

APPENDIX G

Section 63

Outfall 010 - BMP Effectiveness, January 4-5, 2008

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: BMP Effectiveness
Monitoring Program

Sampled: 01/04/08-01/05/08
Received: 01/07/08
Issued: 01/16/08 13:40

NELAP #01108CA California ELAP#1197 CSDLAC #10256

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 4 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IRA0414-01	006 EFF-1	Water
IRA0414-02	006 EFF-2	Water
IRA0414-03	006 EFF-3	Water
IRA0414-04	006 EFF-4	Water
IRA0414-05	006 EFF-5	Water
IRA0414-06	006 EFF-6	Water
IRA0414-07	006 EFF-7	Water
IRA0414-08	006 EFF-8	Water
IRA0414-09	006 EFF-9	Water
IRA0414-10	006 EFF-10	Water
IRA0414-11	006 EFF-11	Water
IRA0414-12	006 EFF-12	Water
IRA0414-13	006 INF-1	Water
IRA0414-14	006 INF-2	Water
IRA0414-15	006 INF-3	Water
IRA0414-16	006 INF-4	Water
IRA0414-17	010 EFF-1	Water
IRA0414-18	010 EFF-2	Water
IRA0414-19	010 EFF-3	Water
IRA0414-20	010 EFF-4	Water
IRA0414-21	010 EFF-5	Water
IRA0414-22	010 EFF-6	Water
IRA0414-23	010 EFF-7	Water

TestAmerica Irvine

Joseph Doak
Project Manager

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
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Monitoring Program
Report Number: IRA0414

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LABORATORY ID	CLIENT ID	MATRIX
IRA0414-24	010 EFF-8	Water
IRA0414-25	010 EFF-9	Water
IRA0414-26	010 EFF-10	Water
IRA0414-27	010 EFF-11	Water
IRA0414-28	010 EFF-12	Water
IRA0414-29	010 EFF-13	Water
IRA0414-30	010 EFF-14	Water
IRA0414-31	010 EFF-15	Water
IRA0414-32	010 EFF-16	Water
IRA0414-33	010 EFF-17	Water
IRA0414-34	010 INF-1	Water
IRA0414-35	010 INF-2	Water
IRA0414-36	010 INF-3	Water
IRA0414-37	010 INF-4	Water
IRA0414-38	010 INF-5	Water
IRA0414-39	010 INF-6	Water
IRA0414-40	010 INF-7	Water
IRA0414-41	010 INF-8	Water
IRA0414-42	010 INF-9	Water
IRA0414-43	010 INF-10	Water
IRA0414-44	010 INF-11	Water
IRA0414-45	010 INF-12	Water
IRA0414-46	010 INF-13	Water
IRA0414-47	010 INF-14	Water

Reviewed By:



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Project Manager

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-01 (006 EFF-1 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-01 (006 EFF-1 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	48	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	48	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-02 (006 EFF-2 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-02 (006 EFF-2 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	42	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	42	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-03 (006 EFF-3 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-03 (006 EFF-3 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	42	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	42	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-04 (006 EFF-4 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	0.99	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-04 (006 EFF-4 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	29	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	29	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-05 (006 EFF-5 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-05 (006 EFF-5 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	30	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	30	1	1/7/2008	1/7/2008	

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-06 (006 EFF-6 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	0.99	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-06 (006 EFF-6 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	18	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	18	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-07 (006 EFF-7 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-07 (006 EFF-7 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	20	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	20	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-08 (006 EFF-8 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	0.99	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-08 (006 EFF-8 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	11	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	11	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-09 (006 EFF-9 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-09 (006 EFF-9 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	11	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07105	10	11	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-10 (006 EFF-10 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-10 (006 EFF-10 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	20	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	20	1	1/7/2008	1/7/2008	

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-11 (006 EFF-11 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	0.99	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-11 (006 EFF-11 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	38	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	38	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-12 (006 EFF-12 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	0.99	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-12 (006 EFF-12 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	29	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	29	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-13 (006 INF-1 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-13 (006 INF-1 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	120	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	120	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-14 (006 INF-2 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-14 (006 INF-2 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	110	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	110	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-15 (006 INF-3 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-15 (006 INF-3 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	73	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	73	1	1/7/2008	1/7/2008	

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-16 (006 INF-4 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-16 (006 INF-4 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	72	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	72	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-17 (010 EFF-1 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-17 (010 EFF-1 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	66	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	66	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-18 (010 EFF-2 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-18 (010 EFF-2 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	39	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	39	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-19 (010 EFF-3 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-19 (010 EFF-3 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	44	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	44	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-20 (010 EFF-4 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08079	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-20 (010 EFF-4 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16083	10	22	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	22	1	1/7/2008	1/7/2008	

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-21 (010 EFF-5 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-21 (010 EFF-5 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	22	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	22	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-22 (010 EFF-6 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-22 (010 EFF-6 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	12	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	12	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-23 (010 EFF-7 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-23 (010 EFF-7 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	10	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A07106	10	10	1	1/7/2008	1/7/2008	
Sample ID: IRA0414-24 (010 EFF-8 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-24 (010 EFF-8 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	10	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	10	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-25 (010 EFF-9 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-25 (010 EFF-9 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	

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Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-26 (010 EFF-10 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-26 (010 EFF-10 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-27 (010 EFF-11 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-27 (010 EFF-11 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-28 (010 EFF-12 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	0.99	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-28 (010 EFF-12 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-29 (010 EFF-13 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-29 (010 EFF-13 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-30 (010 EFF-14 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-30 (010 EFF-14 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-31 (010 EFF-15 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-31 (010 EFF-15 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-32 (010 EFF-16 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-32 (010 EFF-16 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-33 (010 EFF-17 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-33 (010 EFF-17 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	ND	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	ND	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-34 (010 INF-1 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-34 (010 INF-1 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	170	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	170	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-35 (010 INF-2 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-35 (010 INF-2 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	150	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	160	1	1/8/2008	1/8/2008	

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

Project ID: BMP Effectiveness
Monitoring Program
Report Number: IRA0414

Sampled: 01/04/08-01/05/08
Received: 01/07/08

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-36 (010 INF-3 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-36 (010 INF-3 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	270	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	270	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-37 (010 INF-4 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-37 (010 INF-4 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	260	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	260	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-38 (010 INF-5 - Water)				Sampled: 01/04/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-38 (010 INF-5 - Water)				Sampled: 01/04/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	510	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	510	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-39 (010 INF-6 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-39 (010 INF-6 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	310	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	310	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-40 (010 INF-7 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08080	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-40 (010 INF-7 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16085	10	280	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08116	10	280	1	1/8/2008	1/8/2008	

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 Attention: Bronwyn Kelly

Project ID: BMP Effectiveness
 Monitoring Program
 Report Number: IRA0414

Sampled: 01/04/08-01/05/08
 Received: 01/07/08

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-41 (010 INF-8 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-41 (010 INF-8 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	140	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	140	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-42 (010 INF-9 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-42 (010 INF-9 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	86	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	86	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-43 (010 INF-10 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-43 (010 INF-10 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	71	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	71	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-44 (010 INF-11 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-44 (010 INF-11 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	64	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	64	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-45 (010 INF-12 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-45 (010 INF-12 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	56	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	56	1	1/8/2008	1/8/2008	

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Joseph Doak
 Project Manager

MWH-Pasadena/Boeing
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Project ID: BMP Effectiveness
 Monitoring Program
 Report Number: IRA0414

Sampled: 01/04/08-01/05/08
 Received: 01/07/08

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA0414-46 (010 INF-13 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-46 (010 INF-13 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	53	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	53	1	1/8/2008	1/8/2008	
Sample ID: IRA0414-47 (010 INF-14 - Water)				Sampled: 01/05/08				
Reporting Units: g/cc								
Density	Displacement	8A08081	NA	1.0	1	1/8/2008	1/10/2008	
Sample ID: IRA0414-47 (010 INF-14 - Water)				Sampled: 01/05/08				
Reporting Units: mg/l								
Sediment	ASTM D3977	8A16086	10	58	1	1/16/2008	1/16/2008	
Total Suspended Solids	EPA 160.2	8A08117	10	58	1	1/8/2008	1/8/2008	

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Project ID: BMP Effectiveness
 Monitoring Program
 Report Number: IRA0414

Sampled: 01/04/08-01/05/08
 Received: 01/07/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A07105 Extracted: 01/07/08										
Blank Analyzed: 01/07/2008 (8A07105-BLK1)										
Total Suspended Solids	ND	10	mg/l							
LCS Analyzed: 01/07/2008 (8A07105-BS1)										
Total Suspended Solids	965	10	mg/l	1000		96	85-115			
Duplicate Analyzed: 01/07/2008 (8A07105-DUP1)										
Total Suspended Solids	ND	10	mg/l		Source: IRA0401-01 ND				10	
Batch: 8A07106 Extracted: 01/07/08										
Blank Analyzed: 01/07/2008 (8A07106-BLK1)										
Total Suspended Solids	ND	10	mg/l							
LCS Analyzed: 01/07/2008 (8A07106-BS1)										
Total Suspended Solids	973	10	mg/l	1000		97	85-115			
Duplicate Analyzed: 01/07/2008 (8A07106-DUP1)										
Total Suspended Solids	11.0	10	mg/l		Source: IRA0414-23 10.0			10	10	
Batch: 8A08079 Extracted: 01/08/08										
Duplicate Analyzed: 01/10/2008 (8A08079-DUP1)										
Density	1.00	NA	g/cc		Source: IRA0414-01 1.00			0	20	
Batch: 8A08080 Extracted: 01/08/08										
Duplicate Analyzed: 01/10/2008 (8A08080-DUP1)										
Density	1.00	NA	g/cc		Source: IRA0414-21 1.00			0	20	

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Project ID: BMP Effectiveness
 Monitoring Program
 Report Number: IRA0414

Sampled: 01/04/08-01/05/08
 Received: 01/07/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A08081 Extracted: 01/08/08										
Duplicate Analyzed: 01/10/2008 (8A08081-DUP1)					Source: IRA0414-41					
Density	1.00	NA	g/cc		1.00			0	20	
Batch: 8A08116 Extracted: 01/08/08										
Blank Analyzed: 01/08/2008 (8A08116-BLK1)										
Total Suspended Solids	ND	10	mg/l							
LCS Analyzed: 01/08/2008 (8A08116-BS1)										
Total Suspended Solids	991	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 01/08/2008 (8A08116-DUP1)					Source: IRA0414-30					
Total Suspended Solids	ND	10	mg/l		ND				10	
Batch: 8A08117 Extracted: 01/08/08										
Blank Analyzed: 01/08/2008 (8A08117-BLK1)										
Total Suspended Solids	ND	10	mg/l							
LCS Analyzed: 01/08/2008 (8A08117-BS1)										
Total Suspended Solids	993	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 01/08/2008 (8A08117-DUP1)					Source: IRA0446-01					
Total Suspended Solids	ND	10	mg/l		ND				10	

