

APPENDIX G

Section 15

Outfall 010, December 7, 2009

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: 12/07/09
Received: 12/07/09
Revised: 01/25/10 14:54

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

*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.*

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

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

ADDITIONAL INFORMATION: Revised report to provide total Uranium

LABORATORY ID

ISL0775-01
ISL0775-02

CLIENT ID

Outfall 010 (Grab)
Outfall 010 (Comp)

MATRIX

Water
Water

Reviewed By:



TestAmerica Irvine

Kathleen A. Robb For Joseph Doak
Project Manager

MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

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Sampled: 12/07/09

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HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-01 (Outfall 010 (Grab) - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	9L10072	4.7	1.3	ND	1	12/10/2009	12/10/2009	

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METALS

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	9L09085	2.0	0.30	0.67	1	12/9/2009	12/9/2009	J
Cadmium	EPA 200.8	9L09085	1.0	0.10	0.21	1	12/9/2009	12/9/2009	J
Copper	EPA 200.8	9L09085	2.0	0.50	4.4	1	12/9/2009	12/9/2009	
Lead	EPA 200.8	9L09085	1.0	0.20	1.9	1	12/9/2009	12/9/2009	
Thallium	EPA 200.8	9L09085	1.0	0.20	ND	1	12/9/2009	12/9/2009	

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DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	9L11017	2.0	0.30	0.54	1	12/11/2009	12/11/2009	J
Cadmium	EPA 200.8-Diss	9L11017	1.0	0.10	ND	1	12/11/2009	12/11/2009	
Copper	EPA 200.8-Diss	9L11017	2.0	0.50	2.1	1	12/11/2009	12/11/2009	
Lead	EPA 200.8-Diss	9L11017	1.0	0.20	ND	1	12/11/2009	12/11/2009	
Thallium	EPA 200.8-Diss	9L11017	1.0	0.20	ND	1	12/11/2009	12/11/2009	

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INORGANICS

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: mg/l									
Chloride	EPA 300.0	9L08059	0.50	0.25	21	1	12/8/2009	12/8/2009	
Nitrate/Nitrite-N	EPA 300.0	9L08059	0.26	0.15	5.3	1	12/8/2009	12/8/2009	
Sulfate	EPA 300.0	9L08059	0.50	0.20	32	1	12/8/2009	12/8/2009	
Total Dissolved Solids	SM2540C	9L11013	10	1.0	190	1	12/11/2009	12/11/2009	

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EPA-5 1613B

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02RE1 (Outfall 010 (Comp) - Water)									
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	9358216	0.000049	0.0000012	0.00008	0.97	12/24/2009	12/29/2009	B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	9358216	0.000049	0.0000086	0.00013	0.97	12/24/2009	12/29/2009	J, B
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	9358216	0.000049	0.0000130	0.000028	0.97	12/24/2009	12/29/2009	J, B
1,2,3,4,7,8-HxCDD	EPA-5 1613B	9358216	0.000049	0.0000076	0.00002	0.97	12/24/2009	12/29/2009	J, B
1,2,3,4,7,8-HxCDF	EPA-5 1613B	9358216	0.000049	0.0000064	0.000027	0.97	12/24/2009	12/29/2009	J, B
1,2,3,6,7,8-HxCDD	EPA-5 1613B	9358216	0.000049	0.0000070	0.000032	0.97	12/24/2009	12/29/2009	J, B
1,2,3,6,7,8-HxCDF	EPA-5 1613B	9358216	0.000049	0.0000062	0.000013	0.97	12/24/2009	12/29/2009	J, Q, B
1,2,3,7,8,9-HxCDD	EPA-5 1613B	9358216	0.000049	0.0000060	0.000023	0.97	12/24/2009	12/29/2009	J, Q, B
1,2,3,7,8,9-HxCDF	EPA-5 1613B	9358216	0.000049	0.0000068	0.00001	0.97	12/24/2009	12/29/2009	J, Q, B
1,2,3,7,8-PeCDD	EPA-5 1613B	9358216	0.000049	0.0000083	ND	0.97	12/24/2009	12/29/2009	
1,2,3,7,8-PeCDF	EPA-5 1613B	9358216	0.000049	0.0000110	0.000012	0.97	12/24/2009	12/29/2009	J, Q, B
2,3,4,6,7,8-HxCDF	EPA-5 1613B	9358216	0.000049	0.0000058	0.0000095	0.97	12/24/2009	12/29/2009	J, Q, B
2,3,4,7,8-PeCDF	EPA-5 1613B	9358216	0.000049	0.000013	ND	0.97	12/24/2009	12/29/2009	
2,3,7,8-TCDD	EPA-5 1613B	9358216	0.0000097	0.0000056	ND	0.97	12/24/2009	12/29/2009	
2,3,7,8-TCDF	EPA-5 1613B	9358216	0.0000097	0.000028	ND	0.97	12/24/2009	12/29/2009	CON
OCDD	EPA-5 1613B	9358216	0.000097	0.000013	0.00089	0.97	12/24/2009	12/29/2009	B
OCDF	EPA-5 1613B	9358216	0.000097	0.0000077	0.000055	0.97	12/24/2009	12/29/2009	J, B
Total HpCDD	EPA-5 1613B	9358216	0.000049	0.0000012	0.00024	0.97	12/24/2009	12/29/2009	B
Total HpCDF	EPA-5 1613B	9358216	0.000049	0.0000086	0.000048	0.97	12/24/2009	12/29/2009	J, B
Total HxCDD	EPA-5 1613B	9358216	0.000049	0.0000066	0.000026	0.97	12/24/2009	12/29/2009	J, Q, B
Total HxCDF	EPA-5 1613B	9358216	0.000049	0.0000058	0.000017	0.97	12/24/2009	12/29/2009	J, Q, B
Total PeCDD	EPA-5 1613B	9358216	0.000049	0.0000083	ND	0.97	12/24/2009	12/29/2009	
Total PeCDF	EPA-5 1613B	9358216	0.000049	0.0000110	0.000041	0.97	12/24/2009	12/29/2009	J, Q, B
Total TCDD	EPA-5 1613B	9358216	0.0000097	0.0000056	ND	0.97	12/24/2009	12/29/2009	
Total TCDF	EPA-5 1613B	9358216	0.0000097	0.0000070	0.0000092	0.97	12/24/2009	12/29/2009	J, B

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	77 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	77 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	76 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	71 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	73 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	70 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	77 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	74 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	55 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	58 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	78 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	58 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	66 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	70 %
Surrogate: 37Cl-2,3,7,8-TCDD (35-197%)	76 %
Surrogate: 13C-OCDD (17-157%)	75 %

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Sampled: 12/07/09

Received: 12/07/09

MCAWW 245.1

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	9348214	0.2	0.027	0.053	1	12/14/2009	12/14/2009	J

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Received: 12/07/09

MCAWW 245.1-DISS

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: ug/L									
Mercury	MCAWW 245.1-DISS	9348240	0.2	0.027	ND	1	12/14/2009	12/14/2009	

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Sampled: 12/07/09
Received: 12/07/09

