-140			
cis-1,3-Dichloropropene	22.6	0.50	0.22	ug/l	25.0		90	75-125			
Dibromochloromethane	23.8	0.50	0.28	ug/l	25.0		95	70-140			
Methylene chloride	27.1	1.0	0.95	ug/l	25.0		108	55-130			
trans-1,2-Dichloroethene	28.2	0.50	0.27	ug/l	25.0		113	70-125			
trans-1,3-Dichloropropene	22.6	0.50	0.32	ug/l	25.0		91	70-125			
<i>Surrogate: Dibromofluoromethane</i>	28.5			ug/l	25.0		114	80-120			
<i>Surrogate: Toluene-d8</i>	25.3			ug/l	25.0		101	80-120			

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: 8B04024 Extracted: 02/04/08</b>											
<b>LCS Analyzed: 02/04/2008 (8B04024-BS1)</b>											
<i>Surrogate: 4-Bromofluorobenzene</i>	25.8			ug/l	25.0		103	80-120			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04024-MS1)</b>											
<b>Source: IRA3076-01</b>											
1,1,1-Trichloroethane	28.3	0.50	0.30	ug/l	25.0	ND	113	65-140			
1,1,2,2-Tetrachloroethane	27.7	0.50	0.24	ug/l	25.0	ND	111	55-135			
1,1,2-Trichloroethane	25.0	0.50	0.30	ug/l	25.0	ND	100	65-130			
1,1-Dichloroethane	27.4	0.50	0.27	ug/l	25.0	ND	109	65-130			
1,1-Dichloroethene	23.1	0.50	0.42	ug/l	25.0	ND	92	60-130			
1,2-Dichloroethane	25.4	0.50	0.28	ug/l	25.0	ND	101	60-140			
Benzene	24.2	0.50	0.28	ug/l	25.0	ND	97	65-125			
1,2-Dichlorobenzene	25.0	0.50	0.32	ug/l	25.0	ND	100	75-125			
Carbon tetrachloride	27.2	0.50	0.28	ug/l	25.0	ND	109	65-140			
1,2-Dichloropropane	24.4	0.50	0.35	ug/l	25.0	ND	98	65-130			
Chloroform	28.4	0.50	0.33	ug/l	25.0	ND	114	65-135			
1,3-Dichlorobenzene	24.4	0.50	0.35	ug/l	25.0	ND	98	75-125			
Ethylbenzene	25.2	0.50	0.25	ug/l	25.0	ND	101	65-130			
1,4-Dichlorobenzene	22.4	0.50	0.37	ug/l	25.0	ND	90	75-125			
Tetrachloroethene	20.5	0.50	0.32	ug/l	25.0	ND	82	65-130			
Toluene	24.1	0.50	0.36	ug/l	25.0	ND	96	70-125			
Bromodichloromethane	27.7	0.50	0.30	ug/l	25.0	ND	111	70-135			
Trichloroethene	22.5	0.50	0.26	ug/l	25.0	ND	90	65-125			
Bromoform	21.5	0.50	0.40	ug/l	25.0	ND	86	55-135			
Trichlorofluoromethane	33.0	0.50	0.34	ug/l	25.0	ND	132	60-145			
Bromomethane	26.2	1.0	0.42	ug/l	25.0	ND	105	55-145			
Vinyl chloride	26.4	0.50	0.30	ug/l	25.0	ND	106	45-140			
Chlorobenzene	22.8	0.50	0.36	ug/l	25.0	ND	91	75-125			
Xylenes, Total	72.5	1.5	0.90	ug/l	75.0	ND	97	60-130			
Chloroethane	27.2	1.0	0.40	ug/l	25.0	ND	109	55-140			
Chloromethane	24.5	0.50	0.40	ug/l	25.0	ND	98	45-145			
cis-1,3-Dichloropropene	22.2	0.50	0.22	ug/l	25.0	ND	89	70-130			
Dibromochloromethane	24.2	0.50	0.28	ug/l	25.0	ND	97	65-140			
Methylene chloride	25.8	1.0	0.95	ug/l	25.0	ND	103	50-135			
trans-1,2-Dichloroethene	26.9	0.50	0.27	ug/l	25.0	ND	107	65-130			
trans-1,3-Dichloropropene	21.9	0.50	0.32	ug/l	25.0	ND	88	65-135			
<i>Surrogate: Dibromofluoromethane</i>	28.7			ug/l	25.0		115	80-120			
<i>Surrogate: Toluene-d8</i>	25.3			ug/l	25.0		101	80-120			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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 Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04024 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/04/2008 (8B04024-MS1)</b>						<b>Source: IRA3076-01</b>					
<i>Surrogate: 4-Bromofluorobenzene</i>	25.6			ug/l	25.0		102	80-120			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04024-MSD1)</b>						<b>Source: IRA3076-01</b>					
1,1,1-Trichloroethane	28.2	0.50	0.30	ug/l	25.0	ND	113	65-140	0	20	
1,1,2,2-Tetrachloroethane	25.6	0.50	0.24	ug/l	25.0	ND	103	55-135	8	30	
1,1,2-Trichloroethane	23.7	0.50	0.30	ug/l	25.0	ND	95	65-130	5	25	
1,1-Dichloroethane	27.2	0.50	0.27	ug/l	25.0	ND	109	65-130	1	20	
1,1-Dichloroethene	23.7	0.50	0.42	ug/l	25.0	ND	95	60-130	3	20	
1,2-Dichloroethane	23.9	0.50	0.28	ug/l	25.0	ND	96	60-140	6	20	
Benzene	23.7	0.50	0.28	ug/l	25.0	ND	95	65-125	2	20	
1,2-Dichlorobenzene	23.8	0.50	0.32	ug/l	25.0	ND	95	75-125	5	20	
Carbon tetrachloride	26.2	0.50	0.28	ug/l	25.0	ND	105	65-140	4	25	
1,2-Dichloropropane	24.1	0.50	0.35	ug/l	25.0	ND	97	65-130	1	20	
Chloroform	28.1	0.50	0.33	ug/l	25.0	ND	112	65-135	1	20	
1,3-Dichlorobenzene	23.9	0.50	0.35	ug/l	25.0	ND	95	75-125	2	20	
Ethylbenzene	24.7	0.50	0.25	ug/l	25.0	ND	99	65-130	2	20	
1,4-Dichlorobenzene	22.2	0.50	0.37	ug/l	25.0	ND	89	75-125	1	20	
Tetrachloroethene	20.6	0.50	0.32	ug/l	25.0	ND	82	65-130	0	20	
Toluene	23.6	0.50	0.36	ug/l	25.0	ND	94	70-125	2	20	
Bromodichloromethane	27.1	0.50	0.30	ug/l	25.0	ND	108	70-135	2	20	
Trichloroethene	22.0	0.50	0.26	ug/l	25.0	ND	88	65-125	2	20	
Bromoform	19.8	0.50	0.40	ug/l	25.0	ND	79	55-135	8	25	
Trichlorofluoromethane	31.5	0.50	0.34	ug/l	25.0	ND	126	60-145	5	25	
Bromomethane	26.7	1.0	0.42	ug/l	25.0	ND	107	55-145	2	25	
Vinyl chloride	26.5	0.50	0.30	ug/l	25.0	ND	106	45-140	0	30	
Chlorobenzene	22.4	0.50	0.36	ug/l	25.0	ND	89	75-125	2	20	
Xylenes, Total	71.3	1.5	0.90	ug/l	75.0	ND	95	60-130	2	20	
Chloroethane	27.8	1.0	0.40	ug/l	25.0	ND	111	55-140	2	25	
Chloromethane	26.4	0.50	0.40	ug/l	25.0	ND	105	45-145	7	25	
cis-1,3-Dichloropropene	21.1	0.50	0.22	ug/l	25.0	ND	84	70-130	5	20	
Dibromochloromethane	22.6	0.50	0.28	ug/l	25.0	ND	91	65-140	7	25	
Methylene chloride	24.8	1.0	0.95	ug/l	25.0	ND	99	50-135	4	20	
trans-1,2-Dichloroethene	27.1	0.50	0.27	ug/l	25.0	ND	108	65-130	1	20	
trans-1,3-Dichloropropene	20.8	0.50	0.32	ug/l	25.0	ND	83	65-135	5	25	
<i>Surrogate: Dibromofluoromethane</i>	28.6			ug/l	25.0		115	80-120			
<i>Surrogate: Toluene-d8</i>	25.1			ug/l	25.0		100	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 018

Report Number: IRB0156

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 Limits	RPD	RPD Limit	Data Qualifiers
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**Batch: 8B04024 Extracted: 02/04/08**

**Matrix Spike Dup Analyzed: 02/04/2008 (8B04024-MSD1)**

**Source: IRA3076-01**

*Surrogate: 4-Bromofluorobenzene*      25.2      ug/l      25.0      101      80-120

**Batch: 8B07016 Extracted: 02/07/08**

**Blank Analyzed: 02/07/2008 (8B07016-BLK1)**

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							
Benzene	ND	0.50	0.28	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.30	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Chloroethane	ND	1.0	0.40	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							
Methylene chloride	ND	1.0	0.95	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.27	ug/l							

**TestAmerica Irvine**

Joseph Doak  
Project Manager

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Project ID: Annual Outfall 018

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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: 8B07016 Extracted: 02/07/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B07016-BLK1)</b>											
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	23.0			ug/l	25.0		92	80-120			
<b>LCS Analyzed: 02/07/2008 (8B07016-BS1)</b>											
1,1,1-Trichloroethane	28.7	0.50	0.30	ug/l	25.0		115	65-135			
1,1,2,2-Tetrachloroethane	25.8	0.50	0.24	ug/l	25.0		103	55-130			
1,1,2-Trichloroethane	24.7	0.50	0.30	ug/l	25.0		99	70-125			
1,1-Dichloroethane	27.9	0.50	0.27	ug/l	25.0		112	70-125			
1,1-Dichloroethene	24.4	0.50	0.42	ug/l	25.0		98	70-125			
1,2-Dichloroethane	25.2	0.50	0.28	ug/l	25.0		101	60-140			
Benzene	25.4	0.50	0.28	ug/l	25.0		102	70-120			
1,2-Dichlorobenzene	25.6	0.50	0.32	ug/l	25.0		103	75-120			
Carbon tetrachloride	27.8	0.50	0.28	ug/l	25.0		111	65-140			
1,2-Dichloropropane	25.8	0.50	0.35	ug/l	25.0		103	70-125			
Chloroform	28.5	0.50	0.33	ug/l	25.0		114	70-130			
1,3-Dichlorobenzene	25.7	0.50	0.35	ug/l	25.0		103	75-120			
Ethylbenzene	26.4	0.50	0.25	ug/l	25.0		105	75-125			
1,4-Dichlorobenzene	23.6	0.50	0.37	ug/l	25.0		94	75-120			
Tetrachloroethene	21.9	0.50	0.32	ug/l	25.0		88	70-125			
Toluene	25.3	0.50	0.36	ug/l	25.0		101	70-120			
Bromodichloromethane	28.5	0.50	0.30	ug/l	25.0		114	70-135			
Trichloroethene	24.2	0.50	0.26	ug/l	25.0		97	70-125			
Bromoform	20.8	0.50	0.40	ug/l	25.0		83	55-130			
Trichlorofluoromethane	32.1	0.50	0.34	ug/l	25.0		128	65-145			
Bromomethane	27.7	1.0	0.42	ug/l	25.0		111	65-140			
Vinyl chloride	27.9	0.50	0.30	ug/l	25.0		112	55-135			
Chlorobenzene	24.0	0.50	0.36	ug/l	25.0		96	75-120			
Xylenes, Total	75.7	1.5	0.90	ug/l	75.0		101	70-125			
Chloroethane	28.5	1.0	0.40	ug/l	25.0		114	60-140			
Chloromethane	27.4	0.50	0.40	ug/l	25.0		110	50-140			
cis-1,3-Dichloropropene	23.1	0.50	0.22	ug/l	25.0		93	75-125			
Dibromochloromethane	23.5	0.50	0.28	ug/l	25.0		94	70-140			
Methylene chloride	26.5	1.0	0.95	ug/l	25.0		106	55-130			
trans-1,2-Dichloroethene	28.3	0.50	0.27	ug/l	25.0		113	70-125			

#### 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 018

Report Number: IRB0156

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: 8B07016 Extracted: 02/07/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B07016-BS1)</b>											
trans-1,3-Dichloropropene	22.7	0.50	0.32	ug/l	25.0		91	70-125			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	25.8			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.4			ug/l	25.0		101	80-120			
<b>Matrix Spike Analyzed: 02/07/2008 (8B07016-MS1)</b>											
<b>Source: IRB0248-01</b>											
1,1,1-Trichloroethane	29.3	0.50	0.30	ug/l	25.0	ND	117	65-140			
1,1,2,2-Tetrachloroethane	29.8	0.50	0.24	ug/l	25.0	ND	119	55-135			
1,1,2-Trichloroethane	27.3	0.50	0.30	ug/l	25.0	ND	109	65-130			
1,1-Dichloroethane	28.2	0.50	0.27	ug/l	25.0	ND	113	65-130			
1,1-Dichloroethane	24.3	0.50	0.42	ug/l	25.0	ND	97	60-130			
1,2-Dichloroethane	27.2	0.50	0.28	ug/l	25.0	ND	109	60-140			
Benzene	25.8	0.50	0.28	ug/l	25.0	ND	103	65-125			
1,2-Dichlorobenzene	26.6	0.50	0.32	ug/l	25.0	ND	106	75-125			
Carbon tetrachloride	28.2	0.50	0.28	ug/l	25.0	ND	113	65-140			
1,2-Dichloropropane	26.4	0.50	0.35	ug/l	25.0	ND	106	65-130			
Chloroform	29.6	0.50	0.33	ug/l	25.0	ND	118	65-135			
1,3-Dichlorobenzene	26.2	0.50	0.35	ug/l	25.0	ND	105	75-125			
Ethylbenzene	26.8	0.50	0.25	ug/l	25.0	ND	107	65-130			
1,4-Dichlorobenzene	24.2	0.50	0.37	ug/l	25.0	ND	97	75-125			
Tetrachloroethene	21.8	0.50	0.32	ug/l	25.0	ND	87	65-130			
Toluene	26.0	0.50	0.36	ug/l	25.0	ND	104	70-125			
Bromodichloromethane	29.8	0.50	0.30	ug/l	25.0	ND	119	70-135			
Trichloroethene	35.3	0.50	0.26	ug/l	25.0	11.7	94	65-125			
Bromoform	22.9	0.50	0.40	ug/l	25.0	ND	92	55-135			
Trichlorofluoromethane	33.7	0.50	0.34	ug/l	25.0	ND	135	60-145			
Bromomethane	28.2	1.0	0.42	ug/l	25.0	ND	113	55-145			
Vinyl chloride	28.5	0.50	0.30	ug/l	25.0	ND	114	45-140			
Chlorobenzene	24.0	0.50	0.36	ug/l	25.0	ND	96	75-125			
Xylenes, Total	77.2	1.5	0.90	ug/l	75.0	ND	103	60-130			
Chloroethane	29.2	1.0	0.40	ug/l	25.0	ND	117	55-140			
Chloromethane	28.3	0.50	0.40	ug/l	25.0	ND	113	45-145			
cis-1,3-Dichloropropene	23.6	0.50	0.22	ug/l	25.0	ND	94	70-130			
Dibromochloromethane	25.0	0.50	0.28	ug/l	25.0	ND	100	65-140			
Methylene chloride	37.4	1.0	0.95	ug/l	25.0	11.2	105	50-135			
trans-1,2-Dichloroethene	28.7	0.50	0.27	ug/l	25.0	ND	115	65-130			