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Attention: Bronwyn Kelly

Project ID: BMP Effectiveness
Monitoring Program
Report Number: IRA0414

Sampled: 01/04/08-01/05/08
Received: 01/07/08

DATA QUALIFIERS AND DEFINITIONS

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

TestAmerica Irvine

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

Project ID: BMP Effectiveness
Monitoring Program
Report Number: IRA0414

Sampled: 01/04/08-01/05/08
Received: 01/07/08

Certification Summary

TestAmerica Irvine

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

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Irvine

Joseph Doak
Project Manager

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CHAIN OF CUSTODY FORM

Test America Version 12/20/07

Client Name/Address: MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing BMP Effectiveness Monitoring Program		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		ANALYSIS REQUIRED		Field readings: Temp = <i>N/A</i> pH = <i>N/A</i> Time of readings = <i>N/A</i>	
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly <i>R Baranose</i> Sampler: <i>J marrisca</i>		Suspended Sediment Concentration (SSC, ASTM-D3977-1997)		Comments		Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ <input checked="" type="checkbox"/>			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Received By	Date/Time	
010 INF-1	W	500 mL Poly	1	1/4/08 - 1930	None	1	<i>Shulman</i>	12/10	
010 INF-2	W	500 mL Poly	1	1/4/08 - 2030	None	2	<i>Shulman</i>	12/10	
010 INF-3	W	500 mL Poly	1	1/4/08 - 2130	None	3	<i>Shulman</i>	12/10	
010 INF-4	W	500 mL Poly	1	1/4/08 - 2230	None	4	<i>Shulman</i>	12/10	
010 INF-5	W	500 mL Poly	1	1/4/08 - 2330	None	5	<i>Shulman</i>	12/10	
010 INF-6	W	500 mL Poly	1	1/5/08 - 0030	None	6	<i>Shulman</i>	12/10	
010 INF-7	W	500 mL Poly	1	1/5/08 - 0130	None	7	<i>Shulman</i>	12/10	
010 INF-8	W	500 mL Poly	1	1/5/08 - 0230	None	8	<i>Shulman</i>	12/10	
010 INF-9	W	500 mL Poly	1	1/5/08 - 0330	None	9	<i>Shulman</i>	12/10	
010 INF-10	W	500 mL Poly	1	1/5/08 - 0430	None	10	<i>Shulman</i>	12/10	
010 INF-11	W	500 mL Poly	1	1/5/08 - 0530	None	11	<i>Shulman</i>	12/10	
010 INF-12	W	500 mL Poly	1	1/5/08 - 0630	None	12	<i>Shulman</i>	12/10	
010 INF-13	W	500 mL Poly	1	1/5/08 - 0730	None	13	<i>Shulman</i>	12/10	
010 INF-14	W	500 mL Poly	1	1/5/08 - 0830	None	14	<i>Shulman</i>	12/10	
010 INF-15	W	500 mL Poly	1		None	15	<i>Shulman</i>	12/10	
010 INF-16	W	500 mL Poly	1		None	16	<i>Shulman</i>	12/10	
010 INF-17	W	500 mL Poly	1		None	17	<i>Shulman</i>	12/10	
010 INF-18	W	500 mL Poly	1		None	18	<i>Shulman</i>	12/10	
010 INF-19	W	500 mL Poly	1		None	19	<i>Shulman</i>	12/10	
010 INF-20	W	500 mL Poly	1		None	20	<i>Shulman</i>	12/10	
010 INF-21	W	500 mL Poly	1		None	21	<i>Shulman</i>	12/10	
010 INF-22	W	500 mL Poly	1		None	22	<i>Shulman</i>	12/10	
010 INF-23	W	500 mL Poly	1		None	23	<i>Shulman</i>	12/10	
010 INF-24	W	500 mL Poly	1		None	24	<i>Shulman</i>	12/10	
Relinquished By <i>J Baranose</i>	Date/Time: 1-6-08	12/10	Received By <i>Shulman</i>	Date/Time: 1/06/08	12/10				
Relinquished By <i>J Baranose</i>	Date/Time: 1/06/08	1432	Received By <i>Shulman</i>	Date/Time: 1/06/08	1432				

APPENDIX G

Section 64

Outfall 010, January 22, 2008

MEC^X Data Validation Reports



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRA2025

Prepared by

MEC^X, 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: IRA2025
 Project Manager: B. Kelly
 Matrix: Soil
 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 010	IRA2025-01	30191-001, 8012320-01	Water	01/22/08 1005	200.8, 245.1, 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 sample in this SDG was received at TestAmerica-Irvine and Eberline within the temperature limits of 4°C \pm 2°C. The sample was received below the temperature limit at Vista; however, the sample was not noted to have been frozen. The sample was received above temperature limits at Weck; however, mercury is not considered volatile. According to the case narrative for this SDG, the sample was received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, custody seals were not required. Custody seals were intact upon arrival at Eberline and Vista. Custody seals were not present on the cooler received at Weck. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: February 29, 2008

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

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

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

B. EPA METHODS 200.8, 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: March 4, 2008

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

- Holding Times: The analytical holding times, 6 months for metals and 28 days for mercury, were met.
- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were $\leq 5\%$, and all masses of interest were calibrated to ≤ 0.1 amu and ≤ 0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury.
- Blanks: There were no applicable detects in the method blanks or CCBs.
- Interference Check Samples: No ICESA/B analyses were performed in association with the metals analyses only.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for the 6020 total and dissolved analytes. All recoveries and RPDs were within the laboratory-established control limits. Evaluation of the 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.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: March 4, 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, gross beta, radium-226, radium-228, strontium-90, and gamma spectroscopy were prepared within the five-day analytical holding time for unpreserved samples. The aliquot for total uranium was prepared within five days of collection.
- **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 internal spike efficiency to default efficiency ratios was near 1, indicating that quenching was not significant.

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 cell efficiencies were determined in September 2006. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 calibration utilized actinium-228 and was verified in February 2001. The radium-228 tracer, yttrium oxalate yields were greater than 70%.

The gamma spectroscopy geometry-specific, detector efficiencies were determined in September 1999 and February 2007. All analytes were determined at the maximum photopeak energy.

The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All 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:** A laboratory duplicate analysis was performed on the sample in this SDG for gross alpha, gross beta, tritium, radium-228, radium-226, strontium-40, total uranium, potassium-40, and cesium-137. The RPDs were within the laboratory-established control limits.
- **Matrix Spike/Matrix Spike Duplicate:** MS/MSD analyses were performed for the sample in this SDG for gross alpha, gross beta, tritium, radium-226, and total uranium. The gross alpha recovery was above the control limit; therefore, gross alpha detected in the site sample was qualified as an estimated detect, "J." The remaining recoveries were within the laboratory-established control limits. Method accuracy for the remaining methods 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.

Sample ID: **IRA2025-01** *Outfall 010* EPA Method 1613

Client Data
 Name: Test America-Irvine, CA
 Project: IRA2025
 Date Collected: 22-Jan-08
 Time Collected: 1005

Sample Data
 Matrix: Aqueous
 Sample Size: 1.01 L

Laboratory Data
 Lab Sample: 30191-001
 QC Batch No.: 9906
 Date Analyzed DB-5: 29-Jan-08
 Date Received: 24-Jan-08
 Date Extracted: 27-Jan-08
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000695			13C-2,3,7,8-TCDD	81.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000970			13C-1,2,3,7,8-PeCDD	72.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000188			13C-1,2,3,4,7,8-HxCDD	78.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000198			13C-1,2,3,6,7,8-HxCDD	77.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000185			13C-1,2,3,4,6,7,8-HpCDD	82.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000458			J	13C-OCDD	67.4	17 - 157	
OCDD	0.0000309			J	13C-2,3,7,8-TCDF	84.6	24 - 169	
2,3,7,8-TCDF	ND	0.000000598			13C-1,2,3,7,8-PeCDF	69.1	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000712			13C-2,3,4,7,8-PeCDF	70.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000665			13C-1,2,3,4,7,8-HxCDF	71.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000875			13C-1,2,3,6,7,8-HxCDF	72.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000903			13C-2,3,4,6,7,8-HxCDF	72.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000980			13C-1,2,3,7,8,9-HxCDF	75.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000120			13C-1,2,3,4,6,7,8-HpCDF	69.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000865			13C-1,2,3,4,7,8,9-HpCDF	74.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000857			13C-OCDF	69.8	17 - 157	
OCDF	ND	0.00000362			CRS 37C1-2,3,7,8-TCDD	89.5	35 - 197	

Totals

Total TCDD	ND	0.00000180						
Total PeCDD	ND	0.00000501						
Total HxCDD	ND	0.00000191						
Total HpCDD	0.00000986							
Total TCDF	ND	0.000000944						
Total PeCDF	ND	0.000000474						
Total HxCDF	ND	0.000000982						
Total HpCDF	ND	0.00000180						

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

Analyst: *Level IV* Approved By: William J. Luksemburg 29-Jan-2008 14:46

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

Project ID: Routine Outfall 010
 Report Number: IRA2025

Sampled: 01/22/08
 Received: 01/22/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IRA2025-01 (Outfall 010 - Water) - cont.										
Reporting Units: ug/l										
Antimony	J/DNQ	EPA 200.8-Diss	8A22140	0.20	2.0	0.61	1	01/22/08	01/23/08	J
Cadmium	U	EPA 200.8-Diss	8A22140	0.11	1.0	ND	1	01/22/08	01/23/08	
Copper	U	EPA 200.8-Diss	8A22140	0.75	2.0	3.4	1	01/22/08	01/23/08	
Lead	U	EPA 200.8-Diss	8A22140	0.30	1.0	ND	1	01/22/08	01/23/08	
Thallium	U	EPA 200.8-Diss	8A22140	0.20	1.0	ND	1	01/22/08	01/23/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
 Project Manager

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2025-01 (Outfall 010 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	8A23079	0.20	2.0	0.63	1	01/23/08	01/24/08	J
Cadmium	EPA 200.8	8A23079	0.11	1.0	ND	1	01/23/08	01/24/08	
Copper	EPA 200.8	8A23079	0.75	2.0	4.0	1	01/23/08	01/24/08	
Lead	EPA 200.8	8A23079	0.30	1.0	ND	1	01/23/08	01/24/08	
Thallium	EPA 200.8	8A23079	0.20	1.0	ND	1	01/23/08	01/24/08	

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

Project ID: Routine Outfall 010
Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2025-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	
Mercury, Total	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	

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IRA2025 <Page 5 of 14>

Eberline Services

ANALYSIS RESULTS

SDG <u>8682</u>	Client <u>TA IRVINE</u>
Work Order <u>R801142-01</u>	Contract <u>PROJECT# IRA2025</u>
Received Date <u>01/24/08</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
IRA2025-01	8682-001	01/22/08	02/06/08	02/06/08	GrossAlpha	2.52 ± 2.0	pCi/L	2.4
				02/06/08	Gross Beta	42.3 ± 2.4	pCi/L	2.4
				02/04/08	Ra-228	0.145 ± 0.17	pCi/L	0.44
				02/05/08	K-40 (G)	36.0 ± 19	pCi/L	13
				02/05/08	Cs-137 (G)	U	pCi/L	1.1
				02/15/08	H-3	-62.4 ± 94	pCi/L	160
				02/11/08	Ra-226	-0.149 ± 0.46	pCi/L	0.96
				02/07/08	Sr-90	0.032 ± 0.30	pCi/L	0.58
				02/19/08	Total U	2.75 ± 0.30	pCi/L	0.022

