

# **APPENDIX G**

## **Section 56**

Outfall 009, January 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: Routine Outfall 009

Sampled: 01/24/08  
Received: 01/24/08  
Issued: 02/26/08 12:13

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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

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

## SAMPLE CROSS REFERENCE

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

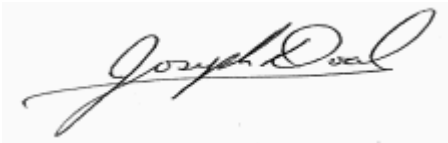
ADDITIONAL INFORMATION: This is a final report to include all subcontract data..

**LABORATORY ID**  
IRA2352-01

**CLIENT ID**  
Outfall 009

**MATRIX**  
Water

Reviewed By:



**TestAmerica Irvine**

Joseph Doak  
Project Manager

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

Project ID: Routine Outfall 009

Report Number: IRA2352

Sampled: 01/24/08  
Received: 01/24/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2352-01 (Outfall 009 - Water)</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	8A25068	0.20	2.0	<b>0.87</b>	1	01/25/08	01/25/08	J
Cadmium	EPA 200.8	8A25068	0.11	1.0	ND	1	01/25/08	01/25/08	
Copper	EPA 200.8	8A25068	0.75	2.0	<b>4.6</b>	1	01/25/08	01/25/08	
Lead	EPA 200.8	8A25068	0.30	1.0	<b>1.3</b>	1	01/25/08	01/25/08	
Thallium	EPA 200.8	8A25068	0.20	1.0	ND	1	01/25/08	01/25/08	

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

Project ID: Routine Outfall 009

Report Number: IRA2352

Sampled: 01/24/08  
Received: 01/24/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2352-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	8A24169	0.20	2.0	<b>0.92</b>	1	01/24/08	01/25/08	J
Cadmium	EPA 200.8-Diss	8A24169	0.11	1.0	ND	1	01/24/08	01/24/08	
Copper	EPA 200.8-Diss	8A24169	0.75	2.0	<b>3.6</b>	1	01/24/08	01/24/08	
Lead	EPA 200.8-Diss	8A24169	0.30	1.0	<b>0.37</b>	1	01/24/08	01/24/08	J
Thallium	EPA 200.8-Diss	8A24169	0.20	1.0	ND	1	01/24/08	01/24/08	

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MWH-Pasadena/Boeing  
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Project ID: Routine Outfall 009

Report Number: IRA2352

Sampled: 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: IRA2352-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8A31085	1.3	4.8	ND	1	01/31/08	01/31/08	
<b>Chloride</b>	EPA 300.0	8A24034	0.25	0.50	<b>7.6</b>	1	01/24/08	01/24/08	
<b>Nitrate/Nitrite-N</b>	EPA 300.0	8A24034	0.15	0.26	<b>1.4</b>	1	01/24/08	01/24/08	
<b>Sulfate</b>	EPA 300.0	8A24034	0.20	0.50	<b>10</b>	1	01/24/08	01/24/08	
<b>Total Dissolved Solids</b>	SM2540C	8A25141	10	10	<b>120</b>	1	01/25/08	01/25/08	

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Report Number: IRA2352

Sampled: 01/24/08

Received: 01/24/08

## 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: IRA2352-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8A1053	0.050	0.20	ND	1	01/30/08	01/31/08	
Mercury, Total	EPA 245.1	W8A1053	0.050	0.20	ND	1	01/30/08	01/31/08	

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Project ID: Routine Outfall 009

Report Number: IRA2352

Sampled: 01/24/08

Received: 01/24/08

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: Outfall 009 (IRA2352-01) - Water</b> EPA 300.0	2	01/24/2008 08:30	01/24/2008 18:15	01/24/2008 19:00	01/24/2008 20:26

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MWH-Pasadena/Boeing  
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Project ID: Routine Outfall 009

Report Number: IRA2352

Sampled: 01/24/08  
 Received: 01/24/08

## 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: 8A25068 Extracted: 01/25/08</b>											
<b>Blank Analyzed: 01/25/2008 (8A25068-BLK1)</b>											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
<b>LCS Analyzed: 01/25/2008 (8A25068-BS1)</b>											
Antimony	84.5	2.0	0.20	ug/l	80.0		106	85-115			
Cadmium	84.8	1.0	0.11	ug/l	80.0		106	85-115			
Copper	86.4	2.0	0.75	ug/l	80.0		108	85-115			
Lead	85.0	1.0	0.30	ug/l	80.0		106	85-115			
Thallium	82.7	1.0	0.20	ug/l	80.0		103	85-115			
<b>Matrix Spike Analyzed: 01/25/2008 (8A25068-MS1) Source: IRA2276-02</b>											
Antimony	82.3	2.0	0.20	ug/l	80.0	ND	103	70-130			
Cadmium	82.0	1.0	0.11	ug/l	80.0	ND	102	70-130			
Copper	83.4	2.0	0.75	ug/l	80.0	ND	104	70-130			
Lead	81.0	1.0	0.30	ug/l	80.0	ND	101	70-130			
Thallium	80.4	1.0	0.20	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Analyzed: 01/25/2008 (8A25068-MS2) Source: IRA2349-01</b>											
Antimony	82.9	2.0	0.20	ug/l	80.0	0.445	103	70-130			
Cadmium	82.9	1.0	0.11	ug/l	80.0	0.119	104	70-130			
Copper	86.6	2.0	0.75	ug/l	80.0	1.92	106	70-130			
Lead	77.5	1.0	0.30	ug/l	80.0	1.14	95	70-130			
Thallium	77.7	1.0	0.20	ug/l	80.0	ND	97	70-130			
<b>Matrix Spike Dup Analyzed: 01/25/2008 (8A25068-MSD1) Source: IRA2276-02</b>											
Antimony	82.2	2.0	0.20	ug/l	80.0	ND	103	70-130	0	20	
Cadmium	82.6	1.0	0.11	ug/l	80.0	ND	103	70-130	1	20	
Copper	83.7	2.0	0.75	ug/l	80.0	ND	105	70-130	0	20	
Lead	81.7	1.0	0.30	ug/l	80.0	ND	102	70-130	1	20	
Thallium	81.7	1.0	0.20	ug/l	80.0	ND	102	70-130	2	20	

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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: 8A24169 Extracted: 01/24/08</b>											
<b>Blank Analyzed: 01/24/2008-01/25/2008 (8A24169-BLK1)</b>											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
<b>LCS Analyzed: 01/24/2008-01/25/2008 (8A24169-BS1)</b>											
Antimony	83.6	2.0	0.20	ug/l	80.0		104	85-115			
Cadmium	80.4	1.0	0.11	ug/l	80.0		100	85-115			
Copper	84.6	2.0	0.75	ug/l	80.0		106	85-115			
Lead	78.0	1.0	0.30	ug/l	80.0		97	85-115			
Thallium	81.1	1.0	0.20	ug/l	80.0		101	85-115			
<b>Matrix Spike Analyzed: 01/24/2008-01/25/2008 (8A24169-MS1) Source: IRA2349-01</b>											
Antimony	86.9	2.0	0.20	ug/l	80.0	0.421	108	70-130			
Cadmium	77.3	1.0	0.11	ug/l	80.0	ND	97	70-130			
Copper	78.7	2.0	0.75	ug/l	80.0	ND	98	70-130			
Lead	75.7	1.0	0.30	ug/l	80.0	ND	95	70-130			
Thallium	77.2	1.0	0.20	ug/l	80.0	ND	97	70-130			
<b>Matrix Spike Dup Analyzed: 01/24/2008-01/25/2008 (8A24169-MSD1) Source: IRA2349-01</b>											
Antimony	86.9	2.0	0.20	ug/l	80.0	0.421	108	70-130	0	20	
Cadmium	78.7	1.0	0.11	ug/l	80.0	ND	98	70-130	2	20	
Copper	79.3	2.0	0.75	ug/l	80.0	ND	99	70-130	1	20	
Lead	73.7	1.0	0.30	ug/l	80.0	ND	92	70-130	3	20	
Thallium	75.6	1.0	0.20	ug/l	80.0	ND	94	70-130	2	20	

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Report Number: IRA2352

Sampled: 01/24/08  
 Received: 01/24/08

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A24034 Extracted: 01/24/08</b>											
<b>Blank Analyzed: 01/24/2008 (8A24034-BLK1)</b>											
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
<b>LCS Analyzed: 01/24/2008 (8A24034-BS1)</b>											
Chloride	4.86	0.50	0.25	mg/l	5.00		97	90-110			M-3
Sulfate	9.69	0.50	0.20	mg/l	10.0		97	90-110			
<b>Matrix Spike Analyzed: 01/24/2008 (8A24034-MS1)</b>					<b>Source: IRA2329-01</b>						
Sulfate	107	1.0	0.40	mg/l	10.0	97.2	98	80-120			
<b>Matrix Spike Analyzed: 01/25/2008 (8A24034-MS2)</b>					<b>Source: IRA2354-09</b>						
Sulfate	16.9	0.50	0.20	mg/l	10.0	6.59	103	80-120			
<b>Matrix Spike Dup Analyzed: 01/24/2008 (8A24034-MSD1)</b>					<b>Source: IRA2329-01</b>						
Sulfate	106	1.0	0.40	mg/l	10.0	97.2	84	80-120	1	20	
<b>Batch: 8A25141 Extracted: 01/25/08</b>											
<b>Blank Analyzed: 01/25/2008 (8A25141-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/25/2008 (8A25141-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 01/25/2008 (8A25141-DUP1)</b>					<b>Source: IRA2124-05</b>						
Total Dissolved Solids	1920	10	10	mg/l		1920			0	10	

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Sampled: 01/24/08  
 Received: 01/24/08

## 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: 8A31085 Extracted: 01/31/08</b>											
<b>Blank Analyzed: 01/31/2008 (8A31085-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
<b>LCS Analyzed: 01/31/2008 (8A31085-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	19.8	5.0	1.4	mg/l	20.2		98	78-114			MNR1
<b>LCS Dup Analyzed: 01/31/2008 (8A31085-BSD1)</b>											
Hexane Extractable Material (Oil & Grease)	19.4	5.0	1.4	mg/l	20.2		96	78-114	2	11	

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## METHOD BLANK/QC DATA

### Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: W8A1053 Extracted: 01/30/08</b>											
<b>Blank Analyzed: 01/31/2008 (W8A1053-BLK1)</b>											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 01/31/2008 (W8A1053-BS1)</b>											
Mercury, Dissolved	0.930	0.20	0.050	ug/l	1.00		93	85-115			
Mercury, Total	0.930	0.20	0.050	ug/l	1.00		93	85-115			
<b>Matrix Spike Analyzed: 01/31/2008 (W8A1053-MS1) Source: 8012822-01</b>											
Mercury, Dissolved	1.38	0.20	0.050	ug/l	1.00	0.431	95	70-130			
Mercury, Total	1.38	0.20	0.050	ug/l	1.00	0.431	95	70-130			
<b>Matrix Spike Analyzed: 01/31/2008 (W8A1053-MS2) Source: 8012822-02</b>											
Mercury, Dissolved	1.37	0.20	0.050	ug/l	1.00	0.426	94	70-130			
Mercury, Total	1.37	0.20	0.050	ug/l	1.00	0.426	94	70-130			
<b>Matrix Spike Dup Analyzed: 01/31/2008 (W8A1053-MSD1) Source: 8012822-01</b>											
Mercury, Dissolved	1.35	0.20	0.050	ug/l	1.00	0.431	92	70-130	2	20	
Mercury, Total	1.35	0.20	0.050	ug/l	1.00	0.431	92	70-130	2	20	
<b>Matrix Spike Dup Analyzed: 01/31/2008 (W8A1053-MSD2) Source: 8012822-02</b>											
Mercury, Dissolved	1.40	0.20	0.050	ug/l	1.00	0.426	97	70-130	2	20	
Mercury, Total	1.40	0.20	0.050	ug/l	1.00	0.426	97	70-130	2	20	

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## 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
IRA2352-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.38	4.8	15
IRA2352-01	Antimony-200.8	Antimony	ug/l	0.87	2.0	6
IRA2352-01	Cadmium-200.8	Cadmium	ug/l	0.059	1.0	4
IRA2352-01	Chloride - 300.0	Chloride	mg/l	7.64	0.50	150
IRA2352-01	Copper-200.8	Copper	ug/l	4.55	2.0	14
IRA2352-01	Hg_w 245.1	Mercury, Total	ug/l	0.027	0.20	0.13
IRA2352-01	Lead-200.8	Lead	ug/l	1.26	1.0	5.2
IRA2352-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.40	0.26	10
IRA2352-01	Sulfate-300.0	Sulfate	mg/l	10	0.50	250
IRA2352-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	117	10	850
IRA2352-01	Thallium-200.8	Thallium	ug/l	0.0013	1.0	2

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## DATA QUALIFIERS AND DEFINITIONS

- 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.
- 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).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

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Project ID: Routine Outfall 009

Report Number: IRA2352

Sampled: 01/24/08  
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## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water		
EPA 1664A	Water		
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
SM2540C	Water	X	

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

### Subcontracted Laboratories

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

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnrc  
Samples: IRA2352-01

#### Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec  
Samples: IRA2352-01

Analysis Performed: Gross Alpha  
Samples: IRA2352-01

Analysis Performed: Gross Beta  
Samples: IRA2352-01

Analysis Performed: Radium, Combined  
Samples: IRA2352-01

Analysis Performed: Strontium 90  
Samples: IRA2352-01

Analysis Performed: Tritium  
Samples: IRA2352-01

Analysis Performed: Uranium, Combined  
Samples: IRA2352-01

### 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: Routine Outfall 009

Report Number: IRA2352

Sampled: 01/24/08  
Received: 01/24/08

**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: IRA2352-01

**Weck Laboratories, Inc**

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

Method Performed: EPA 245.1  
Samples: IRA2352-01

**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

Test America Version 12/20/07

IRA2352

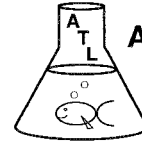
RA2352

Client Name/Address		Project		ANALYSIS REQUIRED		Field readings					
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact Joseph Doak		Boeing-SSFL NPDES Routine Outfall 009 Stormwater at WS-13		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl		Temp = 6.8°C = 44.0° pH = 7.4 Time of readings = 08:30					
Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691		Chronic Toxicity		Comments					
Sampler: R BOMBAL A		Fax Number: (626) 568-6515		Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl							
Sample Description	Sample Matrix	Container Type	# of Cont	Preservative	Bottle #	TCD (and all congeners)	Oil & Grease (1664-HEM)	Cl <sup>-</sup> , SO <sub>4</sub> <sup>2-</sup> , NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup>	TDS	Gross Alpha (900.0), Gross Beta (90.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	
Outfall 009	W	1L Poly	1	HNO <sub>3</sub>	1A						
Outfall 009-Dup	W	1L Poly	1	HNO <sub>3</sub>	1B						
Outfall 009	W	1L Amber	2	None	2A, 2B	X					
Outfall 009	W	1L Amber	2	HCl	3A, 3B						
Outfall 009	W	500 ml Poly	2	None	4A, 4B			X			
Outfall 009	W	500 ml Poly	1	None	5				X		
Outfall 009	W	2.5 Gal Cube 500 ml Amber	1	None	6A					X	
Outfall 009	W	500 ml Amber	1	None	6B						
Outfall 009	W	1 Gal Poly	1	None	7						
Outfall 009	W	1L Poly	1	None	8					X	
Relinquished By											Turn around Time: (check) 24 Hours _____ 48 Hours _____ 72 Hours _____ Sample Integrity: (check) Intact _____ On Ice: <input checked="" type="checkbox"/>
<i>[Signature]</i>		1-24-08									Received By: <i>[Signature]</i> Date/Time: 1/24/08 15:55
Relinquished By											Received By: <i>[Signature]</i> Date/Time: 1/24/08 18:15
<i>[Signature]</i>		1-24-08									Received By: <i>[Signature]</i> Date/Time: 1/24/08 18:15

AF  
1/24/08

7-015-0

# 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 1, 2008  
**Client:** TestAmerica – Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Joseph Doak

**Laboratory No.:** A-08012505-001  
**Sample ID.:** IRA2352-01 (Outfall 009)

**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: 01/24/08  
Date Received: 01/25/08  
Temp. Received: 1°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 01/25/08 to 02/01/08

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

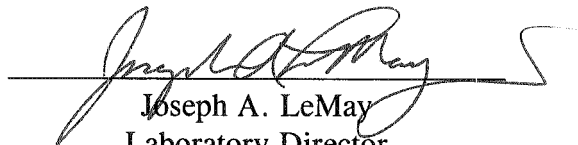
*Ceriodaphnia dubia* Survival and Reproduction Test (EPA Method 1002).