#### TestAmerica Irvine

Joseph Doak  
Project Manager



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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: 8B07016 Extracted: 02/07/08</b>											
<b>Matrix Spike Analyzed: 02/07/2008 (8B07016-MS1)</b>						<b>Source: IRB0248-01</b>					
trans-1,3-Dichloropropene	24.1	0.50	0.32	ug/l	25.0	ND	96	65-135			
Surrogate: Dibromofluoromethane	27.3			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.9			ug/l	25.0		104	80-120			
<b>Matrix Spike Dup Analyzed: 02/07/2008 (8B07016-MSD1)</b>						<b>Source: IRB0248-01</b>					
1,1,1-Trichloroethane	29.2	0.50	0.30	ug/l	25.0	ND	117	65-140	1	20	
1,1,2,2-Tetrachloroethane	29.2	0.50	0.24	ug/l	25.0	ND	117	55-135	2	30	
1,1,2-Trichloroethane	26.6	0.50	0.30	ug/l	25.0	ND	106	65-130	3	25	
1,1-Dichloroethane	28.7	0.50	0.27	ug/l	25.0	ND	115	65-130	2	20	
1,1-Dichloroethane	24.6	0.50	0.42	ug/l	25.0	ND	98	60-130	1	20	
1,2-Dichloroethane	26.1	0.50	0.28	ug/l	25.0	ND	104	60-140	4	20	
Benzene	26.0	0.50	0.28	ug/l	25.0	ND	104	65-125	1	20	
1,2-Dichlorobenzene	27.1	0.50	0.32	ug/l	25.0	ND	108	75-125	2	20	
Carbon tetrachloride	27.9	0.50	0.28	ug/l	25.0	ND	112	65-140	1	25	
1,2-Dichloropropane	26.5	0.50	0.35	ug/l	25.0	ND	106	65-130	0	20	
Chloroform	29.2	0.50	0.33	ug/l	25.0	ND	117	65-135	1	20	
1,3-Dichlorobenzene	26.5	0.50	0.35	ug/l	25.0	ND	106	75-125	1	20	
Ethylbenzene	26.9	0.50	0.25	ug/l	25.0	ND	108	65-130	1	20	
1,4-Dichlorobenzene	24.4	0.50	0.37	ug/l	25.0	ND	98	75-125	1	20	
Tetrachloroethene	22.5	0.50	0.32	ug/l	25.0	ND	90	65-130	3	20	
Toluene	25.9	0.50	0.36	ug/l	25.0	ND	104	70-125	0	20	
Bromodichloromethane	29.0	0.50	0.30	ug/l	25.0	ND	116	70-135	3	20	
Trichloroethene	35.7	0.50	0.26	ug/l	25.0	11.7	96	65-125	1	20	
Bromoform	22.4	0.50	0.40	ug/l	25.0	ND	89	55-135	2	25	
Trichlorofluoromethane	32.2	0.50	0.34	ug/l	25.0	ND	129	60-145	5	25	
Bromomethane	28.9	1.0	0.42	ug/l	25.0	ND	116	55-145	3	25	
Vinyl chloride	29.2	0.50	0.30	ug/l	25.0	ND	117	45-140	2	30	
Chlorobenzene	24.4	0.50	0.36	ug/l	25.0	ND	98	75-125	1	20	
Xylenes, Total	77.5	1.5	0.90	ug/l	75.0	ND	103	60-130	0	20	
Chloroethane	29.4	1.0	0.40	ug/l	25.0	ND	117	55-140	1	25	
Chloromethane	29.8	0.50	0.40	ug/l	25.0	ND	119	45-145	5	25	
cis-1,3-Dichloropropene	23.2	0.50	0.22	ug/l	25.0	ND	93	70-130	2	20	
Dibromochloromethane	24.8	0.50	0.28	ug/l	25.0	ND	99	65-140	1	25	
Methylene chloride	37.2	1.0	0.95	ug/l	25.0	11.2	104	50-135	1	20	
trans-1,2-Dichloroethene	29.3	0.50	0.27	ug/l	25.0	ND	117	65-130	2	20	

#### 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 018

Report Number: IRB0156

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 Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B07016 Extracted: 02/07/08</b>											
<b>Matrix Spike Dup Analyzed: 02/07/2008 (8B07016-MSD1)</b>						<b>Source: IRB0248-01</b>					
trans-1,3-Dichloropropene	24.0	0.50	0.32	ug/l	25.0	ND	96	65-135	1	25	
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.1			ug/l	25.0		100	80-120			

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Sampled: 02/03/08  
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## 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: 8B04024 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/04/2008 (8B04024-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	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	23.1			ug/l	25.0		92	80-120			
<b>LCS Analyzed: 02/04/2008 (8B04024-BS1)</b>											
2-Chloroethyl vinyl ether	28.5	5.0	1.8	ug/l	25.0		114	25-170			
Surrogate: Dibromofluoromethane	28.5			ug/l	25.0		114	80-120			
Surrogate: Toluene-d8	25.3			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	25.8			ug/l	25.0		103	80-120			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04024-MS1) Source: IRA3076-01</b>											
2-Chloroethyl vinyl ether	28.5	5.0	1.8	ug/l	25.0	ND	114	25-170			
Surrogate: Dibromofluoromethane	28.7			ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	25.3			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	25.6			ug/l	25.0		102	80-120			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04024-MSD1) Source: IRA3076-01</b>											
2-Chloroethyl vinyl ether	26.6	5.0	1.8	ug/l	25.0	ND	107	25-170	7	25	
Surrogate: Dibromofluoromethane	28.6			ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	25.1			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	25.2			ug/l	25.0		101	80-120			

TestAmerica Irvine

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 Project Manager

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Received: 02/03/08

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04024 Extracted: 02/04/08</b>										
<b>Blank Analyzed: 02/04/2008 (8B04024-BLK1)</b>										
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.5	N/A	ug/l						
Cyclohexane	ND	2.5	N/A	ug/l						

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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 018

Report Number: IRB0156

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: 8B03026 Extracted: 02/03/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B03026-BLK1)</b>											
1,2,4-Trichlorobenzene	ND	1.0	0.10	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.10	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	0.10	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.10	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.20	ug/l							
Acenaphthene	ND	0.50	0.10	ug/l							
2-Methylnaphthalene	ND	1.0	0.10	ug/l							
2-Methylphenol	ND	2.0	0.10	ug/l							
2-Nitroaniline	ND	5.0	0.10	ug/l							
3-Nitroaniline	ND	5.0	0.20	ug/l							
Acenaphthylene	ND	0.50	0.10	ug/l							
4-Nitroaniline	ND	5.0	0.50	ug/l							
Anthracene	ND	0.50	0.10	ug/l							
Aniline	ND	10	0.30	ug/l							
Benzidine	ND	5.0	1.0	ug/l							
Benzoic acid	ND	20	3.0	ug/l							
Benzyl alcohol	ND	5.0	0.10	ug/l							
Benzo(a)anthracene	ND	5.0	0.10	ug/l							
Hexachlorobutadiene	ND	2.0	0.20	ug/l							
Benzo(a)pyrene	ND	2.0	0.10	ug/l							
Naphthalene	ND	1.0	0.10	ug/l							
Benzo(b)fluoranthene	ND	2.0	0.10	ug/l							
Benzo(g,h,i)perylene	ND	5.0	0.10	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.10	ug/l							
Bis(2-chloroethoxy)methane	ND	0.50	0.10	ug/l							
Bis(2-chloroethyl)ether	ND	0.50	0.10	ug/l							
Bis(2-chloroisopropyl)ether	ND	0.50	0.10	ug/l							
Bis(2-ethylhexyl)phthalate	2.82	5.0	1.7	ug/l							J
4-Bromophenyl phenyl ether	ND	1.0	0.10	ug/l							
Butyl benzyl phthalate	2.46	5.0	0.70	ug/l							J
4-Chloroaniline	ND	2.0	0.10	ug/l							
2-Chloronaphthalene	ND	0.50	0.10	ug/l							
4-Chloro-3-methylphenol	ND	2.0	0.20	ug/l							
4-Chlorophenyl phenyl ether	ND	0.50	0.10	ug/l							
2-Chlorophenol	ND	1.0	0.20	ug/l							

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: 8B03026 Extracted: 02/03/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B03026-BLK1)</b>											
Chrysene	ND	0.50	0.10	ug/l							
Dibenz(a,h)anthracene	ND	0.50	0.10	ug/l							
Dibenzofuran	ND	0.50	0.10	ug/l							
Di-n-butyl phthalate	ND	2.0	0.20	ug/l							
3,3-Dichlorobenzidine	ND	5.0	0.40	ug/l							
2,4-Dichlorophenol	ND	2.0	0.20	ug/l							
Diethyl phthalate	0.160	1.0	0.10	ug/l							J
2,4-Dimethylphenol	ND	2.0	0.30	ug/l							
Dimethyl phthalate	ND	0.50	0.10	ug/l							
4,6-Dinitro-2-methylphenol	ND	5.0	0.20	ug/l							
2,4-Dinitrophenol	ND	5.0	0.90	ug/l							
2,4-Dinitrotoluene	ND	5.0	0.20	ug/l							
2,6-Dinitrotoluene	ND	5.0	0.10	ug/l							
Di-n-octyl phthalate	ND	5.0	0.10	ug/l							
Fluoranthene	ND	0.50	0.10	ug/l							
Fluorene	ND	0.50	0.10	ug/l							
Hexachlorobenzene	ND	1.0	0.10	ug/l							
Hexachlorocyclopentadiene	ND	5.0	0.10	ug/l							
Hexachloroethane	ND	3.0	0.20	ug/l							
Indeno(1,2,3-cd)pyrene	ND	2.0	0.10	ug/l							
Isophorone	ND	1.0	0.10	ug/l							
4-Methylphenol	ND	5.0	0.20	ug/l							
Nitrobenzene	ND	1.0	0.10	ug/l							
2-Nitrophenol	ND	2.0	0.10	ug/l							
4-Nitrophenol	ND	5.0	2.5	ug/l							
N-Nitrosodimethylamine	ND	2.0	0.10	ug/l							
N-Nitroso-di-n-propylamine	ND	2.0	0.10	ug/l							
N-Nitrosodiphenylamine	ND	1.0	0.10	ug/l							
Pentachlorophenol	ND	2.0	0.10	ug/l							
Phenanthrene	ND	0.50	0.10	ug/l							
Phenol	ND	1.0	0.30	ug/l							
Pyrene	ND	0.50	0.10	ug/l							
2,4,5-Trichlorophenol	ND	2.0	0.20	ug/l							
2,4,6-Trichlorophenol	ND	1.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	13.5			ug/l	20.0		68		30-120		

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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: 8B03026 Extracted: 02/03/08</b>											
<b>Blank Analyzed: 02/07/2008 (8B03026-BLK1)</b>											
Surrogate: Phenol-d6	16.1			ug/l	20.0		81	35-120			
Surrogate: 2,4,6-Tribromophenol	19.0			ug/l	20.0		95	40-120			
Surrogate: Nitrobenzene-d5	8.34			ug/l	10.0		83	45-120			
Surrogate: 2-Fluorobiphenyl	8.58			ug/l	10.0		86	50-120			
Surrogate: Terphenyl-d14	9.30			ug/l	10.0		93	50-125			
<b>LCS Analyzed: 02/07/2008 (8B03026-BS1)</b>											
1,2,4-Trichlorobenzene	6.60	1.0	0.10	ug/l	10.0		66	45-120			
1,2-Dichlorobenzene	6.52	0.50	0.10	ug/l	10.0		65	40-120			
1,2-Diphenylhydrazine/Azobenzene	9.26	1.0	0.10	ug/l	10.0		93	60-120			
1,3-Dichlorobenzene	6.12	0.50	0.10	ug/l	10.0		61	35-120			
1,4-Dichlorobenzene	6.12	0.50	0.20	ug/l	10.0		61	35-120			
Acenaphthene	8.10	0.50	0.10	ug/l	10.0		81	60-120			
2-Methylnaphthalene	8.14	1.0	0.10	ug/l	10.0		81	55-120			
2-Methylphenol	7.32	2.0	0.10	ug/l	10.0		73	50-120			
2-Nitroaniline	9.76	5.0	0.10	ug/l	10.0		98	65-120			
3-Nitroaniline	9.06	5.0	0.20	ug/l	10.0		91	60-120			
Acenaphthylene	8.94	0.50	0.10	ug/l	10.0		89	60-120			
4-Nitroaniline	8.48	5.0	0.50	ug/l	10.0		85	55-125			
Anthracene	8.80	0.50	0.10	ug/l	10.0		88	65-120			
Aniline	7.70	10	0.30	ug/l	10.0		77	35-120			J
Benzidine	1.24	5.0	1.0	ug/l	10.0		12	30-160			L6, J
Benzoic acid	5.78	20	3.0	ug/l	10.0		58	25-120			J
Benzyl alcohol	7.04	5.0	0.10	ug/l	10.0		70	50-120			
Benzo(a)anthracene	9.50	5.0	0.10	ug/l	10.0		95	65-120			
Hexachlorobutadiene	5.90	2.0	0.20	ug/l	10.0		59	40-120			
Benzo(a)pyrene	10.2	2.0	0.10	ug/l	10.0		102	55-130			
Naphthalene	7.60	1.0	0.10	ug/l	10.0		76	55-120			
Benzo(b)fluoranthene	8.46	2.0	0.10	ug/l	10.0		85	55-125			
Benzo(g,h,i)perylene	9.22	5.0	0.10	ug/l	10.0		92	45-135			
Benzo(k)fluoranthene	9.28	0.50	0.10	ug/l	10.0		93	50-125			
Bis(2-chloroethoxy)methane	8.96	0.50	0.10	ug/l	10.0		90	55-120			
Bis(2-chloroethyl)ether	7.68	0.50	0.10	ug/l	10.0		77	50-120			
Bis(2-chloroisopropyl)ether	7.68	0.50	0.10	ug/l	10.0		77	45-120			
Bis(2-ethylhexyl)phthalate	13.1	5.0	1.7	ug/l	10.0		131	65-130			L, LI
4-Bromophenyl phenyl ether	8.16	1.0	0.10	ug/l	10.0		82	60-120			

**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 018

Report Number: IRB0156

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: 8B03026 Extracted: 02/03/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B03026-BS1)</b>											
Butyl benzyl phthalate	11.3	5.0	0.70	ug/l	10.0		113	55-130			MNR1
4-Chloroaniline	7.86	2.0	0.10	ug/l	10.0		79	55-120			
2-Chloronaphthalene	7.56	0.50	0.10	ug/l	10.0		76	60-120			
4-Chloro-3-methylphenol	8.74	2.0	0.20	ug/l	10.0		87	60-120			
4-Chlorophenyl phenyl ether	9.08	0.50	0.10	ug/l	10.0		91	65-120			
2-Chlorophenol	7.38	1.0	0.20	ug/l	10.0		74	45-120			
Chrysene	9.16	0.50	0.10	ug/l	10.0		92	65-120			
Dibenz(a,h)anthracene	9.80	0.50	0.10	ug/l	10.0		98	50-135			
Dibenzofuran	8.94	0.50	0.10	ug/l	10.0		89	65-120			
Di-n-butyl phthalate	10.1	2.0	0.20	ug/l	10.0		101	60-125			
3,3-Dichlorobenzidine	6.80	5.0	0.40	ug/l	10.0		68	45-135			
2,4-Dichlorophenol	8.20	2.0	0.20	ug/l	10.0		82	55-120			
Diethyl phthalate	10.3	1.0	0.10	ug/l	10.0		103	55-120			
2,4-Dimethylphenol	8.70	2.0	0.30	ug/l	10.0		87	40-120			
Dimethyl phthalate	9.40	0.50	0.10	ug/l	10.0		94	30-120			
4,6-Dinitro-2-methylphenol	8.86	5.0	0.20	ug/l	10.0		89	45-120			
2,4-Dinitrophenol	8.84	5.0	0.90	ug/l	10.0		88	40-120			
2,4-Dinitrotoluene	9.46	5.0	0.20	ug/l	10.0		95	65-120			
2,6-Dinitrotoluene	9.30	5.0	0.10	ug/l	10.0		93	65-120			
Di-n-octyl phthalate	11.5	5.0	0.10	ug/l	10.0		115	65-135			
Fluoranthene	9.74	0.50	0.10	ug/l	10.0		97	60-120			
Fluorene	9.30	0.50	0.10	ug/l	10.0		93	65-120			
Hexachlorobenzene	8.18	1.0	0.10	ug/l	10.0		82	60-120			
Hexachlorocyclopentadiene	7.94	5.0	0.10	ug/l	10.0		79	25-120			
Hexachloroethane	5.94	3.0	0.20	ug/l	10.0		59	35-120			
Indeno(1,2,3-cd)pyrene	9.44	2.0	0.10	ug/l	10.0		94	45-135			
Isophorone	8.12	1.0	0.10	ug/l	10.0		81	50-120			
4-Methylphenol	7.70	5.0	0.20	ug/l	10.0		77	50-120			
Nitrobenzene	8.02	1.0	0.10	ug/l	10.0		80	55-120			
2-Nitrophenol	8.18	2.0	0.10	ug/l	10.0		82	50-120			
4-Nitrophenol	10.4	5.0	2.5	ug/l	10.0		104	45-120			
N-Nitrosodimethylamine	7.88	2.0	0.10	ug/l	10.0		79	45-120			
N-Nitroso-di-n-propylamine	8.88	2.0	0.10	ug/l	10.0		89	45-120			
N-Nitrosodiphenylamine	9.54	1.0	0.10	ug/l	10.0		95	60-120			
Pentachlorophenol	7.84	2.0	0.10	ug/l	10.0		78	50-120			

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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 018