ASTM 5174-91

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	15135	0.677	0.21	0.577	1	1/15/2010	1/18/2010	Jc

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Sampled: 12/07/09

Received: 12/07/09

EPA 900.0 MOD

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	9355152	3		2.4	1	12/21/2009	12/26/2009	Jc
Gross Beta	EPA 900.0 MOD	9355152	4	1.2	8.9	1	12/21/2009	12/26/2009	

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EPA 901.1 MOD

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	9349219	20	20	0.06	1	12/15/2009	1/8/2010	U
Potassium 40	EPA 901.1 MOD	9349219	NA	250	-60	1	12/15/2009	1/8/2010	U

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EPA 903.0 MOD

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	9345208	1	0.17	0.12	1	12/11/2009	1/5/2010	U

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EPA 904 MOD

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	9345210	1	1.1	0.44	1	12/11/2009	1/4/2010	U

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EPA 905 MOD

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	9345211	3	1.7	-1.29	1	12/11/2009	12/23/2009	U

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EPA 906.0 MOD

Analyte	Method	Batch	Reporting Limit	MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)									
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	9365109	500	160	-26	1	1/4/2010	1/4/2010	U

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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 (Comp) (ISL0775-02) - Water					
EPA 300.0	2	12/07/2009 12:25	12/07/2009 17:55	12/08/2009 20:45	12/08/2009 21:11
Filtration	1	12/07/2009 12:25	12/07/2009 17:55	12/09/2009 13:00	12/09/2009 13:00

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L10072 Extracted: 12/10/09										
Blank Analyzed: 12/10/2009 (9L10072-BLK1)										
Hexane Extractable Material (Oil & Grease)	ND	5.0	mg/l							
LCS Analyzed: 12/10/2009 (9L10072-BS1)										
Hexane Extractable Material (Oil & Grease)	20.4	5.0	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 12/10/2009 (9L10072-BSD1)										
Hexane Extractable Material (Oil & Grease)	20.6	5.0	mg/l	20.0		103	78-114	1	11	
Matrix Spike Analyzed: 12/10/2009 (9L10072-MS1)										
Hexane Extractable Material (Oil & Grease)	22.1	4.7	mg/l	19.0	3.60	98	78-114			

Source: ISL1242-01

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Received: 12/07/09

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L09085 Extracted: 12/09/09										
Blank Analyzed: 12/09/2009 (9L09085-BLK1)										
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.0	ug/l							
Lead	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 12/09/2009 (9L09085-BS1)										
Antimony	80.9	2.0	ug/l	80.0		101	85-115			
Cadmium	81.1	1.0	ug/l	80.0		101	85-115			
Copper	79.0	2.0	ug/l	80.0		99	85-115			
Lead	77.4	1.0	ug/l	80.0		97	85-115			
Thallium	76.9	1.0	ug/l	80.0		96	85-115			
Matrix Spike Analyzed: 12/09/2009 (9L09085-MS1) Source: ISL0786-07										
Antimony	81.7	2.0	ug/l	80.0	ND	102	70-130			
Cadmium	79.0	1.0	ug/l	80.0	ND	99	70-130			
Copper	80.3	2.0	ug/l	80.0	ND	100	70-130			
Lead	74.8	1.0	ug/l	80.0	0.219	93	70-130			
Thallium	74.6	1.0	ug/l	80.0	ND	93	70-130			
Matrix Spike Dup Analyzed: 12/09/2009 (9L09085-MSD1) Source: ISL0786-07										
Antimony	81.1	2.0	ug/l	80.0	ND	101	70-130	1	20	
Cadmium	78.5	1.0	ug/l	80.0	ND	98	70-130	1	20	
Copper	76.2	2.0	ug/l	80.0	ND	95	70-130	5	20	
Lead	73.7	1.0	ug/l	80.0	0.219	92	70-130	2	20	
Thallium	73.2	1.0	ug/l	80.0	ND	91	70-130	2	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: ISL0775

Sampled: 12/07/09
 Received: 12/07/09

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L11017 Extracted: 12/11/09										
Blank Analyzed: 12/11/2009 (9L11017-BLK1)										
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.0	ug/l							
Lead	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 12/11/2009 (9L11017-BS1)										
Antimony	74.2	2.0	ug/l	80.0		93	85-115			
Cadmium	73.9	1.0	ug/l	80.0		92	85-115			
Copper	79.0	2.0	ug/l	80.0		99	85-115			
Lead	83.3	1.0	ug/l	80.0		104	85-115			
Thallium	80.2	1.0	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 12/11/2009 (9L11017-MS1) Source: ISL0771-02										
Antimony	74.9	2.0	ug/l	80.0	0.514	93	70-130			
Cadmium	74.0	1.0	ug/l	80.0	ND	92	70-130			
Copper	82.5	2.0	ug/l	80.0	3.13	99	70-130			
Lead	83.8	1.0	ug/l	80.0	0.913	104	70-130			
Thallium	79.6	1.0	ug/l	80.0	0.238	99	70-130			
Matrix Spike Analyzed: 12/11/2009 (9L11017-MS2) Source: ISL1083-01										
Antimony	76.7	4.0	ug/l	80.0	1.75	94	70-130			
Cadmium	79.9	2.0	ug/l	80.0	5.81	93	70-130			
Copper	207	4.0	ug/l	80.0	136	88	70-130			
Lead	86.6	2.0	ug/l	80.0	9.16	97	70-130			
Thallium	76.4	2.0	ug/l	80.0	ND	95	70-130			
Matrix Spike Dup Analyzed: 12/11/2009 (9L11017-MSD1) Source: ISL0771-02										
Antimony	75.8	2.0	ug/l	80.0	0.514	94	70-130	1	20	
Cadmium	74.6	1.0	ug/l	80.0	ND	93	70-130	1	20	
Copper	82.6	2.0	ug/l	80.0	3.13	99	70-130	0	20	
Lead	82.7	1.0	ug/l	80.0	0.913	102	70-130	1	20	
Thallium	78.8	1.0	ug/l	80.0	0.238	98	70-130	1	20	

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Report Number: ISL0775

Sampled: 12/07/09
Received: 12/07/09

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L08059 Extracted: 12/08/09										
Blank Analyzed: 12/08/2009 (9L08059-BLK1)										
Chloride	ND	0.50	mg/l							
Nitrate/Nitrite-N	ND	0.26	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 12/08/2009 (9L08059-BS1)										
Chloride	5.01	0.50	mg/l	5.00		100	90-110			M-3
Sulfate	10.1	0.50	mg/l	10.0		101	90-110			M-3
Matrix Spike Analyzed: 12/08/2009 (9L08059-MS1) Source: ISL0804-01										
Chloride	49.4	1.0	mg/l	5.00	44.1	105	80-120			MHA
Sulfate	20.6	1.0	mg/l	10.0	11.0	96	80-120			
Matrix Spike Dup Analyzed: 12/08/2009 (9L08059-MSD1) Source: ISL0804-01										
Chloride	49.2	1.0	mg/l	5.00	44.1	102	80-120	0	20	MHA
Sulfate	20.7	1.0	mg/l	10.0	11.0	97	80-120	0	20	
Batch: 9L11013 Extracted: 12/11/09										
Blank Analyzed: 12/11/2009 (9L11013-BLK1)										
Total Dissolved Solids	ND	10	mg/l							
LCS Analyzed: 12/11/2009 (9L11013-BS1)										
Total Dissolved Solids	1010	10	mg/l	1000		101	90-110			
Duplicate Analyzed: 12/11/2009 (9L11013-DUP1) Source: ISL1190-01										
Total Dissolved Solids	535	10	mg/l		539			1	10	