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

## Result Summary:

<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

**CERIODAPHNIA CHRONIC BIOASSAY  
EPA METHOD 1002.0**



Lab No.: A-08012505-001  
Client/ID: Test America – Outfall 009

Date Tested: 01/25/08 to 02/01/08

**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-080106.

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%	24.8
100% Sample	100%	27.8
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 (24.8 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 = 8.8%)
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-7 Day Survival**

Start Date: 1/25/2008 14:00 Test ID: 8012505 Sample ID: Outfall 009  
 End Date: 2/1/2008 13:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial  
 Sample Date: 1/24/2008 08:30 Protocol: FWCH 4TH-EPA-821-R-02-0 Test Species: CD-Ceriodaphnia dubia

Comments:

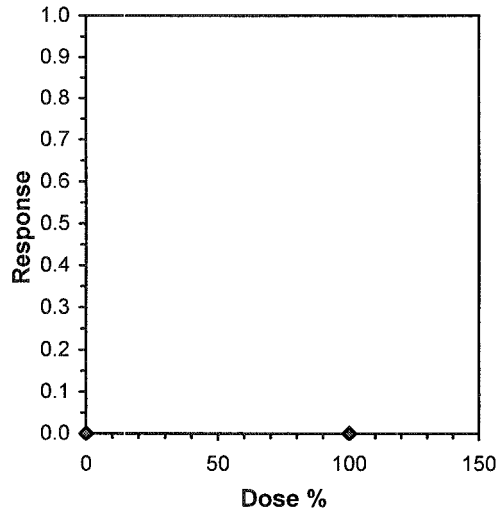
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Isotonic Mean	N-Mean
D-Control	1.0000	1.0000	0	10	10	10			1.0000	1.0000
100	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1
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 Survival and Reproduction Test-Reproduction**

Start Date: 1/25/2008 14:00 Test ID: 8012505 Sample ID: Outfall 009  
 End Date: 2/1/2008 13:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial  
 Sample Date: 1/24/2008 08:30 Protocol: FWCH 4TH-EPA-821-R-02-0 Test Species: CD-Ceriodaphnia dubia

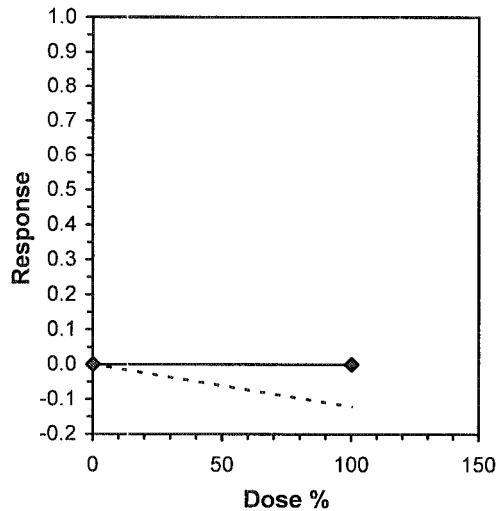
Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	27.000	27.000	26.000	22.000	27.000	25.000	22.000	23.000	25.000	24.000
100	27.000	27.000	23.000	30.000	24.000	26.000	34.000	32.000	29.000	26.000

Conc-%	Mean	N-Mean	Transform: Untransformed				N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%					Mean	N-Mean
D-Control	24.800	1.0000	24.800	22.000	27.000	8.020	10				26.300	1.0000
100	27.800	1.1210	27.800	23.000	34.000	12.438	10	-2.378	1.734	2.187	26.300	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97424	0.905	0.36765	-0.0017		
F-Test indicates equal variances (p = 0.11)	3.02247	6.54109				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	2.18733	0.0882	45	7.95556	0.02867	1, 18

Point	%	SD	Linear Interpolation (200 Resamples)	
			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-08012505-001

Client ID: TestAmerica - IRA2352-01 (Outfall 009)

Start Date: 01/25/2008

		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:		Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Time of Readings:		1400	1500	1500	1300	1300	1500	1500	1500	1500	1500	1500	1500	1500	1300
Control	DO	8.0	8.4	7.9	7.6	7.7	7.7	7.9	7.8	8.9	8.0	8.1	8.4	8.2	8.2
	pH	7.8	8.0	7.7	7.6	7.4	7.6	7.8	8.0	8.0	7.7	7.8	7.6	7.7	7.8
	Temp	25.3	24.3	25.4	24.6	25.1	24.6	24.2	24.6	24.2	25.0	24.6	24.4	25.1	24.2
100%	DO	10.8	9.0	10.6	7.8	9.9	7.7	10.0	8.4	10.1	8.2	10.8	8.6	9.9	7.8
	pH	7.1	7.6	7.0	7.4	7.1	7.4	7.2	7.2	6.9	7.3	7.0	7.2	7.0	7.4
	Temp	24.2	24.3	24.7	24.6	24.7	24.2	25.3	24.4	24.5	24.9	24.9	24.3	24.6	24.1

Additional Parameters	Control	100% Sample
Conductivity (umohms)	290	147
Alkalinity (mg/l CaCO <sub>3</sub> )	66	43
Hardness (mg/l CaCO <sub>3</sub> )	98	56
Ammonia (mg/l NH <sub>3</sub> -N)	<0.2	0.4

Source of Neonates											
Replicate:	A	B	C	D	E	F	G	H	I	J	
Brood ID:	A1	B1	C2	D3	E3	H3	A4	D4	F6	G5	

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	Rm
	2	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	3	0	4	0	0	3	0	0	0	0	4	11	10	Rm
	4	4	8	5	4	0	3	4	5	5	0	38	10	Rm
	5	7	0	9	7	8	7	6	7	8	9	68	10	Rm
	6	0	15	0	0	10	15	0	0	0	0	40	10	Rm
	7	16	0	12	11	0	0	12	11	12	11	85	10	Rm
	Total		27	27	26	22	27	25	22	23	25	24	248	10
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	2	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	3	0	0	4	0	0	0	0	4	0	0	8	10	Rm
	4	5	3	0	5	4	3	5	0	4	5	34	10	Rm
	5	7	8	7	9	8	7	12	10	10	10	88	10	Rm
	6	15	0	12	0	0	0	0	0	0	11	38	10	Rm
	7	18	16	17	16	12	16	17	18	15	16	110	10	Rm
	Total		27	27	23	30	24	26	34	32	29	26	378	10

Circled fourth brood not used in statistical analysis.

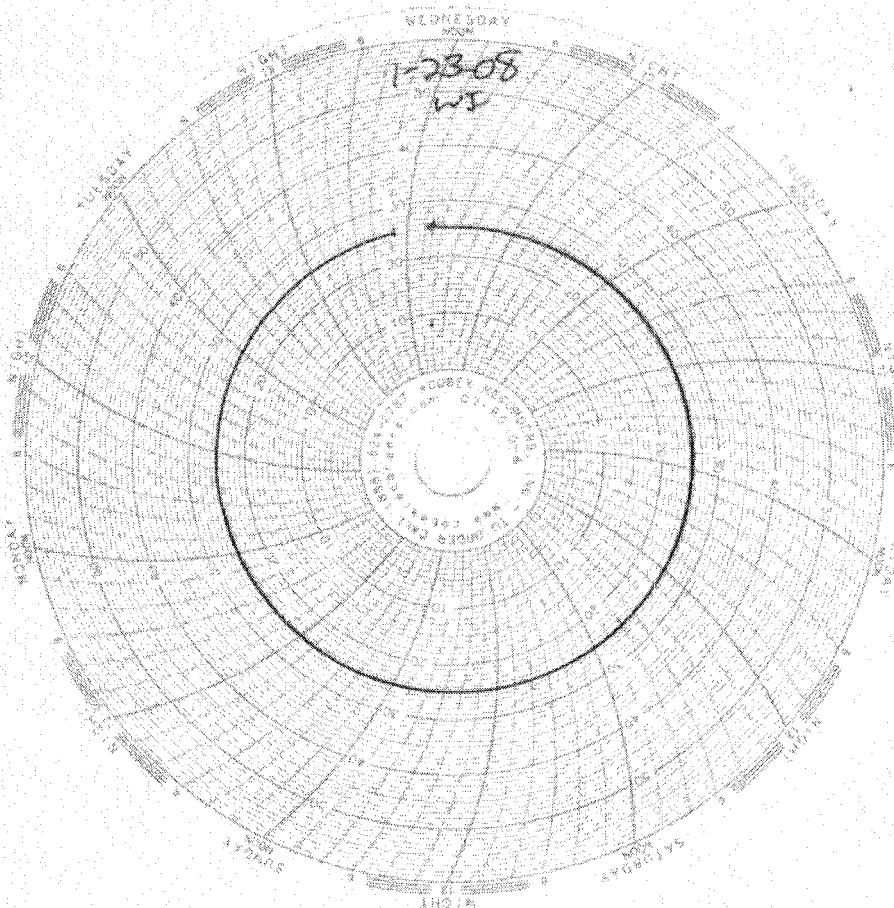
7<sup>th</sup> day only used if <60% of the surviving control females have produced their third brood.

# *Laboratory Temperature Chart*

*QA/QC Batch No: A-08012505*

*Date Tested: 01/25/08 to 02/01/08*

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



**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**IRA2352**


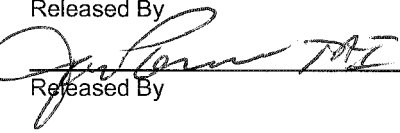
**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**


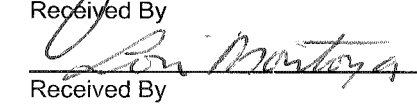
Aquatic Testing Laboratories-SUB  
4350 Transport Street, Unit 107  
Ventura, CA 93003  
Phone : (805) 650-0546  
Fax: (805) 650-0756  
Project Location: California  
Receipt Temperature: 10.0 °C      Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRA2352-01</b>	<b>Water</b>			<b>Sampled: 01/24/08 08:30    ph=7.4 temp=44</b>
Bioassay-7 dy Chmic	N/A	02/04/08	01/25/08 20:30	Cerio, EPA/821-R02-013, Sub to AqTox Labs
<i>Containers Supplied:</i> 1 gal Poly (M)				

  
Released By \_\_\_\_\_  
  
Released By \_\_\_\_\_

1/25/08 0805  
Date/Time

1/25/08 1130  
Date/Time

  
Received By \_\_\_\_\_  
  
Received By \_\_\_\_\_

1/25/08 0805  
Date/Time

1-25-08 1130  
Date/Time





***REFERENCE  
TOXICANT  
DATA***

**CERIODAPHNIA CHRONIC BIOASSAY**  
**EPA METHOD 1002.0**  
**REFERENCE TOXICANT - NaCl**



QA/QC Batch No.: RT-080106

Date Tested: 01/06/08 to 01/12/08

**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: 6 days.  
 Statistics: ToxCalc computer program.

**RESULTS SUMMARY**

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		20.5	
0.25 g/l	100%		19.5	
0.5 g/l	100%		19.5	
1.0 g/l	100%		14.0	*
2.0 g/l	80%		3.2	*
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	2.5 g/l
Reproduction IC25	0.88 g/l

**QA/QC TEST ACCEPTABILITY**

Parameter	Result
Control survival ≥ 80%	Pass (100% Survival)
≥ 15 young per surviving control female	Pass (20.5 young)
≥ 60% surviving controls had 3 broods	Pass (90% with 3 broods)
PMSD < 47% for reproduction	Pass (PMSD = 19.1%)
Stat. sig. diff. conc. relative difference > 13%	Pass (Stat. sig. diff. conc. = 31.7%)
Concentration response relationship acceptable	Pass (Response curve normal)

**Ceriodaphnia Survival and Reproduction Test-Survival Day 6**

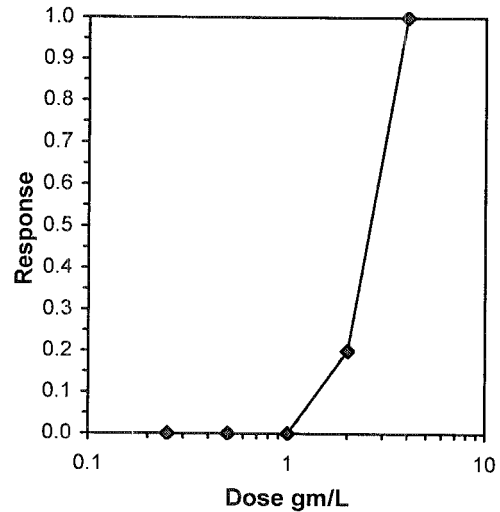
Start Date: 1/6/2008 13:00 Test ID: RT-080106c Sample ID: REF-Ref Toxicant  
 End Date: 1/12/2008 13:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride  
 Sample Date: 1/6/2008 Protocol: FWCH-EPA-821-R-02-013 Test Species: CD-Ceriodaphnia dubia  
 Comments:

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	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000
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	0.8000	0.8000	2	8	10	10	0.2368	0.0500	2	10
4	0.0000	0.0000	10	0	10	10			10	10

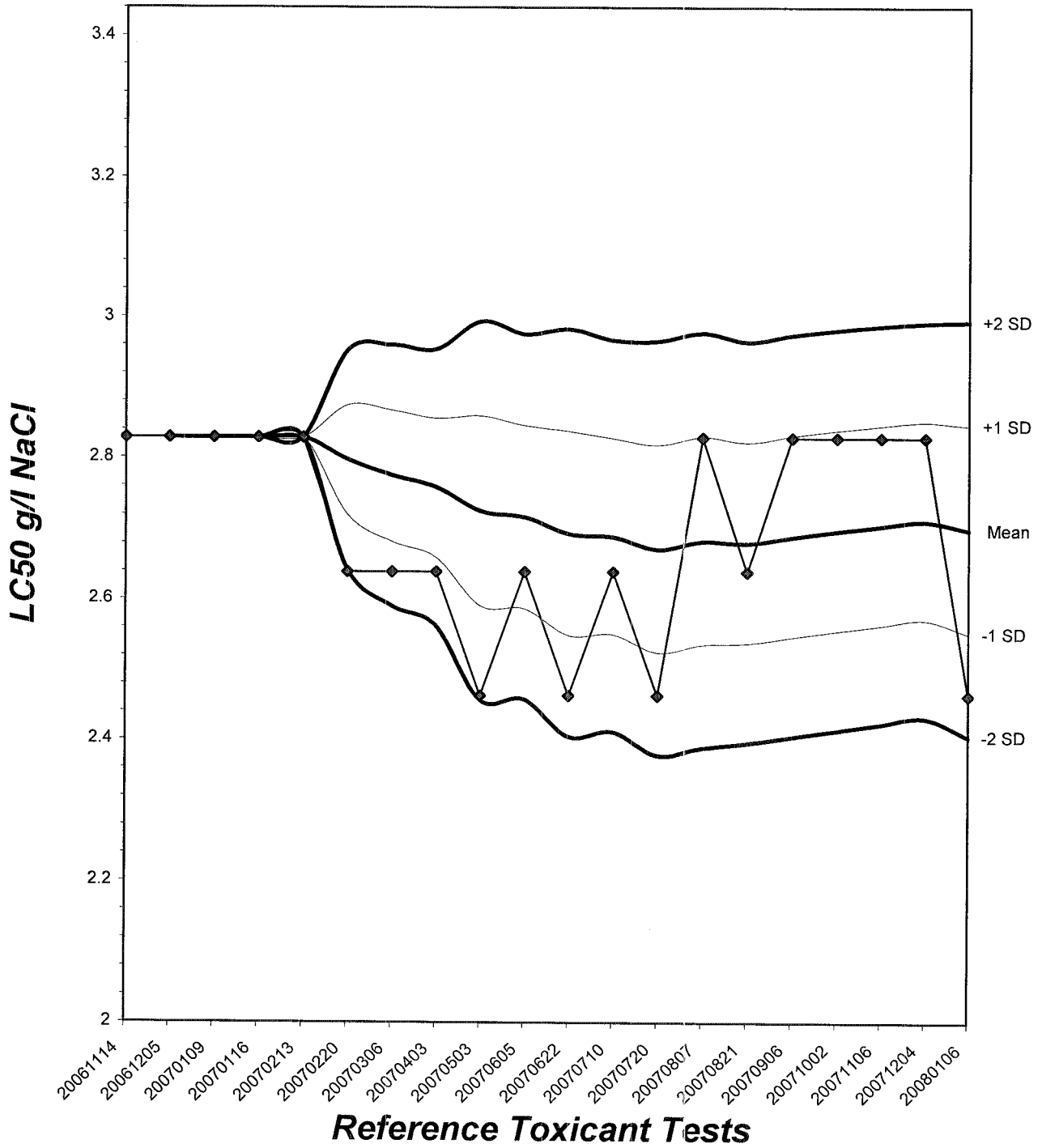
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	2	4	2.82843	
Treatments vs D-Control				

Trim Level	EC50	95% CL	
0.0%	2.4623	2.0663	2.9342
5.0%	2.5108	2.0545	3.0683
10.0%	2.5519	1.9976	3.2599
20.0%	2.5937	2.2616	2.9745
Auto-0.0%	2.4623	2.0663	2.9342



# Ceriodaphnia dubia Chronic Survival Laboratory Control Chart

CV% = 5.46



**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 1/6/2008 13:00    Test ID: RT-080106c    Sample ID: REF-Ref Toxicant  
 End Date: 1/12/2008 13:00    Lab ID: CAATL-Aquatic Testing Labs    Sample Type: NACL-Sodium chloride  
 Sample Date: 1/6/2008    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	23.000	11.000	21.000	21.000	23.000	20.000	19.000	22.000	20.000	25.000
0.25	12.000	24.000	19.000	22.000	9.000	20.000	21.000	21.000	22.000	25.000
0.5	21.000	19.000	21.000	22.000	16.000	12.000	22.000	21.000	22.000	19.000
1	19.000	9.000	9.000	19.000	14.000	10.000	16.000	17.000	19.000	8.000
2	8.000	2.000	2.000	5.000	4.000	3.000	3.000	5.000	0.000	0.000
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				N	Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%				Mean	N-Mean
D-Control	20.500	1.0000	20.500	11.000	25.000	18.432	10			20.500	1.0000
0.25	19.500	0.9512	19.500	9.000	25.000	26.177	10	102.00	76.00	19.500	0.9512
0.5	19.500	0.9512	19.500	12.000	22.000	16.617	10	94.50	76.00	19.500	0.9512
*1	14.000	0.6829	14.000	8.000	19.000	32.819	10	62.50	76.00	14.000	0.6829
*2	3.200	0.1561	3.200	0.000	8.000	76.263	10	55.00	76.00	3.200	0.1561
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 non-normal distribution (p <= 0.05)	0.91281	0.947	-0.9793	0.67912
Bartlett's Test indicates equal variances (p = 0.25)	5.39	13.2767		