Report Number: IRB0156

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: 8B03026 Extracted: 02/03/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B03026-BS1)</b>											<b>MNR1</b>
Phenanthrene	8.30	0.50	0.10	ug/l	10.0		83	65-120			
Phenol	7.66	1.0	0.30	ug/l	10.0		77	40-120			
Pyrene	9.14	0.50	0.10	ug/l	10.0		91	55-125			
2,4,5-Trichlorophenol	8.94	2.0	0.20	ug/l	10.0		89	55-120			
2,4,6-Trichlorophenol	7.78	1.0	0.10	ug/l	10.0		78	55-120			
Surrogate: 2-Fluorophenol	13.7			ug/l	20.0		68	30-120			
Surrogate: Phenol-d6	16.1			ug/l	20.0		80	35-120			
Surrogate: 2,4,6-Tribromophenol	19.7			ug/l	20.0		98	40-120			
Surrogate: Nitrobenzene-d5	8.40			ug/l	10.0		84	45-120			
Surrogate: 2-Fluorobiphenyl	7.54			ug/l	10.0		75	50-120			
Surrogate: Terphenyl-d14	9.00			ug/l	10.0		90	50-125			
<b>LCS Dup Analyzed: 02/07/2008 (8B03026-BSD1)</b>											
1,2,4-Trichlorobenzene	5.76	1.0	0.10	ug/l	10.0		58	45-120	14	20	
1,2-Dichlorobenzene	5.88	0.50	0.10	ug/l	10.0		59	40-120	10	25	
1,2-Diphenylhydrazine/Azobenzene	9.04	1.0	0.10	ug/l	10.0		90	60-120	2	25	
1,3-Dichlorobenzene	5.62	0.50	0.10	ug/l	10.0		56	35-120	9	25	
1,4-Dichlorobenzene	5.88	0.50	0.20	ug/l	10.0		59	35-120	4	25	
Acenaphthene	7.80	0.50	0.10	ug/l	10.0		78	60-120	4	20	
2-Methylnaphthalene	7.62	1.0	0.10	ug/l	10.0		76	55-120	7	20	
2-Methylphenol	6.82	2.0	0.10	ug/l	10.0		68	50-120	7	20	
2-Nitroaniline	8.52	5.0	0.10	ug/l	10.0		85	65-120	14	20	
3-Nitroaniline	8.18	5.0	0.20	ug/l	10.0		82	60-120	10	25	
Acenaphthylene	8.54	0.50	0.10	ug/l	10.0		85	60-120	5	20	
4-Nitroaniline	7.62	5.0	0.50	ug/l	10.0		76	55-125	11	20	
Anthracene	8.14	0.50	0.10	ug/l	10.0		81	65-120	8	20	
Aniline	8.70	10	0.30	ug/l	10.0		87	35-120	12	30	J
Benzidine	5.62	5.0	1.0	ug/l	10.0		56	30-160	128	35	R-2
Benzoic acid	6.46	20	3.0	ug/l	10.0		65	25-120	11	30	J
Benzyl alcohol	6.80	5.0	0.10	ug/l	10.0		68	50-120	3	20	
Benzo(a)anthracene	9.12	5.0	0.10	ug/l	10.0		91	65-120	4	20	
Hexachlorobutadiene	5.26	2.0	0.20	ug/l	10.0		53	40-120	11	25	
Benzo(a)pyrene	9.76	2.0	0.10	ug/l	10.0		98	55-130	5	25	
Naphthalene	6.50	1.0	0.10	ug/l	10.0		65	55-120	16	20	
Benzo(b)fluoranthene	8.28	2.0	0.10	ug/l	10.0		83	55-125	2	25	
Benzo(g,h,i)perylene	9.22	5.0	0.10	ug/l	10.0		92	45-135	0	25	

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Project ID: Annual Outfall 018

Report Number: IRB0156

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: 8B03026 Extracted: 02/03/08</b>											
<b>LCS Dup Analyzed: 02/07/2008 (8B03026-BSD1)</b>											
Benzo(k)fluoranthene	9.02	0.50	0.10	ug/l	10.0		90	50-125	3	20	
Bis(2-chloroethoxy)methane	8.06	0.50	0.10	ug/l	10.0		81	55-120	11	20	
Bis(2-chloroethyl)ether	7.24	0.50	0.10	ug/l	10.0		72	50-120	6	20	
Bis(2-chloroisopropyl)ether	6.94	0.50	0.10	ug/l	10.0		69	45-120	10	20	
Bis(2-ethylhexyl)phthalate	11.8	5.0	1.7	ug/l	10.0		118	65-130	11	20	
4-Bromophenyl phenyl ether	7.84	1.0	0.10	ug/l	10.0		78	60-120	4	25	
Butyl benzyl phthalate	10.8	5.0	0.70	ug/l	10.0		108	55-130	4	20	
4-Chloroaniline	8.14	2.0	0.10	ug/l	10.0		81	55-120	4	25	
2-Chloronaphthalene	7.48	0.50	0.10	ug/l	10.0		75	60-120	1	20	
4-Chloro-3-methylphenol	7.72	2.0	0.20	ug/l	10.0		77	60-120	12	25	
4-Chlorophenyl phenyl ether	8.74	0.50	0.10	ug/l	10.0		87	65-120	4	20	
2-Chlorophenol	6.78	1.0	0.20	ug/l	10.0		68	45-120	8	25	
Chrysene	9.00	0.50	0.10	ug/l	10.0		90	65-120	2	20	
Dibenz(a,h)anthracene	8.86	0.50	0.10	ug/l	10.0		89	50-135	10	25	
Dibenzofuran	8.36	0.50	0.10	ug/l	10.0		84	65-120	7	20	
Di-n-butyl phthalate	9.60	2.0	0.20	ug/l	10.0		96	60-125	5	20	
3,3-Dichlorobenzidine	6.76	5.0	0.40	ug/l	10.0		68	45-135	1	25	
2,4-Dichlorophenol	7.60	2.0	0.20	ug/l	10.0		76	55-120	8	20	
Diethyl phthalate	9.86	1.0	0.10	ug/l	10.0		99	55-120	4	30	
2,4-Dimethylphenol	7.96	2.0	0.30	ug/l	10.0		80	40-120	9	25	
Dimethyl phthalate	9.12	0.50	0.10	ug/l	10.0		91	30-120	3	30	
4,6-Dinitro-2-methylphenol	8.38	5.0	0.20	ug/l	10.0		84	45-120	6	25	
2,4-Dinitrophenol	8.46	5.0	0.90	ug/l	10.0		85	40-120	4	25	
2,4-Dinitrotoluene	9.38	5.0	0.20	ug/l	10.0		94	65-120	1	20	
2,6-Dinitrotoluene	8.52	5.0	0.10	ug/l	10.0		85	65-120	9	20	
Di-n-octyl phthalate	11.1	5.0	0.10	ug/l	10.0		111	65-135	4	20	
Fluoranthene	9.06	0.50	0.10	ug/l	10.0		91	60-120	7	20	
Fluorene	8.82	0.50	0.10	ug/l	10.0		88	65-120	5	20	
Hexachlorobenzene	8.02	1.0	0.10	ug/l	10.0		80	60-120	2	20	
Hexachlorocyclopentadiene	7.62	5.0	0.10	ug/l	10.0		76	25-120	4	30	
Hexachloroethane	5.68	3.0	0.20	ug/l	10.0		57	35-120	4	25	
Indeno(1,2,3-cd)pyrene	8.92	2.0	0.10	ug/l	10.0		89	45-135	6	25	
Isophorone	7.86	1.0	0.10	ug/l	10.0		79	50-120	3	20	
4-Methylphenol	6.60	5.0	0.20	ug/l	10.0		66	50-120	15	20	
Nitrobenzene	7.46	1.0	0.10	ug/l	10.0		75	55-120	7	25	

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

Project ID: Annual Outfall 018

Report Number: IRB0156

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: 8B03026 Extracted: 02/03/08</b>											
<b>LCS Dup Analyzed: 02/07/2008 (8B03026-BSD1)</b>											
2-Nitrophenol	7.92	2.0	0.10	ug/l	10.0		79	50-120	3	25	
4-Nitrophenol	9.52	5.0	2.5	ug/l	10.0		95	45-120	9	30	
N-Nitrosodimethylamine	6.94	2.0	0.10	ug/l	10.0		69	45-120	13	20	
N-Nitroso-di-n-propylamine	7.98	2.0	0.10	ug/l	10.0		80	45-120	11	20	
N-Nitrosodiphenylamine	8.86	1.0	0.10	ug/l	10.0		89	60-120	7	20	
Pentachlorophenol	7.60	2.0	0.10	ug/l	10.0		76	50-120	3	25	
Phenanthrene	8.12	0.50	0.10	ug/l	10.0		81	65-120	2	20	
Phenol	7.50	1.0	0.30	ug/l	10.0		75	40-120	2	25	
Pyrene	8.84	0.50	0.10	ug/l	10.0		88	55-125	3	25	
2,4,5-Trichlorophenol	8.16	2.0	0.20	ug/l	10.0		82	55-120	9	30	
2,4,6-Trichlorophenol	7.36	1.0	0.10	ug/l	10.0		74	55-120	6	30	
Surrogate: 2-Fluorophenol	12.1			ug/l	20.0		61	30-120			
Surrogate: Phenol-d6	14.8			ug/l	20.0		74	35-120			
Surrogate: 2,4,6-Tribromophenol	19.0			ug/l	20.0		95	40-120			
Surrogate: Nitrobenzene-d5	7.62			ug/l	10.0		76	45-120			
Surrogate: 2-Fluorobiphenyl	7.12			ug/l	10.0		71	50-120			
Surrogate: Terphenyl-d14	8.94			ug/l	10.0		89	50-125			

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Project ID: Annual Outfall 018

Report Number: IRB0156

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)

MNR1

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			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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>											<b>MNR1</b>
Endrin	0.511	0.0050	0.0020	ug/l	0.500		102	55-115			
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 018

Report Number: IRB0156

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 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 018

Report Number: IRB0156

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>											
Arsenic	ND	10	7.0	ug/l							
Barium	ND	0.010	0.0060	mg/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							
Cobalt	ND	10	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Manganese	ND	20	7.0	ug/l							
Nickel	ND	10	2.0	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>											
Arsenic	504	10	7.0	ug/l	500		101	85-115			
Barium	0.526	0.010	0.0060	mg/l	0.500		105	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			
Cobalt	502	10	2.0	ug/l	500		100	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			
Manganese	514	20	7.0	ug/l	500		103	85-115			
Nickel	513	10	2.0	ug/l	500		103	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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## 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>						
Arsenic	496	10	7.0	ug/l	500	ND	99	70-130			
Barium	0.534	0.010	0.0060	mg/l	0.500	0.0216	103	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			
Cobalt	482	10	2.0	ug/l	500	ND	96	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			
Manganese	490	20	7.0	ug/l	500	ND	98	70-130			
Nickel	495	10	2.0	ug/l	500	ND	99	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>						
Arsenic	509	10	7.0	ug/l	500	ND	102	70-130			
Barium	0.528	0.010	0.0060	mg/l	0.500	0.00624	104	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			
Cobalt	501	10	2.0	ug/l	500	ND	100	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			
Manganese	515	20	7.0	ug/l	500	ND	103	70-130			
Nickel	515	10	2.0	ug/l	500	ND	103	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 018

Report Number: IRB0156

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>					
Arsenic	506	10	7.0	ug/l	500	ND	101	70-130	2	20	
Barium	0.530	0.010	0.0060	mg/l	0.500	0.0216	102	70-130	1	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	
Cobalt	492	10	2.0	ug/l	500	ND	98	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	
Manganese	501	20	7.0	ug/l	500	ND	100	70-130	2	20	
Nickel	507	10	2.0	ug/l	500	ND	101	70-130	2	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							
Selenium	ND	2.0	0.30	ug/l							
Silver	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			
Selenium	82.5	2.0	0.30	ug/l	80.0		103	85-115			
Silver	83.1	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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MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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: 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			
Selenium	75.1	2.0	0.30	ug/l	80.0	ND	94	70-130			
Silver	78.5	1.0	0.30	ug/l	80.0	ND	98	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			
Selenium	75.5	2.0	0.30	ug/l	80.0	ND	94	70-130			
Silver	78.1	1.0	0.30	ug/l	80.0	ND	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	
Selenium	76.6	2.0	0.30	ug/l	80.0	ND	96	70-130	2	20	
Silver	79.3	1.0	0.30	ug/l	80.0	ND	99	70-130	1	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	RPD Limit	Data Qualifiers
<b>Batch: 8B04145 Extracted: 02/04/08</b>											
<b>Blank Analyzed: 02/05/2008 (8B04145-BLK1)</b>											
Arsenic	ND	10	7.0	ug/l							
Barium	ND	0.010	0.0060	mg/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							
Cobalt	ND	10	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Manganese	ND	20	7.0	ug/l							
Nickel	ND	10	2.0	ug/l							
Hardness (as CaCO3)	ND	1.0	1.0	mg/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							
<b>LCS Analyzed: 02/05/2008 (8B04145-BS1)</b>											
Arsenic	1000	10	7.0	ug/l	1000		100	85-115			
Barium	0.971	0.010	0.0060	mg/l	1.00		97	85-115			
Beryllium	981	2.0	0.90	ug/l	1000		98	85-115			
Boron	0.966	0.050	0.020	mg/l	1.00		97	85-115			
Calcium	1.09	0.10	0.050	mg/l	1.00		109	85-115			
Chromium	995	5.0	2.0	ug/l	1000		100	85-115			
Cobalt	997	10	2.0	ug/l	1000		100	85-115			
Iron	0.995	0.040	0.015	mg/l	1.00		99	85-115			
Magnesium	1.04	0.020	0.012	mg/l	1.00		104	85-115			
Manganese	1020	20	7.0	ug/l	1000		102	85-115			
Nickel	1020	10	2.0	ug/l	1000		102	85-115			
Vanadium	960	10	3.0	ug/l	1000		96	85-115			
Zinc	1040	20	6.0	ug/l	1000		104	85-115			

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Report Number: IRB0156

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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: 8B04145 Extracted: 02/04/08</b>											
<b>Matrix Spike Analyzed: 02/05/2008 (8B04145-MS1)</b>						<b>Source: IRB0146-01</b>					
Arsenic	1020	10	7.0	ug/l	1000	ND	102	70-130			
Barium	0.999	0.010	0.0060	mg/l	1.00	0.0294	97	70-130			
Beryllium	997	2.0	0.90	ug/l	1000	ND	100	70-130			
Boron	1.02	0.050	0.020	mg/l	1.00	0.0451	97	70-130			
Calcium	28.3	0.10	0.050	mg/l	1.00	28.0	23	70-130			MHA
Chromium	1010	5.0	2.0	ug/l	1000	ND	101	70-130			
Cobalt	1000	10	2.0	ug/l	1000	ND	100	70-130			
Iron	1.62	0.040	0.015	mg/l	1.00	0.635	99	70-130			
Magnesium	9.21	0.020	0.012	mg/l	1.00	8.60	61	70-130			MHA
Manganese	1030	20	7.0	ug/l	1000	15.7	102	70-130			
Nickel	1020	10	2.0	ug/l	1000	ND	102	70-130			
Vanadium	982	10	3.0	ug/l	1000	ND	98	70-130			
Zinc	1040	20	6.0	ug/l	1000	ND	104	70-130			

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Matrix Spike Dup Analyzed: 02/05/2008 (8B04145-MSD1)</b>						<b>Source: IRB0146-01</b>					
Arsenic	1020	10	7.0	ug/l	1000	ND	102	70-130	0	20	
Barium	1.02	0.010	0.0060	mg/l	1.00	0.0294	99	70-130	2	20	
Beryllium	996	2.0	0.90	ug/l	1000	ND	100	70-130	0	20	
Boron	1.05	0.050	0.020	mg/l	1.00	0.0451	100	70-130	3	20	
Calcium	28.1	0.10	0.050	mg/l	1.00	28.0	6	70-130	1	20	MHA
Chromium	1010	5.0	2.0	ug/l	1000	ND	101	70-130	1	20	
Cobalt	1010	10	2.0	ug/l	1000	ND	101	70-130	1	20	
Iron	1.64	0.040	0.015	mg/l	1.00	0.635	101	70-130	1	20	
Magnesium	9.33	0.020	0.012	mg/l	1.00	8.60	72	70-130	1	20	MHA
Manganese	1050	20	7.0	ug/l	1000	15.7	104	70-130	2	20	
Nickel	1030	10	2.0	ug/l	1000	ND	103	70-130	1	20	
Vanadium	1010	10	3.0	ug/l	1000	ND	101	70-130	3	20	
Zinc	1100	20	6.0	ug/l	1000	ND	110	70-130	5	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	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B05112 Extracted: 02/05/08</b>											
<b>Blank Analyzed: 02/05/2008 (8B05112-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							
Selenium	ND	2.0	0.30	ug/l							
Silver	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
<b>LCS Analyzed: 02/05/2008 (8B05112-BS1)</b>											
Antimony	80.4	2.0	0.20	ug/l	80.0		100	85-115			
Cadmium	80.6	1.0	0.11	ug/l	80.0		101	85-115			
Copper	83.3	2.0	0.75	ug/l	80.0		104	85-115			
Lead	83.7	1.0	0.30	ug/l	80.0		105	85-115			
Selenium	82.1	2.0	0.30	ug/l	80.0		103	85-115			
Silver	82.0	1.0	0.30	ug/l	80.0		102	85-115			
Thallium	82.4	1.0	0.20	ug/l	80.0		103	85-115			
<b>Matrix Spike Analyzed: 02/05/2008 (8B05112-MS1) Source: IRB0146-01</b>											
Antimony	79.9	2.0	0.20	ug/l	80.0	0.473	99	70-130			
Cadmium	78.6	1.0	0.11	ug/l	80.0	0.130	98	70-130			
Copper	80.8	2.0	0.75	ug/l	80.0	2.50	98	70-130			
Lead	77.8	1.0	0.30	ug/l	80.0	0.385	97	70-130			
Selenium	78.1	2.0	0.30	ug/l	80.0	ND	98	70-130			
Silver	79.1	1.0	0.30	ug/l	80.0	ND	99	70-130			
Thallium	80.0	1.0	0.20	ug/l	80.0	ND	100	70-130			
<b>Matrix Spike Dup Analyzed: 02/05/2008 (8B05112-MSD1) Source: IRB0146-01</b>											
Antimony	81.9	2.0	0.20	ug/l	80.0	0.473	102	70-130	3	20	
Cadmium	80.3	1.0	0.11	ug/l	80.0	0.130	100	70-130	2	20	
Copper	82.1	2.0	0.75	ug/l	80.0	2.50	100	70-130	2	20	
Lead	78.4	1.0	0.30	ug/l	80.0	0.385	98	70-130	1	20	
Selenium	79.0	2.0	0.30	ug/l	80.0	ND	99	70-130	1	20	
Silver	80.7	1.0	0.30	ug/l	80.0	ND	101	70-130	2	20	
Thallium	80.9	1.0	0.20	ug/l	80.0	ND	101	70-130	1	20	