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9358216 Extracted: 12/24/09										
Blank Analyzed: 12/29/2009 (G9L240000216B)					Source:					
1,2,3,4,6,7,8-HpCDD	0.00004	0.00005	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	0.000041	0.00005	ug/L				-			J
1,2,3,4,7,8,9-HpCDF	0.000038	0.00005	ug/L				-			J
1,2,3,4,7,8-HxCDD	0.000032	0.00005	ug/L				-			J
1,2,3,4,7,8-HxCDF	0.000033	0.00005	ug/L				-			J
1,2,3,6,7,8-HxCDD	0.000031	0.00005	ug/L				-			J
1,2,3,6,7,8-HxCDF	0.00003	0.00005	ug/L				-			J
1,2,3,7,8,9-HxCDD	0.000033	0.00005	ug/L				-			J
1,2,3,7,8,9-HxCDF	0.000031	0.00005	ug/L				-			J
1,2,3,7,8-PeCDD	0.000024	0.00005	ug/L				-			J
1,2,3,7,8-PeCDF	0.000021	0.00005	ug/L				-			J
2,3,4,6,7,8-HxCDF	0.000029	0.00005	ug/L				-			J
2,3,4,7,8-PeCDF	0.000025	0.00005	ug/L				-			J
2,3,7,8-TCDD	0.0000027	0.00001	ug/L				-			J, Q
2,3,7,8-TCDF	ND	0.00001	ug/L				-			CON
OCDD	0.000096	0.0001	ug/L				-			J
OCDF	0.000085	0.0001	ug/L				-			J
Total HpCDD	0.000044	0.00005	ug/L				-			J
Total HpCDF	0.000081	0.00005	ug/L				-			J
Total HxCDD	0.000096	0.00005	ug/L				-			J
Total HxCDF	0.00012	0.00005	ug/L				-			J, Q
Total PeCDD	0.000025	0.00005	ug/L				-			J, Q
Total PeCDF	0.000047	0.00005	ug/L				-			J, Q
Total TCDD	0.0000055	0.00001	ug/L				-			J, Q
Total TCDF	0.000012	0.00001	ug/L				-			J, Q
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0014		ug/L	0.002		72	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0014		ug/L	0.002		71	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0014		ug/L	0.002		70	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0013		ug/L	0.002		66	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0013		ug/L	0.002		67	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0014		ug/L	0.002		68	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0014		ug/L	0.002		71	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0014		ug/L	0.002		70	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0011		ug/L	0.002		57	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0011		ug/L	0.002		57	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0015		ug/L	0.002		73	28-136			

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Project ID: Routine Outfall 010

Report Number: ISL0775

Sampled: 12/07/09
Received: 12/07/09

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9358216 Extracted: 12/24/09										
Blank Analyzed: 12/29/2009 (G9L240000216B)					Source:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0012		ug/L	0.002		59	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0012		ug/L	0.002		61	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0012		ug/L	0.002		62	24-169			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00061		ug/L	0.0008		77	35-197			
Surrogate: 13C-OCDD	0.0028		ug/L	0.004		70	17-157			
LCS Analyzed: 12/29/2009 (G9L240000216C)					Source:					
1,2,3,4,6,7,8-HpCDD	0.00093	0.00005	ug/L	0.001		93	70-140			B
1,2,3,4,6,7,8-HpCDF	0.000924	0.00005	ug/L	0.001		92	82-122			B
1,2,3,4,7,8,9-HpCDF	0.000939	0.00005	ug/L	0.001		94	78-138			B
1,2,3,4,7,8-HxCDD	0.000967	0.00005	ug/L	0.001		97	70-164			B
1,2,3,4,7,8-HxCDF	0.000987	0.00005	ug/L	0.001		99	72-134			B
1,2,3,6,7,8-HxCDD	0.000955	0.00005	ug/L	0.001		95	76-134			B
1,2,3,6,7,8-HxCDF	0.000944	0.00005	ug/L	0.001		94	84-130			B
1,2,3,7,8,9-HxCDD	0.00098	0.00005	ug/L	0.001		98	64-162			B
1,2,3,7,8,9-HxCDF	0.000942	0.00005	ug/L	0.001		94	78-130			B
1,2,3,7,8-PeCDD	0.000947	0.00005	ug/L	0.001		95	70-142			B
1,2,3,7,8-PeCDF	0.00097	0.00005	ug/L	0.001		97	80-134			B
2,3,4,6,7,8-HxCDF	0.00096	0.00005	ug/L	0.001		96	70-156			B
2,3,4,7,8-PeCDF	0.000961	0.00005	ug/L	0.001		96	68-160			B
2,3,7,8-TCDD	0.000187	0.00001	ug/L	0.0002		93	67-158			B
2,3,7,8-TCDF	0.000184	0.00001	ug/L	0.0002		92	75-158			B
OCDD	0.00185	0.0001	ug/L	0.002		93	78-144			B
OCDF	0.00186	0.0001	ug/L	0.002		93	63-170			B
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00134		ug/L	0.002		67	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0014		ug/L	0.002		70	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0013		ug/L	0.002		65	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0013		ug/L	0.002		65	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00133		ug/L	0.002		66	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00135		ug/L	0.002		67	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00142		ug/L	0.002		71	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00135		ug/L	0.002		67	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00113		ug/L	0.002		57	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00115		ug/L	0.002		57	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00142		ug/L	0.002		71	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00118		ug/L	0.002		59	21-178			

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: ISL0775

Sampled: 12/07/09

Received: 12/07/09

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9358216 Extracted: 12/24/09										
LCS Analyzed: 12/29/2009 (G9L240000216C)										
Surrogate: 13C-2,3,7,8-TCDD	0.00127		ug/L	0.002		63	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.00131		ug/L	0.002		66	24-169			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000616		ug/L	0.0008		77	35-197			
Surrogate: 13C-OCDD	0.00253		ug/L	0.004		63	17-157			

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METHOD BLANK/QC DATA

MCAWW 245.1

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9348214 Extracted: 12/14/09										
Matrix Spike Dup Analyzed: 12/14/2009 (D9L100591001D)					Source: D9L100591001					
Mercury	1.62	0.2	ug/L	5	0.027	32	90-110	26	10	N, *
Matrix Spike Analyzed: 12/14/2009 (D9L100591001S)					Source: D9L100591001					
Mercury	2.11	0.2	ug/L	5	0.027	42	90-110			N
Blank Analyzed: 12/14/2009 (D9L140000214B)					Source:					
Mercury	ND	0.2	ug/L				-			
LCS Analyzed: 12/14/2009 (D9L140000214C)					Source:					
Mercury	5.04	0.2	ug/L	5		101	90-110			