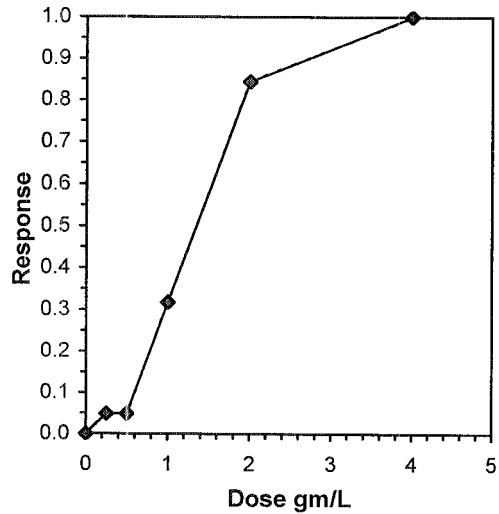
**Hypothesis Test (1-tail, 0.05)**

	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	0.5	1	0.70711	

Treatments vs D-Control

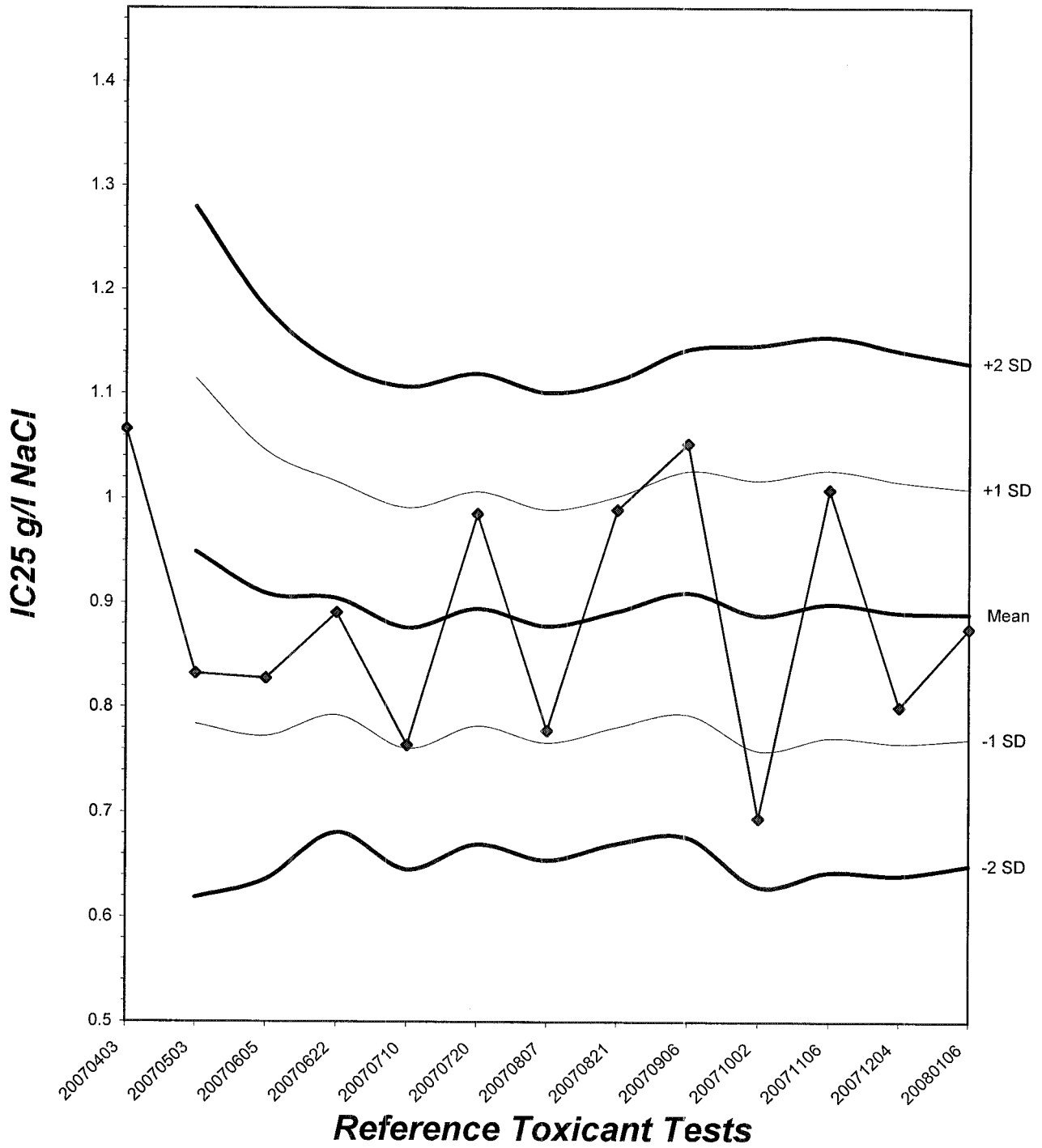
**Linear Interpolation (200 Resamples)**

Point	gm/L	SD	95% CL	Skew
IC05	0.5023	0.1876	0.0809	0.6178
IC10	0.5955	0.1768	0.1617	0.7497
IC15	0.6886	0.1424	0.2426	0.9253
IC20	0.7818	0.1259	0.4995	1.0352
IC25	0.8750	0.1224	0.6413	1.1094
IC40	1.1574	0.1139	0.9216	1.3331
IC50	1.3472	0.0972	1.1197	1.4847



# ***Ceriodaphnia dubia* Chronic Reproduction Laboratory Control Chart**

CV% = 13.5



# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reference Toxicant - NaCl

### Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-080106

Start Date: 01/06/2008

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	h
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	2	0	0	0	3	0	3	0	8	10	
	4	4	3	0	4	3	2	0	2	0	3	21	10	
	5	9	8	7	7	6	7	6	7	6	7	70	10	
	6	10	0	12	10	14	11	10	13	11	15	106	10	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	23	11	21	21	23	20	19	22	20	25	205	10	
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	h
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	3	0	3	0	2	0	0	3	0	11	10	
	4	4	0	2	0	3	6	4	2	0	3	24	10	
	5	8	8	7	5	6	0	7	6	7	8	62	10	
	6	0	13	10	14	0	12	10	13	12	14	98	10	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	12	24	19	22	9	20	21	21	22	25	195	10	
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	h
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	2	0	2	0	0	0	3	2	0	0	9	10	
	4	0	3	0	3	4	3	0	0	3	3	19	10	
	5	9	6	7	7	0	9	8	7	7	6	66	10	
	6	10	10	12	12	12	0	11	12	12	10	101	10	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	21	19	21	22	16	12	22	21	22	19	195	10	

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-080106

Start Date: 01/06/2008

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	h
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	3	0	0	2	0	5	10	
	4	3	2	2	3	0	0	3	2	0	2	17	10	
	5	5	7	7	4	5	7	5	4	7	6	57	10	
	6	11	0	0	12	9	0	8	11	10	0	61	10	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	19	9	9	19	14	10	16	17	19	8	140	10	
2.0 g/l	1	0	0	0	0	0	0	0	X	0	0	9	h	
	2	0	0	0	0	0	0	0	-	0	0	9		
	3	0	0	0	0	0	0	0	-	0	0	9		
	4	2	0	2	3	0	0	0	2	-	0	9		9
	5	3	0	0	2	2	3	3	0	-	0	13		9
	6	3	2	0	0	2	0	0	3	-	X	10		8
	7	-	-	-	-	-	-	-	-	-	-	-		-
	Total	8	2	2	5	4	3	3	5	0	0	32		8
4.0 g/l	1	X	X	X	X	X	X	X	X	X	0	0	h	
	2	-	-	-	-	-	-	-	-	-	-	-		
	3	-	-	-	-	-	-	-	-	-	-	-		
	4	-	-	-	-	-	-	-	-	-	-	-		
	5	-	-	-	-	-	-	-	-	-	-	-		
	6	-	-	-	-	-	-	-	-	-	-	-		
	7	-	-	-	-	-	-	-	-	-	-	-		
	Total	0	0	0	0	0	0	0	0	0	0	0		0

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-080106

Start Date: 01/06/2008

		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:		JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	JK	—	—
Time of Readings:		1300	1330	1300	1300	1300	1230	1200	1300	1300	1300	1300	1300	—	—
Control	DO	7.6	7.2	7.4	7.7	7.4	7.6	7.4	7.5	8.2	7.8	7.9	7.7	—	—
	pH	7.6	7.4	7.4	7.3	7.3	7.2	7.2	7.7	7.5	7.6	7.9	7.6	—	—
	Temp	24.3	25.1	25.4	24.8	24.1	24.9	24.9	25.1	24.4	25.0	24.6	25.1	—	—
0.25 g/l	DO	7.5	7.3	7.5	7.5	7.5	7.7	7.3	7.4	8.2	7.8	7.9	7.7	—	—
	pH	7.6	7.3	7.4	7.4	7.4	7.2	7.3	7.4	7.6	7.5	7.6	7.7	—	—
	Temp	24.4	25.2	25.3	24.9	24.2	24.9	24.7	25.0	24.4	25.1	24.6	25.1	—	—
0.5 g/l	DO	7.4	7.2	7.4	7.6	7.4	7.5	7.4	7.6	8.5	7.6	8.0	7.8	—	—
	pH	7.5	7.3	7.4	7.4	7.4	7.2	7.3	7.5	7.6	7.5	7.7	7.7	—	—
	Temp	24.3	25.1	25.3	24.9	24.1	25.2	24.6	24.9	24.4	24.9	24.4	24.9	—	—
1.0 g/l	DO	7.5	7.2	7.6	7.7	7.3	7.8	7.4	7.4	8.4	7.8	7.7	7.7	—	—
	pH	7.5	7.3	7.6	7.5	7.4	7.2	7.3	7.5	7.6	7.6	7.9	7.6	—	—
	Temp	24.4	25.2	25.1	24.7	24.2	25.2	24.6	25.0	24.4	24.9	24.6	25.0	—	—
2.0 g/l	DO	7.4	7.4	7.6	7.5	7.4	7.8	7.2	7.6	8.2	7.6	7.6	7.7	—	—
	pH	7.5	7.4	7.6	7.6	7.4	7.3	7.2	7.6	7.5	7.6	7.9	7.6	—	—
	Temp	24.5	25.1	25.0	24.6	24.2	25.3	24.8	25.2	24.4	24.8	24.6	25.1	—	—
4.0 g/l	DO	7.5	7.8	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.6	7.8	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	24.3	24.6	—	—	—	—	—	—	—	—	—	—	—	—

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)	350	348	305	6400	3100	3210
Alkalinity (mg/l CaCO <sub>3</sub> )	66	65	63	65	66	64
Hardness (mg/l CaCO <sub>3</sub> )	98	97	98	98	97	98

### Source of Neonates

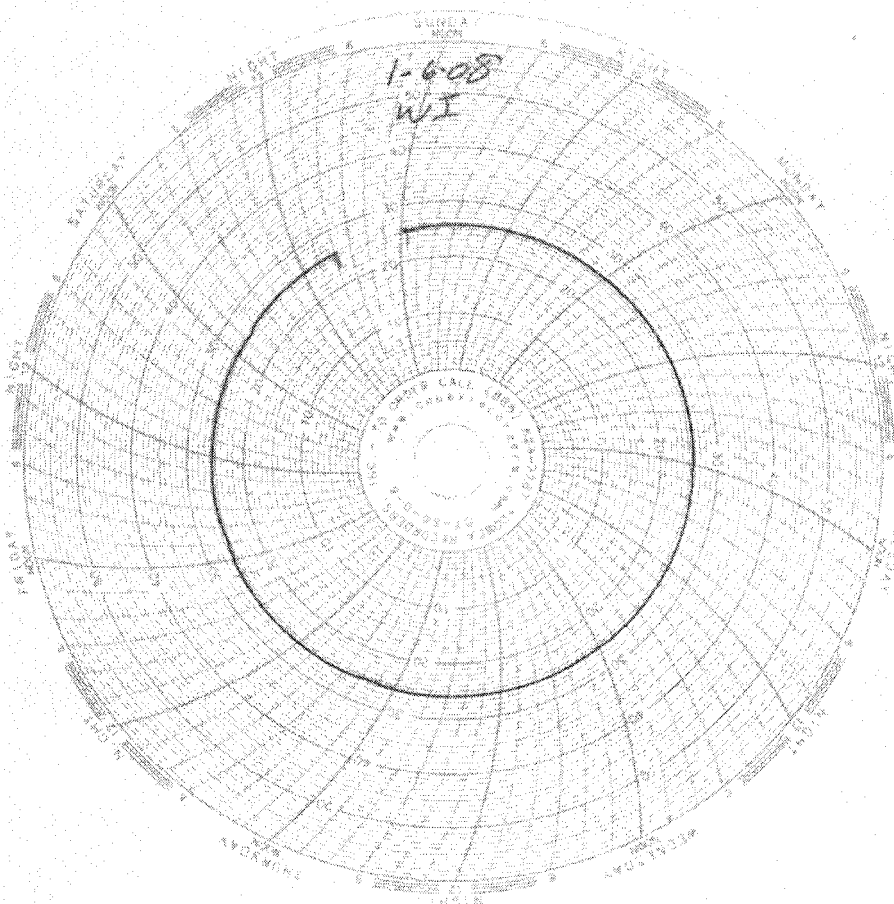
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	2B	1B	3C	2C	2A	3D	3E	2F	3F	2G

# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-080106*

*Date Tested: 01/06/08 to 01/12/08*

*Acceptable Range: 25+/- 1°C*





February 22, 2008

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

Reference: Eberline Services NELAP Cert #01120CA  
Test America Project Nos. IRA1233, IRA2025, IRA2352, IRA2350,  
IRA2349, IRA2156  
Eberline Services Reports R801067-8681, R801142-8682, R801161-8683  
R801162-8684, R801163-8685, R801164-8686

Dear Mr. Doak:

Enclosed are results from the analyses of six water samples. One sample was received on January 16, one on January 24, three on January 26, and one on January 28, 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). 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 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: Reports/CoC's  
Invoices

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


NPDES - 2174

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8683</u> Work Order <u>R801161-01</u> Received Date <u>01/26/08</u>	Client <u>TA IRVINE</u> Contract <u>PROJECT# IRA2352</u> Matrix <u>WATER</u>
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Client	Lab						
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IRA2352-01	8683-001	01/24/08	02/06/08	GrossAlpha	0.769 ± 0.39	pCi/L	0.40
			02/06/08	Gross Beta	1.47 ± 0.55	pCi/L	0.84
			02/04/08	Ra-228	-0.021 ± 0.17	pCi/L	0.46
			01/31/08	K-40 (G)	U	pCi/L	12
			01/31/08	Cs-137 (G)	U	pCi/L	0.61
			02/15/08	H-3	-89.1 ± 92	pCi/L	160
			02/11/08	Ra-226	-0.059 ± 0.40	pCi/L	0.76
			02/07/08	Sr-90	0.195 ± 0.45	pCi/L	0.97
			02/19/08	Total U	0.108 ± 0.015	pCi/L	0.022

Certified by <u></u> Report Date <u>02/22/08</u> Page 1
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# Eberline Services

## QC RESULTS

SDG <u>8683</u> Work Order <u>R801161-01</u> Received Date <u>01/26/08</u>	Client <u>TA IRVINE</u> Contract <u>PROJECT# IRA2352</u> Matrix <u>WATER</u>
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Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8682-002	GrossAlpha	10.6 ± 0.84	pCi/Smpl	10.1	0.29	105% recovery
		Gross Beta	9.49 ± 0.38	pCi/Smpl	9.39	0.29	101% recovery
		Ra-228	8.69 ± 0.54	pCi/Smpl	8.73	0.75	100% recovery
		Co-60 (G)	223 ± 11	pCi/Smpl	226	7.0	99% recovery
		Cs-137 (G)	253 ± 11	pCi/Smpl	236	8.1	107% recovery
		Am-241 (G)	215 ± 37	pCi/Smpl	252	47	85% recovery
		H-3	228 ± 14	pCi/Smpl	240	16	95% recovery
		Ra-226	5.92 ± 0.27	pCi/Smpl	5.58	0.085	106% recovery
		Sr-90	9.45 ± 0.73	pCi/Smpl	9.40	0.32	101% recovery
		Total U	1.06 ± 0.12	pCi/Smpl	1.13	0.004	94% recovery

<u>BLANK</u>							
	8682-003	GrossAlpha	0.006 ± 0.13	pCi/Smpl	NA	0.25	<MDA
		Gross Beta	-0.090 ± 0.27	pCi/Smpl	NA	0.44	<MDA
		Ra-228	-0.089 ± 0.33	pCi/Smpl	NA	0.78	<MDA
		K-40 (G)	U	pCi/Smpl	NA	190	<MDA
		Cs-137 (G)	U	pCi/Smpl	NA	7.4	<MDA
		H-3	-4.88 ± 9.0	pCi/Smpl	NA	15	<MDA
		Ra-226	-0.014 ± 0.026	pCi/Smpl	NA	0.071	<MDA
		Sr-90	0.078 ± 0.24	pCi/Smpl	NA	0.54	<MDA
		Total U	0.00E 00 ± 1.9E-04	pCi/Smpl	NA	4.4E-04	<MDA

<u>DUPLICATES</u>				<u>ORIGINALS</u>			
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	3σ
8682-004	GrossAlpha	3.13 ± 2.1	2.2	8682-001	2.52 ± 2.0	2.4	22 160 satis.
	Gross Beta	42.1 ± 2.3	2.1		42.3 ± 2.4	2.4	0 44 satis.
	Ra-228	0.070 ± 0.15	0.42		0.145 ± 0.17	0.44	- 0 satis.