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Report Number: IRB0156

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

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	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-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	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			
Nitrate-N	1.19	0.11	0.060	mg/l	1.13		106	90-110			
Nitrite-N	1.65	0.15	0.090	mg/l	1.52		109	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)</b>											
						<b>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			
Nitrate-N	3.59	0.11	0.060	mg/l	1.13	2.36	109	80-120			
Nitrite-N	1.77	0.15	0.090	mg/l	1.52	ND	116	80-120			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04043-MS2)</b>											
						<b>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			
Nitrate-N	2.90	0.11	0.060	mg/l	1.13	1.73	103	80-120			
Nitrite-N	1.59	0.15	0.090	mg/l	1.52	ND	105	80-120			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04043-MSD1)</b>											
						<b>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	
Nitrate-N	3.64	0.11	0.060	mg/l	1.13	2.36	113	80-120	1	20	
Nitrite-N	1.81	0.15	0.090	mg/l	1.52	ND	119	80-120	2	20	

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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: 8B04054 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/04/2008 (8B04054-BLK1)</b>											
Chromium VI	ND	1.0	0.20	ug/l							
<b>LCS Analyzed: 02/04/2008 (8B04054-BS1)</b>											
Chromium VI	50.1	1.0	0.20	ug/l	50.0		100	90-110			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04054-MS1)</b>											
Chromium VI	46.5	1.0	0.20	ug/l	50.0	ND	93	90-110			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04054-MS2)</b>											
Chromium VI	41.8	1.0	0.20	ug/l	50.0	ND	84	90-110			M2
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04054-MSD1)</b>											
Chromium VI	48.5	1.0	0.20	ug/l	50.0	ND	97	90-110	4	10	
<b><u>Batch: 8B04067 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/04/2008 (8B04067-BLK1)</b>											
Turbidity	0.120	1.0	0.040	NTU							J
<b>Duplicate Analyzed: 02/04/2008 (8B04067-DUP1)</b>											
Turbidity	3.31	1.0	0.040	NTU		3.24			2	20	
<b><u>Batch: 8B04070 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/09/2008 (8B04070-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							

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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: 8B04070 Extracted: 02/04/08</u></b>											
<b>LCS Analyzed: 02/09/2008 (8B04070-BS1)</b>											
Biochemical Oxygen Demand	218	100	30	mg/l	198		110	85-115			
<b>LCS Dup Analyzed: 02/09/2008 (8B04070-BSD1)</b>											
Biochemical Oxygen Demand	218	100	30	mg/l	198		110	85-115	0	20	
<b><u>Batch: 8B04074 Extracted: 02/04/08</u></b>											
<b>Duplicate Analyzed: 02/04/2008 (8B04074-DUP1)</b>											
Residual Chlorine	0.170	0.10	0.10	mg/l		Source: IRB0146-01 0.170			0	20	
<b><u>Batch: 8B04097 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/04/2008 (8B04097-BLK1)</b>											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
<b>LCS Analyzed: 02/04/2008 (8B04097-BS1)</b>											
Surfactants (MBAS)	0.252	0.10	0.044	mg/l	0.250		101	90-110			
<b>Matrix Spike Analyzed: 02/04/2008 (8B04097-MS1)</b>											
Surfactants (MBAS)	0.268	0.10	0.044	mg/l	0.250	Source: IRB0156-01 ND	107	50-125			
<b>Matrix Spike Dup Analyzed: 02/04/2008 (8B04097-MSD1)</b>											
Surfactants (MBAS)	0.265	0.10	0.044	mg/l	0.250	Source: IRB0156-01 ND	106	50-125	1	20	
<b><u>Batch: 8B04112 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/04/2008 (8B04112-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							

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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: 8B05134 Extracted: 02/05/08</u></b>											
<b>Blank Analyzed: 02/05/2008 (8B05134-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/05/2008 (8B05134-BS1)</b>											
Total Suspended Solids	967	10	10	mg/l	1000		97	85-115			
<b>Duplicate Analyzed: 02/05/2008 (8B05134-DUP1)</b>											
						<b>Source: IRB0193-02</b>					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b><u>Batch: 8B07098 Extracted: 02/07/08</u></b>											
<b>Blank Analyzed: 02/08/2008 (8B07098-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 02/08/2008 (8B07098-BS1)</b>											
Ammonia-N (Distilled)	10.4	0.50	0.30	mg/l	10.0		104	80-115			

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NPDES - 4106



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

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## 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: 8B07098 Extracted: 02/07/08</u></b>											
<b>Matrix Spike Analyzed: 02/08/2008 (8B07098-MS1)</b>						<b>Source: IRB0146-01</b>					
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0	ND	101	70-120			
<b>Matrix Spike Dup Analyzed: 02/08/2008 (8B07098-MSD1)</b>						<b>Source: IRB0146-01</b>					
Ammonia-N (Distilled)	9.80	0.50	0.30	mg/l	10.0	ND	98	70-120	3	15	
<b><u>Batch: 8B07123 Extracted: 02/07/08</u></b>											
<b>Blank Analyzed: 02/07/2008 (8B07123-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/07/2008 (8B07123-BS1)</b>											
Total Dissolved Solids	988	10	10	mg/l	1000		99	90-110			
<b>Duplicate Analyzed: 02/07/2008 (8B07123-DUP1)</b>						<b>Source: IRB0153-01</b>					
Total Dissolved Solids	266	10	10	mg/l		258			3	10	
<b><u>Batch: 8B08056 Extracted: 02/07/08</u></b>											
<b>LCS Analyzed: 02/07/2008 (8B08056-BS1)</b>											
Specific Conductance	550	1.0	1.0	umhos/cm	530		104	90-110			
<b>Duplicate Analyzed: 02/07/2008 (8B08056-DUP1)</b>						<b>Source: IRB0076-01</b>					
Specific Conductance	1140	1.0	1.0	umhos/cm		1140			0	5	
<b><u>Batch: 8B12073 Extracted: 02/12/08</u></b>											
<b>Blank Analyzed: 02/12/2008 (8B12073-BLK1)</b>											
Perchlorate	ND	4.0	1.5	ug/l							

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## 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: 8B12073 Extracted: 02/12/08</u></b>											
<b>LCS Analyzed: 02/12/2008 (8B12073-BS1)</b>											
Perchlorate	55.4	4.0	1.5	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	4.0	1.5	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	4.0	1.5	ug/l	50.0	ND	102	80-120	1	20	
<b><u>Batch: 8B12074 Extracted: 02/12/08</u></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			MNR1
<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	
<b><u>Batch: 8B13116 Extracted: 02/13/08</u></b>											
<b>Blank Analyzed: 02/13/2008 (8B13116-BLK1)</b>											
Total Organic Carbon	ND	1.0	0.50	mg/l							
<b>LCS Analyzed: 02/13/2008 (8B13116-BS1)</b>											
Total Organic Carbon	10.2	1.0	0.50	mg/l	10.0		102	90-110			

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B13116 Extracted: 02/13/08</b>											
<b>Matrix Spike Analyzed: 02/13/2008 (8B13116-MS1)</b>						<b>Source: IRB0174-02</b>					
Total Organic Carbon	11.4	1.0	0.50	mg/l	5.00	6.26	103	80-120			
<b>Matrix Spike Dup Analyzed: 02/13/2008 (8B13116-MSD1)</b>						<b>Source: IRB0174-02</b>					
Total Organic Carbon	11.2	1.0	0.50	mg/l	5.00	6.26	98	80-120	2	20	

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Project ID: Annual Outfall 018

Report Number: IRB0156

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

## 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: W8B0147 Extracted: 02/05/08</b>											
<b>Blank Analyzed: 02/07/2008 (W8B0147-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 (W8B0147-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 (W8B0147-MS1) Source: 8020444-01</b>											
Mercury, Dissolved	1.04	0.20	0.050	ug/l	1.00	ND	104	70-130			
Mercury, Total	1.04	0.20	0.050	ug/l	1.00	ND	104	70-130			
<b>Matrix Spike Analyzed: 02/07/2008 (W8B0147-MS2) Source: 8020445-01</b>											
Mercury, Dissolved	1.04	0.20	0.050	ug/l	1.00	ND	104	70-130			
Mercury, Total	1.04	0.20	0.050	ug/l	1.00	ND	104	70-130			
<b>Matrix Spike Dup Analyzed: 02/07/2008 (W8B0147-MSD1) Source: 8020444-01</b>											
Mercury, Dissolved	1.05	0.20	0.050	ug/l	1.00	ND	105	70-130	1	20	
Mercury, Total	1.05	0.20	0.050	ug/l	1.00	ND	105	70-130	1	20	
<b>Matrix Spike Dup Analyzed: 02/07/2008 (W8B0147-MSD2) Source: 8020445-01</b>											
Mercury, Dissolved	1.06	0.20	0.050	ug/l	1.00	ND	106	70-130	2	20	
Mercury, Total	1.06	0.20	0.050	ug/l	1.00	ND	106	70-130	2	20	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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
IRB0156-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	1.24	4.8	45
IRB0156-01	608-Pesticides (LowRL)	alpha-BHC	ug/l	0.00030	0.0047	0.03
IRB0156-01	624-Boeing 001/002 Q (Fr113+X), L1,1-Dichloroethene		ug/l	0	0.50	6
IRB0156-01	624-Boeing 001/002 Q (Fr113+X), LTrichloroethene		ug/l	0	0.50	5
IRB0156-01	625+NDMA, LL	2,4,6-Trichlorophenol	ug/l	0	0.94	13
IRB0156-01	625+NDMA, LL	2,4-Dinitrotoluene	ug/l	0	4.7	18
IRB0156-01	625+NDMA, LL	Bis(2-ethylhexyl)phthalate	ug/l	1.72	4.7	4
IRB0156-01	625+NDMA, LL	N-Nitrosodimethylamine	ug/l	0	1.9	16
IRB0156-01	625+NDMA, LL	Pentachlorophenol	ug/l	0	1.9	16
IRB0156-01	Ammonia-N, Titr (350.2) w/dist	Ammonia-N (Distilled)	mg/l	0.28	0.50	10
IRB0156-01	Antimony-200.8	Antimony	ug/l	0.45	2.0	6
IRB0156-01	Arsenic-200.7	Arsenic	ug/l	0.14	10	10
IRB0156-01	Barium-200.7	Barium	mg/l	0.019	0.010	1
IRB0156-01	Beryllium-200.7	Beryllium	ug/l	0	2.0	4
IRB0156-01	BOD	Biochemical Oxygen Demand	mg/l	1.12	2.0	30
IRB0156-01	Cadmium-200.8	Cadmium	ug/l	0.100	1.0	3.1
IRB0156-01	Chloride - 300.0	Chloride	mg/l	23	0.50	150
<b>IRB0156-01</b>	<b>Chlorine, Residual</b>	<b>Residual Chlorine</b>	<b>mg/l</b>	<b>0.14</b>	<b>0.10</b>	<b>0.1</b>
IRB0156-01	Chromium VI-218.6	Chromium VI	ug/l	0	1.0	16
IRB0156-01	Chromium-200.7	Chromium	ug/l	1.67	5.0	16
IRB0156-01	Copper-200.8	Copper	ug/l	3.49	2.0	14
IRB0156-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	-1	5.0	8.5
IRB0156-01	Fluoride-300.0	Fluoride	mg/l	0.31	0.50	1.6
IRB0156-01	Hg_w 245.1	Mercury, Total	ug/l	0.019	0.20	0.2
<b>IRB0156-01</b>	<b>Iron-200.7</b>	<b>Iron</b>	<b>mg/l</b>	<b>0.66</b>	<b>0.040</b>	<b>0.3</b>
IRB0156-01	Lead-200.8	Lead	ug/l	0.49	1.0	5.2
IRB0156-01	Manganese-200.7	Manganese	ug/l	18	20	50
IRB0156-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.043	0.10	0.5
IRB0156-01	Nickel-200.7	Nickel	ug/l	2.61	10	96
IRB0156-01	Nitrate-N, 300.0	Nitrate-N	mg/l	1.73	0.11	8
IRB0156-01	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IRB0156-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.73	0.26	8
IRB0156-01	Perchlorate 314.0-DEFAULT	Perchlorate	ug/l	0	4.0	6
IRB0156-01	Selenium-200.8	Selenium	ug/l	0.26	2.0	5
IRB0156-01	Settleable Solids	Total Settleable Solids	ml/l/hr	0	0.10	0.3
IRB0156-01	Silver-200.8	Silver	ug/l	0.097	1.0	4.1
IRB0156-01	Sulfate-300.0	Sulfate	mg/l	67	2.5	300

### TestAmerica Irvine

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

Project ID: Annual Outfall 018

Report Number: IRB0156

Sampled: 02/03/08

Received: 02/03/08

IRB0156-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	261	10	950
IRB0156-01	Thallium-200.8	Thallium	ug/l	0.052	1.0	2
IRB0156-01	TSS - EPA 160.2	Total Suspended Solids	mg/l	9.00	10	45
IRB0156-01	Zinc-200.7	Zinc	ug/l	14	20	120

## 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
IRB0156-02	624-Boeing 001/002 Q (Fr113+X), L1,1-Dichloroethene		ug/l	0.43	0.50	6
IRB0156-02	624-Boeing 001/002 Q (Fr113+X), LTrichloroethene		ug/l	0	0.50	5

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618 Michillinda Avenue, Suite 200  
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IRB0156

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

## DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- HFT** The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after receipt.
- J** 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.
- L** Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- L1** Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
- L6** Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-3** 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).
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-2** The RPD exceeded the acceptance limit.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

## ADDITIONAL COMMENTS

**For TICs:**

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library.

**For 1,2-Diphenylhydrazine:**

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

**For GRO (C4-C12):**

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

**For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :**

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

### TestAmerica Irvine

Joseph Doak  
Project Manager

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Report Number: IRB0156

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## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 1664A	Water		
EPA 180.1	Water	X	X
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 218.6	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 330.5	Water	X	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 415.1	Water	X	X
EPA 608	Water	X	X
EPA 624 (MOD.)	Water		X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B-SIM	Water		
Filtration	Water	N/A	N/A
SM2340B	Water	X	X
SM2540C	Water	X	
SM5540-C	Water	X	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-7 dy Chronic  
Samples: IRB0156-01

Analysis Performed: Bioassay-Acute 96hr  
Samples: IRB0156-01

### TestAmerica Irvine

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Sampled: 02/03/08  
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## Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec  
Samples: IRB0156-01

Analysis Performed: Gross Alpha  
Samples: IRB0156-01

Analysis Performed: Gross Beta  
Samples: IRB0156-01

Analysis Performed: Radium, Combined  
Samples: IRB0156-01

Analysis Performed: Strontium 90  
Samples: IRB0156-01

Analysis Performed: Tritium  
Samples: IRB0156-01

Analysis Performed: Uranium, Combined  
Samples: IRB0156-01

## Truesdail Laboratories-SUB California Cert #1237

14201 Franklin Avenue - Tustin, CA 92680

Analysis Performed: Hydrazine  
Samples: IRB0156-01

## 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: IRB0156-01

## Weck Laboratories, Inc

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

Method Performed: EPA 245.1  
Samples: IRB0156-01

## TestAmerica Irvine

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Project Manager

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IPB0150

# CHAIN OF CUSTODY FORM

Test America Version 12/20/07

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

Project:  
 Boeing-SSFL NPDES  
 Annual Outfall 018

Test America Contact: Joseph Doak  
 Project Manager: Bronwyn Kelly  
 Sampler: *[Signature]*

Phone Number:  
 (626) 568-6691  
 Fax Number:  
 (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Outfall 018	W	1L Poly	1	2/13/08 17:35	HNO <sub>3</sub>	1A
Outfall 018 Dup	W	1L Poly	1		HNO <sub>3</sub>	1B
Outfall 018	W	1L Poly	1		?	1C
Outfall 018	W	1L Poly	1		None	2
Outfall 018	W	1L Amber	2		None	3A, 3B
Outfall 018	W	1L Amber	2		HCl	4A, 4B
Outfall 018	W	500 ml Poly	1		NaOH	5
Outfall 018	W	1L Poly	1		None	6
Outfall 018	W	500 ml Poly	2		None	7A, 7B
Outfall 018	W	500 ml Poly	2		None	8A, 8B
Outfall 018	W	500 ml Poly	1		None	9
Outfall 018	W	500 ml Poly	2		None	10A, 10B
Outfall 018	W	500 ml Poly	1		H <sub>2</sub> SO <sub>4</sub>	11
Outfall 018	W	1L Amber	2		None	12A, 12B
Outfall 018	W	1L Amber	2		None	13A, 13B