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METHOD BLANK/QC DATA

MCAWW 245.1-DISS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9348240 Extracted: 12/14/09										
Matrix Spike Dup Analyzed: 12/14/2009 (D9L100591001D)										
Mercury	5.13	0.2	ug/L	5	ND	102	90-110	0	10	
Matrix Spike Analyzed: 12/14/2009 (D9L100591001S)										
Mercury	5.13	0.2	ug/L	5	ND	102	90-110			
Blank Analyzed: 12/14/2009 (D9L140000240B)										
Mercury	ND	0.2	ug/L							
LCS Analyzed: 12/14/2009 (D9L140000240C)										
Mercury	5.1	0.2	ug/L	5		102	90-110			

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METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 15135 Extracted: 01/15/10										
Blank Analyzed: 01/18/2010 (F0A150000135B)										
Total Uranium	0.496	0.677	pCi/L				-			Jc
LCS Analyzed: 01/18/2010 (F0A150000135C)										
Total Uranium	28.4	0.7	pCi/L	27.1		105	90-120			
Matrix Spike Dup Analyzed: 01/18/2010 (F9L100528001D)										
Total Uranium	29	0.7	pCi/L	27.1	0.443	105	62-150	2	20	
Matrix Spike Analyzed: 01/18/2010 (F9L100528001S)										
Total Uranium	29.4	0.7	pCi/L	27.1	0.443	107	62-150			

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METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9355152 Extracted: 12/21/09										
Matrix Spike Analyzed: 12/26/2009 (F9L100525001S)					Source: ISL0775-02					
Gross Alpha	47.6	3	pCi/L	49.4	2.4	91	33-150			
Gross Beta	81.5	4	pCi/L	68.3	8.9	106	71-146			
Duplicate Analyzed: 12/26/2009 (F9L100525001X)					Source: ISL0775-02					
Gross Alpha	3.5	3	pCi/L		2.4		-			
Gross Beta	8.8	4	pCi/L		8.9		-			
Blank Analyzed: 12/26/2009 (F9L210000152B)					Source:					
Gross Alpha	0.11	2	pCi/L				-			U
Gross Beta	-0.59	4	pCi/L				-			U
LCS Analyzed: 12/26/2009 (F9L210000152C)					Source:					
Gross Alpha	45.1	3	pCi/L	49.4		91	80-140			
Gross Beta	70.4	4	pCi/L	68.3		103	77-123			

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METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9349219 Extracted: 12/15/09										
Duplicate Analyzed: 01/08/2010 (F9L100525001X)					Source: ISL0775-02					
Cesium 137	0	20	pCi/L		0.06		-			U
Potassium 40	-130	NA	pCi/L		-60		-			U
Blank Analyzed: 01/08/2010 (F9L150000219B)					Source:					
Cesium 137	2.7	20	pCi/L				-			U
Potassium 40	-60	NA	pCi/L				-			U
LCS Analyzed: 01/08/2010 (F9L150000219C)					Source:					
Americium 241	130000	NA	pCi/L	141000		92	90-110			
Cobalt 60	79200	NA	pCi/L	87900		90	90-110			
Cesium 137	48500	20	pCi/L	53100		91	90-110			

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METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9345208 Extracted: 12/11/09										
Blank Analyzed: 01/05/2010 (F9L110000208B)										
Radium (226)	0.059	1	pCi/L		Source:		-			U
LCS Analyzed: 01/05/2010 (F9L110000208C)										
Radium (226)	10.7	1	pCi/L	11.3	Source:	95	45-150			
LCS Dup Analyzed: 01/05/2010 (F9L110000208L)										
Radium (226)	11.2	1	pCi/L	11.3	Source:	99	45-150	4	40	

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: ISL0775

Sampled: 12/07/09
 Received: 12/07/09

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9345210 Extracted: 12/11/09										
Blank Analyzed: 01/04/2010 (F9L110000210B)										
Radium 228	0.32	1	pCi/L		Source:		-			U
LCS Analyzed: 01/04/2010 (F9L110000210C)										
Radium 228	6.51	1	pCi/L	6.53	Source:	100	64-150			
LCS Dup Analyzed: 01/04/2010 (F9L110000210L)										
Radium 228	6.06	1	pCi/L	6.53	Source:	93	64-150	7	40	

TestAmerica Irvine

Kathleen A. Robb For Joseph Doak
 Project Manager

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

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

Project ID: Routine Outfall 010

Report Number: ISL0775

Sampled: 12/07/09
 Received: 12/07/09

METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9345211 Extracted: 12/11/09										
Blank Analyzed: 12/23/2009 (F9L110000211B)										
Strontium 90	0.02	3	pCi/L		Source:		-			U
LCS Analyzed: 12/23/2009 (F9L110000211C)										
Strontium 90	6.68	3	pCi/L	6.83	Source:	98	90-143			
LCS Dup Analyzed: 12/23/2009 (F9L110000211L)										
Strontium 90	6.57	3	pCi/L	6.83	Source:	96	90-143	2	40	

TestAmerica Irvine

Kathleen A. Robb For 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: ISL0775

Sampled: 12/07/09

Received: 12/07/09

METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9365109 Extracted: 01/04/10										
Duplicate Analyzed: 01/04/2010 (F9L100525001X)										
Tritium	34	500	pCi/L		-26		-			U
Matrix Spike Analyzed: 01/04/2010 (F9L100528001S)										
Tritium	4360	500	pCi/L	4560	-6	96	62-147			
Blank Analyzed: 01/04/2010 (F9L310000109B)										
Tritium	120	500	pCi/L							U
LCS Analyzed: 01/04/2010 (F9L310000109C)										
Tritium	4380	500	pCi/L	4560		96	85-112			

TestAmerica Irvine

Kathleen A. Robb For 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: ISL0775

Sampled: 12/07/09

Received: 12/07/09

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ISL0775-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.7	15

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ISL0775-02	Antimony-200.8	Antimony	ug/l	0.67	2.0	6
ISL0775-02	Cadmium-200.8	Cadmium	ug/l	0.21	1.0	4
ISL0775-02	Chloride - 300.0	Chloride	mg/l	21	0.50	150
ISL0775-02	Copper-200.8	Copper	ug/l	4.40	2.0	14
ISL0775-02	Lead-200.8	Lead	ug/l	1.88	1.0	5.2
ISL0775-02	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	5.27	0.26	10
ISL0775-02	Sulfate-300.0	Sulfate	mg/l	32	0.50	250
ISL0775-02	TDS - SM2540C	Total Dissolved Solids	mg/l	188	10	850
ISL0775-02	Thallium-200.8	Thallium	ug/l	0.049	1.0	2

Compliance Check

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

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

TestAmerica Irvine

Kathleen A. Robb For 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: ISL0775