Certified by   
 Report Date 02/22/08  
 Page 2

# Eberline Services

SDG <u>8683</u> Work Order <u>R801161-01</u> Received Date <u>01/26/08</u>	Client <u>TA IRVINE</u> Contract <u>PROJECT# IRA2352</u> Matrix <u>WATER</u>
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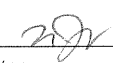
K-40	(G)	42.6 ± 18	9.6	36.0 ± 19	13	17	102	satis.
Cs-137	(G)	U	0.92	U	1.1	-	0	satis.
Tl-208	(G)	U	1.2	U		200	302	satis.
Pb-210	(G)	U	230	U		200	302	satis.
Bi-212	(G)	U	7.7	U		200	302	satis.
Pb-212	(G)	U	1.6	U		200	302	satis.
Bi-214	(G)	U	2.1	U		200	301	satis.
Pb-214	(G)	U	2.2	U		200	302	satis.
Ra-226	(G)	U	18	U		200	302	satis.
Ac-228	(G)	U	5.0	U		200	302	satis.
Th-234	(G)	U	31	U		200	302	satis.
U-235	(G)	U	6.5	U		200	302	satis.
U-238	(G)	U	130	U		200	302	satis.
Am-241	(G)	U	6.7	U		200	302	satis.
H-3		-73.7 ± 92	160	-62.4 ± 94	160	-	0	satis.
Ra-226		0.111 ± 0.44	0.80	-0.149 ± 0.46	0.96	-	0	satis.
Sr-90		-0.108 ± 0.44	1.1	0.032 ± 0.30	0.58	-	0	satis.
Total U		2.88 ± 0.32	0.022	2.75 ± 0.30	0.022	5	30	satis.

SPIKED SAMPLE

<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>
8682-005	GrossAlpha	225 ± 12	2.5
	Gross Beta	192 ± 4.5	2.4
	H-3	15800 ± 310	160
	Ra-226	124 ± 4.7	0.94
	Total U	120 ± 15	2.2

ORIGINAL SAMPLE

<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Added</u>	<u>%Recv</u>
8682-001	2.52 ± 2.0	2.4	163	136
	42.3 ± 2.4	2.4	145	103
	-62.4 ± 94	160	16000	99
	-0.149 ± 0.46	0.96	112	111
	2.75 ± 0.30	0.022	113	104

Certified by   
 Report Date 02/22/08  
 Page 3

SUBCONTRACT ORDER

TestAmerica Irvine

IRA2352

8683

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 - SUB  
2030 Wright Avenue  
Richmond, CA 94804  
Phone : (510) 235-2633  
Fax: (510) 235-0438  
Project Location: California  
Receipt Temperature: 8 °C Ice: (Y) / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2352-01	Water		Sampled: 01/24/08 08:30	ph=7.4 temp=44
Gamma Spec-O	mg/kg	02/04/08	01/23/09 08:30	Out to Eberline, K-40 and CS-137 only
Gross Alpha-O	pCi/L	02/04/08	07/22/08 08:30	Out to Eberline
Gross Beta-O	pCi/L	02/04/08	07/22/08 08:30	Out to Eberline
Level 4 Data Package - Out	N/A	02/04/08	02/21/08 08:30	
Radium, Combined-O	pCi/L	02/04/08	01/23/09 08:30	Out to Eberline
Strontium 90-O	pCi/L	02/04/08	01/23/09 08:30	Out to Eberline
Tritium-O	pCi/L	02/04/08	01/23/09 08:30	Out to Eberline
Uranium, Combined-O	pCi/L	02/04/08	01/23/09 08:30	Out to Eberline
<i>Containers Supplied:</i>				
2.5 gal Poly (K)	500 mL Amber (L)			



Released By

1/25/08 17:00

Date/Time

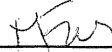
FedEx

Received By

1/25/08 17:00

Date/Time

Released By



Received By

01/26/08 11:00

Date/Time

February 09, 2008

**Vista Project I.D.: 30203**

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 January 26, 2008 under your Project Name "IRA2352". 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: 1/26/2008**

Vista Lab. ID

Client Sample ID

30203-001

IRA2352-01

## SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	9917	Lab Sample:	0-MB001	Date Analyzed DB-5:	6-Feb-08	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	31-Jan-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	0.000000997			<b>IS</b> 13C-2,3,7,8-TCDD	93.4	25 - 164		
1,2,3,7,8-PeCDD	ND	0.000000625			13C-1,2,3,7,8-PeCDD	84.1	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000147			13C-1,2,3,4,7,8-HxCDD	92.1	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000149			13C-1,2,3,6,7,8-HxCDD	91.6	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000142			13C-1,2,3,4,6,7,8-HpCDD	94.6	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000144			13C-OCDD	78.5	17 - 157		
OCDD	ND	0.00000845			13C-2,3,7,8-TCDF	92.5	24 - 169		
2,3,7,8-TCDF	ND	0.000000679			13C-1,2,3,7,8-PeCDF	79.3	24 - 185		
1,2,3,7,8-PeCDF	ND	0.000000815			13C-2,3,4,7,8-PeCDF	77.4	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000838			13C-1,2,3,4,7,8-HxCDF	93.1	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000635			13C-1,2,3,6,7,8-HxCDF	88.7	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000689			13C-2,3,4,6,7,8-HxCDF	87.8	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000752			13C-1,2,3,7,8,9-HxCDF	97.5	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000910			13C-1,2,3,4,6,7,8-HpCDF	85.2	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.00000116			13C-1,2,3,4,7,8,9-HpCDF	90.7	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.00000122			13C-OCDF	87.0	17 - 157		
OCDF	ND	0.00000291			<b>CRS</b> 37Cl-2,3,7,8-TCDD	94.5	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.000000997			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000191			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000146			c. Method detection limit.				
Total HpCDD	ND	0.00000353			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000679							
Total PeCDF	ND	0.000000826							
Total HxCDF	ND	0.000000742							
Total HpCDF	ND	0.00000118							

Analyst: MAS

Approved By: William J. Luksemburg 08-Feb-2008 13:08

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	9917	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	31-Jan-08	Date Analyzed DB-5:	6-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	10.4	6.7 - 15.8	<b>IS</b> 13C-2,3,7,8-TCDD	91.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	48.9	35 - 71	13C-1,2,3,7,8-PeCDD	83.6	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	49.4	35 - 82	13C-1,2,3,4,7,8-HxCDD	89.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	50.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	86.1	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	49.0	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	88.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	49.9	35 - 70	13C-OCDD	75.3	17 - 157	
OCDD	100	102	78 - 144	13C-2,3,7,8-TCDF	88.0	24 - 169	
2,3,7,8-TCDF	10.0	9.69	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	76.4	24 - 185	
1,2,3,7,8-PeCDF	50.0	50.2	40 - 67	13C-2,3,4,7,8-PeCDF	74.3	21 - 178	
2,3,4,7,8-PeCDF	50.0	52.2	34 - 80	13C-1,2,3,4,7,8-HxCDF	87.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	49.9	36 - 67	13C-1,2,3,6,7,8-HxCDF	83.7	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	50.4	42 - 65	13C-2,3,4,6,7,8-HxCDF	84.8	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	50.8	35 - 78	13C-1,2,3,7,8,9-HxCDF	87.0	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	50.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	80.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	51.1	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	87.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	50.1	39 - 69	13C-OCDF	80.9	17 - 157	
OCDF	100	100	63 - 170	<b>CRS</b> 37Cl-2,3,7,8-TCDD	92.1	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 08-Feb-2008 13:08

Sample ID: IRA2352-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA		Matrix:	Aqueous	Lab Sample:	30203-001	Date Received:	26-Jan-08
Project:	IRA2352		Sample Size:	1.00 L	QC Batch No.:	9917	Date Extracted:	31-Jan-08
Date Collected:	24-Jan-08				Date Analyzed DB-5:	6-Feb-08	Date Analyzed DB-225:	NA
Time Collected:	0830							
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	0.00000874			<b>IS</b> 13C-2,3,7,8-TCDD	70.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000104			13C-1,2,3,7,8-PeCDD	64.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000142			13C-1,2,3,4,7,8-HxCDD	88.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000147			13C-1,2,3,6,7,8-HxCDD	87.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000139			13C-1,2,3,4,6,7,8-HpCDD	89.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000888			J	13C-OCDD	76.0	17 - 157	
OCDD	0.0000852				13C-2,3,7,8-TCDF	102	24 - 169	
2,3,7,8-TCDF	ND	0.000000664			13C-1,2,3,7,8-PeCDF	78.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000160			13C-2,3,4,7,8-PeCDF	71.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000117			13C-1,2,3,4,7,8-HxCDF	87.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000654			13C-1,2,3,6,7,8-HxCDF	83.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000709			13C-2,3,4,6,7,8-HxCDF	82.6	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000800			13C-1,2,3,7,8,9-HxCDF	84.5	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000104			13C-1,2,3,4,6,7,8-HpCDF	87.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000260			13C-1,2,3,4,7,8,9-HpCDF	83.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000115			13C-OCDF	82.2	17 - 157	
OCDF	ND	0.0000149			<b>CRS</b> 37Cl-2,3,7,8-TCDD	72.2	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000176			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000297			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000330			c. Method detection limit.			
Total HpCDD	0.0000203				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000664						
Total PeCDF	ND	0.00000170						
Total HxCDF	ND	0.00000192						
Total HpCDF	0.00000172							

Analyst: MAS

Approved By: William J. Luksemburg 08-Feb-2008 13:08

## 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

IRA2352

30203

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 4.1  
1104 Windfield Way  
El Dorado Hills, CA 95762  
Phone : (916) 673-1520  
Fax: (916) 673-0106  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2352-01	Water			Sampled: 01/24/08 08:30 ph=7.4 temp=44
1613-Dioxin-HR-Alta	ug/l	02/04/08	01/31/08 08:30	J flags, 17 congeners, no TEQ, ug/L, sub=Vista
Level 4 + EDD-OUT	N/A	02/04/08	02/21/08 08:30	
<i>Containers Supplied:</i>				
1 L Amber (C)		1 L Amber (D)		

  
\_\_\_\_\_  
Released By

1/25/08 17:00  
\_\_\_\_\_  
Date/Time

FedEx 1/25/08 17:00  
\_\_\_\_\_  
Received By

  
\_\_\_\_\_  
Received By

\_\_\_\_\_  
Released By

\_\_\_\_\_  
Date/Time

1/28/08 1:00p  
\_\_\_\_\_  
Date/Time

**SAMPLE LOG-IN CHECKLIST**



Vista Project #: 30203 TAT unspecified

<b>Samples Arrival:</b>	Date/Time <u>1/26/08 0944</u>	Initials: <u>FEB</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>N/A</u>
<b>Logged In:</b>	Date/Time <u>1/28/08 1009</u>	Initials: <u>UBB</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>B-2</u>
<b>Delivered By:</b>	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> Cal
		<input type="radio"/> DHL	<input type="radio"/> Hand Delivered
	<input type="radio"/> Other		
<b>Preservation:</b>	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
		<input type="radio"/> None	
<b>Temp °C</b>	<u>4.1</u>	<b>Time:</b>	<u>0947</u>
		<b>Thermometer ID:</b>	<u>IR-1</u>

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk # <u>7909 2519 0739</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?			None
COC			
Sample Container			
Shipping Container	<input checked="" type="radio"/> Vista	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
			<input checked="" type="radio"/> Return
			<input type="radio"/> Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine  
IRA2352 ✓

8012538

SENDING LABORATORY:



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

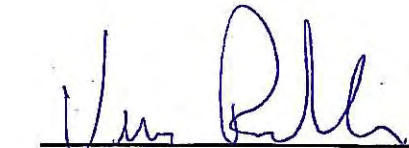
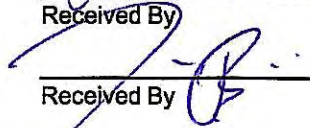
RECEIVING LABORATORY:

Weck Laboratories, Inc-SUB  
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: IRA2352-01	Water		Sampled: 01/24/08 08:30 ✓ ✓	ph=7.4 temp=44
Level 4 Data Package - Weck	N/A	02/04/08	02/21/08 08:30	Out to weck
✓Mercury - 245.1, Diss -OUT	mg/l	02/04/08	02/21/08 08:30	Boeing, J flags/ Out to Weck
✓Mercury - 245.1-OUT	mg/l	02/04/08	02/21/08 08:30	Boeing, permit, J flags/ Out to Weck
<i>Containers Supplied:</i>				
125 mL Poly w/HNO3	125 mL Poly (O)			
(N)				

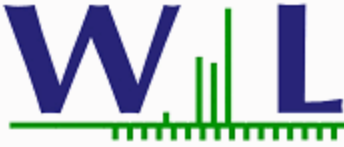
Level 4

 1/25/08  
 Released By \_\_\_\_\_ Date/Time \_\_\_\_\_  
 1/25/08 1007  
 Released By \_\_\_\_\_ Date/Time \_\_\_\_\_

 0820  
 Received By \_\_\_\_\_ Date/Time \_\_\_\_\_  
 01/25/08 ✓  
 Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

0820 7.3c

KEF 1/25



### CERTIFICATE OF ANALYSIS

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

**Report Date:** 02/04/08 10:42  
**Received Date:** 01/25/08 08:20  
**Turn Around:** 6 days

Phone: (949) 261-1022  
Fax: (949) 260-3297

**Work Order #:** 8012538  
**Client Project:** IRA2352

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 01/25/08 08:20 with the Chain of Custody document. The samples were received in good condition. The samples were received at 7.3 °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: 8012538  
Project ID: IRA2352

Date Received: 01/25/08 08:20  
Date Reported: 02/04/08 10:42

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRA2352-01	Client		8012538-01	Water	01/24/08 08:30



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: 8012538  
Project ID: IRA2352

Date Received: 01/25/08 08:20  
Date Reported: 02/04/08 10:42

IRA2352-01 8012538-01 (Water)

Date Sampled: 01/24/08 08:30

**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	W8A1053	01/30/08	01/31/08	jlp
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8A1053	01/30/08	01/31/08	jlp



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: 8012538  
Project ID: IRA2352

Date Received: 01/25/08 08:20  
Date Reported: 02/04/08 10:42

# 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: 8012538  
 Project ID: IRA2352

Date Received: 01/25/08 08:20  
 Date Reported: 02/04/08 10:42

**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 W8A1053 - EPA 245.1**

**Blank (W8A1053-BLK1)**

Analyzed: 01/31/08

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

**LCS (W8A1053-BS1)**

Analyzed: 01/31/08

Mercury, Dissolved	0.930	0.20	ug/l	1.00		93	85-115			
Mercury, Total	0.930	0.20	ug/l	1.00		93	85-115			

**Matrix Spike (W8A1053-MS1)**

Source: 8012822-01

Analyzed: 01/31/08

Mercury, Dissolved	1.38	0.20	ug/l	1.00	0.431	95	70-130			
Mercury, Total	1.38	0.20	ug/l	1.00	0.431	95	70-130			

**Matrix Spike (W8A1053-MS2)**

Source: 8012822-02

Analyzed: 01/31/08

Mercury, Dissolved	1.37	0.20	ug/l	1.00	0.426	94	70-130			
Mercury, Total	1.37	0.20	ug/l	1.00	0.426	94	70-130			

**Matrix Spike Dup (W8A1053-MSD1)**

Source: 8012822-01

Analyzed: 01/31/08

Mercury, Dissolved	1.35	0.20	ug/l	1.00	0.431	92	70-130	2	20	
Mercury, Total	1.35	0.20	ug/l	1.00	0.431	92	70-130	2	20	

**Matrix Spike Dup (W8A1053-MSD2)**

Source: 8012822-02

Analyzed: 01/31/08

Mercury, Dissolved	1.40	0.20	ug/l	1.00	0.426	97	70-130	2	20	
Mercury, Total	1.40	0.20	ug/l	1.00	0.426	97	70-130	2	20	





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

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

Report ID: 8012538  
Project ID: IRA2352

Date Received: 01/25/08 08:20  
Date Reported: 02/04/08 10:42

### 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.

# **APPENDIX G**

## **Section 57**

Outfall 009, February 3, 2008

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



# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB0152

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: IRB0152  
 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 009	IRB0152-01	30236-001, 8020454-01, CRB0033-01, 9600-001, 118968	Water	02/03/08 1000	100.2, 160.2, 200.7, 200.8, 245.1, 525.2, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 1613, ASTM D-5174

**II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-Irvine above the temperature limits; however, the samples had insufficient time to cool. The samples were received below the temperature limits at Vista and Weck; however, the sample was not noted to have been frozen. The sample was received within the temperature limits at Eberline and TestAmerica-Colton. 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 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.