Relinquished By: *[Signature]* Date/Time: 2-13-08 17:35

Relinquished By: *[Signature]* Date/Time: 2/13/08 18:30

Relinquished By: *[Signature]* Date/Time: 2/13/08 18:25

Received By: *[Signature]* Date/Time: 2/13/08 16:05

Received By: *[Signature]* Date/Time: 2/13/08 18:25

Turn around Time: (check) 24 Hours  48 Hours  72 Hours  Normal

Sample Integrity: (check) Intact  On Ice:

Field readings:  
 Temp = 9.8  
 pH = 7.8  
 Time of readings = 14:45

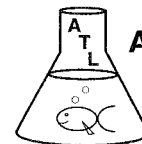
Comments:  
 24 IAT  
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 24 IAT  
 24 IAT

CHAIN OF CUSTODY FORM

Test America Version 12/20/07

<b>Client Name/Address:</b> MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		<b>Project:</b> Boeing-SSFL NPDES Annual Outfall 018		<b>Phone Number:</b> (626) 568-6691 <b>Fax Number:</b> (626) 568-6515	
<b>Test America Contact:</b> Joseph Doak <b>Project Manager:</b> Bronwyn Kelly <b>Sampler:</b> R.P.A.		<b>Sample Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 5		<b>Preservative:</b> HCl <b>Bottle #:</b> 14A, 14B, 14C, 14D, 14E	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 3		<b>Preservative:</b> None <b>Bottle #:</b> 15A, 15B, 15C		<b>ANALYSIS REQUIRED</b> 8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 3		<b>Preservative:</b> HCl <b>Bottle #:</b> 16A, 16B, 16C		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 250 ml Glass <b># of Cont.:</b> 1		<b>Preservative:</b> HCl <b>Bottle #:</b> 17		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 150 ml Poly <b># of Cont.:</b> 1		<b>Preservative:</b> None <b>Bottle #:</b> 18		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 2.5 Gal Cube <b># of Cont.:</b> 1		<b>Preservative:</b> None <b>Bottle #:</b> 19A, 19B		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 1L Amber <b># of Cont.:</b> 2		<b>Preservative:</b> None <b>Bottle #:</b> 20A, 20B		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 1		<b>Preservative:</b> HCl <b>Bottle #:</b> 21A		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 2		<b>Preservative:</b> HCl <b>Bottle #:</b> 21B, 21C		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 1L Amber <b># of Cont.:</b> 1		<b>Preservative:</b> None <b>Bottle #:</b> 22A		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 1L Amber <b># of Cont.:</b> 1		<b>Preservative:</b> None <b>Bottle #:</b> 22B		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 1L Amber <b># of Cont.:</b> 2		<b>Preservative:</b> None <b>Bottle #:</b> 23A, 23B		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 1 Gal Cube <b># of Cont.:</b> 2		<b>Preservative:</b> None <b>Bottle #:</b> 24A, 24B		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Outfall 018 <b>Matrix:</b> W <b>Container Type:</b> 1L Poly <b># of Cont.:</b> 1		<b>Preservative:</b> None <b>Bottle #:</b> 25		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Trip Blanks <b>Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 3		<b>Preservative:</b> HCl <b>Bottle #:</b> 26A, 26B, 26C		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Sample Description:</b> Trip Blanks <b>Matrix:</b> W <b>Container Type:</b> VOAs <b># of Cont.:</b> 3		<b>Preservative:</b> None <b>Bottle #:</b> 27A, 27B, 27C		8015 - gas PCBs (908.0), K-40, CS-137 (901.0 or 901.1) 228 (304.0), Uranium (903.0 or 903.1) & Radium Combined Radium 226 (906.0), Sr-90 (905.0), Total Beta(900.0), Tritium (H-3) Gross Alpha(900.0), Gross Total Residual Chlorine	
<b>Relinquished By:</b> [Signature] <b>Date/Time:</b> 2-3-08 1605		<b>Received By:</b> [Signature] <b>Date/Time:</b> 2/3/08 1605		Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/>	
<b>Relinquished By:</b> [Signature] <b>Date/Time:</b> 2/3/08 1830		<b>Received By:</b> [Signature] <b>Date/Time:</b> 2/3/08 1830		Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/>	
<b>Relinquished By:</b> [Signature] <b>Date/Time:</b> 2/3/08 1830		<b>Received By:</b> [Signature] <b>Date/Time:</b> 2/3/08 1830		Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/>	

# LABORATORY REPORT



**Aquatic  
Testing  
Laboratories**

*"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 12, 2008

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

**Laboratory No.:** A-08020412-001  
**Sample ID.:** IRB0156-01 (Outfall 018)

**Sample Control:** The sample was received by ATL within the recommended hold time, in a chilled state, and with the chain of custody record attached. Testing was conducted on only one sample per client instruction.

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 02/11/08

**Sample Analysis:** The following analyses were performed on your sample:

Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0),  
*Ceriodaphnia dubia* Survival and Reproduction Test (EPA Method 1002).

Attached are the test data generated from the analysis of your sample.

## Result Summary:

<b>Acute:</b>	<u>Survival</u>	<u>TUa</u>
Fathead Minnow:	100%	0.0
<b>Chronic:</b>	<u>NOEC</u>	<u>TUc</u>
<i>Ceriodaphnia</i> Survival:	100%	1.0
<i>Ceriodaphnia</i> Reproduction:	100%	1.0

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

  
Joseph A. LeMay  
Laboratory Director

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



Lab No.: A-08020412-001

Client/ID: TestAmerica - IRB0156-01 (Outfall 018)

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	R 1400
	100%	19.8	10.9	6.9	0	0	
24 Hr	Control	19.3	7.8	7.5	0	0	R 1330
	100%	19.3	7.9	7.2	0	0	
48 Hr	Control	19.5	7.6	7.7	0	0	R 1400
	100%	19.7	7.3	7.6	0	0	
Renewal	Control	20.5	8.8	7.8	0	0	R 1400
	100%	19.5	11.4	7.0	0	0	
72 Hr	Control	19.3	8.0	7.4	0	0	R 1200
	100%	19.7	8.2	7.3	0	0	
96 Hr	Control	19.5	8.2	7.3	0	0	R 1300
	100%	19.8	8.0	7.4	0	0	

**Comments:**

Sample as received: Chlorine: 0.0 mg/l; pH: 6.9; Conductivity: 230 umho; Temp: 4°C;

DO: 10.2 mg/l; Alkalinity: 62 mg/l; Hardness: 106 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: 96 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 %



# ***CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST***

- *Test and Results Summary*
- *Data Summary and Statistical Analyses*
- *Raw Test Data: Water Quality & Test Organism Measurements*

**CERIODAPHNIA CHRONIC BIOASSAY  
EPA METHOD 1002.0**



Lab No.: A-08020412-001  
Client/ID: Test America – IRB0156-01 (Outfall 018)

Date Tested: 02/04/08 to 02/11/08

**TEST SUMMARY**

Test type: Daily static-renewal.  
Species: *Ceriodaphnia dubia*.  
Age: < 24 hrs; all released within 8 hrs.  
Test vessel size: 30 ml.  
Number of test organisms per vessel: 1.  
Temperature: 25 +/- 1°C.  
Dilution water: Mod. hard reconstituted (MHRW).  
QA/QC Batch No.: RT-080204.

Endpoints: Survival and Reproduction.  
Source: In-laboratory culture.  
Food: .1 ml YTC, algae per day.  
Test solution volume: 15 ml.  
Number of replicates: 10.  
Photoperiod: 16/8 hrs. light/dark cycle.  
Test duration: 7 days.  
Statistics: ToxCalc computer program.

**RESULTS SUMMARY**

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	25.1
100% Sample	100%	26.5
Sample not statistically significantly less than Control for either endpoint.		

**CHRONIC TOXICITY**

Survival NOEC	100%
Survival TUC	1.0
Reproduction NOEC	100%
Reproduction TUC	1.0

**QA/QC TEST ACCEPTABILITY**

Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (25.1 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 5.7%)
Statistically significantly different concentrations relative difference > 13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)





**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 2/4/2008 15:00    Test ID: 8020412c    Sample ID: Outfall 018  
 End Date: 2/11/2008 14:00    Lab ID: CAATL-Aquatic Testing Labs    Sample Type: EFF2-Industrial  
 Sample Date: 2/3/2008 14:45    Protocol: FWCH-EPA-821-R-02-013    Test Species: CD-Ceriodaphnia dubia

Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	24.000	27.000	26.000	25.000	24.000	27.000	25.000	24.000	25.000	24.000
100	30.000	29.000	24.000	25.000	28.000	28.000	24.000	28.000	24.000	25.000

Conc-%	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed		Isotonic	
			Mean	Min	Max	CV%	MSD			Critical	MSD	Mean	N-Mean
D-Control	25.100	1.0000	25.100	24.000	27.000	4.770	10					25.800	1.0000
100	26.500	1.0558	26.500	24.000	30.000	8.760	10	-1.695	1.734	1.432		25.800	1.0000

**Auxiliary Tests**

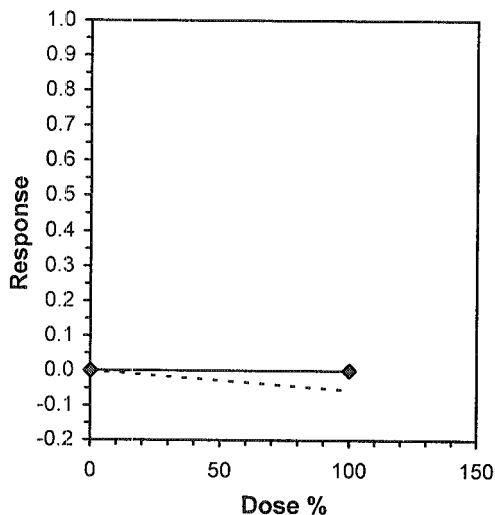
	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.93672	0.905	0.24281	-1.0199
F-Test indicates equal variances (p = 0.06)	3.75969	6.54109		

**Hypothesis Test (1-tail, 0.05)**

	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	1.43228	0.05706	9.8	3.41111	0.10731	1, 18
Treatments vs D-Control						

**Linear Interpolation (200 Resamples)**

Point	%	SD	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**CERIODAPHNIA DUBIA CHRONIC BIOASSAY**  
**EPA METHOD 1002.0 Raw Data Sheet**



Lab No.: A-08020412-001

Client ID: TestAmerica - IRB0156-01 (Outfall 018)

Start Date: 02/04/2008

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>	<i>R</i>
Time of Readings:		1500	1600	1600	1600	1600	1600	1600	1500	1500	1400	1400	1330	1330	1400
Control	DO	2.8	8.4	7.8	8.6	7.3	8.3	8.3	8.6	8.1	8.3	7.9	8.1	8.2	8.1
	pH	7.4	7.8	7.5	7.8	7.7	7.8	7.6	7.7	7.5	7.3	7.5	7.3	7.5	7.9
	Temp	24.9	24.3	24.9	24.6	25.2	24.8	25.6	24.7	25.2	24.6	25.3	24.3	24.3	24.2
100%	DO	8.6	8.3	10.5	9.2	10.2	9.0	10.6	8.8	11.3	8.5	10.9	8.5	10.9	7.8
	pH	6.7	7.6	6.8	7.8	7.0	7.7	6.9	7.6	6.9	7.3	6.6	7.2	6.8	7.6
	Temp	24.5	24.2	24.5	24.8	24.3	24.8	24.4	24.8	24.2	24.7	24.7	24.6	24.5	24.1

Additional Parameters	Control	100% Sample
Conductivity (umohms)	301	230
Alkalinity (mg/l CaCO <sub>3</sub> )	68	62
Hardness (mg/l CaCO <sub>3</sub> )	98	106
Ammonia (mg/l NH <sub>3</sub> -N)	20.1	0.2

Source of Neonates											
Replicate:	A	B	C	D	E	F	G	H	I	J	
Brood ID:	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	<i>R</i>
	2	0	0	0	0	0	0	0	0	0	0	0	10	<i>R</i>
	3	2	3	3	3	4	4	3	3	2	2	29	10	<i>R</i>
	4	6	6	0	0	0	7	0	7	0	6	32	10	<i>R</i>
	5	0	0	6	7	6	0	6	0	8	0	33	10	<i>R</i>
	6	16	0	0	0	0	16	0	0	0	0	32	10	<i>R</i>
	7	0	18	17	15	14	0	16	14	15	16	3125	10	<i>R</i>
	Total	24	27	26	25	24	27	25	24	25	24	251	10	<i>R</i>
100%	1	0	0	0	0	0	0	0	0	0	0	10	<i>R</i>	
	2	0	0	0	0	0	0	0	0	0	0	10	<i>R</i>	
	3	5	2	2	2	2	3	2	3	3	27	10	<i>R</i>	
	4	7	0	6	6	7	8	6	7	7	61	10	<i>R</i>	
	5	0	8	16	0	0	0	0	0	0	24	10	<i>R</i>	
	6	18	19	0	0	0	0	0	18	0	0	55	10	<i>R</i>
	7	0	0	19	17	19	17	16	0	14	15	98	10	<i>R</i>
	Total	30	29	24	25	28	28	24	28	24	25	269	10	<i>R</i>

Circled fourth brood not used in statistical analysis.

7<sup>th</sup> day only used if <60% of the surviving control females have produced their third brood.

SUBCONTRACT ORDER

TestAmerica Irvine

IRB0156

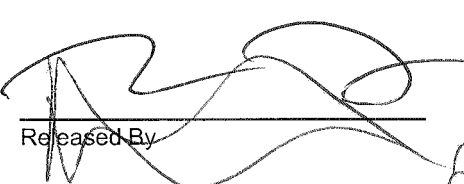
SENDING LABORATORY:

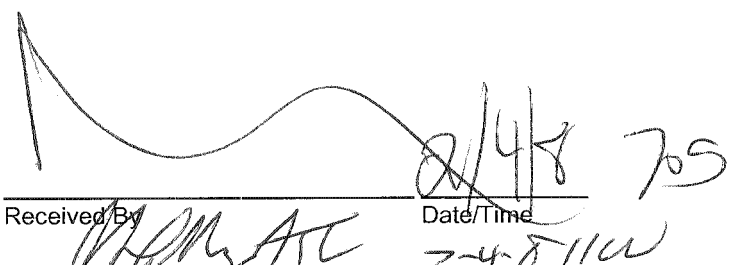
TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

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: 9 °C Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0156-01</b>	<b>Water</b>		<b>Sampled: 02/03/08 14:45</b>	
Bioassay-7 dy Chrnrc	N/A	02/13/08	02/05/08 02:45	Cerio, EPA/821-R02-013, Sub to AqTox Labs
Bioassay-Acute 96hr	% Survival	02/13/08	02/05/08 02:45	FH minnow, EPA/821-R02-012, Sub to AqTox Labs
Level 4 Data Package - Out	N/A	02/13/08	03/02/08 14:45	
<i>Containers Supplied:</i>				
1 gal Poly (AT)	1 gal Poly (AU)			

  
 Released By \_\_\_\_\_  
 Date/Time 2/4/08 1100  
 Released By \_\_\_\_\_  
 Date/Time \_\_\_\_\_

  
 Received By \_\_\_\_\_  
 Date/Time 2/4/08 705  
 Received By ATC  
 Date/Time 2-4-08 1100  
 Received By \_\_\_\_\_  
 Date/Time \_\_\_\_\_



***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>Rm</u>			<u>Rm</u>					<u>Rm</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>Rm</u>			<u>Rm</u>					<u>Rm</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: 97 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	

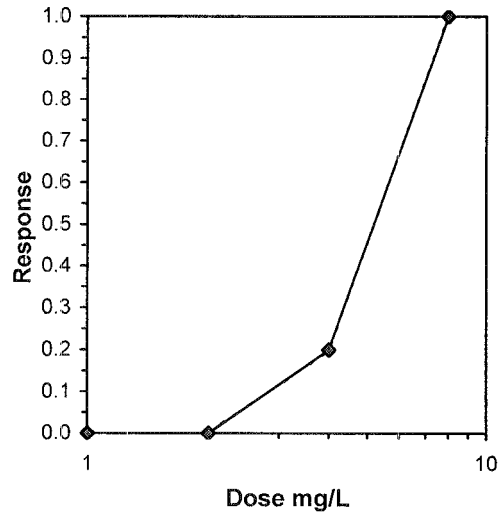
**Auxiliary Tests**

Normality of the data set cannot be confirmed  
 Equality of variance cannot be confirmed