Sampled: 12/07/09
Received: 12/07/09

DATA QUALIFIERS AND DEFINITIONS

- * Relative percent difference (RPD) is outside stated control limits.
- B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- CON** Confirmation analysis.
- 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.
- Je** Result is greater than sample detection limit but less than stated reporting limit.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- N** Spike sample recovery is outside control limits.
- Q** Estimated maximum possible concentration (EMPC).
- U** Result is less than the sample detection limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

TestAmerica Irvine

Kathleen A. Robb For Joseph Doak
Project Manager

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ISL0775 <Page 34 of 36>
NPDES Page 806 of 1088

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

Project ID: Routine Outfall 010

Report Number: ISL0775

Sampled: 12/07/09
Received: 12/07/09

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
Filtration	Water	N/A	N/A
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: ISL0775-02

Analysis Performed: EDD + Level 4
Samples: ISL0775-02

TestAmerica Denver

4955 Yarrow Street - Arvada, CO 80002

Method Performed: MCAWW 245.1
Samples: ISL0775-02

Method Performed: MCAWW 245.1-DISS
Samples: ISL0775-02

TestAmerica Irvine

Kathleen A. Robb For 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: ISL0775

Sampled: 12/07/09
Received: 12/07/09

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ISL0775-02

Method Performed: EPA 900.0 MOD
Samples: ISL0775-02

Method Performed: EPA 901.1 MOD
Samples: ISL0775-02

Method Performed: EPA 903.0 MOD
Samples: ISL0775-02

Method Performed: EPA 904 MOD
Samples: ISL0775-02

Method Performed: EPA 905 MOD
Samples: ISL0775-02

Method Performed: EPA 906.0 MOD
Samples: ISL0775-02

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ISL0775-02RE1

TestAmerica Irvine

Kathleen A. Robb For Joseph Doak
Project Manager

ISL6775

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 010 GRAB Stormwater at Building 203		ANALYSIS REQUIRED										Field readings: Temp °F = 56.1°F pH = 6.82 Time of readings = 1225	
Test America Contact: Joseph Doak		Project Manager: Bronwyn Kelly Sampler: <i>Stinson</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Sampling Date/Time 12/7/09 17:35		Preservative HCl		Bottle # 1A, 1B		Oil & Grease (1664-HEM) X		Comments	
Sample Description Outfall 010		Sample Matrix W	Container Type 1L Amber	# of Cont. 2	 (This section is crossed out with a diagonal line) 										
These Samples are the Grab Portion of Outfall 010 for this storm event. Composite samples will follow and are to be added to this work order.										Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: <input checked="" type="checkbox"/> 48 Hour: _____ 5 Day: _____ Normal: _____					
Relinquished By <i>Joseph Doak</i>		Date/Time: 12/7/09 15:35		Received By <i>Mark Quinn</i>		Date/Time: 12-7-09 15:35		Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>		NPDES Level IV: <input checked="" type="checkbox"/>					
Relinquished By <i>Mark Quinn</i>		Date/Time: 12-7-09 17:55		Received By <i>W. Boyer</i>		Date/Time: 12/7/09 17:55		NPDES Level IV: _____		NPDES Level IV: _____					
Relinquished By _____		Date/Time: _____		Received By _____		Date/Time: _____		NPDES Level IV: _____		NPDES Level IV: _____					

#169

Client Name/Address: MWH-Arcadia 618 Michilinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak		Project: Boeing-SSFL NPDES Routine Outfall 010 COMPOSITE GRAB Stormwater at Building 203		ANALYSIS REQUIRED																																					
Project Manager: Bronwyn Kelly Sampler: S. JOHNSON		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515																																							
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	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, Tl	Comments																											
Outfall 010	W	1L Poly	1	12/17/09 12:25	HNO ₃	2A,	X							Hold until notified																											
Outfall 010 Dup	W	1L Poly	1		HNO ₃	2B,	X							hold																											
Outfall 010	W	1L Amber	2		None	3A, 3B		X						hold																											
Outfall 010	W	500 mL Poly	2		None	4A, 4B		X						hold																											
Outfall 010	W	500 mL Poly	1		None	5			X					hold																											
Outfall 010	W	2.5 Gal Cube	1		None	6A				X				Unfiltered and unpreserved analysis																											
Outfall 010	W	500 ml Amber	1		None	6B								hold																											
Outfall 010	W	1 Gal Poly	1		None	7								Only test if first or second rain events of the year																											
Outfall 010	W	1L Poly	1		None	8							X	Filter within 24hrs of receipt at lab																											
COC Page 2 of 2 are the composite samples for Outfall 010 for this storm event. These must be added to the same work order for COC Page 1 of 2 for Outfall 010 for the same event.																																									
Relinquished By		Date/Time:		Received By		Date/Time:		Turn-around time: (Check)		24 Hour: _____		72 Hour: _____		10 Day: _____		5 Day: _____		Normal: _____																							
<i>[Signature]</i>		12-17-09 15:35		<i>[Signature]</i>		12-17-09 15:35																																			
Relinquished By		Date/Time:		Received By		Date/Time:		Sample Integrity: (Check)		Intact: _____		On Ice: _____																													
<i>[Signature]</i>		12-17-09 17:55		<i>[Signature]</i>		12/17/09		X		X		A-1																													
Relinquished By		Date/Time:		Received By		Date/Time:		Data Requirements: (Check)		No Level IV: _____		All Level IV: _____																													

20:58
12/18/09

Client Name/Address: MWH-Arcadia 618 Michillinda Ave., Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 010 GRAB Stormwater at Building 203		ANALYSIS REQUIRED		Field readings: 53.2 °F ^{SD} Temp °F = 56.1 °F pH = 6.52 ^{SD} 8.12 Time of readings = 1225
Test America Contact: Joseph Doak		Project Manager: Bronwyn Kelly Sampler: <i>S. Dawson</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Comments
Sample Description Outfall 010	Sample Matrix W	Container Type 1L Amber	# of Cont. 2	Sampling Date/Time 12/7/09 12:35	Preservative HCl	
Oil & Grease (1664-HEM)				X		
These Samples are the Grab Portion of Outfall 010 for this storm event. Composite samples will follow and are to be added to this work order.						
Relinquished By <i>Joseph Doak</i>	Date/Time: 12/7/09 15:35	Received By <i>Mark Campbell</i>	Date/Time: 12-7-09 15:35	Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: <input checked="" type="checkbox"/> 48 Hour: _____ 5 Day: _____ Normal: _____		
Relinquished By	Date/Time:	Received By	Date/Time:	Sample Integrity: (Check) Intact: _____ On Ice: <input checked="" type="checkbox"/>		
Relinquished By	Date/Time:	Received By	Date/Time:	Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>		

CHAIN OF CUSTODY FORM

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 010 COMPOSITE GRAB Stormwater at Building 203		Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Sampler: S. Johnson		ANALYSIS REQUIRED		Comments Hold Outfall Notified						
Test America Contact: Joseph Doak		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl		TCDD (and all congeners)		CI, 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, Tl	
Sample Description		Sample Matrix		Container Type		# of Cont.		Sampling Date/Time			Preservative		Bottle #		Hg, Tl	
Outfall 010		W		1L Poly		1		12/7/09 12:25			HNO ₃		2A		X	
Outfall 010 Dup		W		1L Poly		1		12/7/09 12:25			HNO ₃		2B		X	
Outfall 010		W		1L Amber		2		12/7/09 12:25			None		3A, 3B		X	
Outfall 010		W		500 mL Poly		2		12/7/09 12:25			None		4A, 4B		X	
Outfall 010		W		500 mL Poly		1		12/7/09 12:25			None		5A		X	
Outfall 010		W		2.5 Gal Cube		1		12/7/09 12:25			None		6A		X	
Outfall 010		W		500 ml Amber		1		12/7/09 12:25			None		6B		X	
Outfall 010		W		1 Gal Poly		1		12/7/09 12:25		None		7		X		
Outfall 010		W		1L Poly		1		12/7/09 12:25		None		8		X		

COC Page 2 of 2 are the composite samples for Outfall 010 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 010 for the same event.