Outfall 010

J/R, Q

U

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LEVEL IV

Certified by <u><i>[Signature]</i></u>
Report Date <u>02/22/08</u>
Page 1

APPENDIX G

Section 65

Outfall 010, January 22, 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 010

Sampled: 01/22/08
Received: 01/22/08
Issued: 02/25/08 10:23

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
IRA2025-01

CLIENT ID
Outfall 010

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 010

Report Number: IRA2025

Sampled: 01/22/08

Received: 01/22/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2025-01 (Outfall 010 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	8A23079	0.20	2.0	0.63	1	01/23/08	01/24/08	J
Cadmium	EPA 200.8	8A23079	0.11	1.0	ND	1	01/23/08	01/24/08	
Copper	EPA 200.8	8A23079	0.75	2.0	4.0	1	01/23/08	01/24/08	
Lead	EPA 200.8	8A23079	0.30	1.0	ND	1	01/23/08	01/24/08	
Thallium	EPA 200.8	8A23079	0.20	1.0	ND	1	01/23/08	01/24/08	

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NPDES - 2480

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2025-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	8A22140	0.20	2.0	0.61	1	01/22/08	01/23/08	J
Cadmium	EPA 200.8-Diss	8A22140	0.11	1.0	ND	1	01/22/08	01/23/08	
Copper	EPA 200.8-Diss	8A22140	0.75	2.0	3.4	1	01/22/08	01/23/08	
Lead	EPA 200.8-Diss	8A22140	0.30	1.0	ND	1	01/22/08	01/23/08	
Thallium	EPA 200.8-Diss	8A22140	0.20	1.0	ND	1	01/22/08	01/23/08	

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NPDES - 2481

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08

Received: 01/22/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2025-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8A28083	1.3	4.8	ND	1	01/28/08	01/28/08	
Chloride	EPA 300.0	8A22048	5.0	10	72	20	01/22/08	01/23/08	
Nitrate/Nitrite-N	EPA 300.0	8A22048	0.15	0.26	2.5	1	01/22/08	01/23/08	
Sulfate	EPA 300.0	8A22048	0.20	0.50	46	1	01/22/08	01/23/08	
Total Dissolved Solids	SM2540C	8A23102	10	10	480	1	01/23/08	01/23/08	

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NPDES - 2482

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08

Received: 01/22/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2025-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	
Mercury, Total	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	

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NPDES - 2483

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08

Received: 01/22/08

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 010 (IRA2025-01) - Water EPA 300.0	2	01/22/2008 10:05	01/22/2008 17:05	01/22/2008 18:00	01/23/2008 00:08

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Project Manager

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NPDES - 2484

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
 Received: 01/22/08

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
Batch: 8A23079 Extracted: 01/23/08											
Blank Analyzed: 01/24/2008 (8A23079-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: 01/24/2008 (8A23079-BS1)											
Antimony	85.6	2.0	0.20	ug/l	80.0		107	85-115			
Cadmium	89.8	1.0	0.11	ug/l	80.0		112	85-115			
Copper	85.6	2.0	0.75	ug/l	80.0		107	85-115			
Lead	85.9	1.0	0.30	ug/l	80.0		107	85-115			
Thallium	85.4	1.0	0.20	ug/l	80.0		107	85-115			
Matrix Spike Analyzed: 01/24/2008 (8A23079-MS1)											
						Source: IRA2025-01					
Antimony	86.9	4.0	0.40	ug/l	80.0	0.633	108	70-130			
Cadmium	84.0	2.0	0.22	ug/l	80.0	ND	105	70-130			
Copper	82.4	4.0	1.5	ug/l	80.0	3.95	98	70-130			
Lead	83.9	2.0	0.60	ug/l	80.0	ND	105	70-130			
Thallium	82.1	2.0	0.40	ug/l	80.0	ND	103	70-130			
Matrix Spike Dup Analyzed: 01/24/2008 (8A23079-MSD1)											
						Source: IRA2025-01					
Antimony	89.6	4.0	0.40	ug/l	80.0	0.633	111	70-130	3	20	
Cadmium	85.5	2.0	0.22	ug/l	80.0	ND	107	70-130	2	20	
Copper	83.1	4.0	1.5	ug/l	80.0	3.95	99	70-130	1	20	
Lead	85.7	2.0	0.60	ug/l	80.0	ND	107	70-130	2	20	
Thallium	84.4	2.0	0.40	ug/l	80.0	ND	106	70-130	3	20	

TestAmerica Irvine

Joseph Doak
 Project Manager

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 8A22140 Extracted: 01/22/08											
Blank Analyzed: 01/23/2008 (8A22140-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: 01/23/2008 (8A22140-BS1)											
Antimony	88.2	2.0	0.20	ug/l	80.0		110	85-115			
Cadmium	80.6	1.0	0.11	ug/l	80.0		101	85-115			
Copper	81.1	2.0	0.75	ug/l	80.0		101	85-115			
Lead	81.8	1.0	0.30	ug/l	80.0		102	85-115			
Thallium	78.5	1.0	0.20	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/23/2008 (8A22140-MS1)											
						Source: IRA2025-01					
Antimony	91.8	2.0	0.20	ug/l	80.0	0.608	114	70-130			
Cadmium	79.4	1.0	0.11	ug/l	80.0	ND	99	70-130			
Copper	80.4	2.0	0.75	ug/l	80.0	3.44	96	70-130			
Lead	79.1	1.0	0.30	ug/l	80.0	ND	99	70-130			
Thallium	76.0	1.0	0.20	ug/l	80.0	ND	95	70-130			
Matrix Spike Dup Analyzed: 01/23/2008 (8A22140-MSD1)											
						Source: IRA2025-01					
Antimony	94.5	2.0	0.20	ug/l	80.0	0.608	117	70-130	3	20	
Cadmium	80.0	1.0	0.11	ug/l	80.0	ND	100	70-130	1	20	
Copper	82.0	2.0	0.75	ug/l	80.0	3.44	98	70-130	2	20	
Lead	78.6	1.0	0.30	ug/l	80.0	ND	98	70-130	1	20	
Thallium	75.8	1.0	0.20	ug/l	80.0	ND	95	70-130	0	20	

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Project Manager

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A22048 Extracted: 01/22/08											
Blank Analyzed: 01/22/2008 (8A22048-BLK1)											
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							
LCS Analyzed: 01/22/2008 (8A22048-BS1)											
Chloride	5.35	0.50	0.25	mg/l	5.00		107	90-110			M-3
Sulfate	10.2	0.50	0.20	mg/l	10.0		102	90-110			
Matrix Spike Analyzed: 01/22/2008 (8A22048-MS1)											
					Source: IRA1989-01						
Sulfate	48.7	2.5	1.0	mg/l	10.0	39.0	97	80-120			
Matrix Spike Analyzed: 01/22/2008 (8A22048-MS2)											
					Source: IRA2022-01						
Chloride	25.1	1.0	0.50	mg/l	5.00	20.7	88	80-120			
Sulfate	23.4	1.0	0.40	mg/l	10.0	13.7	97	80-120			
Matrix Spike Dup Analyzed: 01/22/2008 (8A22048-MSD1)											
					Source: IRA1989-01						
Sulfate	48.2	2.5	1.0	mg/l	10.0	39.0	92	80-120	1	20	
Batch: 8A23102 Extracted: 01/23/08											
Blank Analyzed: 01/23/2008 (8A23102-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/23/2008 (8A23102-BS1)											
Total Dissolved Solids	1010	10	10	mg/l	1000		101	90-110			
Duplicate Analyzed: 01/23/2008 (8A23102-DUP1)											
					Source: IRA1941-04						
Total Dissolved Solids	80.0	10	10	mg/l		78.0			3	10	

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
 Received: 01/22/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A28083 Extracted: 01/28/08											
Blank Analyzed: 01/28/2008 (8A28083-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 01/28/2008 (8A28083-BS1)											
Hexane Extractable Material (Oil & Grease)	20.2	5.0	1.4	mg/l	20.2		100	78-114			MNR1
LCS Dup Analyzed: 01/28/2008 (8A28083-BSD1)											
Hexane Extractable Material (Oil & Grease)	21.2	5.0	1.4	mg/l	20.2		105	78-114	5	11	

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
 Received: 01/22/08

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
Batch: W8A0913 Extracted: 01/25/08											
Blank Analyzed: 01/28/2008 (W8A0913-BLK1)											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.050	0.025	ug/l							
LCS Analyzed: 01/28/2008 (W8A0913-BS1)											
Mercury, Dissolved	0.967	0.20	0.050	ug/l	1.00		97	85-115			
Mercury, Total	0.967	0.050	0.025	ug/l	1.00		97	85-115			
Matrix Spike Analyzed: 01/28/2008 (W8A0913-MS1) Source: 8012328-01											
Mercury, Dissolved	1.01	0.20	0.050	ug/l	1.00	ND	101	70-130			
Mercury, Total	1.01	0.050	0.025	ug/l	1.00	ND	101	70-130			
Matrix Spike Analyzed: 01/28/2008 (W8A0913-MS2) Source: 8012328-02											
Mercury, Dissolved	0.978	0.20	0.050	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.978	0.050	0.025	ug/l	1.00	ND	98	70-130			
Matrix Spike Dup Analyzed: 01/28/2008 (W8A0913-MSD1) Source: 8012328-01											
Mercury, Dissolved	0.992	0.20	0.050	ug/l	1.00	ND	99	70-130	2	20	
Mercury, Total	0.992	0.050	0.025	ug/l	1.00	ND	99	70-130	2	20	
Matrix Spike Dup Analyzed: 01/28/2008 (W8A0913-MSD2) Source: 8012328-02											
Mercury, Dissolved	1.01	0.20	0.050	ug/l	1.00	ND	101	70-130	3	20	
Mercury, Total	1.01	0.050	0.025	ug/l	1.00	ND	101	70-130	3	20	

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

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

TestAmerica Irvine

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Project Manager

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NPDES - 2490

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnrc
Samples: IRA2025-01

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IRA2025-01

Analysis Performed: Gross Alpha
Samples: IRA2025-01

Analysis Performed: Gross Beta
Samples: IRA2025-01

Analysis Performed: Radium, Combined
Samples: IRA2025-01

Analysis Performed: Strontium 90
Samples: IRA2025-01

Analysis Performed: Tritium
Samples: IRA2025-01

Analysis Performed: Uranium, Combined
Samples: IRA2025-01

TestAmerica Irvine

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

Project ID: Routine Outfall 010

Report Number: IRA2025

Sampled: 01/22/08
Received: 01/22/08

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: IRA2025-01

Weck Laboratories, Inc

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

Method Performed: EPA 245.1
Samples: IRA2025-01

TestAmerica Irvine

Joseph Doak
Project Manager

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IPR2025

CHAIN OF CUSTODY FORM

Test America Version 12/20/07

IRAZ2005

Client Name/Address:
MWH-Arcadia
 618 Michilinda Avenue, Suite 200
 Arcadia, CA 91007
 Test America Contact: Joseph Doak