### Data Qualifier Reference Table

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

### Qualification Code Reference Table

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

**Qualification Code Reference Table Cont.**

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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 100.2—Asbestos

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 100.2*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The sample was received and filtered beyond the 48 hour holding time; therefore, nondetected asbestos in the sample was qualified as an estimated nondetect, "UJ."
- Calibration: Not applicable to this analysis.
- Blanks: An aqueous blank was analyzed with the sample in this SDG. No asbestos was detected in the blank sample.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the site sample.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported 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.



## B. 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).

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

Reviewed By: P. Meeks

Date Reviewed: March 26, 2008

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

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

- Calibration: Calibration criteria were met. Mercury initial calibration  $r^2$  values were  $\geq 0.995$  and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury. All CRI/CRA and check standard recoveries were within the control limits of 70-130%.
- Blanks: Selenium was reported in the method blank associated with the total metals fraction at  $-8.4 \mu\text{g/L}$ ; therefore, nondetected selenium in the total metals fraction was qualified as an estimated nondetect, "UJ." There were no other applicable detects in the method blanks or CCBs.
- Interference Check Samples: ICSA/B analyses were performed in association with all analyses except total antimony. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solutions. No 6010 analytes required qualification as the concentrations of the interferents were not significant. For the 6020 analytes, the reviewer was not able to ascertain if the detections were indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: A matrix spike analysis was performed on the sample in this SDG for the total 6020 analytes. All recoveries were within the laboratory-established control limits. Evaluation of mercury 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 boron was detected at a slightly higher concentration in the dissolved metals sample fraction. The difference between the boron results was within the sensitivity limits of the analytical instrument and, therefore, the reviewer considered the two 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.

#### D. EPA METHOD 525.2 — Pesticides

Reviewed By: P. Meeks

Date Reviewed: March 27, 2008

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

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

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

## E. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: March 28, 2008

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

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

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

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The tritium detector efficiency for the sample was at least 20% and was

considered acceptable. The strontium chemical yield was at least 70% and was considered acceptable. The strontium continuing calibration results were within the laboratory control limits. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 tracer, yttrium oxalate, yields were greater than 70%. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

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

## F. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 28, 2008

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

- Holding Times: The analytical holding time, seven days for TSS, was met.

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

**Analysis of Water by Transmission Electron Microscopy  
(EPA-600 R 94 134) EPA 100.2**

EMS No. 118968 Client Test America  
 Sample No. IRB-0152-01 Date Analyzed 2/7/2008

Fibers > 10 µm in length (chrysotile)	UT/A	<u>BDL*</u>	MFL
Mass (chrysotile)		<u>0</u>	ug/L
More/Less than 5 Fibers in Sample (chrysotile)		<u>LESS</u>	
Poisson 95% Confidence Interval		<u>0 to 8.2</u>	MFL
Detection Limit		<u>2.2</u>	MFL

\* BDL : Below Detection Limit; MFL: Million Fibers per Liter

LEVEL IV

**Particle Size Distribution ( Chrysotile )**

Particle Length - Microns							
0 - 0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 - 4.99	5.00 - 9.99	10 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Particle Width - Microns							
0 - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 - .49	.50 - .99	1 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Aspect Ratio L/W							
0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 - 99	100 - 199	200 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>



Sample ID: <b>IRB0152-01</b> <i>Outfall 009</i>		EPA Method 1613						
Client Data		Laboratory Data						
Name: Test America-Irvine, CA	Matrix: Aqueous	Lab Sample: 30236-001	Date Received: 5-Feb-08					
Project: IRB0152	Sample Size: 1.00 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-22.5: NA					
Time Collected: 1000								
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	0.000000451			13C-2,3,7,8-TCDD	87.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000700			13C-1,2,3,7,8-PeCDD	77.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000142			13C-1,2,3,4,7,8-HxCDD	80.4	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000184			J	13C-1,2,3,6,7,8-HxCDD	81.9	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000142			J	13C-1,2,3,4,6,7,8-HpCDD	86.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000332				13C-OCDD	79.7	17 - 157	
OCDD	0.000259			B	13C-2,3,7,8-TCDF	88.5	24 - 169	
2,3,7,8-TCDF	ND	0.000000609			13C-1,2,3,7,8-PeCDF	77.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000842			13C-2,3,4,7,8-PeCDF	76.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000840			13C-1,2,3,4,7,8-HxCDF	79.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000720			13C-1,2,3,6,7,8-HxCDF	77.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000141			13C-2,3,4,6,7,8-HxCDF	75.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000773			13C-1,2,3,7,8,9-HxCDF	80.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000994			13C-1,2,3,4,6,7,8-HpCDF	75.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000562			J	13C-1,2,3,4,7,8,9-HpCDF	79.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000119			13C-OCDF	80.9	17 - 157	
OCDF	0.0000141			J	CRS 37Cl-2,3,7,8-TCDD	88.4	35 - 197	
<b>Totals</b>								
Total TCDD	ND	0.000000895						
Total PeCDD	ND	0.00000120						
Total HxCDD	0.0000103							
Total HpCDD	0.0000823							
Total TCDF	ND	0.000000609						
Total PeCDF	0.00000107							
Total HxCDF	0.00000499							
Total HpCDF	0.0000158							

**Footnotes**

a. Sample specific estimated detection limit.  
b. Estimated maximum possible concentration.  
c. Method detection limit.  
d. Lower control limit - upper control limit.

Analyst: MAS *hewett* Approved By: William J. Luksemburg 22-Feb-2008 15:50

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	50	1	02/04/08	02/04/08	
Boron J/DNQ	EPA 200.7	8B04079	0.020	0.050	0.038	1	02/04/08	02/04/08	J
Calcium	EPA 200.7	8B04079	0.050	0.10	13	1	02/04/08	02/04/08	
Iron	EPA 200.7	8B04079	0.015	0.040	1.5	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	4.0	1	02/04/08	02/04/08	

LEVEL IV

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.*

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	8B04079	40	50	1500	1	02/04/08	02/04/08	
Antimony	EPA 200.8	8B04080	0.20	2.0	1.6	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	0.16	1	02/04/08	02/04/08	J
Chromium	EPA 200.7	8B04079	2.0	5.0	3.5	1	02/04/08	02/04/08	J
Copper	EPA 200.8	8B04080	0.75	2.0	4.7	1	02/04/08	02/04/08	
Lead	EPA 200.8	8B04080	0.30	1.0	6.0	1	02/04/08	02/04/08	
Nickel	EPA 200.7	8B04079	2.0	10	2.6	1	02/04/08	02/04/08	J
Selenium	EPA 200.7	8B04079	8.0	10	ND	1	02/04/08	02/04/08	
Silver	EPA 200.7	8B04079	6.0	10	ND	1	02/04/08	02/04/08	
Thallium	EPA 200.8	8B04080	0.20	1.0	ND	1	02/04/08	02/04/08	
Vanadium	EPA 200.7	8B04079	3.0	10	3.7	1	02/04/08	02/04/08	J
Zinc	EPA 200.7	8B04079	6.0	20	15	1	02/04/08	02/04/08	J

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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
Sample ID: IRB0152-01 (Outfall 009 - Water) - cont.									
Reporting Units: mg/l									
Boron	J/DNQ EPA 200.7-Diss	8B05111	0.020	0.050	0.039	1	02/05/08	02/06/08	J
Calcium	EPA 200.7-Diss	8B05111	0.050	0.10	13	1	02/05/08	02/06/08	
Iron	EPA 200.7-Diss	8B05111	0.015	0.040	0.11	1	02/05/08	02/06/08	
Magnesium	EPA 200.7-Diss	8B05111	0.012	0.020	3.5	1	02/05/08	02/06/08	
Hardness (as CaCO3)	SM2340B	8B05111	1.0	1.0	47	1	02/05/08	02/06/08	

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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
Sample ID: IRB0152-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7-Diss	8B05111	40	50	<b>110</b>	1	02/05/08	02/06/08	
Antimony	EPA 200.8-Diss	8B04144	0.20	2.0	<b>1.5</b>	1	02/04/08	02/05/08	J
Arsenic	EPA 200.7-Diss	8B05111	7.0	10	ND	1	02/05/08	02/06/08	
Beryllium	EPA 200.7-Diss	8B05111	0.90	2.0	ND	1	02/05/08	02/06/08	
Cadmium	EPA 200.8-Diss	8B04144	0.11	1.0	ND	1	02/04/08	02/05/08	
Chromium	EPA 200.7-Diss	8B05111	2.0	5.0	ND	1	02/05/08	02/06/08	
Copper	EPA 200.8-Diss	8B04144	0.75	2.0	<b>2.4</b>	1	02/04/08	02/05/08	
Lead	EPA 200.8-Diss	8B04144	0.30	1.0	<b>0.54</b>	1	02/04/08	02/05/08	J
Nickel	EPA 200.7-Diss	8B05111	2.0	10	ND	1	02/05/08	02/06/08	
Selenium	EPA 200.7-Diss	8B05111	8.0	10	ND	1	02/05/08	02/06/08	
Silver	EPA 200.7-Diss	8B05111	6.0	10	ND	1	02/05/08	02/06/08	
Thallium	EPA 200.8-Diss	8B04144	0.20	1.0	ND	1	02/04/08	02/05/08	
Vanadium	EPA 200.7-Diss	8B05111	3.0	10	ND	1	02/05/08	02/06/08	
Zinc	EPA 200.7-Diss	8B05111	6.0	20	ND	1	02/05/08	02/06/08	

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - 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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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009  
 Report Number: IRB0152

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

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Chlorpyrifos	U	EPA 525.2	C8B0516	0.10	1.0	ND	1.01	02/05/08	02/07/08
Diazinon	UJ/H	EPA 525.2	C8B0516	0.24	0.25	ND	1.01	02/05/08	02/07/08
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>						84 %			
<i>Surrogate: Triphenylphosphate (70-130%)</i>						121 %			
<i>Surrogate: Perylene-d12 (70-130%)</i>						93 %			

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - 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	
Chloride	EPA 300.0	8B04043	0.25	0.50	7.0	1	02/04/08	02/04/08	
Fluoride	EPA 300.0	8B04043	0.15	0.50	0.21	1	02/04/08	02/04/08	J
Nitrate/Nitrite-N	EPA 300.0	8B04043	0.15	0.26	3.3	1	02/04/08	02/04/08	
Sulfate	EPA 300.0	8B04043	0.20	0.50	11	1	02/04/08	02/04/08	
Total Dissolved Solids	SM2540C	8B07122	10	10	110	1	02/07/08	02/07/08	
Total Suspended Solids	EPA 160.2	8B05134	10	10	62	1	02/05/08	02/05/08	

\* Analysis not validated

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# **APPENDIX G**

## **Section 58**

Outfall 009, 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 009

Sampled: 02/03/08  
Received: 02/03/08  
Issued: 03/07/08 12:20

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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

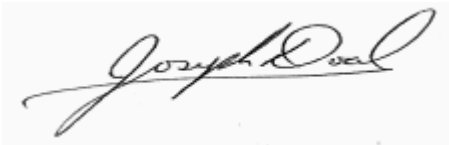
*This entire report was reviewed and approved for release.*

## SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
IRB0152-01	Outfall 009	Water
IRB0152-02	Trip Blanks	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak  
Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - 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	
1,1-Dichloroethene	EPA 624	8B04024	0.42	0.50	ND	1	02/04/08	02/05/08	
1,2-Dichloroethane	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	
1,2-Dichloropropane	EPA 624	8B04024	0.35	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	
1,4-Dichlorobenzene	EPA 624	8B04024	0.37	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	
Bromodichloromethane	EPA 624	8B04024	0.30	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	
Bromomethane	EPA 624	8B04024	0.42	1.0	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	
Chlorobenzene	EPA 624	8B04024	0.36	0.50	ND	1	02/04/08	02/05/08	
Chloroethane	EPA 624	8B04024	0.40	1.0	ND	1	02/04/08	02/05/08	
Chloroform	EPA 624	8B04024	0.33	0.50	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	
Ethylbenzene	EPA 624	8B04024	0.25	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	
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	
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	
Trichloroethene	EPA 624	8B04024	0.26	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	
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	
Xylenes, Total	EPA 624	8B04024	0.90	1.5	ND	1	02/04/08	02/05/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>110 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>102 %</i>				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>91 %</i>				

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NPDES - 2223

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-02 (Trip Blanks - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/04/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B04024	0.24	0.50	ND	1	02/04/08	02/04/08	
1,1,2-Trichloroethane	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/04/08	
1,1-Dichloroethane	EPA 624	8B04024	0.27	0.50	ND	1	02/04/08	02/04/08	
1,1-Dichloroethene	EPA 624	8B04024	0.42	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichloroethane	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichlorobenzene	EPA 624	8B04024	0.32	0.50	ND	1	02/04/08	02/04/08	
1,2-Dichloropropane	EPA 624	8B04024	0.35	0.50	ND	1	02/04/08	02/04/08	
1,3-Dichlorobenzene	EPA 624	8B04024	0.35	0.50	ND	1	02/04/08	02/04/08	
1,4-Dichlorobenzene	EPA 624	8B04024	0.37	0.50	ND	1	02/04/08	02/04/08	
Benzene	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/04/08	
Bromodichloromethane	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/04/08	
Bromoform	EPA 624	8B04024	0.40	0.50	ND	1	02/04/08	02/04/08	
Bromomethane	EPA 624	8B04024	0.42	1.0	ND	1	02/04/08	02/04/08	
Carbon tetrachloride	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/04/08	
Chlorobenzene	EPA 624	8B04024	0.36	0.50	ND	1	02/04/08	02/04/08	
Chloroethane	EPA 624	8B04024	0.40	1.0	ND	1	02/04/08	02/04/08	
Chloroform	EPA 624	8B04024	0.33	0.50	ND	1	02/04/08	02/04/08	
Chloromethane	EPA 624	8B04024	0.40	0.50	ND	1	02/04/08	02/04/08	
cis-1,3-Dichloropropene	EPA 624	8B04024	0.22	0.50	ND	1	02/04/08	02/04/08	
Dibromochloromethane	EPA 624	8B04024	0.28	0.50	ND	1	02/04/08	02/04/08	
Ethylbenzene	EPA 624	8B04024	0.25	0.50	ND	1	02/04/08	02/04/08	
Methylene chloride	EPA 624	8B04024	0.95	1.0	ND	1	02/04/08	02/04/08	
Tetrachloroethene	EPA 624	8B04024	0.32	0.50	ND	1	02/04/08	02/04/08	
Toluene	EPA 624	8B04024	0.36	0.50	ND	1	02/04/08	02/04/08	
trans-1,2-Dichloroethene	EPA 624	8B04024	0.27	0.50	ND	1	02/04/08	02/04/08	
trans-1,3-Dichloropropene	EPA 624	8B04024	0.32	0.50	ND	1	02/04/08	02/04/08	
Trichloroethene	EPA 624	8B04024	0.26	0.50	ND	1	02/04/08	02/04/08	
Trichlorofluoromethane	EPA 624	8B04024	0.34	0.50	ND	1	02/04/08	02/04/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B04024	0.50	5.0	ND	1	02/04/08	02/04/08	
Vinyl chloride	EPA 624	8B04024	0.30	0.50	ND	1	02/04/08	02/04/08	
Xylenes, Total	EPA 624	8B04024	0.90	1.5	ND	1	02/04/08	02/04/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>111 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>103 %</i>				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>92 %</i>				

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Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - 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%)					110 %				
Surrogate: Toluene-d8 (80-120%)					102 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				
<b>Sample ID: IRB0152-02 (Trip Blanks - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B04024	4.0	5.0	ND	1	02/04/08	02/04/08	
Acrylonitrile	EPA 624	8B04024	0.70	2.0	ND	1	02/04/08	02/04/08	
2-Chloroethyl vinyl ether	EPA 624	8B04024	1.8	5.0	ND	1	02/04/08	02/04/08	
Surrogate: Dibromofluoromethane (80-120%)					111 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %				