Relinquished By: <i>[Signature]</i> Date/Time: 12-7-09 15:35	Received By: <i>[Signature]</i> Date/Time: 12-7-09 15:35	Turn-around time: (Check) 24 Hour: <input checked="" type="checkbox"/> 48 Hour: <input type="checkbox"/> 72 Hour: <input type="checkbox"/> 10 Day: <input checked="" type="checkbox"/> Normal: <input type="checkbox"/>
Relinquished By: <i>[Signature]</i> Date/Time: 12-7-09 17:55	Received By: <i>[Signature]</i> Date/Time: 12-7-09 17:55	Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/> 4.1
Relinquished By: <i>[Signature]</i> Date/Time: 12-7-09 17:55	Received By: <i>[Signature]</i> Date/Time: 12-7-09 17:55	Data Requirements: (Check) No Level IV: <input type="checkbox"/> All Level IV: <input checked="" type="checkbox"/> NPDES Level IV: <input checked="" type="checkbox"/>

LABORATORY REPORT



**Aquatic
Testing
Laboratories**

"dedicated to providing quality aquatic toxicity testing"

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

Date: November 15, 2009

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

Laboratory No.: A-09120807-001
Sample I.D.: ISL0775-02 (Outfall 010)

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

Date Sampled: 12/07/09
Date Received: 12/08/09
Temp. Received: 2.1°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 12/08/09 to 12/15/09

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:

	<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-09120807-001
Client/ID: Test America – ISL0775-02 (Outfall 009)

Date Tested: 12/08/09 to 12/15/09

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-091208.

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

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	25.9
100% Sample	100%	27.9
* Sample not statistically significantly less than Control.		

CHRONIC TOXICITY

Survival NOEC	100%
Survival TUc	1.0
Reproduction NOEC	100%
Reproduction TUc	1.0

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥ 80%	Pass (100% survival)
≥ 15 young per surviving control female	Pass (25.9 young)
≥ 60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD < 47% for reproduction; if > 47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 5.4%)
Statistically significantly different concentrations relative difference > 13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

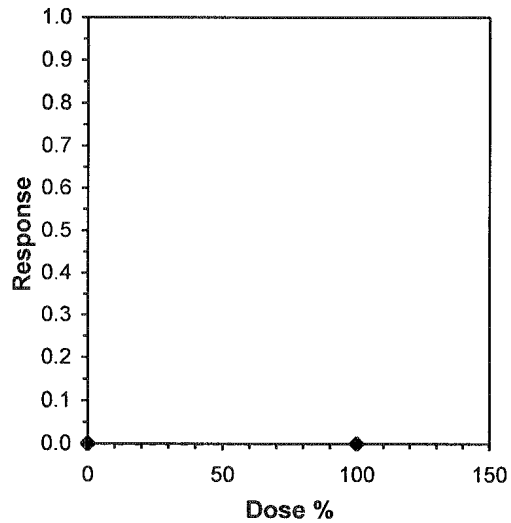
Start Date: 12/8/2009 15:00 Test ID: 9120807c Sample ID: Outfall 010
 End Date: 12/15/2009 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial
 Sample Date: 12/7/2009 12:25 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia
 Comments:

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 1-Tailed		Isotonic	
							Exact P	Critical	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				

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



Ceriodaphnia Survival and Reproduction Test-Reproduction

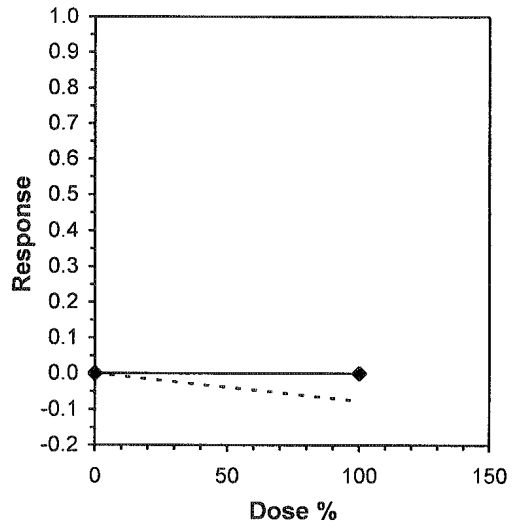
Start Date: 12/8/2009 15:00 Test ID: 9120807c Sample ID: Outfall 010
 End Date: 12/15/2009 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial
 Sample Date: 12/7/2009 12:25 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia
 Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	25.000	26.000	26.000	25.000	27.000	25.000	29.000	25.000	25.000	26.000
100	25.000	30.000	29.000	25.000	29.000	28.000	25.000	28.000	31.000	29.000

Conc-%	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%	Mean					N-Mean	
D-Control	25.900	1.0000	25.900	25.000	29.000	4.968	10				26.900	1.0000	
100	27.900	1.0772	27.900	25.000	31.000	7.825	10	-2.496	1.734	1.390	26.900	1.0000	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution ($p > 0.05$)	0.93317	0.905	-0.0291	-0.218		
F-Test indicates equal variances ($p = 0.13$)	2.87919	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	1.38966	0.05365	20	3.21111	0.02251	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-09120807-001

Client ID: TestAmerica - Outfall 010

Start Date: 12/08/2009

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Time of Readings:		1500	1500	1520	1400	1400	1500	1500	1400	1400	1500	1500	1500	1500	1400
Control	DO	8.2	8.2	8.8	8.1	8.8	8.3	9.2	7.9	8.0	8.2	8.2	7.9	8.2	8.2
	pH	7.9	7.7	7.7	7.8	7.8	7.8	7.8	7.7	7.8	7.7	7.9	7.7	7.8	7.6
	Temp	24.2	24.1	24.3	24.9	24.7	25.2	25.1	25.5	26.0	25.6	25.8	24.2	24.4	24.2
100%	DO	9.5	8.1	9.8	7.6	8.2	8.3	9.9	7.8	9.5	7.9	9.4	7.6	10.1	8.1
	pH	6.5	7.2	6.5	7.3	7.1	7.4	6.5	7.2	6.6	7.3	6.6	7.2	6.6	7.1
	Temp	24.2	24.0	24.5	24.3	24.1	25.1	24.8	25.1	25.5	25.4	24.9	24.3	24.2	24.1