ANALYSIS REQUIRED

Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, TI	
TCDD (and all congeners)	
Oil & Grease (1664-HEM)	
Cl, SO ₄ , NO ₃ +NO ₂ -N	
TDS	
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)	
Chronic Toxicity	
Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, TI	

Project:
Boeing-SSFL NPDES Routine Outfall 010
 Stormwater at Building 203

Field readings:
 Temp = **46.8°**
 pH = **8.3**
 Time of readings = **10:05**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Comments
Outfall 010	W	1L Poly	1	1-22-08 10:05	HNO ₃	1A	
Outfall 010-Dup	W	1L Poly	1		HNO ₃	1B	
Outfall 010	W	1L Amber	2		None	2A, 2B	
Outfall 010	W	1L Amber	2		HCl	3A, 3B	
Outfall 010	W	500 ml Poly	2		None	4A, 4B	
Outfall 010	W	500 ml Poly	1		None	5	
Outfall 010	W	2.5 Gal Cube 500 ml Amber	1		None	6A, 6B	
Outfall 010	W	1 Gal Poly	1		None	7	
Outfall 010	W	1L Poly	1	1-22-08 10:15	None	8	

Relinquished By: *Robert Bern* Date/Time: 1-22-08 1400
 Relinquished By: *Robert Bern TAI* Date/Time: 1/22/08 1705
 Relinquished By: *Robert Bern TAI* Date/Time: 1/22/08 1705

Received By: *Robert Bern TAI* Date/Time: 1/22/08 1400
 Received By: *Robert Bern TAI* Date/Time: 1/22/08 1705
 Received By: *Robert Bern TAI* Date/Time: 1/22/08 1705

Turn around Time: (check)
 24 Hours _____ 5 Days _____
 48 Hours _____ 10 Days _____
 72 Hours _____ Normal _____
 Sample Integrity: (check) Intact _____ On Ice: **4.2/2.2**

LABORATORY REPORT



"dedicated to providing quality aquatic toxicity testing"

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

Date: January 30, 2008

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

Laboratory No.: A-08012308-001
Sample ID.: IRA2025-01 (Outfall 010)

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: 01/22/08
Date Received: 01/23/08
Temp. Received: 2°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 01/23/08 to 01/29/08

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

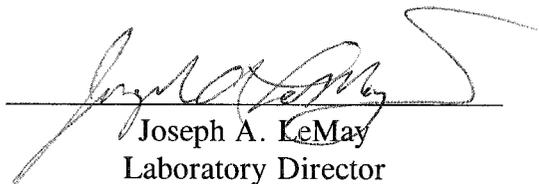
Ceriodaphnia dubia Survival and Reproduction Test (EPA Method 1002).

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

Result Summary:

Chronic:	<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-08012308-001
Client/ID: Test America – Outfall 010

Date Tested: 01/23/08 to 01/29/08

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: 6 days.
Statistics: ToxCalc computer program.

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	26.8
100% Sample	100%	28.9
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 (26.8 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 = 14.8%)
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-Survival Day 6

Start Date: 1/23/2008 14:00 Test ID: 8012308 Sample ID: Outfall 010
 End Date: 1/29/2008 15:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial
 Sample Date: 1/22/2008 10:05 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

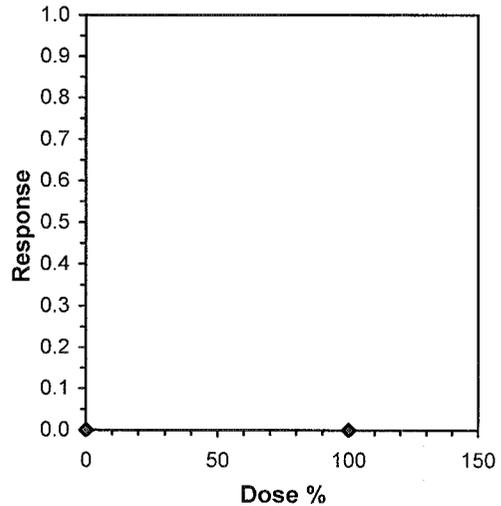
Hypothesis Test (1-tail, 0.05) **NOEC** **LOEC** **ChV** **TU**

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

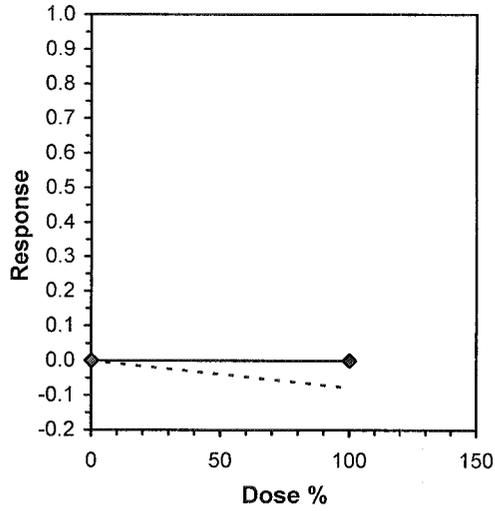
Start Date: 1/23/2008 14:00 Test ID: 8012308 Sample ID: Outfall 010
 End Date: 1/29/2008 15:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial
 Sample Date: 1/22/2008 10:05 Protocol: FWCH 4TH-EPA-821-R-02-0 Test Species: CD-Ceriodaphnia dubia
 Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	27.000	32.000	26.000	27.000	27.000	25.000	32.000	18.000	33.000	21.000
100	29.000	34.000	17.000	31.000	32.000	32.000	23.000	26.000	34.000	31.000

Conc-%	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%	Mean					N-Mean	
D-Control	26.800	1.0000	26.800	18.000	33.000	17.921	10				27.850	1.0000	
100	28.900	1.0784	28.900	17.000	34.000	18.772	10	-0.917	1.734	3.973	27.850	1.0000	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.91596	0.905	-0.9124	0.31456		
F-Test indicates equal variances (p = 0.72)	1.27601	6.54109				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences Treatments vs D-Control	3.97324	0.14826	22.05	26.25	0.37151	1, 18

Linear Interpolation (200 Resamples)				
Point	%	SD	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



CERIODAPHNIA DUBIA CHRONIC BIOASSAY
EPA METHOD 1002.0 Raw Data Sheet



Lab No.: A-08012308-001

Client ID: TestAmerica - IRA2025-01 (Outfall 010)

Start Date: 01/23/2008

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr												
Analyst Initials:		R	R	R	R	R	R	R	R	R	R	R	R	R	-
Time of Readings:		1400	1400	1400	1400	1400	1500	1500	1300	1700	1400	1500	1500	1500	-
Control	DO	8.7	8.5	8.0	8.2	8.0	8.0	7.9	7.6	7.7	7.7	7.9	8.1	8.9	-
	pH	7.8	7.7	7.6	7.8	7.8	7.9	7.7	7.6	7.6	7.6	7.8	8.0	8.0	-
	Temp	25.1	24.4	24.7	24.8	25.3	25.0	25.4	24.7	25.1	24.2	24.2	24.9	24.2	-
100%	DO	10.5	8.6	10.9	8.5	10.5	8.2	10.3	7.6	9.5	7.7	10.1	8.3	10.1	-
	pH	8.3	8.3	8.3	8.3	8.3	8.3	8.2	8.2	8.1	8.2	8.1	8.3	8.2	-
	Temp	24.5	24.3	24.7	24.8	24.4	25.0	25.0	24.8	24.7	24.3	24.9	24.8	24.4	-

Additional Parameters	Control	100% Sample
Conductivity (umohms)	290	635
Alkalinity (mg/l CaCO ₃)	66	242
Hardness (mg/l CaCO ₃)	98	200
Ammonia (mg/l NH ₃ -N)	0.2	0.4

Source of Neonates											
Replicate:	A	B	C	D	E	F	G	H	I	J	
Brood ID:	C3	E2	G2	H1	I1	A5	B6	C4	G4	H5	

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	5	4	5	4	4	3	3	4	5	3	40	10	R
	4	10	0	7	10	8	8	0	6	0	0	49	10	R
	5	0	12	0	0	0	0	13	0	11	10	46	10	R
	6	12	16	14	13	15	14	16	8	17	8	133	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	27	32	26	27	27	25	32	18	33	21	268	10	R
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	5	5	4	4	5	5	4	4	5	4	45	10	R
	4	0	12	0	0	11	10	0	0	0	0	33	10	R
	5	10	0	13	12	17	17	9	10	12	13	112	10	R
	6	14	17	0	15	0	0	10	12	17	14	99	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	29	34	17	31	32	32	23	26	34	31	289	10	R

Circled fourth brood not used in statistical analysis.

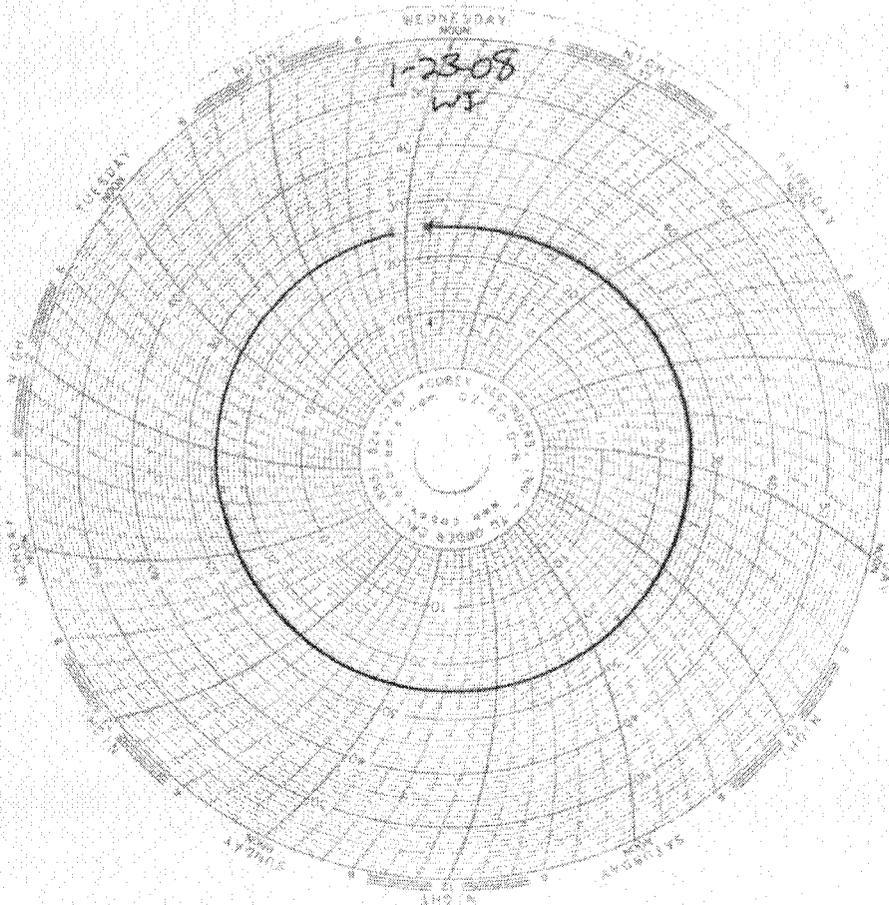
7th day only used if <60% of the surviving control females have produced their third brood.