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Acenaphthylene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Aniline	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
Anthracene	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
Benzidine	EPA 625	8B04111	8.1	19	ND	0.957	02/04/08	02/08/08	L6
Benzoic acid	EPA 625	8B04111	9.6	19	ND	0.957	02/04/08	02/08/08	
Benzo(a)anthracene	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
Benzo(b)fluoranthene	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
Benzo(k)fluoranthene	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
Benzo(g,h,i)perylene	EPA 625	8B04111	3.8	9.6	ND	0.957	02/04/08	02/08/08	
Benzo(a)pyrene	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
Benzyl alcohol	EPA 625	8B04111	2.4	19	ND	0.957	02/04/08	02/08/08	
Bis(2-chloroethoxy)methane	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Bis(2-chloroethyl)ether	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Bis(2-chloroisopropyl)ether	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
Bis(2-ethylhexyl)phthalate	EPA 625	8B04111	3.8	48	ND	0.957	02/04/08	02/08/08	
4-Bromophenyl phenyl ether	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Butyl benzyl phthalate	EPA 625	8B04111	3.8	19	ND	0.957	02/04/08	02/08/08	
4-Chloroaniline	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
2-Chloronaphthalene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
4-Chloro-3-methylphenol	EPA 625	8B04111	2.4	19	ND	0.957	02/04/08	02/08/08	
2-Chlorophenol	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
4-Chlorophenyl phenyl ether	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
Chrysene	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
Dibenz(a,h)anthracene	EPA 625	8B04111	2.9	19	ND	0.957	02/04/08	02/08/08	
Dibenzofuran	EPA 625	8B04111	3.8	9.6	ND	0.957	02/04/08	02/08/08	
Di-n-butyl phthalate	EPA 625	8B04111	2.9	19	ND	0.957	02/04/08	02/08/08	
1,3-Dichlorobenzene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
1,4-Dichlorobenzene	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
1,2-Dichlorobenzene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
3,3-Dichlorobenzidine	EPA 625	8B04111	2.9	19	ND	0.957	02/04/08	02/08/08	
2,4-Dichlorophenol	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
Diethyl phthalate	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
2,4-Dimethylphenol	EPA 625	8B04111	3.3	19	ND	0.957	02/04/08	02/08/08	
Dimethyl phthalate	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
4,6-Dinitro-2-methylphenol	EPA 625	8B04111	3.8	19	ND	0.957	02/04/08	02/08/08	
2,4-Dinitrophenol	EPA 625	8B04111	7.7	19	ND	0.957	02/04/08	02/08/08	
2,4-Dinitrotoluene	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
2,6-Dinitrotoluene	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
Di-n-octyl phthalate	EPA 625	8B04111	3.3	19	ND	0.957	02/04/08	02/08/08	
Fluoranthene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Fluorene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Hexachlorobenzene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Hexachlorobutadiene	EPA 625	8B04111	3.8	9.6	ND	0.957	02/04/08	02/08/08	
Hexachlorocyclopentadiene	EPA 625	8B04111	4.8	19	ND	0.957	02/04/08	02/08/08	
Hexachloroethane	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
Indeno(1,2,3-cd)pyrene	EPA 625	8B04111	3.3	19	ND	0.957	02/04/08	02/08/08	
Isophorone	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
2-Methylnaphthalene	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
2-Methylphenol	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
4-Methylphenol	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
Naphthalene	EPA 625	8B04111	2.9	9.6	ND	0.957	02/04/08	02/08/08	
2-Nitroaniline	EPA 625	8B04111	1.9	19	ND	0.957	02/04/08	02/08/08	
3-Nitroaniline	EPA 625	8B04111	2.9	19	ND	0.957	02/04/08	02/08/08	
4-Nitroaniline	EPA 625	8B04111	3.8	19	ND	0.957	02/04/08	02/08/08	
Nitrobenzene	EPA 625	8B04111	2.4	19	ND	0.957	02/04/08	02/08/08	
2-Nitrophenol	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
4-Nitrophenol	EPA 625	8B04111	5.3	19	ND	0.957	02/04/08	02/08/08	
N-Nitrosodiphenylamine	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
N-Nitroso-di-n-propylamine	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
Pentachlorophenol	EPA 625	8B04111	3.3	19	ND	0.957	02/04/08	02/08/08	
Phenanthrene	EPA 625	8B04111	3.3	9.6	ND	0.957	02/04/08	02/08/08	
Phenol	EPA 625	8B04111	1.9	9.6	ND	0.957	02/04/08	02/08/08	
Pyrene	EPA 625	8B04111	3.8	9.6	ND	0.957	02/04/08	02/08/08	
1,2,4-Trichlorobenzene	EPA 625	8B04111	2.4	9.6	ND	0.957	02/04/08	02/08/08	
2,4,5-Trichlorophenol	EPA 625	8B04111	2.9	19	ND	0.957	02/04/08	02/08/08	
2,4,6-Trichlorophenol	EPA 625	8B04111	4.3	19	ND	0.957	02/04/08	02/08/08	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	8B04111	2.4	19	ND	0.957	02/04/08	02/08/08	
N-Nitrosodimethylamine	EPA 625	8B04111	2.4	19	ND	0.957	02/04/08	02/08/08	
Surrogate: 2-Fluorophenol (30-120%)					82 %				
Surrogate: Phenol-d6 (35-120%)					87 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					68 %				
Surrogate: Nitrobenzene-d5 (45-120%)					82 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					89 %				
Surrogate: Terphenyl-d14 (50-125%)					102 %				

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
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%)					77 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					70 %				

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Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	8B05099	0.42	0.47	ND	0.943	02/05/08	02/06/08	
Aroclor 1221	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/06/08	
Aroclor 1232	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/06/08	
Aroclor 1242	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/06/08	
Aroclor 1248	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/06/08	
Aroclor 1254	EPA 608	8B05099	0.24	0.47	ND	0.943	02/05/08	02/06/08	
Aroclor 1260	EPA 608	8B05099	0.28	0.47	ND	0.943	02/05/08	02/06/08	
Surrogate: Decachlorobiphenyl (45-120%)					90 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	<b>50</b>	1	02/04/08	02/04/08	
Boron	EPA 200.7	8B04079	0.020	0.050	<b>0.038</b>	1	02/04/08	02/04/08	J
Calcium	EPA 200.7	8B04079	0.050	0.10	<b>13</b>	1	02/04/08	02/04/08	
Iron	EPA 200.7	8B04079	0.015	0.040	<b>1.5</b>	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	<b>4.0</b>	1	02/04/08	02/04/08	

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Aluminum</b>	EPA 200.7	8B04079	40	50	<b>1500</b>	1	02/04/08	02/04/08	
<b>Antimony</b>	EPA 200.8	8B04080	0.20	2.0	<b>1.6</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	
<b>Cadmium</b>	EPA 200.8	8B04080	0.11	1.0	<b>0.16</b>	1	02/04/08	02/04/08	J
<b>Chromium</b>	EPA 200.7	8B04079	2.0	5.0	<b>3.5</b>	1	02/04/08	02/04/08	J
<b>Copper</b>	EPA 200.8	8B04080	0.75	2.0	<b>4.7</b>	1	02/04/08	02/04/08	
<b>Lead</b>	EPA 200.8	8B04080	0.30	1.0	<b>6.0</b>	1	02/04/08	02/04/08	
<b>Nickel</b>	EPA 200.7	8B04079	2.0	10	<b>2.6</b>	1	02/04/08	02/04/08	J
Selenium	EPA 200.7	8B04079	8.0	10	ND	1	02/04/08	02/04/08	
Silver	EPA 200.7	8B04079	6.0	10	ND	1	02/04/08	02/04/08	
Thallium	EPA 200.8	8B04080	0.20	1.0	ND	1	02/04/08	02/04/08	
<b>Vanadium</b>	EPA 200.7	8B04079	3.0	10	<b>3.7</b>	1	02/04/08	02/04/08	J
<b>Zinc</b>	EPA 200.7	8B04079	6.0	20	<b>15</b>	1	02/04/08	02/04/08	J

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: mg/l									
<b>Boron</b>	EPA 200.7-Diss	8B05111	0.020	0.050	<b>0.039</b>	1	02/05/08	02/06/08	J
<b>Calcium</b>	EPA 200.7-Diss	8B05111	0.050	0.10	<b>13</b>	1	02/05/08	02/06/08	
<b>Iron</b>	EPA 200.7-Diss	8B05111	0.015	0.040	<b>0.11</b>	1	02/05/08	02/06/08	
<b>Magnesium</b>	EPA 200.7-Diss	8B05111	0.012	0.020	<b>3.5</b>	1	02/05/08	02/06/08	
<b>Hardness (as CaCO3)</b>	SM2340B	8B05111	1.0	1.0	<b>47</b>	1	02/05/08	02/06/08	

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Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Aluminum</b>	EPA 200.7-Diss	8B05111	40	50	<b>110</b>	1	02/05/08	02/06/08	
<b>Antimony</b>	EPA 200.8-Diss	8B04144	0.20	2.0	<b>1.5</b>	1	02/04/08	02/05/08	J
Arsenic	EPA 200.7-Diss	8B05111	7.0	10	ND	1	02/05/08	02/06/08	
Beryllium	EPA 200.7-Diss	8B05111	0.90	2.0	ND	1	02/05/08	02/06/08	
Cadmium	EPA 200.8-Diss	8B04144	0.11	1.0	ND	1	02/04/08	02/05/08	
Chromium	EPA 200.7-Diss	8B05111	2.0	5.0	ND	1	02/05/08	02/06/08	
<b>Copper</b>	EPA 200.8-Diss	8B04144	0.75	2.0	<b>2.4</b>	1	02/04/08	02/05/08	
<b>Lead</b>	EPA 200.8-Diss	8B04144	0.30	1.0	<b>0.54</b>	1	02/04/08	02/05/08	J
Nickel	EPA 200.7-Diss	8B05111	2.0	10	ND	1	02/05/08	02/06/08	
Selenium	EPA 200.7-Diss	8B05111	8.0	10	ND	1	02/05/08	02/06/08	
Silver	EPA 200.7-Diss	8B05111	6.0	10	ND	1	02/05/08	02/06/08	
Thallium	EPA 200.8-Diss	8B04144	0.20	1.0	ND	1	02/04/08	02/05/08	
Vanadium	EPA 200.7-Diss	8B05111	3.0	10	ND	1	02/05/08	02/06/08	
Zinc	EPA 200.7-Diss	8B05111	6.0	20	ND	1	02/05/08	02/06/08	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - 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	
<b>Chloride</b>	EPA 300.0	8B04043	0.25	0.50	<b>7.0</b>	1	02/04/08	02/04/08	
<b>Fluoride</b>	EPA 300.0	8B04043	0.15	0.50	<b>0.21</b>	1	02/04/08	02/04/08	J
<b>Nitrate/Nitrite-N</b>	EPA 300.0	8B04043	0.15	0.26	<b>3.3</b>	1	02/04/08	02/04/08	
<b>Sulfate</b>	EPA 300.0	8B04043	0.20	0.50	<b>11</b>	1	02/04/08	02/04/08	
<b>Total Dissolved Solids</b>	SM2540C	8B07122	10	10	<b>110</b>	1	02/07/08	02/07/08	
<b>Total Suspended Solids</b>	EPA 160.2	8B05134	10	10	<b>62</b>	1	02/05/08	02/05/08	

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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 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	8B04112	2.2	5.0	ND	1	02/04/08	02/04/08	
Perchlorate	EPA 314.0	8B12073	1.5	4.0	ND	1	02/12/08	02/12/08	

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**NPDES - 2235**



MWH-Pasadena/Boeing  
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Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB0152-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Chlorpyrifos	EPA 525.2	C8B0516	0.10	1.0	ND	1.01	02/05/08	02/07/08	P, pH
Diazinon	EPA 525.2	C8B0516	0.24	0.25	ND	1.01	02/05/08	02/07/08	
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					84 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					121 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					93 %				

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IRB0152 <Page 15 of 50>  
NPDES - 2236

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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: IRB0152-01 (Outfall 009 - 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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**IRB0152 <Page 16 of 50>**  
**NPDES - 2237**

MWH-Pasadena/Boeing  
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: Outfall 009 (IRB0152-01) - Water</b>					
EPA 300.0	2	02/03/2008 10:00	02/03/2008 18:25	02/04/2008 05:00	02/04/2008 07:02
EPA 624	3	02/03/2008 10:00	02/03/2008 18:25	02/04/2008 00:00	02/05/2008 00:18
<b>Sample ID: Trip Blanks (IRB0152-02) - Water</b>					
EPA 624	3	02/03/2008 10:00	02/03/2008 18:25	02/04/2008 00:00	02/04/2008 22:23

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**IRB0152 <Page 17 of 50>**  
**NPDES - 2238**

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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>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							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
Chloromethane	ND	0.50	0.40	ug/l							
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l							
Dibromochloromethane	ND	0.50	0.28	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	ND	1.0	0.95	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.27	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.30	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: Dibromofluoromethane	27.5			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			

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Project ID: Annual Outfall 009

Report Number: IRB0152

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>											
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			
1,2-Dichlorobenzene	25.3	0.50	0.32	ug/l	25.0		101	75-120			
1,2-Dichloropropane	25.1	0.50	0.35	ug/l	25.0		100	70-125			
1,3-Dichlorobenzene	25.0	0.50	0.35	ug/l	25.0		100	75-120			
1,4-Dichlorobenzene	23.2	0.50	0.37	ug/l	25.0		93	75-120			
Benzene	24.7	0.50	0.28	ug/l	25.0		99	70-120			
Bromodichloromethane	28.2	0.50	0.30	ug/l	25.0		113	70-135			
Bromoform	21.2	0.50	0.40	ug/l	25.0		85	55-130			
Bromomethane	29.0	1.0	0.42	ug/l	25.0		116	65-140			
Carbon tetrachloride	27.1	0.50	0.28	ug/l	25.0		109	65-140			
Chlorobenzene	23.6	0.50	0.36	ug/l	25.0		94	75-120			
Chloroethane	29.2	1.0	0.40	ug/l	25.0		117	60-140			
Chloroform	29.1	0.50	0.33	ug/l	25.0		116	70-130			
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			
Ethylbenzene	25.8	0.50	0.25	ug/l	25.0		103	75-125			
Methylene chloride	27.1	1.0	0.95	ug/l	25.0		108	55-130			
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			
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			
Trichloroethene	22.9	0.50	0.26	ug/l	25.0		92	70-125			
Trichlorofluoromethane	33.5	0.50	0.34	ug/l	25.0		134	65-145			
Vinyl chloride	29.4	0.50	0.30	ug/l	25.0		118	55-135			
Xylenes, Total	73.8	1.5	0.90	ug/l	75.0		98	70-125			
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			

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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 009

Report Number: IRB0152

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>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			
1,2-Dichlorobenzene	25.0	0.50	0.32	ug/l	25.0	ND	100	75-125			
1,2-Dichloropropane	24.4	0.50	0.35	ug/l	25.0	ND	98	65-130			
1,3-Dichlorobenzene	24.4	0.50	0.35	ug/l	25.0	ND	98	75-125			
1,4-Dichlorobenzene	22.4	0.50	0.37	ug/l	25.0	ND	90	75-125			
Benzene	24.2	0.50	0.28	ug/l	25.0	ND	97	65-125			
Bromodichloromethane	27.7	0.50	0.30	ug/l	25.0	ND	111	70-135			
Bromoform	21.5	0.50	0.40	ug/l	25.0	ND	86	55-135			
Bromomethane	26.2	1.0	0.42	ug/l	25.0	ND	105	55-145			
Carbon tetrachloride	27.2	0.50	0.28	ug/l	25.0	ND	109	65-140			
Chlorobenzene	22.8	0.50	0.36	ug/l	25.0	ND	91	75-125			
Chloroethane	27.2	1.0	0.40	ug/l	25.0	ND	109	55-140			
Chloroform	28.4	0.50	0.33	ug/l	25.0	ND	114	65-135			
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			
Ethylbenzene	25.2	0.50	0.25	ug/l	25.0	ND	101	65-130			
Methylene chloride	25.8	1.0	0.95	ug/l	25.0	ND	103	50-135			
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			
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			
Trichloroethene	22.5	0.50	0.26	ug/l	25.0	ND	90	65-125			
Trichlorofluoromethane	33.0	0.50	0.34	ug/l	25.0	ND	132	60-145			
Vinyl chloride	26.4	0.50	0.30	ug/l	25.0	ND	106	45-140			
Xylenes, Total	72.5	1.5	0.90	ug/l	75.0	ND	97	60-130			
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			

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618 Michillinda Avenue, Suite 200  
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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>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	
1,2-Dichlorobenzene	23.8	0.50	0.32	ug/l	25.0	ND	95	75-125	5	20	
1,2-Dichloropropane	24.1	0.50	0.35	ug/l	25.0	ND	97	65-130	1	20	
1,3-Dichlorobenzene	23.9	0.50	0.35	ug/l	25.0	ND	95	75-125	2	20	
1,4-Dichlorobenzene	22.2	0.50	0.37	ug/l	25.0	ND	89	75-125	1	20	
Benzene	23.7	0.50	0.28	ug/l	25.0	ND	95	65-125	2	20	
Bromodichloromethane	27.1	0.50	0.30	ug/l	25.0	ND	108	70-135	2	20	
Bromoform	19.8	0.50	0.40	ug/l	25.0	ND	79	55-135	8	25	
Bromomethane	26.7	1.0	0.42	ug/l	25.0	ND	107	55-145	2	25	
Carbon tetrachloride	26.2	0.50	0.28	ug/l	25.0	ND	105	65-140	4	25	
Chlorobenzene	22.4	0.50	0.36	ug/l	25.0	ND	89	75-125	2	20	
Chloroethane	27.8	1.0	0.40	ug/l	25.0	ND	111	55-140	2	25	
Chloroform	28.1	0.50	0.33	ug/l	25.0	ND	112	65-135	1	20	
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	
Ethylbenzene	24.7	0.50	0.25	ug/l	25.0	ND	99	65-130	2	20	
Methylene chloride	24.8	1.0	0.95	ug/l	25.0	ND	99	50-135	4	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	
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	
Trichloroethene	22.0	0.50	0.26	ug/l	25.0	ND	88	65-125	2	20	
Trichlorofluoromethane	31.5	0.50	0.34	ug/l	25.0	ND	126	60-145	5	25	
Vinyl chloride	26.5	0.50	0.30	ug/l	25.0	ND	106	45-140	0	30	
Xylenes, Total	71.3	1.5	0.90	ug/l	75.0	ND	95	60-130	2	20	
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			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 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