Additional Parameters	Control	100% Sample
Conductivity (umohms)	333	250
Alkalinity (mg/l CaCO ₃)	72	30
Hardness (mg/l CaCO ₃)	93	53
Ammonia (mg/l NH ₃ -N)	50.2	0.4

Source of Neonates											
Replicate:	A	B	C	D	E	F	G	H	I	J	
Brood ID:	H4	H5	H6	A4	B5	B6	C4	D4	D6	E5	

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	2	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	3	0	4	0	0	0	0	0	2	0	2	8	10	Rm
	4	4	0	3	3	4	3	4	0	4	0	25	10	Rm
	5	7	9	8	8	9	7	9	8	7	9	81	10	Rm
	6	14	13	0	0	14	0	0	15	14	0	70	10	Rm
	7	0	0	15	14	0	15	16	0	0	15	75	10	Rm
	Total	25	26	26	25	25	25	29	29	29	26	259	10	Rm
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	2	0	0	0	0	0	0	0	0	0	0	0	10	Rm
	3	0	4	0	0	3	0	4	0	4	4	19	10	Rm
	4	3	0	4	3	0	5	0	4	0	0	19	10	Rm
	5	8	10	9	8	9	9	7	8	12	9	89	10	Rm
	6	14	16	14	14	17	14	14	16	15	16	152	10	Rm
	7	0	0	0	0	0	0	0	0	0	13	0	10	Rm
	Total	25	30	29	25	29	28	25	28	31	29	279	10	Rm

Circled fourth brood not used in statistical analysis.

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

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 010 COMPOSITE G-RAB Stormwater at Building 203		ANALYSIS REQUIRED		Comments	
Test America Contact: Joseph Doak		Project Manager: Bronwyn Kelly		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl		Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl	
Phone Number: (626) 568-6691		Fax Number: (626) 568-6515		TCDD (and all congeners)		Chronic Toxicity	
Sampler: S. Dawson		Sampling Date/Time 12/7/09 17:55		CF, SO ₄ , NO ₃ +NO ₂ -N		Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	
Sample Description	Sample Matrix	Container Type	# of cont.	Preservative	Bottle #	TDS	Comments
Outfall 010	W	1L Poly	1	HNO ₃	2A		Hold until notified
Outfall 010 Dup	W	1L Poly	1	HNO ₃	2B		hold
Outfall 010	W	1L Amber	2	None	3A-3B		hold
Outfall 010	W	500 mL Poly	2	None	4A, 4B	X	hold
Outfall 010	W	500 mL Poly	1	None	5	X	hold
Outfall 010	W	2.5 Gal Cube	1	None	6A		Unfiltered and unpreserved analysis
Outfall 010	W	500 ml Amber	1	None	6B		hold
Outfall 010	W	1 Gal Poly	1	None	7		Only test if first or second rain events of the year
Outfall 010	W	1L Poly	1	None	8	X	Filler w/in 24hrs of receipt at lab

COC Page 2 of 2 are the composite samples for Outfall 010 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 010 for the same event.

Relinquished By [Signature]	Date/Time: 12-7-09 15:35	Received By [Signature]	Date/Time: 12-7-09 15:35	Turn-around time: (Check) 24 Hour: <input type="checkbox"/> 72 Hour: <input checked="" type="checkbox"/> 48 Hour: <input type="checkbox"/> 5 Day: <input type="checkbox"/>
Relinquished By [Signature]	Date/Time: 12-7-09 17:55	Received By [Signature]	Date/Time: 12/7/09	Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/>
Relinquished By [Signature]	Date/Time: 12-8-09 11:00	Received By [Signature]	Date/Time: 12-8-09 11:00	Diag Requirements: (Check) No Level IV: <input type="checkbox"/> All Level IV: <input checked="" type="checkbox"/> NPDES Level IV: <input checked="" type="checkbox"/>

SUBCONTRACT ORDER
TestAmerica Irvine
ISL0775

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: CA - CALIFORNIA
Receipt Temperature: 21 °C Ice: (Y) N

Standard TAT is requested unless specific due date is requested. ⇔ Due Date: _____ Initials: _____

Analysis	Units	Expires	Comments
Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)			
			Sampled: 12/07/09 12:25
Bioassay-7 dy Chrnrc	N/A	12/09/09 00:25	Cerio, EPA/821-R02-013, Sub to Aquatic testing Excel EDD email to pm, Include Std logs for Lvl IV
EDD + Level 4	N/A	01/04/10 12:25	
Containers Supplied:			
1 gal Poly (J)			

Released By
12-8-09 11:00
Date/Time

Received By
12-8-09 11:00
Date/Time

Released By
Date/Time

Received By
Date/Time

***REFERENCE
TOXICANT
DATA***

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0
REFERENCE TOXICANT - NaCl



QA/QC Batch No.: RT-091208

Date Tested: 12/08/09 to 12/15/09

TEST SUMMARY

Test type: Daily static-renewal.
 Species: *Ceriodaphnia dubia*.
 Age: <24 hrs; all released within 8 hrs.
 Test vessel size: 30 ml.
 Number of test organisms per vessel: 1.
 Temperature: 25 +/- 1°C.
 Dilution water: Mod. hard reconstituted (MHRW).
 Reference Toxicant: Sodium chloride (NaCl).

Endpoints: Survival and Reproduction.
 Source: In-laboratory culture.
 Food: .1 ml YTC, algae per day.
 Test solution volume: 20 ml.
 Number of replicates: 10.
 Photoperiod: 16/8 hrs. light/dark cycle.
 Test duration: 7 days.
 Statistics: ToxCalc computer program.

RESULTS SUMMARY

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		21.4	
0.25 g/l	100%		24.2	
0.5 g/l	100%		23.7	
1.0 g/l	100%		11.9	*
2.0 g/l	80%		3.4	*
4.0 g/l	0%	*	0	**

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

CHRONIC TOXICITY

Survival LC50	2.5 g/l
Reproduction IC25	0.76 g/l

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥15 young per surviving control female	Pass (21.4 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 10.5%)
Stat. sig. diff. conc. relative difference >13%	Pass (Stat. sig. diff. conc. Relative difference = 44.4%)
Concentration response relationship acceptable	Pass (Response curve normal)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date: 12/8/2009 15:00 Test ID: RT091208c Sample ID: REF-Ref Toxicant
 End Date: 12/15/2009 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride
 Sample Date: 12/8/2009 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia

Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
B-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	0.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
B-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