Laboratory Temperature Chart

QA/QC Batch No: A-08012308

Date Tested: 01/23/08 to 01/29/08

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



SUBCONTRACT ORDER

TestAmerica Irvine

IRA2025

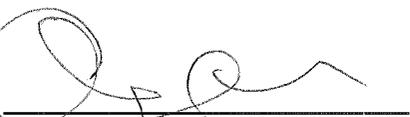
SENDING LABORATORY:

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

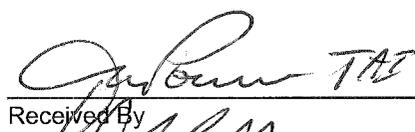
RECEIVING LABORATORY:

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: 2 °C Ice: Y / N

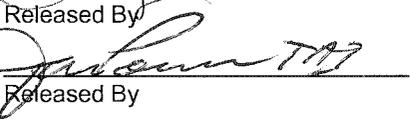
Analysis	Units	Due	Expires	Comments
Sample ID: IRA2025-01	Water		Sampled: 01/22/08 10:05	ph=8.3, temp=46.8
Bioassay-7 dy Chmic	N/A	01/31/08	01/23/08 22:05	Cerio, EPA/821-R02-013, Sub to Aquatic testing
Containers Supplied: 1 gal Poly (M)				


Released By

1/23/08 0720
Date/Time


Received By

1/23/08 0720
Date/Time


Released By

1/23/08 1210
Date/Time


Received By

1-23-08 1210
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

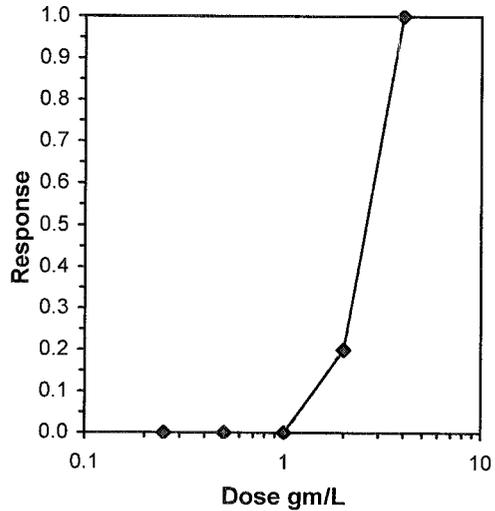
Comments:

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

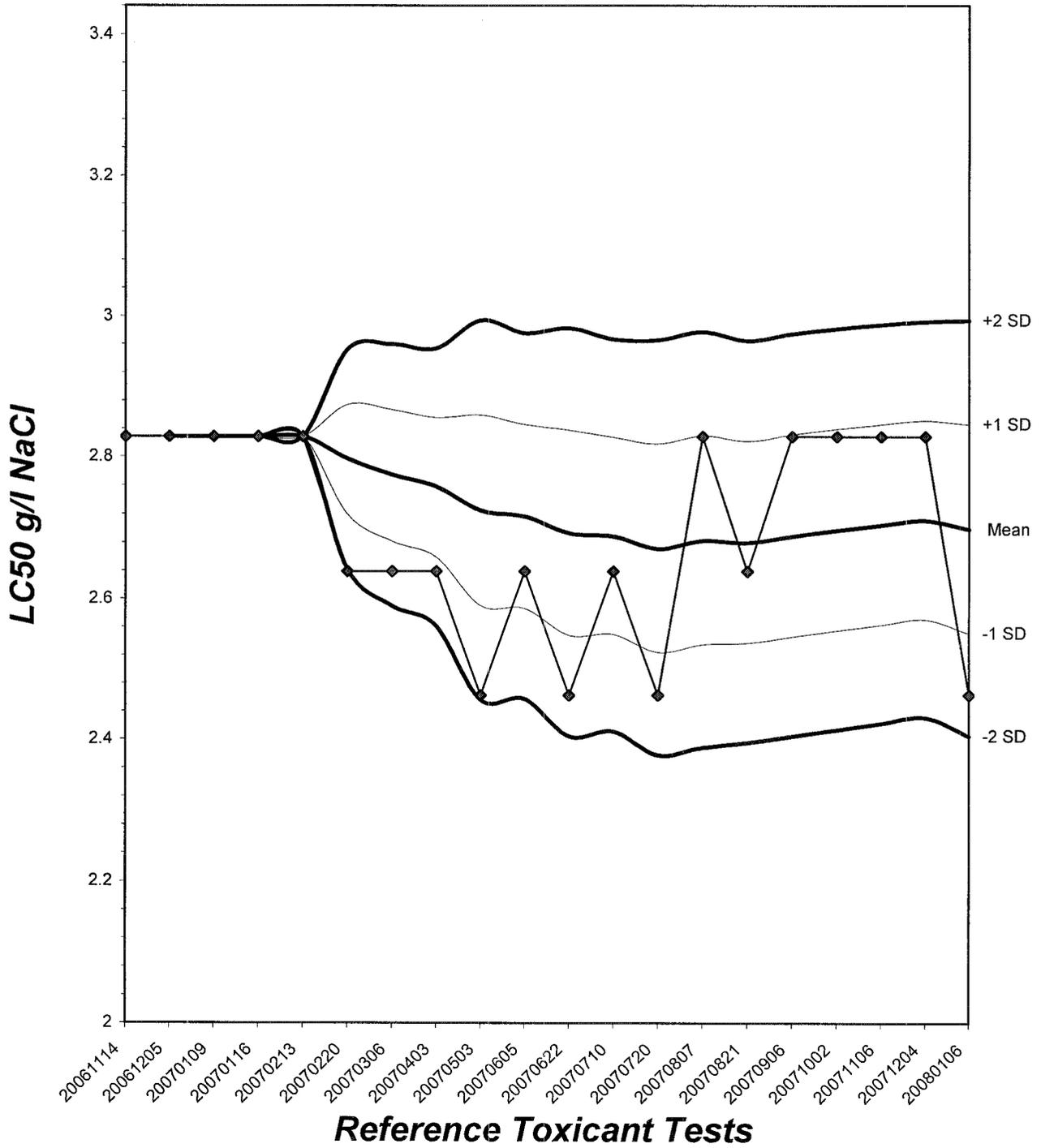
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	2	4	2.82843	
Treatments vs D-Control				

Trimmed Spearman-Kärber			
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					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			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

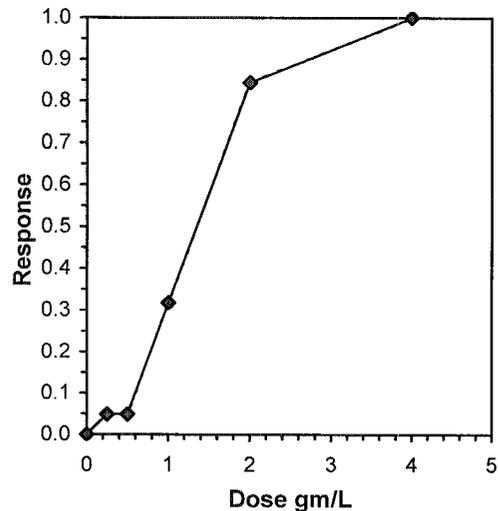
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05) Statistic: 0.91281 Critical: 0.947 Skew: -0.9793 Kurt: 0.67912
 Bartlett's Test indicates equal variances (p = 0.25) Statistic: 5.39 Critical: 13.2767

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

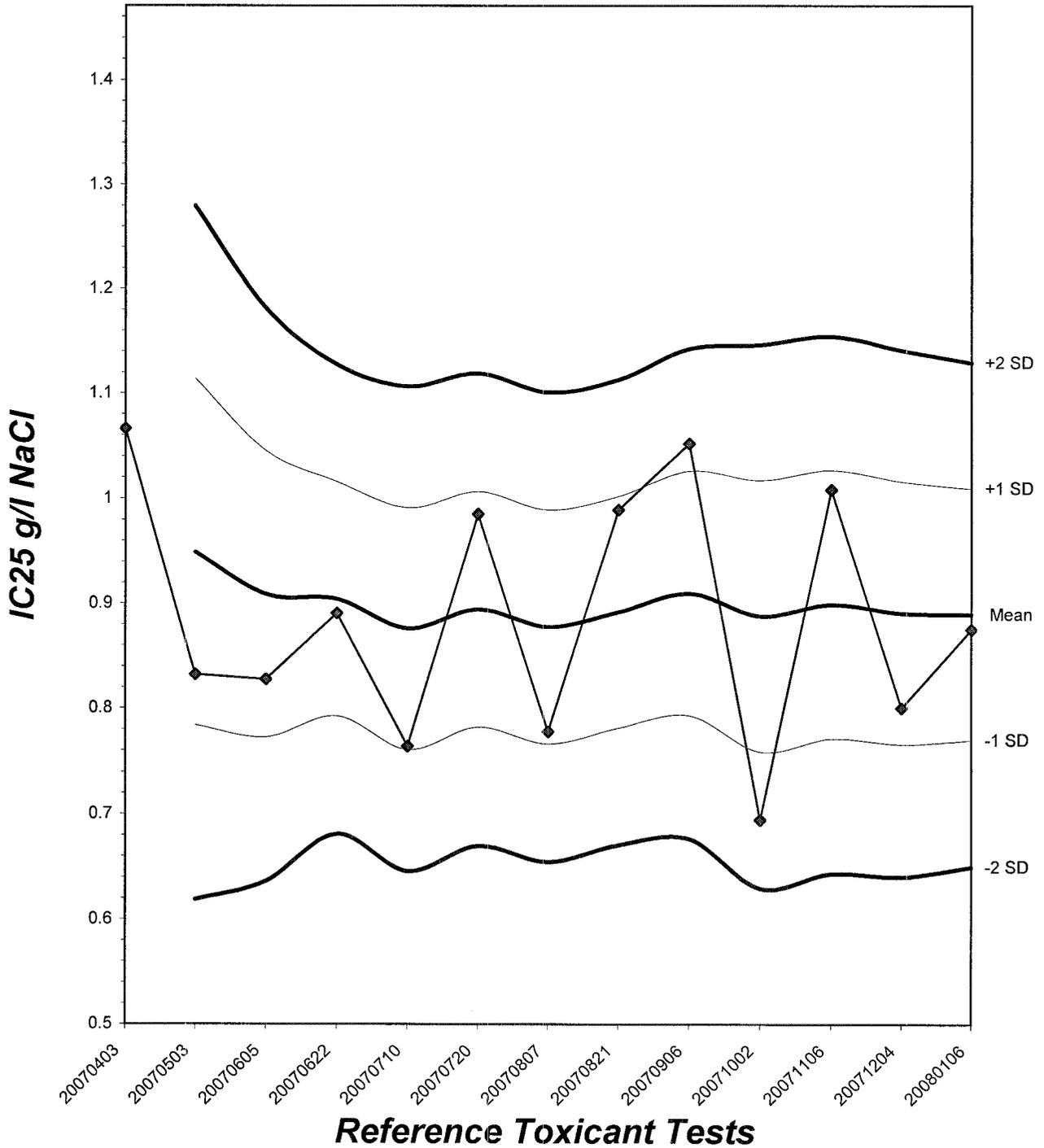
Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	0.5023	0.1876	0.0809	0.6178	-0.0659
IC10	0.5955	0.1768	0.1617	0.7497	-0.5184
IC15	0.6886	0.1424	0.2426	0.9253	-0.5389
IC20	0.7818	0.1259	0.4995	1.0352	0.2728
IC25	0.8750	0.1224	0.6413	1.1094	0.3153
IC40	1.1574	0.1139	0.9216	1.3331	-0.0890
IC50	1.3472	0.0972	1.1197	1.4847	-0.4227



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

Circled fourth brood not used in statistical analysis.