Statistic      Critical      Skew      Kurt

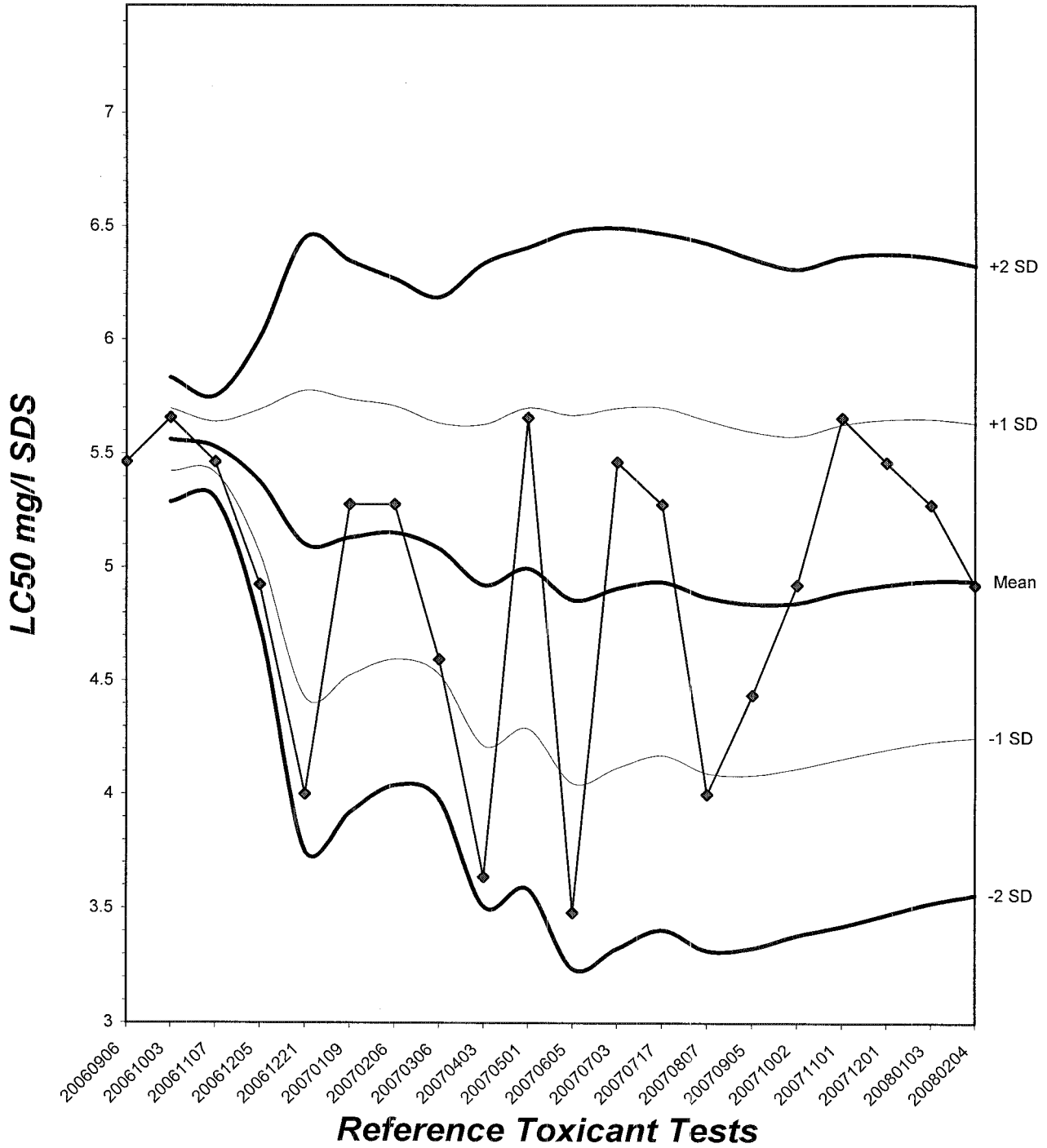
**Trimmed Spearman-Kärber**

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: 

DATE: 2-4-8

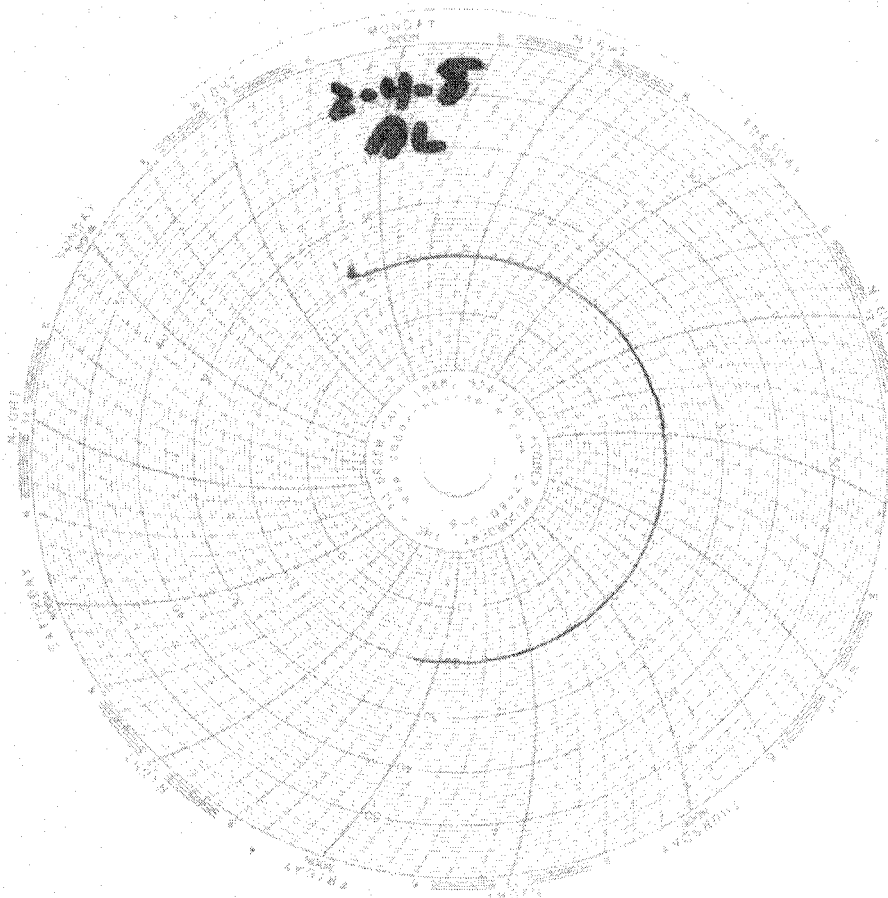


# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-080202*

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

*Acceptable Range: 20+/- 1°C*



# ***CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST***

- *Test and Results Summary*
- *Data Summary and Statistical Analyses*
- *Raw Test Data: Water Quality & Test Organism Measurements*

# CERIODAPHNIA CHRONIC BIOASSAY

## EPA METHOD 1002.0 REFERENCE TOXICANT - NaCl



QA/QC Batch No.: RT-080204

Date Tested: 02/04/08 to 02/11/08

### TEST SUMMARY

Test type: Daily static-renewal.

Species: *Ceriodaphnia dubia*.

Age: <24 hrs; all released within 8 hrs.

Test vessel size: 30 ml.

Number of test organisms per vessel: 1.

Temperature: 25 +/- 1°C.

Dilution water: Mod. hard reconstituted (MHRW).

Reference Toxicant: Sodium chloride (NaCl).

Endpoints: Survival and Reproduction.

Source: In-laboratory culture.

Food: .1 ml YTC, algae per day.

Test solution volume: 20 ml.

Number of replicates: 10.

Photoperiod: 16/8 hrs. light/dark cycle.

Test duration: 7 days.

Statistics: ToxCalc computer program.

### RESULTS SUMMARY

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		25.3	
0.25 g/l	100%		26.4	
0.5 g/l	100%		26.5	
1.0 g/l	100%		18.5	*
2.0 g/l	90%		7.2	*
4.0 g/l	0%	*	0	**

\* Statistically significantly less than control at P = 0.05 level  
\*\* Reproduction data from concentrations greater than survival NOEC are excluded from statistical analysis.

### CHRONIC TOXICITY

Survival LC50	2.6 g/l
Reproduction IC25	0.93 g/l

### QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥15 young per surviving control female	Pass (25.3 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 9.9%)
Stat. sig. diff. conc. relative difference > 13%	Pass (Stat. sig. diff. conc. = 26.9%)
Concentration response relationship acceptable	Pass (Response curve normal)

**Ceriodaphnia Survival and Reproduction Test-7 Day Survival**

Start Date: 2/4/2008 15:00 Test ID: RT-080204c Sample ID: REF-Ref Toxicant  
 End Date: 2/11/2008 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride  
 Sample Date: 2/4/2008 Protocol: FWCH-EPA-821-R-02-013 Test Species: CD-Ceriodaphnia dubia

Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	0.9000	0.9000	1	9	10	10	0.5000	0.0500	1	10
4	0.0000	0.0000	10	0	10	10			10	10

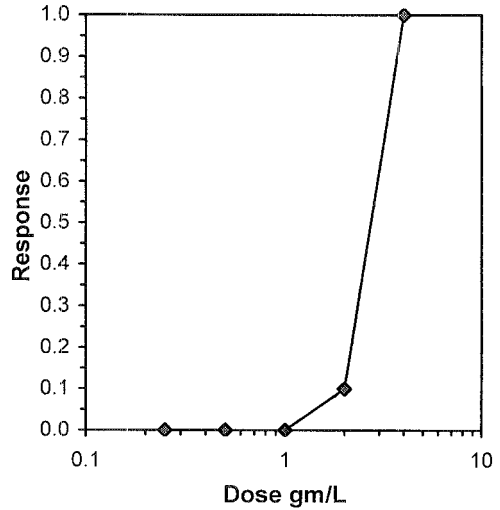
**Hypothesis Test (1-tail, 0.05)**      NOEC      LOEC      ChV      TU

Fisher's Exact Test                      2              4              2.82843

Treatments vs D-Control

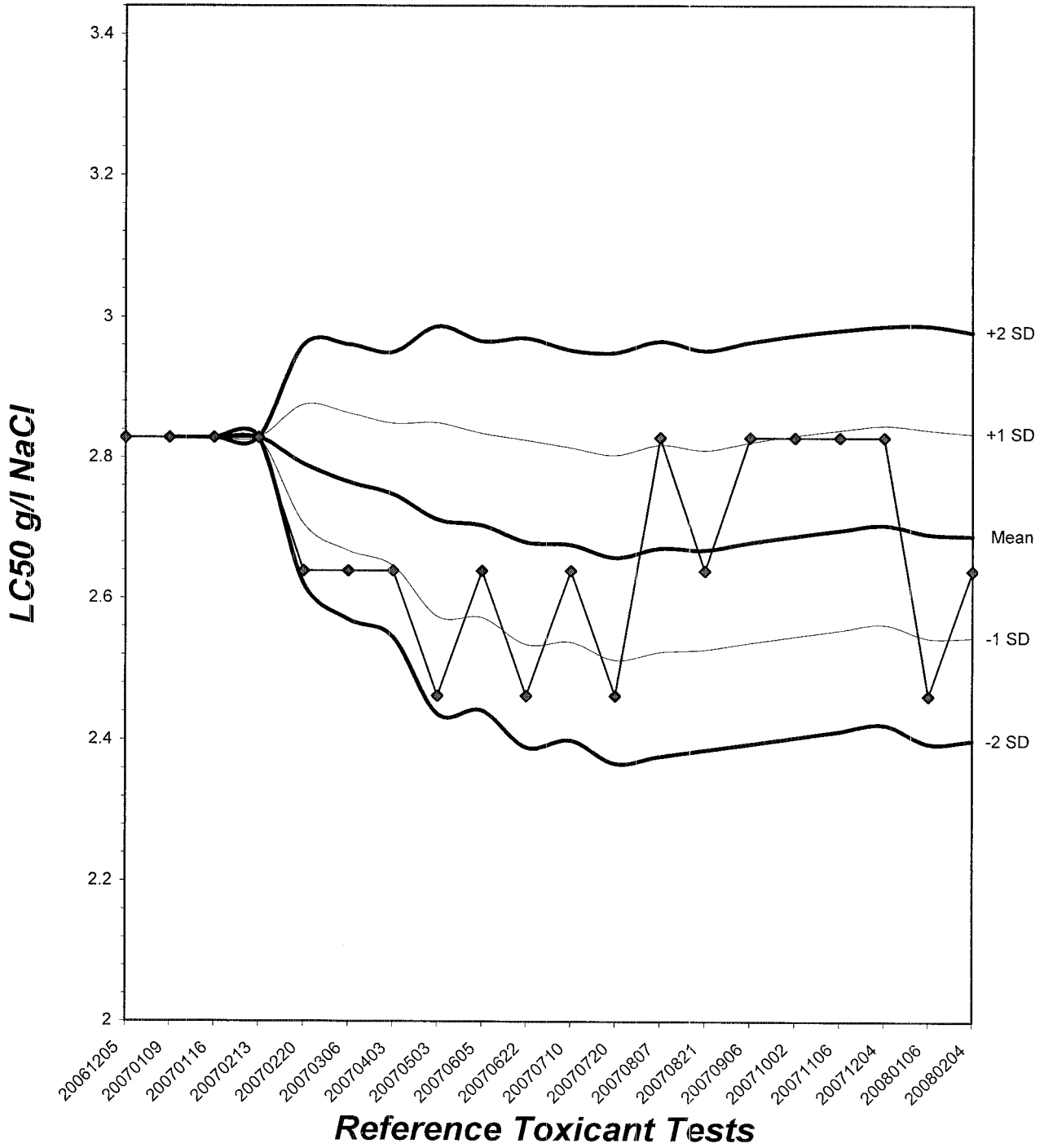
**Trimmed Spearman-Kärber**

Trim Level	EC50	95% CL	
0.0%	2.6390	2.3138	3.0099
5.0%	2.6984	2.2899	3.1798
10.0%	2.7216	2.5094	2.9517
20.0%	2.7216	2.5094	2.9517
Auto-0.0%	2.6390	2.3138	3.0099



# Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 5.38



**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 2/4/2008 15:00    Test ID: RT-080204c    Sample ID: REF-Ref Toxicant  
 End Date: 2/11/2008 14:00    Lab ID: CAATL-Aquatic Testing Labs    Sample Type: NACL-Sodium chloride  
 Sample Date: 2/4/2008    Protocol: FWCH-EPA-821-R-02-013    Test Species: CD-Ceriodaphnia dubia

Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	24.000	22.000	25.000	29.000	25.000	25.000	24.000	26.000	27.000	26.000
0.25	25.000	26.000	29.000	27.000	26.000	25.000	27.000	27.000	25.000	27.000
0.5	25.000	27.000	26.000	30.000	25.000	27.000	27.000	28.000	26.000	24.000
1	19.000	22.000	24.000	17.000	14.000	18.000	20.000	18.000	16.000	17.000
2	12.000	8.000	4.000	4.000	3.000	2.000	6.000	12.000	11.000	10.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Conc-gm/L	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
D-Control	25.300	1.0000	25.300	22.000	29.000	7.465	10			26.067	1.0000
0.25	26.400	1.0435	26.400	25.000	29.000	4.791	10	126.00	76.00	26.067	1.0000
0.5	26.500	1.0474	26.500	24.000	30.000	6.475	10	124.50	76.00	26.067	1.0000
*1	18.500	0.7312	18.500	14.000	24.000	15.759	10	57.50	76.00	18.500	0.7097
*2	7.200	0.2846	7.200	2.000	12.000	53.911	10	55.00	76.00	7.200	0.2762
4	0.000	0.0000	0.000	0.000	0.000	0.000	10			0.000	0.0000

**Auxiliary Tests**

Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.96604	0.947	0.25066
Bartlett's Test indicates unequal variances (p = 9.42E-03)	13.4148	13.2767	0.00896