Joseph Doak  
 Project Manager



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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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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 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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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 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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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 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B04111 Extracted: 02/04/08</b>											
<b>LCS Analyzed: 02/07/2008 (8B04111-BS1)</b>											
1,2,4-Trichlorobenzene	82.1	10	2.5	ug/l	100		82	45-120			
2,4,5-Trichlorophenol	94.0	20	3.0	ug/l	100		94	55-120			
2,4,6-Trichlorophenol	91.5	20	4.5	ug/l	100		92	55-120			
1,2-Diphenylhydrazine/Azobenzene	97.8	20	2.5	ug/l	100		98	60-120			
N-Nitrosodimethylamine	98.9	20	2.5	ug/l	100		99	45-120			
Surrogate: 2-Fluorophenol	167			ug/l	200		83	30-120			
Surrogate: Phenol-d6	171			ug/l	200		86	35-120			
Surrogate: 2,4,6-Tribromophenol	153			ug/l	200		77	40-120			
Surrogate: Nitrobenzene-d5	89.0			ug/l	100		89	45-120			
Surrogate: 2-Fluorobiphenyl	87.6			ug/l	100		88	50-120			
Surrogate: Terphenyl-d14	100			ug/l	100		100	50-125			
<b>Matrix Spike Analyzed: 02/07/2008 (8B04111-MS1)</b>											
<b>Source: IRA3018-06</b>											
Acenaphthene	93.7	48	14	ug/l	95.2	ND	98	60-120			
Acenaphthylene	40.8	48	14	ug/l	95.2	ND	43	60-120			M2, J
Aniline	53.5	48	12	ug/l	95.2	ND	56	35-120			
Anthracene	84.9	48	9.5	ug/l	95.2	ND	89	65-120			
Benzidine	ND	95	40	ug/l	95.2	ND		30-160			M2
Benzoic acid	107	95	48	ug/l	95.2	ND	112	25-125			
Benzo(a)anthracene	89.0	48	9.5	ug/l	95.2	ND	94	65-120			
Benzo(b)fluoranthene	83.0	48	9.5	ug/l	95.2	ND	87	55-125			
Benzo(k)fluoranthene	95.6	48	12	ug/l	95.2	ND	100	55-125			
Benzo(g,h,i)perylene	68.7	48	19	ug/l	95.2	ND	72	45-135			
Benzo(a)pyrene	90.1	48	9.5	ug/l	95.2	ND	95	55-130			
Benzyl alcohol	34.9	95	12	ug/l	95.2	ND	37	40-120			M2, J
Bis(2-chloroethoxy)methane	76.3	48	14	ug/l	95.2	ND	80	50-120			
Bis(2-chloroethyl)ether	106	48	14	ug/l	95.2	ND	112	50-120			
Bis(2-chloroisopropyl)ether	86.9	48	12	ug/l	95.2	ND	91	45-120			
Bis(2-ethylhexyl)phthalate	91.0	240	19	ug/l	95.2	ND	96	65-130			J
4-Bromophenyl phenyl ether	75.0	48	14	ug/l	95.2	ND	79	60-120			
Butyl benzyl phthalate	92.6	95	19	ug/l	95.2	ND	97	55-130			J
4-Chloroaniline	19.6	48	9.5	ug/l	95.2	ND	21	55-120			M2, J
2-Chloronaphthalene	83.3	48	14	ug/l	95.2	ND	87	60-120			
4-Chloro-3-methylphenol	84.0	95	12	ug/l	95.2	ND	88	60-120			J
2-Chlorophenol	77.2	48	14	ug/l	95.2	ND	81	45-120			
4-Chlorophenyl phenyl ether	92.5	48	12	ug/l	95.2	ND	97	65-120			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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Attention: Bronwyn Kelly

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Report Number: IRB0152

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>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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 Received: 02/03/08

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

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

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

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

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### METALS

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

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 Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### METALS

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

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

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

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

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

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

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Joseph Doak  
 Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### METALS

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

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### DISSOLVED METALS

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

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 618 Michillinda Avenue, Suite 200  
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### DISSOLVED METALS

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

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

### DISSOLVED METALS

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

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Report Number: IRB0152

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

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Report Number: IRB0152

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: 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: 8B07122 Extracted: 02/07/08</u></b>											
<b>Blank Analyzed: 02/07/2008 (8B07122-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/07/2008 (8B07122-BS1)</b>											
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			

TestAmerica Irvine

Joseph Doak  
Project Manager

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NPDES - 2264

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B07122 Extracted: 02/07/08</b>											
<b>Duplicate Analyzed: 02/07/2008 (8B07122-DUP1)</b>						<b>Source: IRB0146-01</b>					
Total Dissolved Solids	296	10	10	mg/l		292			1	10	
<b>Batch: 8B12073 Extracted: 02/12/08</b>											
<b>Blank Analyzed: 02/12/2008 (8B12073-BLK1)</b>											
Perchlorate	ND	4.0	1.5	ug/l							
<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>Batch: 8B12074 Extracted: 02/12/08</b>											
<b>Blank Analyzed: 02/12/2008 (8B12074-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
<b>LCS Analyzed: 02/12/2008 (8B12074-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	20.0	5.0	1.4	mg/l	20.2		99	78-114			MNRI
<b>LCS Dup Analyzed: 02/12/2008 (8B12074-BSD1)</b>											
Hexane Extractable Material (Oil & Grease)	18.5	5.0	1.4	mg/l	20.2		92	78-114	8	11	

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## METHOD BLANK/QC DATA

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

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

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 Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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	

TestAmerica Irvine

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 Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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
IRB0152-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.86	4.8	15
IRB0152-01	Antimony-200.8	Antimony	ug/l	1.58	2.0	6
IRB0152-01	Boron-200.7	Boron	mg/l	0.038	0.050	1
IRB0152-01	Cadmium-200.8	Cadmium	ug/l	0.16	1.0	4
IRB0152-01	Chloride - 300.0	Chloride	mg/l	6.97	0.50	150
IRB0152-01	Copper-200.8	Copper	ug/l	4.75	2.0	14
IRB0152-01	Fluoride-300.0	Fluoride	mg/l	0.21	0.50	1.6
IRB0152-01	Hg_w 245.1	Mercury, Total	ug/l	0.030	0.20	0.2
<b>IRB0152-01</b>	<b>Lead-200.8</b>	<b>Lead</b>	<b>ug/l</b>	<b>6.01</b>	<b>1.0</b>	<b>5.2</b>
IRB0152-01	Nickel-200.7	Nickel	ug/l	2.63	10	100
IRB0152-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	3.30	0.26	10
IRB0152-01	Perchlorate 314.0-DEFAULT	Perchlorate	ug/l	0	4.0	6
IRB0152-01	Sulfate-300.0	Sulfate	mg/l	11	0.50	250
IRB0152-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	109	10	850
IRB0152-01	Thallium-200.8	Thallium	ug/l	0.12	1.0	2

## Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
-----------	----------	---------	-------	--------	-----	------------------

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 009

Report Number: IRB0152

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

## DATA QUALIFIERS AND DEFINITIONS

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

## ADDITIONAL COMMENTS

### For 1,2-Diphenylhydrazine:

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

TestAmerica Irvine

Joseph Doak  
Project Manager

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NPDES - 2269

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## Certification Summary

### TestAmerica Irvine

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

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

### Subcontracted Laboratories

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

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr

Samples: IRB0152-01

### TestAmerica Irvine

Joseph Doak  
Project Manager

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

Project ID: Annual Outfall 009

Report Number: IRB0152

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

## Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec  
Samples: IRB0152-01

Analysis Performed: Gross Alpha  
Samples: IRB0152-01

Analysis Performed: Gross Beta  
Samples: IRB0152-01

Analysis Performed: Radium, Combined  
Samples: IRB0152-01

Analysis Performed: Strontium 90  
Samples: IRB0152-01

Analysis Performed: Tritium  
Samples: IRB0152-01

Analysis Performed: Uranium, Combined  
Samples: IRB0152-01

## EMS Laboratories *California Cert #1119*

117 W. Bellevue Drive - Pasadena, CA 91105

Analysis Performed: Asbestos-TEM (100.2 - DW)  
Samples: IRB0152-01

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

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

Method Performed: EPA 525.2  
Samples: IRB0152-01

## 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: IRB0152-01

## Weck Laboratories, Inc

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

Method Performed: EPA 245.1  
Samples: IRB0152-01

## TestAmerica Irvine

Joseph Doak  
Project Manager

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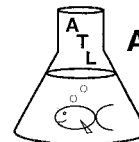
CHAIN OF CUSTODY FORM

Test America Version 12/20/07

IRB0192

Client Name/Address: MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak		Project: Boeing-SSFL NPDES Annual Outfall 009 Stormwater at WS-13		ANALYSIS REQUIRED Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni, + PP, Hardness as Ca CO <sub>3</sub> TCDD (and all congeners) Oil & Grease (1664-HEM) Cl <sup>-</sup> , SO <sub>4</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> +NO <sub>2</sub> <sup>-</sup> , F, Perchlorate TDS, TSS VOCs (624), xylenes + PP VOCs A+A+2CVE Pesticides/PCBs, Chlorpyrifos, Diazinon + PP Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1) SVOCs (625) + PP Acute and Chronic Toxicity Cyanide Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni + PP, Hardness (100.2) Field readings Temp = 47.7 pH = 7.3 Time of readings = 10:00 Comments																				
Project Manager: Bronwyn Kelly Sampler: <i>Maariscal, J. Barroso, R.</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni, + PP, Hardness as Ca CO <sub>3</sub> TCDD (and all congeners) Oil & Grease (1664-HEM) Cl <sup>-</sup> , SO <sub>4</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> +NO <sub>2</sub> <sup>-</sup> , F, Perchlorate TDS, TSS VOCs (624), xylenes + PP VOCs A+A+2CVE Pesticides/PCBs, Chlorpyrifos, Diazinon + PP Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1) SVOCs (625) + PP Acute and Chronic Toxicity Cyanide Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni, + PP, Hardness (100.2) Field readings Temp = 47.7 pH = 7.3 Time of readings = 10:00 Comments																				
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	1A	1B	2A, 2B	3A, 3B	4A, 4B	5A, 5B	6A, 6B, 6C	7A, 7B, 7C	8A, 8B	9A, 9B	10A, 10B	11A, 11B	12	13	14	15A, 15B, 15C	16A, 16B, 16C	
Outfall 009	W	1L Poly	1	02-03-08 10:00	HNO <sub>3</sub>	1A	X																	
Outfall 009-Dup	W	1L Poly	1		HNO <sub>3</sub>	1B	X																	
Outfall 009	W	1L Amber	2		None	2A, 2B																		
Outfall 009	W	1L Amber	2		HCl	3A, 3B			X															
Outfall 009	W	500 ml Poly	2		None	4A, 4B																		
Outfall 009	W	500 ml Poly	2		None	5A, 5B						X												
Outfall 009	W	VOAs	3		HCl	6A, 6B, 6C																		
Outfall 009	W	VOAs	3		None	7A, 7B, 7C																		
Outfall 009	W	1L Amber	2		None	8A, 8B																		
Outfall 009	W	2.5 Gal Cube 500 ml Amber	1		None	9A, 9B																		
Outfall 009	W	1L Amber	2		None	10A, 10B																		
Outfall 009	W	1 Gal Poly	2		None	11A, 11B																		
Outfall 009	W	500ml Poly	1		NaOH	12																		
Outfall 009	W	1L Poly	1		None	13																		
Outfall 009	W	1L Poly	1	02-03-08 10:00	None	14																		
Trip Blanks	W	VOAs	3		HCl	15A, 15B, 15C																		
Trip Blanks	W	VOAs	3		None	16A, 16B, 16C																		
Relinquished By	Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
<i>L. Han</i>	02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605		02-03-08 1605	
Relinquished By	Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
<i>BB K. Lee</i>	02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825	
Relinquished By	Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
<i>BB K. Lee</i>	02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825	
Relinquished By	Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
<i>BB K. Lee</i>	02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825		02-03-08 1825	

# 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 9, 2008  
**Client:** Test America – Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Joseph Doak

**Laboratory No.:** A-08020408-001  
**Sample ID.:** IRB0152-01 (Outfall 009)

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

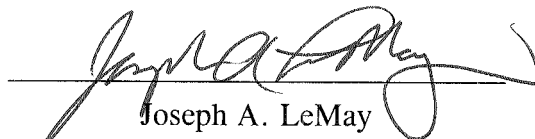
Date Sampled: 02/03/08  
Date Received: 02/04/08  
Temp. Received: 4°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 02/04/08 to 02/08/08

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

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IRB0152-01	100% Survival (TUa = 0.0)

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

  
Joseph A. LeMay  
Laboratory Director

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



Lab No.: A-08020408-001

Client/ID: TestAmerica - IRB0152-01 (Outfall 009)

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%	19.9	10.6	7.4	0	0	
24 Hr	Control	19.3	7.8	7.5	0	0	R 1330
	100%	19.2	8.1	7.1	0	0	
48 Hr	Control	19.5	7.6	7.7	0	0	R 1400
	100%	19.6	7.3	7.2	0	0	
Renewal	Control	20.5	8.8	7.8	0	0	R 1400
	100%	19.5	11.1	7.3	0	0	
72 Hr	Control	19.3	8.0	7.4	0	0	R 1200
	100%	19.5	7.8	7.3	0	0	
96 Hr	Control	19.5	8.2	7.3	0	0	R 1300
	100%	19.7	8.2	7.2	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.4; Conductivity: 119 umho; Temp: 4°C;

DO: 10.7 mg/l; Alkalinity: 25 mg/l; Hardness: 50 mg/l; NH<sub>3</sub>-N: 0.3 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 %

**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**IRB0152**


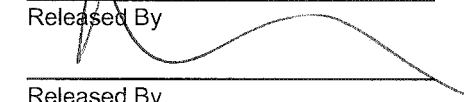
**SENDING LABORATORY:**

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


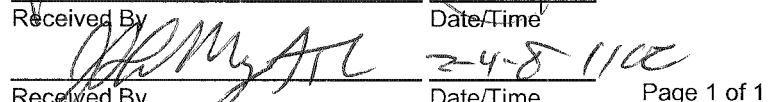
**RECEIVING LABORATORY:**

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: 4 °C Ice: (Y) / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0152-01</b>	<b>Water</b>		<b>Sampled: 02/03/08 10:00</b>	
Bioassay-Acute 96hr	% Survival	02/13/08	02/04/08 22:00	FH minnow, EPA/821-R02-012, Sub to AqTox Labs
Level 4 Data Package - Out	N/A	02/13/08	03/02/08 10:00	
<i>Containers Supplied:</i>				
1 gal Poly (W)		1 gal Poly (X)		

  
\_\_\_\_\_  
Released By  
  
\_\_\_\_\_  
Released By

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

  
\_\_\_\_\_  
Received By  
  
\_\_\_\_\_  
Received By

\_\_\_\_\_  
Date/Time  
2/4/08 705  
\_\_\_\_\_  
Date/Time

\_\_\_\_\_  
Date/Time  
2-4-8 1100  
\_\_\_\_\_  
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: 47 mg/l; Conductivity: 290 umho.

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

Yes (response curve normal)

No (dose interrupted indicated or non-normal)

**Acute Fish Test-96 Hr Survival**

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

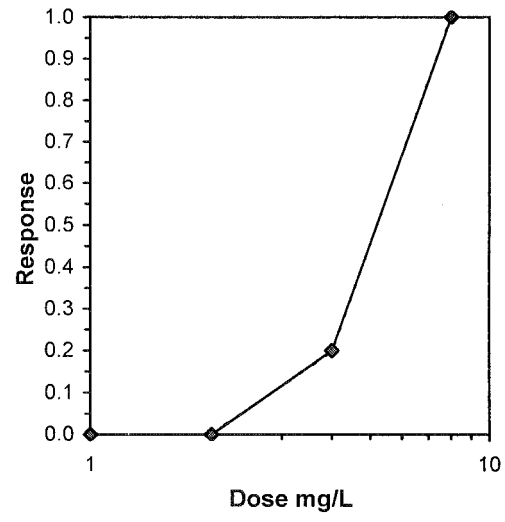
Comments:

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

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

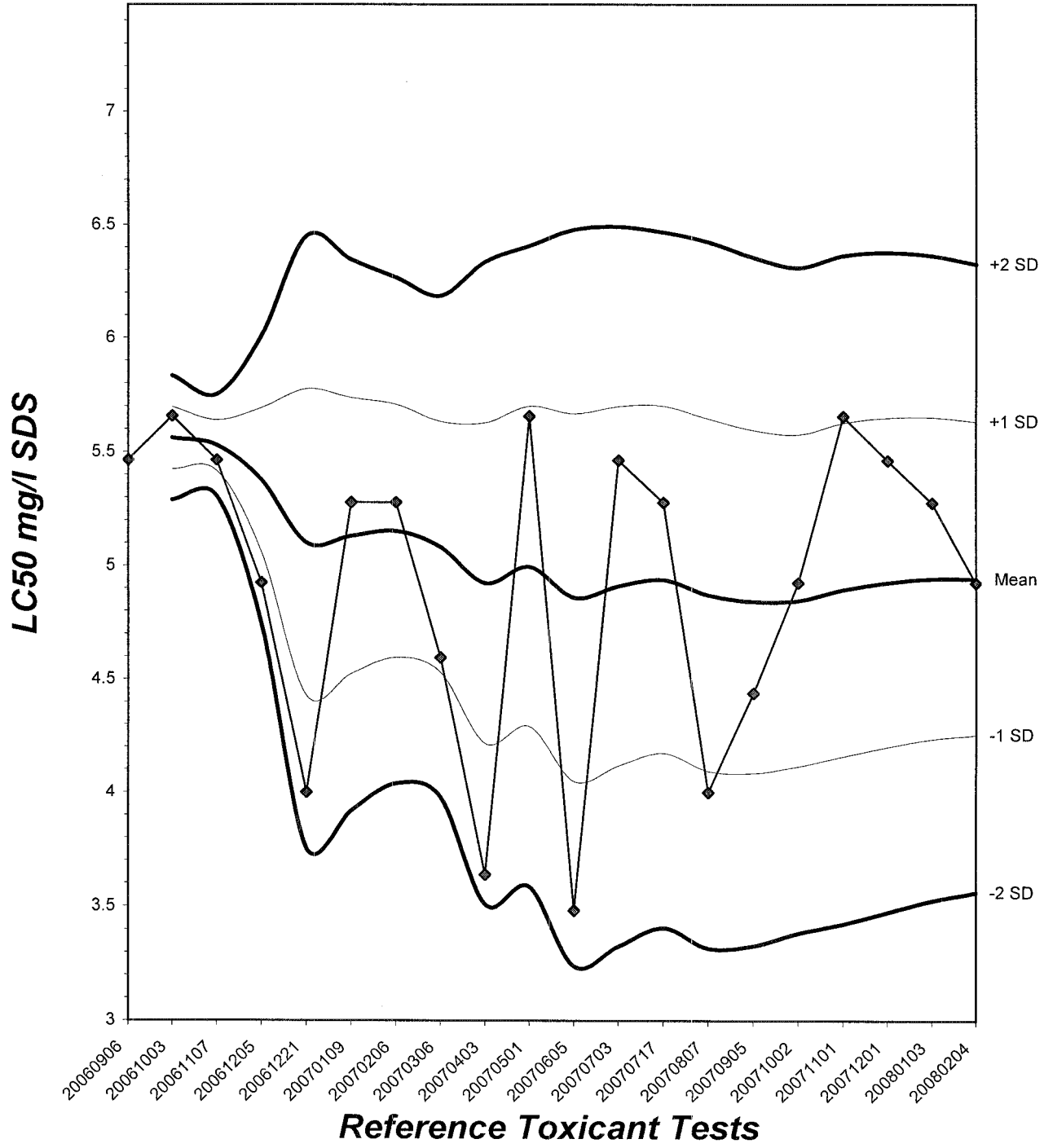
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

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



# Fathead Minnow Acute Laboratory Control Chart

CV% = 14



# TEST ORGANISM LOG



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

QA/QC BATCH NO.: RT-080204

SOURCE: In-Lab Culture

DATE HATCHED: 01-21-08

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

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

DATE USED IN LAB: 2/4/08

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

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

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

### ACCLIMATION WATER QUALITY:

Temp.: 19.8 °C

pH: 7.4

Ammonia: 20.1 mg/l NH<sub>3</sub>-N

DO: 8.4 mg/l

Alkalinity: 64 mg/l

Hardness: 96 mg/l

READINGS RECORDED BY: [Signature]

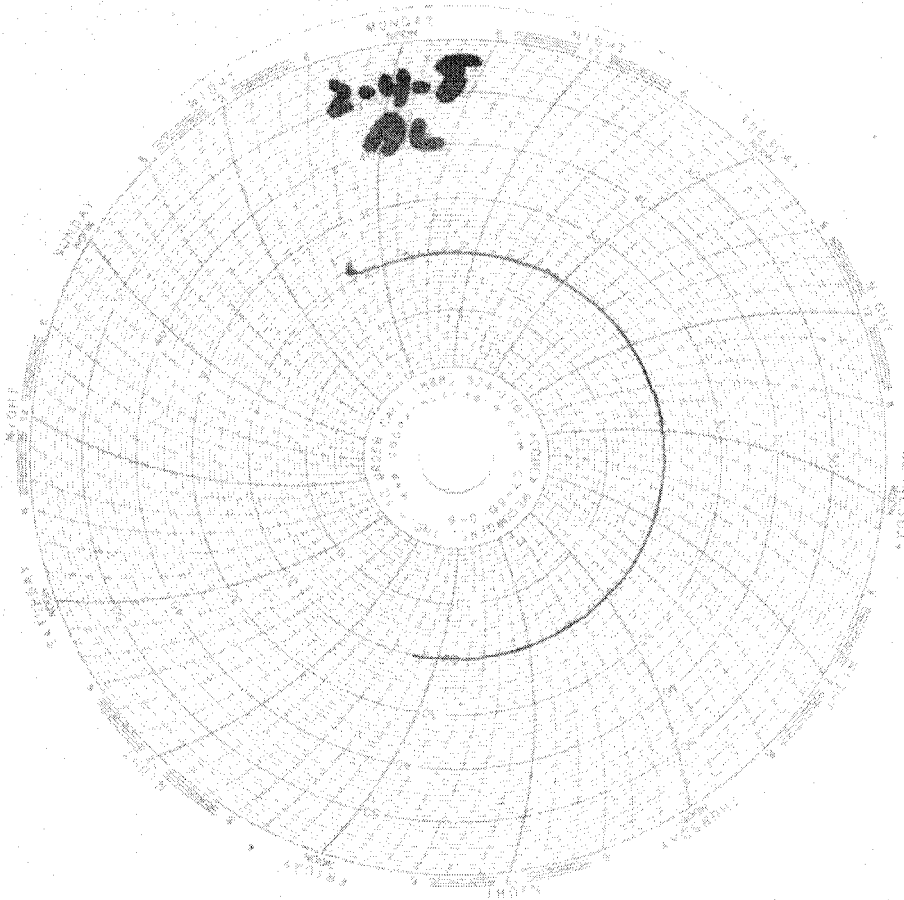
DATE: 2-4-8

# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-080202*

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

*Acceptable Range: 20+/- 1°C*



DATE: February 7, 2008

Page 1 of 9

CLIENT: TestAmerica, Irvine  
17461 Derian Ave., Ste 100  
Irvine, CA 92614

ATTENTION: Joseph Doak

REFERENCE: IRB0152

REPORT NO: 118968

DATE RECEIVED: 2/4/08 at 0845

DATE ANALYZED: 2/7/08

SUBJECT: ANALYSIS OF WATER SAMPLE FOR ASBESTOS BY TEM

ACCREDITED: California Department of Health Services (ELAP-1119)

The sample(s), date and time of collection, and filtration are as follows:

<u>Sample</u>	<u>Date/Time of Collection</u>	<u>Date/Time of Filtration</u>
IRB0152-01	2/3/08 1000	2/4/08 0937

The sample was analyzed for fibers  $>10 \mu\text{m}$  in length to conform with the drinking water document, EPA 600 R 94 134, 100.2. This regulation calls for an MCL (maximum contaminant level) of 7 MFL and an analytical sensitivity level of 0.2 MFL.

No asbestos structures  $>10 \mu\text{m}$  in length were detected. The analytical sensitivity of 0.2 MFL was not reached due to the turbidity

The results of the analysis and the detection limit are summarized on the following pages.

Respectfully submitted,

EMS LABORATORIES, INC.



B. M. Kolk  
Laboratory Director

BMK/ah

NOTE: The results of the analysis are based upon the samples submitted to the laboratory. No representation is made regarding the sampling area other than that implied by the analytical results for the immediate vicinity of the samples analyzed as calculated from the data presented with those samples.

This report, from a NIST laboratory through NVLAP, must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

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

Any deviation or exclusion from the test method is noted in this cover letter.

Unless otherwise noted in this cover letter, the samples were received properly packaged, clearly identified and intact.





**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**IRB0152**

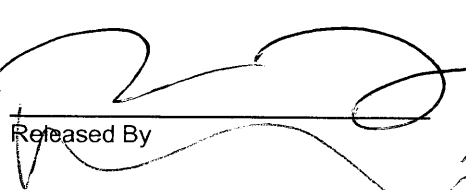
**SENDING LABORATORY:**

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

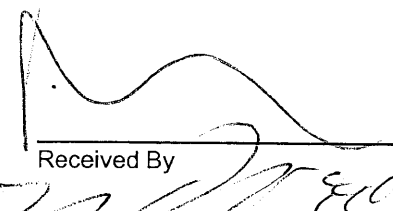
**RECEIVING LABORATORY:**

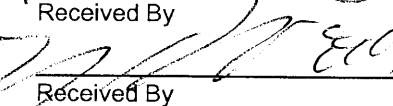
EMS Laboratories  
117 W. Bellevue Drive  
Pasadena, CA 91105  
Phone : (626) 568-4065  
Fax: (626) 796-5282  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C      Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0152-01</b>	<b>Water</b>		Sampled: <b>02/03/08 10:00</b>	
Asbestos-TEM (100.2 - DW)	Present/Not Pr	02/13/08	02/05/08 10:00	Boeing, permit, J flags, Out to EMS
Level 4 Data Package	N/A	02/13/08	03/02/08 10:00	
<i>Containers Supplied:</i> 1 Liter Poly (AC)				

Released By  Date/Time 2/4/08 9:40

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

Received By  Date/Time 2/4/08 7:05

Received By  Date/Time 2-4-08 8:45

February 25, 2008

**Vista Project I.D.: 30236**

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 "IRB0152". 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

30236-001

IRB0152-01

## 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 15:50

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 15:50

Sample ID: <b>IRB0152-01</b>					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA		Matrix:	Aqueous	Lab Sample:	30236-001	Date Received:	5-Feb-08
Project:	IRB0152		Sample Size:	1.00 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:	1000							
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	0.000000451			<b>IS</b> 13C-2,3,7,8-TCDD	87.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000700			13C-1,2,3,7,8-PeCDD	77.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000142			13C-1,2,3,4,7,8-HxCDD	80.4	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000184			J	13C-1,2,3,6,7,8-HxCDD	81.9	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000142			J	13C-1,2,3,4,6,7,8-HpCDD	86.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000332				13C-OCDD	79.7	17 - 157	
OCDD	0.000259			B	13C-2,3,7,8-TCDF	88.5	24 - 169	
2,3,7,8-TCDF	ND	0.000000609			13C-1,2,3,7,8-PeCDF	77.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000842			13C-2,3,4,7,8-PeCDF	76.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000840			13C-1,2,3,4,7,8-HxCDF	79.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000720			13C-1,2,3,6,7,8-HxCDF	77.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000141			13C-2,3,4,6,7,8-HxCDF	75.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000773			13C-1,2,3,7,8,9-HxCDF	80.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000994			13C-1,2,3,4,6,7,8-HpCDF	75.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000562			J	13C-1,2,3,4,7,8,9-HpCDF	79.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000119			13C-OCDF	80.9	17 - 157	
OCDF	0.0000141			J	<b>CRS</b> 37Cl-2,3,7,8-TCDD	88.4	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000895			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000120			b. Estimated maximum possible concentration.			
Total HxCDD	0.0000103				c. Method detection limit.			
Total HpCDD	0.0000823				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000609						
Total PeCDF	0.00000107							
Total HxCDF	0.00000499							
Total HpCDF	0.0000158							

Analyst: MAS

Approved By: William J. Luksemburg 22-Feb-2008 15:50

## **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

IRB0152

30236

SENDING LABORATORY:

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

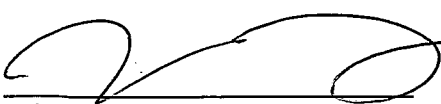
RECEIVING LABORATORY:

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

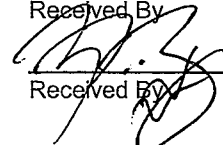
1.4°C

Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB0152-01</b>	<b>Water</b>		Sampled: 02/03/08 10:00	
1613-Dioxin-HR-Alfa	ug/l	02/13/08	02/10/08 10:00	J flags, 17 congeners, no TEQ, ug/L, sub=Vista
Level 4 + EDD-OUT	N/A	02/13/08	03/02/08 10:00	Excel EDD email to pm, Include Std logs for Lvl IV
<i>Containers Supplied:</i>				
1 L Amber (C)	1 L Amber (D)			

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

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

FedEx  \_\_\_\_\_  
Received By Date/Time

2/4/08 17:00  
2.5.08/0929  
Date/Time

SAMPLE LOG-IN CHECKLIST



Vista Project #: 30236 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 1206</u>	Initials: <u>YBUB</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>B3</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

IRB0152

8020454

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: IRB0152-01	Water		Sampled: 02/03/08 10:00	
Level 4 Data Package - Weck	N/A	02/13/08	03/02/08 10:00	Provide Element transfer file
Mercury - 245.1, Diss -OUT	mg/l	02/13/08	03/02/08 10:00	Boeing, J flags, sub to Weck
Mercury - 245.1-OUT	mg/l	02/13/08	03/02/08 10:00	Boeing, J flags, sub to Weck

Containers Supplied:

125 mL Poly (AA)      125 mL Poly w/HNO3  
HNO3      (AB)

Diss. Mercury is Filtered and pres.

Released By: [Signature]      Date/Time: 2/4/08 10:00      Received By: [Signature]      Date/Time: 2/4/08 10:00

Released By: [Signature]      Date/Time: 2/4/08 13:45      Received By: [Signature]      Date/Time: 02/04/08 13:45

NPDES 2296 Page 1 of 1



### CERTIFICATE OF ANALYSIS

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

**Report Date:** 02/11/08 16:19  
**Received Date:** 02/04/08 13:45  
**Turn Around:** Normal

Phone: (949) 261-1022  
Fax: (949) 260-3297

**Work Order #:** 8020454  
**Client Project:** IRB0152

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: 8020454  
Project ID: IRB0152

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:19

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRB0152-01	Client		8020454-01	Water	02/03/08 10:00



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: 8020454  
Project ID: IRB0152

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:19

**IRB0152-01 8020454-01 (Water)**

Date Sampled: 02/03/08 10:00

**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.  
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: 8020454  
Project ID: IRB0152

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:19

# 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: 8020454  
 Project ID: IRB0152

Date Received: 02/04/08 13:45  
 Date Reported: 02/11/08 16:19

**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.  
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: 8020454  
Project ID: IRB0152

Date Received: 02/04/08 13:45  
Date Reported: 02/11/08 16:19

### 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

NPDES - 2303



# Eberline Services

## QC RESULTS

SDG <u>8600</u>	Client <u>TA IRVINE</u>
Work Order <u>R802046-01</u>	Contract <u>PROJECT# IRB0152</u>
Received Date <u>02/03/08</u>	Matrix <u>WATER</u>

Lab						
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results</u>	<u>Units</u>	<u>Amount Added</u>	<u>MDA</u>	<u>Evaluation</u>
<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

<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>
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

<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>3σ</u>	
			<u>RPD (Tot)</u>	<u>Eval</u>
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 

Report Date 03/11/08


Page 2

# Eberline Services

## QC RESULTS

SDG <u>8600</u>	Client <u>TA IRVINE</u>
Work Order <u>R802046-01</u>	Contract <u>PROJECT# IRB0152</u>
Received Date <u>02/03/08</u>	Matrix <u>WATER</u>

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

Certified by <u></u>
Report Date <u>03/11/08</u>
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**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**IRB0152**

**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: 4.6 °C      Ice: (Y) / N

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<b>Analysis</b>	<b>Units</b>	<b>Due</b>	<b>Expires</b>	<b>Comments</b>
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<b>Sample ID: IRB0152-01</b>	<b>Water</b>	Sampled: <b>02/03/08 10:00</b>		
EDD + Level 4	N/A	02/13/08	03/02/08 10:00	
Gamma Spec-O	mg/kg	02/13/08	02/02/09 10:00	Out to Eberline, k-40 and cs-137 only
Gross Alpha-O	pCi/L	02/13/08	08/01/08 10:00	Out to Eberline, Boeing
Gross Beta-O	pCi/L	02/13/08	08/01/08 10:00	Out to Eberline, Boeing
Radium, Combined-O	pCi/L	02/13/08	02/02/09 10:00	Out to Eberline, Boeing
Strontium 90-O	pCi/L	02/13/08	02/02/09 10:00	Out to Eberline, Boeing
Tritium-O	pCi/L	02/13/08	02/02/09 10:00	Out to Eberline, Boeing
Uranium, Combined-O	pCi/L	02/13/08	02/02/09 10:00	Out to Eberline, Boeing

*Containers Supplied:*

2.5 gal Poly (S)      500 mL Amber (T)

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

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

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

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



*file posted*

Client: TEST AMERICA City: IRVINE State: CA

Date/Time received: 07/05/08 09:30 CoC No: 1RB0152

Container ID No: 1601085T Requested TAT (Days): \_\_\_\_\_ F.O. Received Yes:  No:

INSPECTION

- 1 Custody seals on shipping container intact? Yes  No  N/A
- 2 Custody seals on shipping container dated & signed? Yes  No  N/A
- 3 Custody seals on sample containers intact? Yes  No  N/A
- 4 Custody seals on sample containers dated & signed? Yes  No  N/A
- 5 Packing materials: \_\_\_\_\_ 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 \_\_\_\_\_ No: preserved  or \_\_\_\_\_ Preservative \_\_\_\_\_
- 13 Describe any anomalies \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14 Was F.M. notified of any anomalies? Yes  No  Date: \_\_\_\_\_

15 Inspected by: MFu Date: 07/05/08 Time: 10:45

Customer Sample No	Beta/Gamma com	Ion Chamber mR/hr	Wide	Customer Sample No	Beta/Gamma com	Ion Chamber mR/hr	Wide
1RB0152-1	<60						

Ion Chamber Ser. No: \_\_\_\_\_

Calibration date: \_\_\_\_\_

Alpha Meter Ser. No: \_\_\_\_\_

Calibration date: \_\_\_\_\_

Beta/Gamma Meter Ser. No: 100482

Calibration date: 09 MAY 07