7th 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.

7th 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													
Analyst Initials:		g	h	h	h	h	h	h	g	h	h	h	h	h	h	
Time of Readings:		1300	1330	1330	1300	1300	1230	1230	1300	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	7.5	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	7.5	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 O₂; 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 ₃)	66	65	63	65	66	64
Hardness (mg/l CaCO ₃)	98	97	98	98	97	98

Source of Neonates

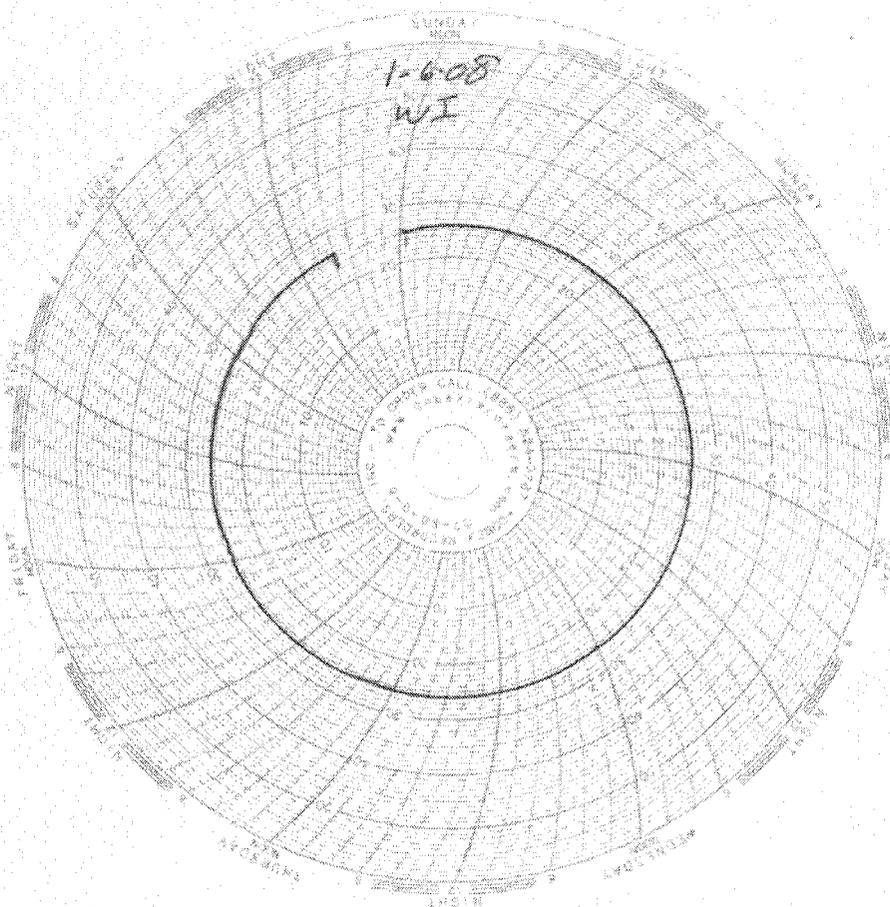
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	2B	1B	3C	2C	2A	3D	3E	2H	3F	2G

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 - 2511

Eberline Services

ANALYSIS RESULTS

SDG <u>8682</u> Work Order <u>R801142-01</u> Received Date <u>01/24/08</u>	Client <u>TA IRVINE</u> Contract <u>PROJECT# IRA2025</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>
IRA2025-01	8682-001	01/22/08	02/06/08	GrossAlpha	2.52 ± 2.0	pCi/L	2.4
			02/06/08	Gross Beta	42.3 ± 2.4	pCi/L	2.4
			02/04/08	Ra-228	0.145 ± 0.17	pCi/L	0.44
			02/05/08	K-40 (G)	36.0 ± 19	pCi/L	13
			02/05/08	Cs-137 (G)	U	pCi/L	1.1
			02/15/08	H-3	-62.4 ± 94	pCi/L	160
			02/11/08	Ra-226	-0.149 ± 0.46	pCi/L	0.96
			02/07/08	Sr-90	0.032 ± 0.30	pCi/L	0.58
			02/19/08	Total U	2.75 ± 0.30	pCi/L	0.022

Certified by <u></u> Report Date <u>02/22/08</u> Page 1
--

Eberline Services

SDG <u>8682</u> Work Order <u>R801142-01</u> Received Date <u>01/24/08</u>	Client <u>TA IRVINE</u> Contract <u>PROJECT# IRA2025</u> Matrix <u>WATER</u>
--	--

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

**TestAmerica Irvine
IRA2025**

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: 4 °C Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2025-01	Water		Sampled: 01/22/08 10:05	ph=8.3, temp=46.8
Gamma Spec-O	mg/kg	01/31/08	01/21/09 10:05	Boeing, J flags, K-40 and CS-137 only
Gross Alpha-O	pCi/L	01/31/08	07/20/08 10:05	Boeing, J flags
Gross Beta-O	pCi/L	01/31/08	07/20/08 10:05	Boeing, J flags
Level 4 Data Package - Out	N/A	01/31/08	02/19/08 10:05	
Radium, Combined-O	pCi/L	01/31/08	01/21/09 10:05	Boeing, J flags
Strontium 90-O	pCi/L	01/31/08	01/21/09 10:05	Boeing, J flags
Tritium-O	pCi/L	01/31/08	01/21/09 10:05	Boeing, J flags
Uranium, Combined-O	pCi/L	01/31/08	01/21/09 10:05	Boeing, J flags
<i>Containers Supplied:</i>				
2.5 gal Poly (K)	500 mL Amber (L)			

 1/23/08 17:00
Released By _____ Date/Time _____

FedEx 1/23/08 17:00
Received By _____ Date/Time _____
MFU 01/24/08 09:15
Received By _____ Date/Time _____

Released By _____

Date/Time _____



January 29, 2008

Vista Project I.D.: 30191

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 24, 2008 under your Project Name "IRA2025". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A rush 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. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink that reads "Martha M. Maier".

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: 1/24/2008

Vista Lab. ID

Client Sample ID

30191-001

IRA2025-01

SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	9906	Lab Sample:	0-MB001	Date Analyzed DB-5:	29-Jan-08	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	27-Jan-08						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000647			IS 13C-2,3,7,8-TCDD	86.5	25 - 164		
1,2,3,7,8-PeCDD	ND	0.00000122			13C-1,2,3,7,8-PeCDD	79.3	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000111			13C-1,2,3,4,7,8-HxCDD	88.1	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000109			13C-1,2,3,6,7,8-HxCDD	86.9	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000105			13C-1,2,3,4,6,7,8-HpCDD	91.4	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000123			13C-OCDD	73.6	17 - 157		
OCDD	ND	0.00000681			13C-2,3,7,8-TCDF	90.4	24 - 169		
2,3,7,8-TCDF	ND	0.000000578			13C-1,2,3,7,8-PeCDF	76.2	24 - 185		
1,2,3,7,8-PeCDF	ND	0.000000800			13C-2,3,4,7,8-PeCDF	77.2	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000796			13C-1,2,3,4,7,8-HxCDF	80.4	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000512			13C-1,2,3,6,7,8-HxCDF	82.8	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000533			13C-2,3,4,6,7,8-HxCDF	82.6	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000583			13C-1,2,3,7,8,9-HxCDF	91.5	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000671			13C-1,2,3,4,6,7,8-HpCDF	81.2	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000428			13C-1,2,3,4,7,8,9-HpCDF	85.2	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.000000460			13C-OCDF	78.4	17 - 157		
OCDF	ND	0.00000140			CRS 37Cl-2,3,7,8-TCDD	84.0	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.00000122			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000195			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000207			c. Method detection limit.				
Total HpCDD	ND	0.00000302			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000578							
Total PeCDF	ND	0.00000209							
Total HxCDF	ND	0.000000573							
Total HpCDF	ND	0.000000443							

Analyst: MAS

Approved By: William J. Luksemburg 29-Jan-2008 14:46

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	9906	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	27-Jan-08	Date Analyzed DB-5:	29-Jan-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	9.57	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	89.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	48.6	35 - 71	13C-1,2,3,7,8-PeCDD	80.6	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	45.8	35 - 82	13C-1,2,3,4,7,8-HxCDD	89.6	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	87.3	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	47.0	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	91.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	45.3	35 - 70	13C-OCDD	73.9	17 - 157	
OCDD	100	95.0	78 - 144	13C-2,3,7,8-TCDF	93.6	24 - 169	
2,3,7,8-TCDF	10.0	8.78	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	79.3	24 - 185	
1,2,3,7,8-PeCDF	50.0	45.0	40 - 67	13C-2,3,4,7,8-PeCDF	78.5	21 - 178	
2,3,4,7,8-PeCDF	50.0	45.9	34 - 80	13C-1,2,3,4,7,8-HxCDF	79.6	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	46.7	36 - 67	13C-1,2,3,6,7,8-HxCDF	82.1	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	46.4	42 - 65	13C-2,3,4,6,7,8-HxCDF	81.7	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	46.5	35 - 78	13C-1,2,3,7,8,9-HxCDF	88.5	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	45.4	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	80.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	45.1	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	86.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	44.9	39 - 69	13C-OCDF	79.2	17 - 157	
OCDF	100	91.4	63 - 170	CRS 37Cl-2,3,7,8-TCDD	82.9	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 29-Jan-2008 14:46

Sample ID: IRA2025-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA		Matrix:	Aqueous	Lab Sample:	30191-001	Date Received:	24-Jan-08
Project:	IRA2025		Sample Size:	1.01 L	QC Batch No.:	9906	Date Extracted:	27-Jan-08
Date Collected:	22-Jan-08				Date Analyzed DB-5:	29-Jan-08	Date Analyzed DB-225:	NA
Time Collected:	1005							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000695			IS 13C-2,3,7,8-TCDD	81.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000970			13C-1,2,3,7,8-PeCDD	72.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000188			13C-1,2,3,4,7,8-HxCDD	78.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000198			13C-1,2,3,6,7,8-HxCDD	77.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000185			13C-1,2,3,4,6,7,8-HpCDD	82.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000458			J	13C-OCDD	67.4	17 - 157	
OCDD	0.0000309			J	13C-2,3,7,8-TCDF	84.6	24 - 169	
2,3,7,8-TCDF	ND	0.000000598			13C-1,2,3,7,8-PeCDF	69.1	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000712			13C-2,3,4,7,8-PeCDF	70.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000665			13C-1,2,3,4,7,8-HxCDF	71.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000875			13C-1,2,3,6,7,8-HxCDF	72.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000903			13C-2,3,4,6,7,8-HxCDF	72.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000980			13C-1,2,3,7,8,9-HxCDF	75.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000120			13C-1,2,3,4,6,7,8-HpCDF	69.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000865			13C-1,2,3,4,7,8,9-HpCDF	74.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000857			13C-OCDF	69.8	17 - 157	
OCDF	ND	0.00000362			CRS 37Cl-2,3,7,8-TCDD	89.5	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000180			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000501			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000191			c. Method detection limit.			
Total HpCDD	0.00000986				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000944						
Total PeCDF	ND		0.000000474					
Total HxCDF	ND	0.000000982						
Total HpCDF	ND	0.00000180						