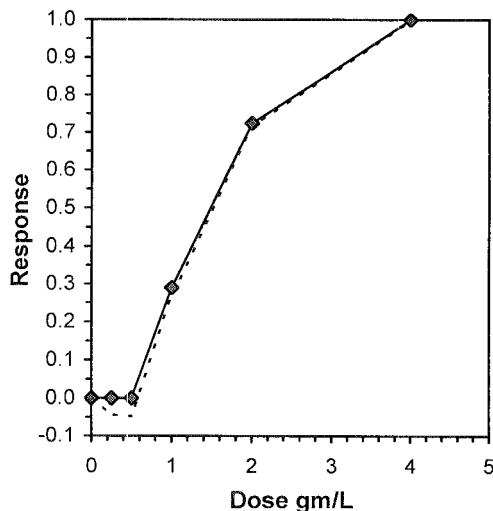
**Hypothesis Test (1-tail, 0.05)**

NOEC	LOEC	ChV	TU
0.5	1	0.70711	

Steel's Many-One Rank Test  
Treatments vs D-Control

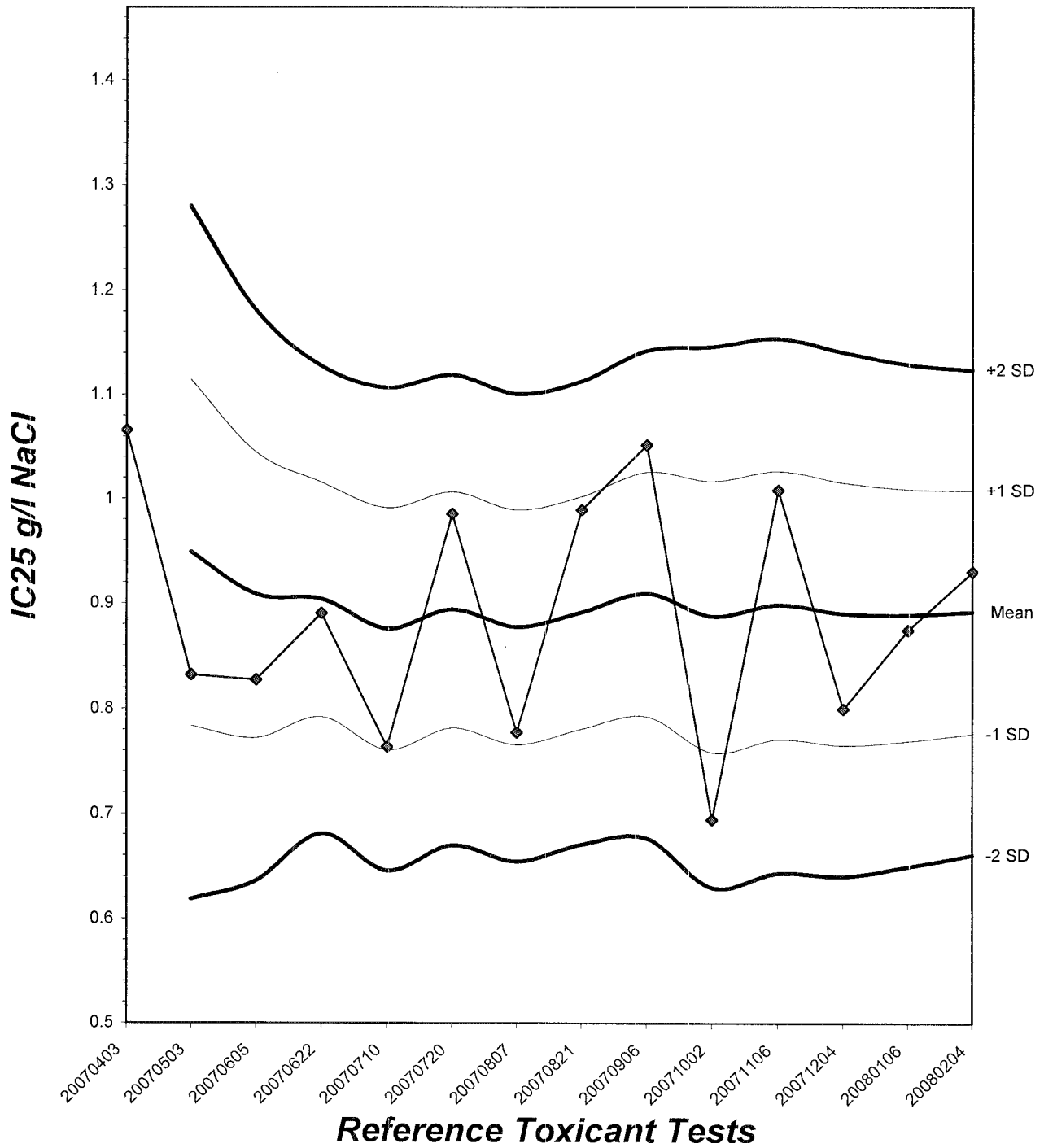
**Linear Interpolation (200 Resamples)**

Point	gm/L	SD	95% CL		Skew
IC05	0.5861	0.0133	0.5527	0.6099	-0.7096
IC10	0.6722	0.0221	0.6345	0.7198	0.3536
IC15	0.7584	0.0319	0.7090	0.8296	0.5420
IC20	0.8445	0.0421	0.7795	0.9395	0.5923
IC25	0.9306	0.0516	0.8512	1.0476	0.5147
IC40	1.2531	0.0676	1.1276	1.3772	-0.0019
IC50	1.4838	0.0691	1.3665	1.6234	0.2328



# Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 13



# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl

## Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-080204

Start Date: 02/04/2008

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	3	3	4	4	3	3	4	3	3	34	10	R
	4	0	7	6	0	0	0	0	0	0	0	13	10	R
	5	6	12	0	10	6	5	7	6	9	7	68	10	R
	6	14	0	0	15	0	0	0	16	0	0	45	10	R
	7	16	15	16	0	15	17	14	0	15	16	93	10	R
	Total	24	22	25	29	25	25	24	26	27	26	253	10	R
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	3	4	5	3	3	3	5	3	3	35	10	R
	4	0	7	8	0	0	0	0	0	0	0	15	10	R
	5	6	0	17	10	8	6	7	7	8	7	76	10	R
	6	0	16	0	12	15	16	17	0	0	0	76	10	R
	7	16	19	16	15	16	0	0	15	14	17	62	10	R
	Total	25	26	29	27	26	25	27	27	25	27	264	10	R
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	4	3	5	3	4	4	5	3	3	37	10	R
	4	0	8	0	0	0	0	0	0	0	0	8	10	R
	5	6	15	7	8	7	6	7	8	8	7	79	10	R
	6	16	0	0	17	0	0	0	15	0	0	48	10	R
	7	15	17	16	12	15	17	16	18	15	14	93	10	R
	Total	25	27	26	30	25	27	27	28	26	24	265	10	R

Circled fourth brood not used in statistical analysis.

7<sup>th</sup> day only used if <60% of the surviving control females have produced their third brood.



# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reference Toxicant - NaCl

### Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-080204

Start Date: 02/04/2008

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	2	3	2	2	2	2	3	3	3	3	25	10	R
	4	0	0	6	0	4	5	0	0	0	0	15	10	R
	5	5	6	16	5	0	0	4	5	4	5	50	10	R
	6	12	13	0	10	0	11	13	10	0	0	69	10	R
	7	13	12	10	9	8	0	0	0	9	9	26	10	R
	Total	19	22	24	17	14	18	20	18	16	17	185	10	R
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	2	2	0	0	0	2	3	3	2	14	10	R
	4	3	0	0	2	3	2	0	0	0	0	10	10	R
	5	0	3	2	0	0	0	2	4	3	4	18	10	R
	6	5	3	0	0	X	0	0	5	0	0	13	9	R
	7	4	4	0	2	-	0	2	5	5	4	17	9	R
	Total	12	8	4	4	3	2	6	12	11	10	72	9	R
4.0 g/l	1	X	X	X	X	X	X	X	X	X	0	0	R	
	2	-	-	-	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	0	0	0	0	0	0	0	0	0	0	0	0	R

Circled fourth brood not used in statistical analysis.

7<sup>th</sup> day only used if <60% of the surviving control females have produced their third brood.

# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reference Toxicant - NaCl Water Chemistries Raw Data Sheet



QA/QC No.: RT-080204

Start Date: 02/04/2008

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst Initials:		R	R	R	R	R	R	R	R	R	R	R	R	R	R
Time of Readings:		1400	1600	1600	1600	1600	1600	1600	1520	1520	1400	1400	1330	1370	1400
Control	DO	7.7	8.3	7.8	8.4	7.3	8.2	8.3	8.0	8.1	8.0	7.8	8.0	7.7	8.1
	pH	7.4	8.0	7.5	7.8	7.7	7.7	7.6	7.7	7.5	7.9	7.5	7.8	7.5	7.9
	Temp	24.4	24.5	24.9	24.4	25.2	24.7	25.6	24.4	25.2	25.0	25.3	24.6	25.0	24.3
0.25 g/l	DO	7.7	8.3	7.9	8.4	7.3	8.3	8.3	8.0	8.1	8.0	7.8	8.0	7.8	8.3
	pH	7.5	8.0	7.6	7.8	7.7	7.8	7.6	7.7	7.5	7.9	7.5	7.9	7.5	7.9
	Temp	24.5	24.5	24.9	24.3	25.3	24.7	25.6	24.4	25.2	25.0	25.4	24.7	25.0	24.2
0.5 g/l	DO	7.7	8.4	7.9	8.3	7.3	8.3	8.3	8.1	8.1	8.0	7.8	7.9	7.8	8.4
	pH	7.6	8.0	7.7	7.9	7.7	7.8	7.7	7.7	7.5	8.0	7.5	7.9	7.6	7.9
	Temp	24.6	24.5	24.8	24.3	25.3	24.7	25.7	24.5	25.3	25.0	25.4	24.6	25.0	24.5
1.0 g/l	DO	7.7	8.4	7.9	8.3	7.3	8.2	8.3	8.1	8.1	8.1	7.8	8.0	7.9	8.4
	pH	7.6	8.1	7.7	7.9	7.7	7.8	7.7	7.7	7.5	8.0	7.5	7.9	7.6	8.0
	Temp	24.6	24.5	24.7	24.3	25.4	24.8	25.7	24.5	25.3	25.1	25.5	24.8	25.1	24.7
2.0 g/l	DO	7.8	8.4	7.9	8.2	7.3	8.2	8.3	8.2	8.0	8.1	7.8	8.0	7.8	8.4
	pH	7.7	8.1	7.7	7.9	7.7	7.8	7.7	7.7	7.5	8.0	7.5	8.0	7.5	7.9
	Temp	24.6	24.5	24.6	24.4	25.6	24.8	25.5	24.5	25.4	25.1	25.6	24.7	25.1	24.7
4.0 g/l	DO	7.9	8.3	-	-	-	-	-	-	-	-	-	-	-	-
	pH	7.7	8.1	-	-	-	-	-	-	-	-	-	-	-	-
	Temp	25.0	24.5	-	-	-	-	-	-	-	-	-	-	-	-

Dissolved Oxygen (DO) readings are in mg/l O<sub>2</sub>; Temperature (Temp) readings are in °C.

Additional Parameters	Control			High Concentration		
	Day 1	Day 3	Day 5	Day 1	Day 3	Day 5
	Conductivity (µS)	301	290	285	6420	3370
Alkalinity (mg/l CaCO <sub>3</sub> )	68	64	64	69	65	65
Hardness (mg/l CaCO <sub>3</sub> )	98	96	95	99	98	97

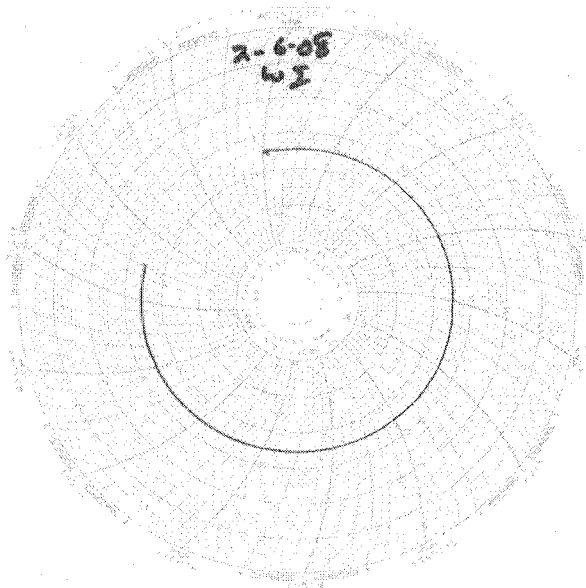
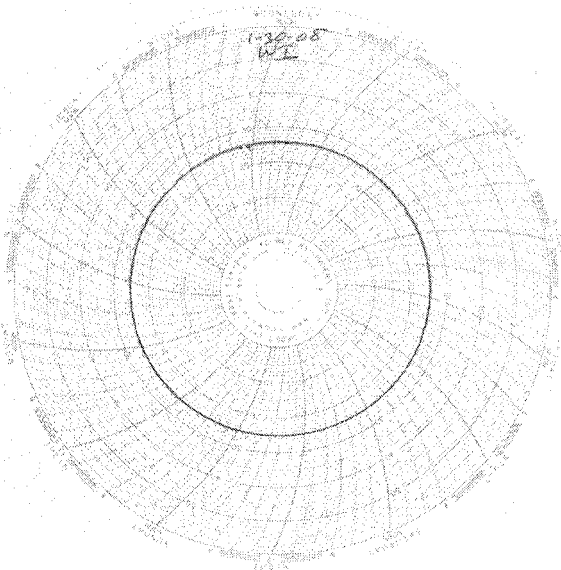
Source of Neonates										
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	1A	1B	1C	1E	1F	1H	2B	2E	2G	2J

# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-080204*

*Date Tested: 02/04/08 to 02/11/08*

*Acceptable Range: 25 $\pm$  1 $^{\circ}$ C*



# TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

February 19, 2008

14201 FRANKLIN AVENUE  
TUSTIN, CALIFORNIA 92780-7008  
(714) 730-6239 · FAX (714) 730-6462  
www.truesdail.com

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

**Project Name:** IRB0156  
**Project Number:** IRB0156


**Date Received:** 2/4/08  
**Truesdail Project:** 973190

## Samples Cross-reference

<u>Truesdail ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Time Sampled</u>	<u>Analysis Requested</u>
973190-1	IRB0156-01	Water	02/03/08	1445	Hydrazines by EPA 8315M

Respectfully Submitted,  
TRUESDAIL LABORATORIES, INC.

  
K.R.P. Iyer  
Quality Control/Quality Assurance Officer

  
Xuan Huong Dang  
Project Manager

002

NPDES - 4142

# TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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**Client:** TestAmerica - Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

**Attention:** Joseph Doak

**Project Name:** IRB0156  
**Project Number:** IRB0156

**Date Received:** 02/04/08  
**Truesdail Project:** 973190

## Case Narrative

**Sample Receipt** The sample was received at 4 °C and in good condition. It was kept in a refrigerator until analysis. Thereafter, it is being kept in ambient storage for an additional 2 months before disposal. Any anomalies would be noted in the "Comments" section.

**Analysis** The analysis was performed as requested on the chain-of-custody.

**Quality Control** The analytical results for each batch of samples performed include a minimum of one set of laboratory control sample/laboratory control sample duplicate (LCS/LCSD), one matrix spike (MS) and a reagent blank (Method blank). Any exceptions or problems would be noted in the "Comments" section.

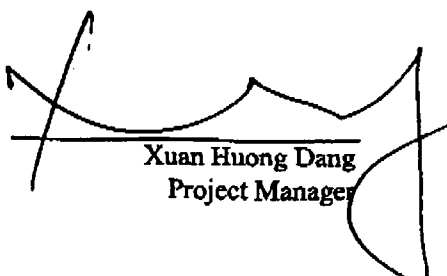
**Comments** Matrix spike and matrix spike duplicate were done on a sample from a different TestAmerica Project, 973194-1 (IRB0147-01), as the method requirement per batch of 20 samples.

All quality assurance requirements set forth by the method specification and all quality control recoveries were within the laboratory acceptance limits. No anomalies or nonconformance events occurred during the course of analysis.

The results are quantitated down to the MDL level.

Respectfully Submitted,  
TRUESDAIL LABORATORIES, INC.

  
K.R.P. Iyer  
Quality Control/Quality Assurance Officer

  
Xuan Huong Dang  
Project Manager

003

NPDES - 4143

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004

NPDES - 4144

Client: TestAmerica Analytical-Irvine

17461 Darlan Avenue, Suite 100  
Irvine, CA 92614-5817

## REPORT

Attention: Joseph Doak  
Sample: Water / 1 Sample  
Project Name: IRB0156  
P.O. Number: IRB0156  
Method Number: 8315 (Modified)  
Investigation: Hydrazines

Laboratory No: 973190  
Report Date: February 19, 2008  
Sampling Date: February 3, 2008  
Receiving Date: February 4, 2008  
Extraction Date: February 5, 2008  
Analysis Date: February 6, 2008  
Units: µg/L  
Reported By: JS

## Analytical Results

Sample ID	Sample Description	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
707223-MB	Method Blank	100	1	ND	ND	ND	None
973190	IRB0156-01	100	1	ND	ND	ND	None
MDL				0.56	0.32	0.15	
POL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

Note: Results based on detector #1 (UV=365nm) data.

Xuan Dang, Project Manager  
Analytical Services, Truesdall Laboratories, Inc.

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdall Laboratories.

# TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Client: **TeslaAmerica Analytical-Irvine**  
 17461 Darian Avenue, Suite 100  
 Irvine, CA 92614-6817



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005

NPDES - 4145

Client Contact: **Joseph Doak**  
 Sample: **Water / 1 Sample**  
 Sample ID: **IRB0156**  
 P.O. Number: **IRB0136**  
 Method Number: **8315 (Modified)**  
 Investigation: **Hydrazines**  
 Run Batch No.: **Extraction: 4269; Analysis: 597**

QC Lab. No.: **707223**  
 Project Lab. No.: **973190**  
 Spiked Sample ID: **973194**  
 Report Date: **February 19, 2008**  
 Sampling Date: **February 3, 2008**  
 Receiving Date: **February 4, 2008**  
 Extraction Date: **February 5, 2008**  
 Analysis Date: **February 6, 2008**  
 Reported By: **JS**

## Quality Control/Quality Assurance Calibration Report

Parameter	ICV		Percent Recovery	Control Limits	Flag
	Theoretical Value (ug/L)	Measured Value (ug/L)			
Monomethyl Hydrazine	25.0	28.6	115	85-115	PASS
u-Dimethyl Hydrazine	25.0	28.5	114	85-115	PASS
Hydrazine	5.0	5.21	104	95-115	PASS

Parameter	OCS		Percent Recovery	Control Limits	Flag
	Theoretical Value (ug/L)	Measured Value (ug/L)			
Monomethyl Hydrazine	50.0	48.8	97.6	85-115	PASS
u-Dimethyl Hydrazine	50.0	49.0	98.0	85-115	PASS
Hydrazine	10.0	9.25	92.5	85-115	PASS

## Quality Control/Quality Assurance Spikes Report

Parameter	LCS/LCSD				LCS/ RPD	Flag	%D	Control Limits	%Rec.
	Spiked Conc. ug/L	Recovered Concentration LCS	Recovery MB	Percent Recovery (%) LCS					
Monomethyl Hydrazine	50.0	47.7	0.0	95.4	88.9	6.89%	PASS	20	70-130
u-Dimethyl Hydrazine	50.0	45.6	0.0	91.1	87.2	4.38%	PASS	20	70-130
Hydrazine	10.0	8.51	0.0	85.1	80.4	5.71%	PASS	20	70-130

Parameter	MS/MSD				MS/ MSD RPD	Flag	%D	Control Limits	%Rec.
	Recovered Concentration MS	MSD Sample	Percent Recovery (%) MS	MSD					
Monomethyl Hydrazine	36.7	36.8	0.00	73.4	73.6	0.25%	PASS	20	11-134
u-Dimethyl Hydrazine	38.7	40.2	0.00	77.5	80.4	3.65%	PASS	20	42-109
Hydrazine	7.61	7.87	0.00	78.1	78.7	3.38%	PASS	20	37-128

Note: Results based on detector #1 (UV+sssdsm) data.