Analyst:

Approved By: William J. Luksemburg 29-Jan-2008 14:46

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	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.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
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

IRA2025

SENDING LABORATORY:

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

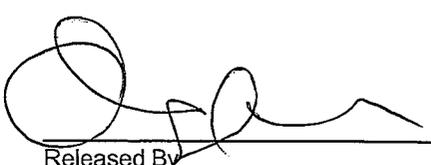
RECEIVING LABORATORY:

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: 0.1 °C

30191
0.1°C

Ice: (Y) N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2025-01	Water			Sampled: 01/22/08 10:05 ph=8.3, temp=46.8
1613-Dioxin-HR-Alta	ug/l	01/31/08	01/29/08 10:05	J flags, 17 congeners, no TEQ, ug/L, sub=Vista
<i>Containers Supplied:</i>				
1 L Amber (C)	1 L Amber (D)			



Released By

1/23/08 1700

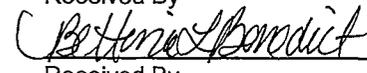
Date/Time

FedEx

Received By

1/23/08 1700

Date/Time



Received By

1/24/08 0955

Date/Time

Released By

Date/Time

SAMPLE LOG-IN CHECKLIST



Vista Project #: 30191 TAT 7

Samples Arrival:	Date/Time 1/24/08 0858	Initials: YBB	Location: WR-2
			Shelf/Rack: N/A
Logged In:	Date/Time 1/24/08 1348	Initials: YBB	Location: WR-2
			Shelf/Rack: B-4
Delivered By:	<u>FedEx</u>	UPS	Cal
		DHL	Hand Delivered
	Other		
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
		None	
Temp °C	0.1	Time: 0905	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 # 7983 5858 3013	✓	
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 ₂ S ₂ O ₃ Preservation Documented?	COC	Sample Container	<u>None</u>
Shipping Container	Vista	<u>Client</u>	Retain
		<u>Return</u>	Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine

IRA2025

8012320

SENDING LABORATORY:

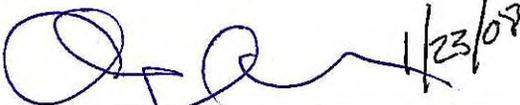
TestAmerica Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Project Manager: Joseph Doak

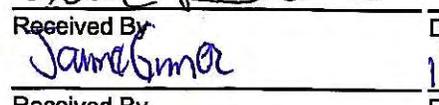
RECEIVING LABORATORY:

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: 18.2 °C

Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2025-01	Water		Sampled: 01/22/08 10:05	ph=8.3, temp=46.8
Level 4 + EDD-OUT	N/A	01/31/08	02/19/08 10:05	Sub to Weck, transfer file EDD
Level 4 Data Package - Weck	N/A	01/31/08	02/19/08 10:05	Out to Weck
Mercury - 245.1, Diss -OUT	mg/l	01/31/08	02/19/08 10:05	Weck, Boeing, J flags
Mercury - 245.1-OUT	mg/l	01/31/08	02/19/08 10:05	Weck, Boeing, permit, J flags, if result>ND, call TA
<i>Containers Supplied:</i>				
125 mL Poly w/HNO3	125 mL Poly (O)			
(N)				

 1/23/08 0805
 Released By _____ Date/Time _____
 1/23/08 1105
 Released By _____ Date/Time _____

 1/23/08 0805
 Received By _____ Date/Time _____
 1/23/08 1105
 Received By _____ Date/Time _____



CERTIFICATE OF ANALYSIS

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

Report Date: 01/29/08 15:46
Received Date: 01/23/08 11:05
Turn Around: 6 days

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

Work Order #: 8012320
Client Project: IRA2025

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 01/23/08 11:05 with the Chain of Custody document. The samples were received in good condition. The samples were received at 18.2 °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: 8012320
Project ID: IRA2025

Date Received: 01/23/08 11:05
Date Reported: 01/29/08 15:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRA2025-01	Client		8012320-01	Water	01/22/08 10:05



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: 8012320
Project ID: IRA2025

Date Received: 01/23/08 11:05
Date Reported: 01/29/08 15:46

IRA2025-01 8012320-01 (Water)

Date Sampled: 01/22/08 10:05

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	W8A0913	01/25/08	01/28/08	jlp
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8A0913	01/25/08	01/28/08	jlp



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Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

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

Report ID: 8012320
Project ID: IRA2025

Date Received: 01/23/08 11:05
Date Reported: 01/29/08 15:46

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: 8012320
 Project ID: IRA2025

Date Received: 01/23/08 11:05
 Date Reported: 01/29/08 15:46

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 W8A0913 - EPA 245.1

Blank (W8A0913-BLK1)

Analyzed: 01/28/08

Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.050	ug/l							

LCS (W8A0913-BS1)

Analyzed: 01/28/08

Mercury, Dissolved	0.967	0.20	ug/l	1.00		97	85-115			
Mercury, Total	0.967	0.050	ug/l	1.00		97	85-115			

Matrix Spike (W8A0913-MS1)

Source: 8012328-01

Analyzed: 01/28/08

Mercury, Dissolved	1.01	0.20	ug/l	1.00	ND	101	70-130			
Mercury, Total	1.01	0.050	ug/l	1.00	ND	101	70-130			

Matrix Spike (W8A0913-MS2)

Source: 8012328-02

Analyzed: 01/28/08

Mercury, Dissolved	0.978	0.20	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.978	0.050	ug/l	1.00	ND	98	70-130			

Matrix Spike Dup (W8A0913-MSD1)

Source: 8012328-01

Analyzed: 01/28/08

Mercury, Dissolved	0.992	0.20	ug/l	1.00	ND	99	70-130	2	20	
Mercury, Total	0.992	0.050	ug/l	1.00	ND	99	70-130	2	20	

Matrix Spike Dup (W8A0913-MSD2)

Source: 8012328-02

Analyzed: 01/28/08

Mercury, Dissolved	1.01	0.20	ug/l	1.00	ND	101	70-130	3	20	
Mercury, Total	1.01	0.050	ug/l	1.00	ND	101	70-130	3	20	



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Phone 626.336.2139 Fax 626.336.2634

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

Report ID: 8012320
Project ID: IRA2025

Date Received: 01/23/08 11:05
Date Reported: 01/29/08 15:46

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 66

Outfall 010 - BMP Effectiveness, January 22, 2008

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: BMP Effectiveness
Monitoring Program

Sampled: 01/22/08
Received: 01/26/08
Issued: 02/06/08 18:11

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IRA2570-01	010 EFF-1	Water
IRA2570-02	010 EFF-2	Water
IRA2570-03	010 EFF-3	Water
IRA2570-04	010 EFF-4	Water
IRA2570-05	010 EFF-5	Water
IRA2570-06	010 EFF-6	Water
IRA2570-07	010 EFF-7	Water
IRA2570-08	010 EFF-8	Water
IRA2570-09	010 EFF-9	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

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

Project ID: BMP Effectiveness
 Monitoring Program
 Report Number: IRA2570

Sampled: 01/22/08
 Received: 01/26/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2570-01 (010 EFF-1 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	1.0	1	02/01/08	02/01/08	
Sample ID: IRA2570-02 (010 EFF-2 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	1.0	1	02/01/08	02/01/08	
Sample ID: IRA2570-03 (010 EFF-3 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-04 (010 EFF-4 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-05 (010 EFF-5 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-06 (010 EFF-6 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-07 (010 EFF-7 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-08 (010 EFF-8 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-09 (010 EFF-9 - Water)									
Reporting Units: g/cc									
Density	Displacement	8B01116	N/A	NA	0.99	1	02/01/08	02/01/08	
Sample ID: IRA2570-01 (010 EFF-1 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	

TestAmerica Irvine

Joseph Doak
 Project Manager

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

Project ID: BMP Effectiveness
 Monitoring Program
 Report Number: IRA2570

Sampled: 01/22/08
 Received: 01/26/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2570-02 (010 EFF-2 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-03 (010 EFF-3 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-04 (010 EFF-4 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-05 (010 EFF-5 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-06 (010 EFF-6 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-07 (010 EFF-7 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-08 (010 EFF-8 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	
Sample ID: IRA2570-09 (010 EFF-9 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8B04106	10	10	ND	1	02/04/08	02/05/08	

TestAmerica Irvine

Joseph Doak
 Project Manager

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

Project ID: BMP Effectiveness
Monitoring Program
Report Number: IRA2570

Sampled: 01/22/08
Received: 01/26/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B01116 Extracted: 02/01/08										
Duplicate Analyzed: 02/01/2008 (8B01116-DUP1)										
Density	0.999	NA	N/A	g/cc		Source: IRA2570-01 1.00		0	20	

TestAmerica Irvine

Joseph Doak
Project Manager

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IRA2570 <Page 4 of 6>
NPDES - 2538

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

Project ID: BMP Effectiveness
Monitoring Program
Report Number: IRA2570

Sampled: 01/22/08
Received: 01/26/08

DATA QUALIFIERS AND DEFINITIONS

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

TestAmerica Irvine

Joseph Doak
Project Manager

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IRA2570 <Page 5 of 6>
NPDES - 2539

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

Project ID: BMP Effectiveness
Monitoring Program
Report Number: IRA2570

Sampled: 01/22/08
Received: 01/26/08

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

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.