Xuan Dang, Project Manager  
 Analytical Services, Truesdail Laboratories, Inc.

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006  
NPDES - 4146

Client: TestAmerica Analytical-Irvine  
17461 Derlan Avenue, Suite 100  
Irvine, CA 92614-9817

Attention: Joseph Doak  
Project Name: IR80156  
Method Number: 8315 (Modified)  
Investigation: Hydrazines

Laboratory No: 973190  
Report Date: February 19, 2008  
Sampling Date: February 3, 2008  
Receiving Date: February 4, 2008  
Analysis Date: February 6, 2008  
Reported By: JS

## Qualifier Codes and Definitions

<u>Code</u>	<u>Definition</u>
FPS	Force Peak Start: Peak start needs to be adjusted to the baseline
FPE	Force Peak End: Peak end needs to be adjusted to the baseline
SP	Split Peak: Background or co-eluting peaks need to be split.
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
ND	Not Detected: Analyte is not detected at or above the method detection limit.
N/A	Not Applicable
ICV	Initial Calibration Verification: First source calibration standard run at a mid-level spike prior to samples.
QCS	Quality Control Standard: Second source calibration standard run at a mid-level spike after all samples.
MB	Method Blank: Reagent water extracted and run with each batch of 20 samples to demonstrate that all analytes are not detected from the extraction process.
LCS (D)	Laboratory Control Spike: Second source standard spiked into blank matrix and extracted and run with each batch of 20 samples (run in duplicate).
MS (D)	Matrix Spike: Second source standard spiked into sample matrix and extracted and run with each batch of 20 samples (run in duplicate).
RPD	Relative Percent Difference: A calculated value of the deviation between the spikes and spike duplicates to measure precision.
J	J-flags: Any result found between the MDL and the PQL will be reported with a "J" attached.
Flag	Pass If within Control Limits; otherwise "Fail"

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## **Section 2.0**

### **SAMPLE CHECK-IN RECORDS**

**Chain of Custody**

**Sample Integrity and Analysis Discrepancy Form**

**Internal Chain of Custody**

SUBCONTRACT ORDER

TestAmerica Irvine

IRB0156

973190

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:

Truesdail Laboratories-SUB  
14201 Franklin Avenue  
Tustin, CA 92680  
Phone: (714) 730-6239  
Fax: (714) 730-6462  
Project Location: California  
Receipt Temperature: °C Ice: Y / N

Rec'd 02/01/08  
s22d 973190

Analysis	Units	Due	Expires	Comments
Sample ID: IRB0156-01	Water		Sampled: 02/03/08 14:45	
Hydrazine-OUT	%	02/13/08	02/06/08 14:45	Sub Truesdail for Monomethylhydrazine, J flags
Level 4 Data Package	N/A	02/13/08	03/02/08 14:45	
<i>Containers Supplied:</i>				
1 L Amber (AR)	1 L Amber (AS)			

**ALERT !!  
Level IV QC**

**For Sample Conditions  
See Form Attached**

*[Signature]*  
Released By \_\_\_\_\_ Date/Time 02/04/08 07:00  
*[Signature]*  
Released By \_\_\_\_\_ Date/Time 02/04/08 07:28

*[Signature]*  
Received By \_\_\_\_\_ Date/Time 02/04/08 07:00  
*[Signature]*  
Received By \_\_\_\_\_ Date/Time 2/4/08, 7:30 am

February 25, 2008

**Vista Project I.D.: 30240**

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

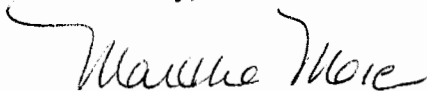
Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on February 05, 2008 under your Project Name "IRB0156". 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 NELAC 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

30240-001

IRB0156-01

## SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	9953	Lab Sample:	0-MB001	Date Analyzed DB-5:	19-Feb-08	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	15-Feb-08						
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	0.00000705			<b>IS</b> 13C-2,3,7,8-TCDD	82.9	25 - 164		
1,2,3,7,8-PeCDD	ND	0.00000681			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	0.00000647			13C-1,2,3,7,8-PeCDF	74.4	24 - 185		
1,2,3,7,8-PeCDF	ND	0.00000731			13C-2,3,4,7,8-PeCDF	77.1	21 - 178		
2,3,4,7,8-PeCDF	ND	0.00000752			13C-1,2,3,4,7,8-HxCDF	75.8	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.00000943			13C-1,2,3,6,7,8-HxCDF	77.6	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.00000974			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	0.00000705			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	0.00000647							
Total PeCDF	ND	0.00000742							
Total HxCDF	ND	0.00000107							
Total HpCDF	ND	0.00000335							

Analyst: MAS

Approved By: William J. Luksemburg 22-Feb-2008 15:52

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 15:52

Sample ID: <b>IRB0156-01</b>					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA		Matrix:	Aqueous	Lab Sample:	30240-001	Date Received:	5-Feb-08
Project:	IRB0156		Sample Size:	0.987 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:	1445							
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	0.000000631			<b>IS</b> 13C-2,3,7,8-TCDD	81.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000114			13C-1,2,3,7,8-PeCDD	70.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000157			13C-1,2,3,4,7,8-HxCDD	75.7	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000177			J	13C-1,2,3,6,7,8-HxCDD	75.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000192			13C-1,2,3,4,6,7,8-HpCDD	75.7	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000309				13C-OCDD	68.7	17 - 157	
OCDD	0.000323			B	13C-2,3,7,8-TCDF	85.2	24 - 169	
2,3,7,8-TCDF	ND	0.000000569			13C-1,2,3,7,8-PeCDF	67.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000779			13C-2,3,4,7,8-PeCDF	70.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000771			13C-1,2,3,4,7,8-HxCDF	69.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000876			13C-1,2,3,6,7,8-HxCDF	71.5	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000910			13C-2,3,4,6,7,8-HxCDF	70.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000954			13C-1,2,3,7,8,9-HxCDF	71.7	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000133			13C-1,2,3,4,6,7,8-HpCDF	68.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000629			J	13C-1,2,3,4,7,8,9-HpCDF	71.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000112			13C-OCDF	69.0	17 - 157	
OCDF	0.0000156			J	<b>CRS</b> 37Cl-2,3,7,8-TCDD	88.7	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000120			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000177			b. Estimated maximum possible concentration.			
Total HxCDD	0.00000881				c. Method detection limit.			
Total HpCDD	0.0000631				d. Lower control limit - upper control limit.			
Total TCDF	0.00000189							
Total PeCDF	0.000000643							
Total HxCDF	0.00000514							
Total HpCDF	0.0000148							

Analyst: MAS

Approved By: William J. Luksemburg 22-Feb-2008 15:52



## 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

IRB0156

30240

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

1.4°C

Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRB0156-01	Water		Sampled: 02/03/08 14:45	
1613-Dioxin-HR-Alfa	ug/l	02/13/08	02/10/08 14:45	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Level 4 + EDD-OUT	N/A	02/13/08	03/02/08 14:45	**LEVEL IV QC, ACCESS 7 EDD**
<i>Containers Supplied:</i>				
1 L Amber (F)	1 L Amber (G)			

V. Bauer 2/4/08 17:00  
Released By Date/Time

Released By Date/Time

FedEx 2/4/08 17:00  
Received By Date/Time

2.500/0929  
Received By Date/Time

SAMPLE LOG-IN CHECKLIST



Vista Project #: 30240 TAT Standard

Samples Arrival:	Date/Time <u>2/5/08 0929</u>	Initials: <u>YBUB</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time <u>2/6/08 1227</u>	Initials: <u>YBUB</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>B-3</u>
Delivered By:	<u>FedEx</u>	UPS	Cal
			DHL
			Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C	<u>1.4°C</u>	Time: <u>0953</u>	Thermometer ID: IR-1

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	Trk # <u>7926 4257 8964</u>	✓	
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	COC	Sample Container	<u>None</u>
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine

IRB0156

8020450

SENDING LABORATORY:

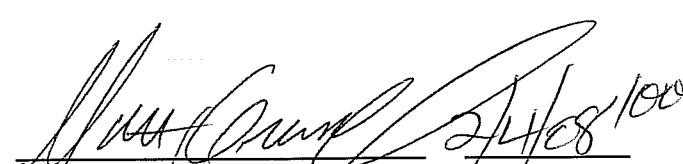
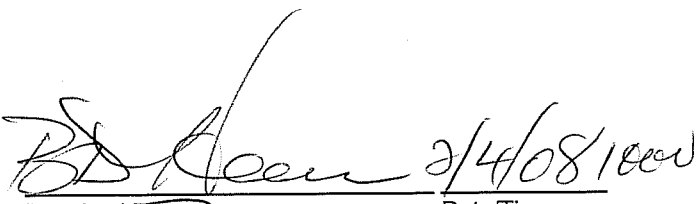
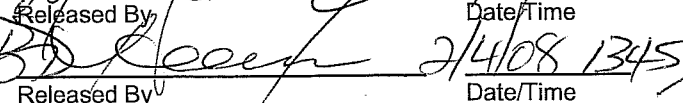
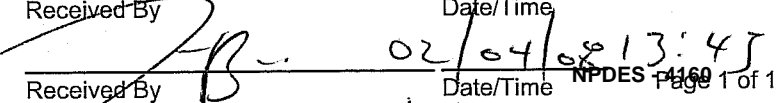
TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

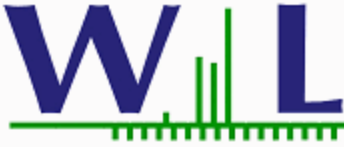
RECEIVING LABORATORY:

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: IRB0156-01	Water		Sampled: 02/03/08 14:45	
Level 4 Data Package - Wec	N/A	02/13/08	03/02/08 14:45	Include Element transfer EDD
Mercury - 245.1, Diss -OUT	mg/l	02/13/08	03/02/08 14:45	Sub to Weck, Boeing, J flags, rpt in ug/L
Mercury - 245.1-OUT	mg/l	02/13/08	03/02/08 14:45	Sub to Weck, Boeing, J flags, rpt in ug/L
<i>Containers Supplied:</i>				
125 mL Poly (AW)	125 mL Poly w/HNO3			
<u>HNO3</u>	(AX)			

Diss. Mercury already filtered and pres.

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



### CERTIFICATE OF ANALYSIS

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

**Report Date:** 02/11/08 16:20  
**Received Date:** 02/04/08 13:45  
**Turn Around:** Normal

Phone: (949) 261-1022

**Work Order #:** 8020450

Fax: (949) 260-3297

**Client Project:** IRB0156

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





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: 8020450  
Project ID: IRB0156

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:20

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRB0156-01	Client		8020450-01	Water	02/03/08 14:45





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: 8020450  
Project ID: IRB0156

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:20

**IRB0156-01 8020450-01 (Water)**

Date Sampled: 02/03/08 14:45

**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	W8B0147	02/05/08	02/07/08	jlp
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8B0147	02/05/08	02/07/08	jlp



Weck Laboratories, Inc.  
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Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

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

Report ID: 8020450  
Project ID: IRB0156

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:20

# 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: 8020450  
 Project ID: IRB0156

Date Received: 02/04/08 13:45  
 Date Reported: 02/11/08 16:20

**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 W8B0147 - EPA 245.1**

**Blank (W8B0147-BLK1)**

Analyzed: 02/07/08

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

**LCS (W8B0147-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 (W8B0147-MS1)**

Source: 8020444-01

Analyzed: 02/07/08

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

**Matrix Spike (W8B0147-MS2)**

Source: 8020445-01

Analyzed: 02/07/08

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

**Matrix Spike Dup (W8B0147-MSD1)**

Source: 8020444-01

Analyzed: 02/07/08

Mercury, Dissolved	1.05	0.20	ug/l	1.00	ND	105	70-130	1	20	
Mercury, Total	1.05	0.20	ug/l	1.00	ND	105	70-130	1	20	

**Matrix Spike Dup (W8B0147-MSD2)**

Source: 8020445-01

Analyzed: 02/07/08

Mercury, Dissolved	1.06	0.20	ug/l	1.00	ND	106	70-130	2	20	
Mercury, Total	1.06	0.20	ug/l	1.00	ND	106	70-130	2	20	



Weck Laboratories, Inc.  
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Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

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

Report ID: 8020450  
Project ID: IRB0156

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:20

### Notes and Definitions

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>8603</u>	Client <u>TA IRVINE</u>
Work Order <u>R802049-01</u>	Contract <u>PROJECT# IRB0156</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

BLANK

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

DUPLICATES

Sample ID	Nuclide	Results ± 2σ	MDA
8693-004	GrossAlpha	1.03 ± 1.0	1.5
	Gross Beta	15.0 ± 1.2	1.6
	Ra-228	0.099 ± 0.18	0.48
	K-40 (G)	24.8 ± 7.8	4.9
	Cs-137 (G)	U	0.53
	H-3	-6.31 ± 84	150
	Ra-226	0.583 ± 0.52	0.81
	Sr-90	-0.021 ± 0.29	0.71
	Total U	0.611 ± 0.067	0.022

ORIGINALS

Sample ID	Results ± 2σ	MDA	RPD (Tot)	3σ Eval
8693-001	0.763 ± 0.99	1.3	-	0 satis.
	14.2 ± 0.93	0.97	5	46 satis.
	0.295 ± 0.19	0.49	-	0 satis.
	24.0 ± 11	8.2	3	86 satis.
	U	0.86	-	0 satis.
	7.12 ± 78	130	-	0 satis.
	0.426 ± 0.44	0.70	-	0 satis.
	0.026 ± 0.31	0.72	-	0 satis.
	0.578 ± 0.064	0.022	6	30 satis.

Certified by ngj

Report Date 03/11/08


Page 2

# Eberline Services

## QC RESULTS

SDG <u>8603</u>	Client <u>TA IRVINE</u>
Work Order <u>R802049-01</u>	Contract <u>PROJECT# IRB0156</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 + 2<math>\sigma</math></u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results + 2<math>\sigma</math></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

**IRB0156**

**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

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0156-01</b>				
	<b>Water</b>	Sampled: <b>02/03/08 14:45</b>		
EDD + Level 4	N/A	02/13/08	03/02/08 14:45	Excel EDD email to pm, Include Std logs for Lvl IV
Gamma Spec-O	mg/kg	02/13/08	02/02/09 14:45	Out to Eberline, k-40 and cs-137 only
Gross Alpha-O	pCi/L	02/13/08	08/01/08 14:45	Out to Eberline, Boeing
Gross Beta-O	pCi/L	02/13/08	08/01/08 14:45	Out to Eberline, Boeing
Radium, Combined-O	pCi/L	02/13/08	02/02/09 14:45	Out to Eberline, Boeing
Strontium 90-O	pCi/L	02/13/08	02/02/09 14:45	Out to Eberline, Boeing
Tritium-O	pCi/L	02/13/08	02/02/09 14:45	Out to Eberline, Boeing
Uranium, Combined-O	pCi/L	02/13/08	02/02/09 14:45	Out to Eberline, Boeing

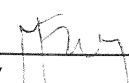
*Containers Supplied:*

2.5 gal Poly (AI)      500 mL Amber (AJ)

 2/4/08 17:00  
 Released By      Date/Time

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

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

 02/05/08 09:30  
 Received By      Date/Time

*File 2/5/08*

Client: TEST AMERICA City IRVINE State CA

Date/Time received 02/05/08 09:38 CoC No IRB 0156

Container I.D. No. 160085T Requested TAT (Days) \_\_\_\_\_ P.C. 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 is Wet  Dry
- 6 Number of samples in shipping container 1 Sample Matrix W
- 7 Number of containers per sample 2 (Or see CoC \_\_\_\_\_)
- 8 Samples are in correct container? Yes  No
- 9 Paperwork agrees 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  pH \_\_\_\_\_ Preservative \_\_\_\_\_
- 13 Describe any anomalies  
\_\_\_\_\_  
\_\_\_\_\_
- 14 Was F.M. notified of any anomalies? Yes  No  Date \_\_\_\_\_
- 15 Inspected by M. Han Date 02/05/08 Time 10:45

Customer Sample No.	Beta/Gamma CoC#	Ion Chamber mR/hr	Wide	Customer Sample No.	Beta/Gamma CoC#	Ion Chamber mR/hr	Wide
IRB0156-1	L60						

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

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