IPA2570

RA2570

CHAIN OF CUSTODY FORM

Version 12/20/07

Client Name/Address: MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing BMP Effectiveness Monitoring Program		Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Project Manager: Joseph Doak Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Field readings: Temp = N/A pH = N/A Time of readings = N/A		ANALYSIS REQUIRED	Comments
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly Sampler: J. Morrison R. Morrison		Project: Boeing BMP Effectiveness Monitoring Program		Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Project Manager: Joseph Doak Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Field readings: Temp = N/A pH = N/A Time of readings = N/A			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Suspended Sediment Concentration (SSC, ASTM-D3977-1997)				
010 EFF-1	W	500 mL Poly	1	01/22/08-0419	None	1	X				
010 EFF-2	W	500 mL Poly	1	01/22/08-0519	None	2	X				
010 EFF-3	W	500 mL Poly	1	01/22/08-0619	None	3	X				
010 EFF-4	W	500 mL Poly	1	01/22/08-0719	None	4	X				
010 EFF-5	W	500 mL Poly	1	01/22/08-0819	None	5	X				
010 EFF-6	W	500 mL Poly	1	01/22/08-0919	None	6	X				
010 EFF-7	W	500 mL Poly	1	01/22/08-1019	None	7	X				
010 EFF-8	W	500 mL Poly	1	01/22/08-1119	None	8	X				
010 EFF-9	W	500 mL Poly	1	01/22/08-1219	None	9	X				
010 EFF-10	W	500 mL Poly	1		None	10	X				
010 EFF-11	W	500 mL Poly	1		None	11	X				
010 EFF-12	W	500 mL Poly	1		None	12	X				
010 EFF-13	W	500 mL Poly	1		None	13	X				
010 EFF-14	W	500 mL Poly	1		None	14	X				
010 EFF-15	W	500 mL Poly	1		None	15	X				
010 EFF-16	W	500 mL Poly	1		None	16	X				
010 EFF-17	W	500 mL Poly	1		None	17	X				
010 EFF-18	W	500 mL Poly	1		None	18	X				
010 EFF-19	W	500 mL Poly	1		None	19	X				
010 EFF-20	W	500 mL Poly	1		None	20	X				
010 EFF-21	W	500 mL Poly	1		None	21	X				
010 EFF-22	W	500 mL Poly	1		None	22	X				
010 EFF-23	W	500 mL Poly	1		None	23	X				
010 EFF-24	W	500 mL Poly	1		None	24	X				
Relinquished By	Date/Time: 1-26-08 1245			Received By		Date/Time: 01-26-08 1245					
Relinquished By	Date/Time: 1-26-08 1530			Received By		Date/Time: 1-26-08 1530					
Relinquished By	Date/Time: 1-26-08 1530			Received By		Date/Time: 1-26-08 1530					

ML 1/28/08
1615

Turn around Time: (check)
 24 Hours 5 Days
 48 Hours 10 Days
 72 Hours Normal
 Sample Integrity: (check)
 Intact On Ice:
 7.6/5.6°C

APPENDIX G

Section 67

Outfall 010, February 3, 2008

MEC^X Data Validation Reports



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB0153

Prepared by

MEC^X, 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: IRB0153
 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 010	IRB0153-01	30236-001, 8020453-01, CRB0036-01, 8601-001	Water	02/03/08 1410	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 in transit. The samples were received below the temperature limits at Vista and Weck; however, the samples were 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.

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.

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

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

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x 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 $\mu\text{g/L}$. The detect for OCDD in the sample was less than five times the concentration reported in the method blank; therefore, the OCDD detect was qualified as an estimated nondetect, "UJ," and

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

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

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

Reviewed By: P. Meeks

Date Reviewed: March 26, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x 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 ≤ 0.1 amu and ≤ 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 ≥ 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: ICESA/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 ICESA 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: MS/MSD analyses were performed on the sample in this SDG for the total 6010 analytes. MS/MSD recoveries are not evaluated if the native concentration of an analyte is $4\times$ the spike concentration. All recoveries and RPDs 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 zinc was detected at a slightly higher concentration in the dissolved metals sample fraction. The difference between the zinc results is 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.

C. EPA METHOD 525.2 — Pesticides

Reviewed By: P. Meeks

Date Reviewed: March 27, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x 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 ≥ 0.05 and %RSDs $\leq 30\%$. Continuing calibration RRFs were ≥ 0.05 and applicable target compound responses were within the method QC limits of 70-130%.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample from this SDG. Evaluation of method accuracy and precision was based on the LCS/LCSD results.

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

D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: March 28, 2008

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

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

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

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

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

Sample ID: **IRB0153-01** *Outfall 010* **EPA Method 1613**

Client Data
 Name: Test America-Irvine, CA
 Project: IRB0153
 Date Collected: 3-Feb-08
 Time Collected: 1410

Sample Data
 Matrix: Aqueous
 Sample Size: 1.01 L

Laboratory Data
 Lab Sample: 30237-001
 QC Batch No.: 9953
 Date Analyzed DB-5: 19-Feb-08
 Date Received: 5-Feb-08
 Date Extracted: 15-Feb-08
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000568			13C-2,3,7,8-TCDD	76.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000661			13C-1,2,3,7,8-PeCDD	69.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000124			13C-1,2,3,4,7,8-HxCDD	72.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000126			13C-1,2,3,6,7,8-HxCDD	72.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000120			13C-1,2,3,4,6,7,8-HpCDD	77.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000149			J	13C-OCDD	72.3	17 - 157	
OCDD	0.0000124			J,B	13C-2,3,7,8-TCDF	81.3	24 - 169	
2,3,7,8-TCDF	ND	0.000000439			13C-1,2,3,7,8-PeCDF	69.8	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000607			13C-2,3,4,7,8-PeCDF	70.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000649			13C-1,2,3,4,7,8-HxCDF	69.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000647			13C-1,2,3,6,7,8-HxCDF	68.6	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000678			13C-2,3,4,6,7,8-HxCDF	67.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000748			13C-1,2,3,7,8,9-HxCDF	73.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000961			13C-1,2,3,4,6,7,8-HpCDF	71.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000119			13C-1,2,3,4,7,8,9-HpCDF	74.3	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000738			13C-OCDF	76.2	17 - 157	
OCDF	ND	0.00000406			CRS 37Cl-2,3,7,8-TCDD	88.0	35 - 197	

Totals

Total TCDD	ND	0.000000865						
Total PeCDD	ND	0.00000132						
Total HxCDD	ND	0.00000123						
Total HpCDD	0.00000363							
Total TCDF	ND	0.000000439						
Total PeCDF	ND	0.000000628						
Total HxCDF	ND	0.000000753						
Total HpCDF	ND	0.00000123						

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
 Approved By: William J. Luksemburg 22-Feb-2008 15:51

Lowered IV

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

Project ID: Annual Outfall 010

Report Number: IRB0153

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: IRB0153-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	160	1	02/04/08	02/04/08	
Boron U	EPA 200.7	8B04079	0.020	0.050	ND	1	02/04/08	02/04/08	
Calcium	EPA 200.7	8B04079	0.050	0.10	53	1	02/04/08	02/04/08	MHA
Iron	EPA 200.7	8B04079	0.015	0.040	0.095	1	02/04/08	02/04/08	
Magnesium	EPA 200.7	8B04079	0.012	0.020	7.6	1	02/04/08	02/04/08	

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TestAmerica Irvine

Joseph Doak
Project Manager

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

Project ID: Annual Outfall 010

Report Number: IRB0153

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: IRB0153-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	8B04079	40	50	95	1	02/04/08	02/04/08	
Antimony	EPA 200.8	8B04080	0.20	2.0	0.35	1	02/04/08	02/05/08	J
Arsenic	EPA 200.7	8B04079	7.0	10	ND	1	02/04/08	02/04/08	
Beryllium	EPA 200.7	8B04079	0.90	2.0	ND	1	02/04/08	02/04/08	
Cadmium	EPA 200.8	8B04080	0.11	1.0	ND	1	02/04/08	02/04/08	
Chromium	EPA 200.7	8B04079	2.0	5.0	2.2	1	02/04/08	02/04/08	J
Copper	EPA 200.8	8B04080	0.75	2.0	ND	1	02/04/08	02/04/08	
Lead	EPA 200.8	8B04080	0.30	1.0	ND	1	02/04/08	02/04/08	
Nickel	EPA 200.7	8B04079	2.0	10	ND	1	02/04/08	02/04/08	
Selenium	EPA 200.7	8B04079	8.0	10	ND	1	02/04/08	02/04/08	
Silver	EPA 200.7	8B04079	6.0	10	ND	1	02/04/08	02/04/08	
Thallium	EPA 200.8	8B04080	0.20	1.0	ND	1	02/04/08	02/04/08	
Vanadium	EPA 200.7	8B04079	3.0	10	ND	1	02/04/08	02/04/08	
Zinc	EPA 200.7	8B04079	6.0	20	9.2	1	02/04/08	02/04/08	J

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Arcadia, CA 91007
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Project ID: Annual Outfall 010

Report Number: IRB0153

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: IRB0153-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Boron	U	EPA 200.7-Diss	8B05111	0.020	0.050	ND	1	02/05/08	02/06/08
Calcium		EPA 200.7-Diss	8B05111	0.050	0.10	53	1	02/05/08	02/06/08
Iron	JANQ	EPA 200.7-Diss	8B05111	0.015	0.040	0.016	1	02/05/08	02/06/08 J
Magnesium		EPA 200.7-Diss	8B05111	0.012	0.020	7.4	1	02/05/08	02/06/08
Hardness (as CaCO3)		SM2340B	8B05111	1.0	1.0	160	1	02/05/08	02/06/08

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Report Number: IRB0153

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: IRB0153-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aluminum U	EPA 200.7-Diss	8B05111	40	50	ND	1	02/05/08	02/06/08	
Antimony J/DNQ, *III	EPA 200.8-Diss	8B04144	0.20	2.0	0.34	1	02/04/08	02/05/08	J
Arsenic U	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	ND	1	02/04/08	02/05/08	
Lead UJ/*III	EPA 200.8-Diss	8B04144	0.30	1.0	ND	1	02/04/08	02/05/08	
Nickel U	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 UJ/*III	EPA 200.8-Diss	8B04144	0.20	1.0	ND	1	02/04/08	02/05/08	
Vanadium U	EPA 200.7-Diss	8B05111	3.0	10	ND	1	02/05/08	02/06/08	
Zinc J/DNQ	EPA 200.7-Diss	8B05111	6.0	20	11	1	02/05/08	02/06/08	J

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Project ID: Annual Outfall 010

Report Number: IRB0153

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
Sample ID: IRB0153-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	U	EPA 245.1	W8B0147	0.050	0.20	ND	1	02/05/08	02/07/08
Mercury, Total	V	EPA 245.1	W8B0147	0.050	0.20	ND	1	02/05/08	02/07/08

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Annual Outfall 010

Report Number: IRB0153

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
Sample ID: IRB0153-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Chlorpyrifos U	EPA 525.2	C8B0516	0.10	1.0	ND	1	02/05/08	02/07/08	P, pH
Diazinon UJ/H	EPA 525.2	C8B0516	0.24	0.25	ND	1	02/05/08	02/07/08	
Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)					91 %				
Surrogate: Triphenylphosphate (70-130%)					108 %				
Surrogate: Perylene-d12 (70-130%)					95 %				

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Eberline Services

ANALYSIS RESULTS

SDG <u>8601</u>	Client <u>TA IRVINE</u>
Work Order <u>R802047-01</u>	Contract <u>PROJECT# IRB0153</u>
Received Date <u>02/05/08</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
Client <u>Sample ID</u> outfall 010 IRB0153-01	8601-001	02/03/08	02/26/08		GrossAlpha	0.302 ± 0.73	pCi/L	1.2 UJ/R
			02/26/08		Gross Beta	5.04 ± 0.94	pCi/L	1.4
			02/27/08		Ra-228	0.157 ± 0.20	pCi/L	0.53 UJ/H
			02/25/08		K-40 (G)	U	pCi/L	19 ↓
			02/25/08		Cs-137 (G)	U	pCi/L	0.90 ↓
			02/29/08		H-3	-51.6 ± 88	pCi/L	150 U
			03/04/08		Ra-226	0.266 ± 0.39	pCi/L	0.66 UJ/H
			02/18/08		Sr-90	0.005 ± 0.36	pCi/L	0.84 ↓
			02/26/08		Total U	0.386 ± 0.043	pCi/L	0.022 J/H

LEVEL IV

Certified by <u></u>
Report Date <u>04/02/08</u>
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