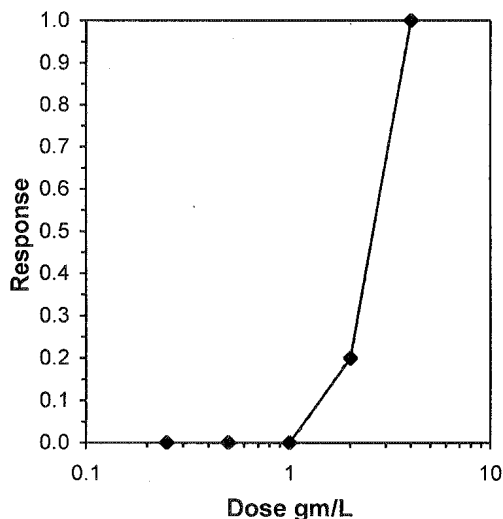
Hypothesis Test (1-tail, 0.05) NOEC LOEC ChV TU

Fisher's Exact Test 2 4 2.82843

Treatments vs B-Control

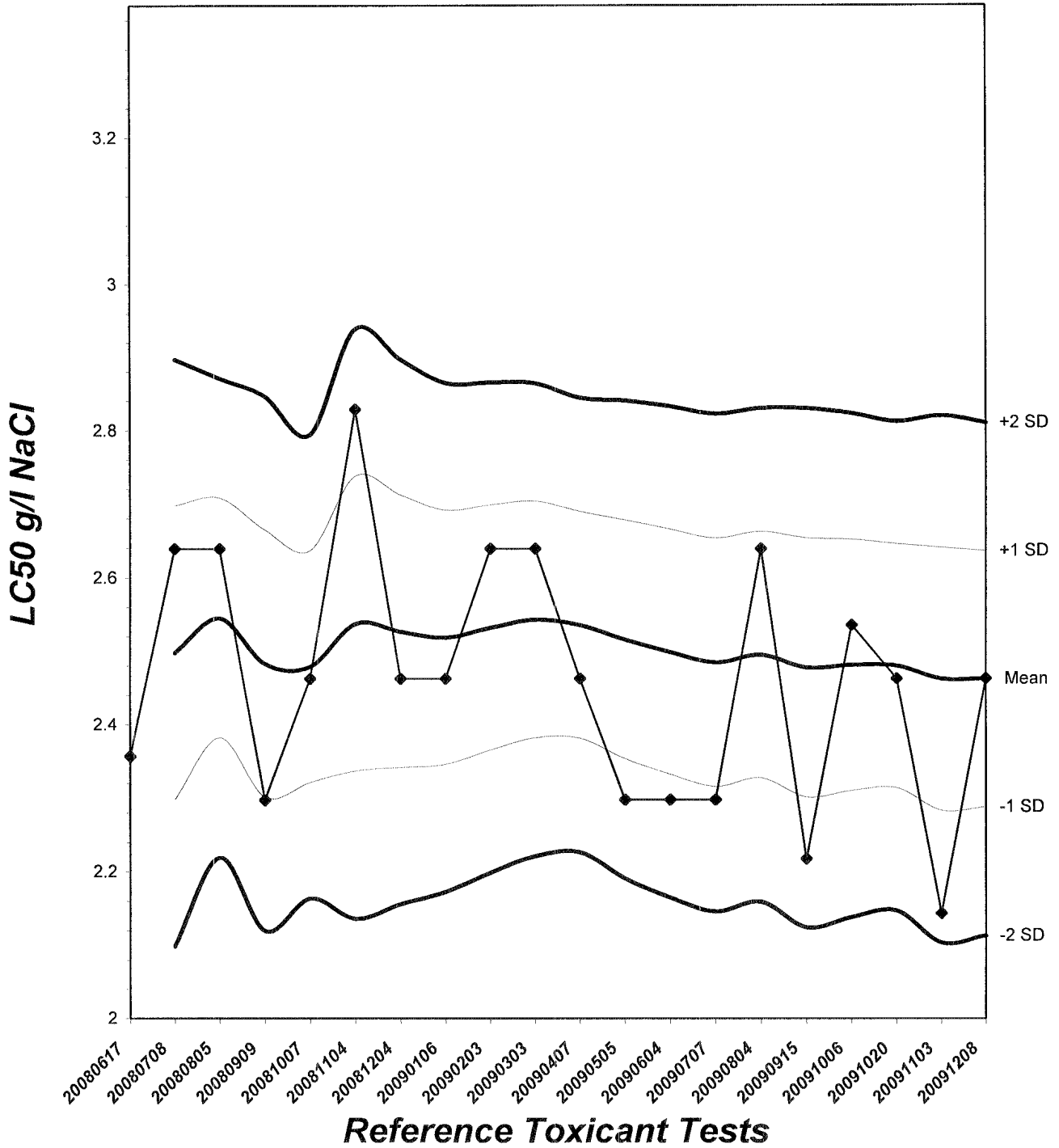
Trimmed Spearman-Kärber

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 Chronic Survival Laboratory Control Chart

CV% = 7.08



Ceriodaphnia Survival and Reproduction Test-Reproduction

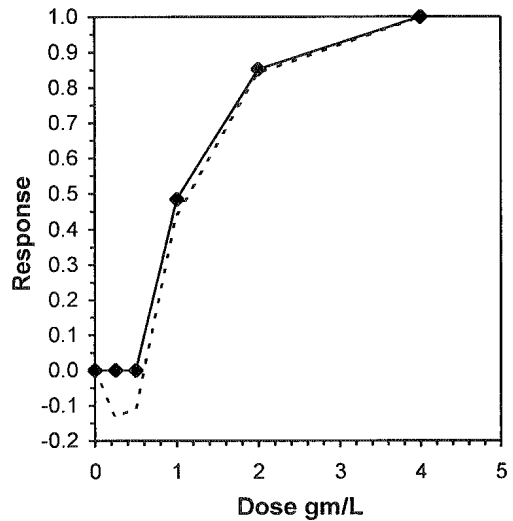
Start Date: 12/8/2009 15:00 Test ID: RT091208c Sample ID: REF-Ref Toxicant
 End Date: 12/15/2009 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride
 Sample Date: 12/8/2009 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia
 Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
B-Control	20.000	19.000	20.000	24.000	20.000	21.000	24.000	21.000	23.000	22.000
0.25	27.000	25.000	26.000	24.000	21.000	24.000	26.000	25.000	20.000	24.000
0.5	24.000	20.000	27.000	24.000	25.000	22.000	22.000	25.000	23.000	25.000
1	12.000	13.000	17.000	9.000	15.000	13.000	8.000	8.000	9.000	15.000
2	5.000	3.000	2.000	3.000	7.000	2.000	2.000	2.000	5.000	3.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Conc-gm/L	Transform: Untransformed							1-Tailed			Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
B-Control	21.400	1.0000	21.400	19.000	24.000	8.301	10				23.100	1.0000
0.25	24.200	1.1308	24.200	20.000	27.000	9.095	10	-2.773	2.223	2.245	23.100	1.0000
0.5	23.700	1.1075	23.700	20.000	27.000	8.451	10	-2.278	2.223	2.245	23.100	1.0000
*1	11.900	0.5561	11.900	8.000	17.000	27.288	10	9.408	2.223	2.245	11.900	0.5152
*2	3.400	0.1589	3.400	2.000	7.000	50.373	10	17.827	2.223	2.245	3.400	0.1472
4	0.000	0.0000	0.000	0.000	0.000	0.000	10				0.000	0.0000

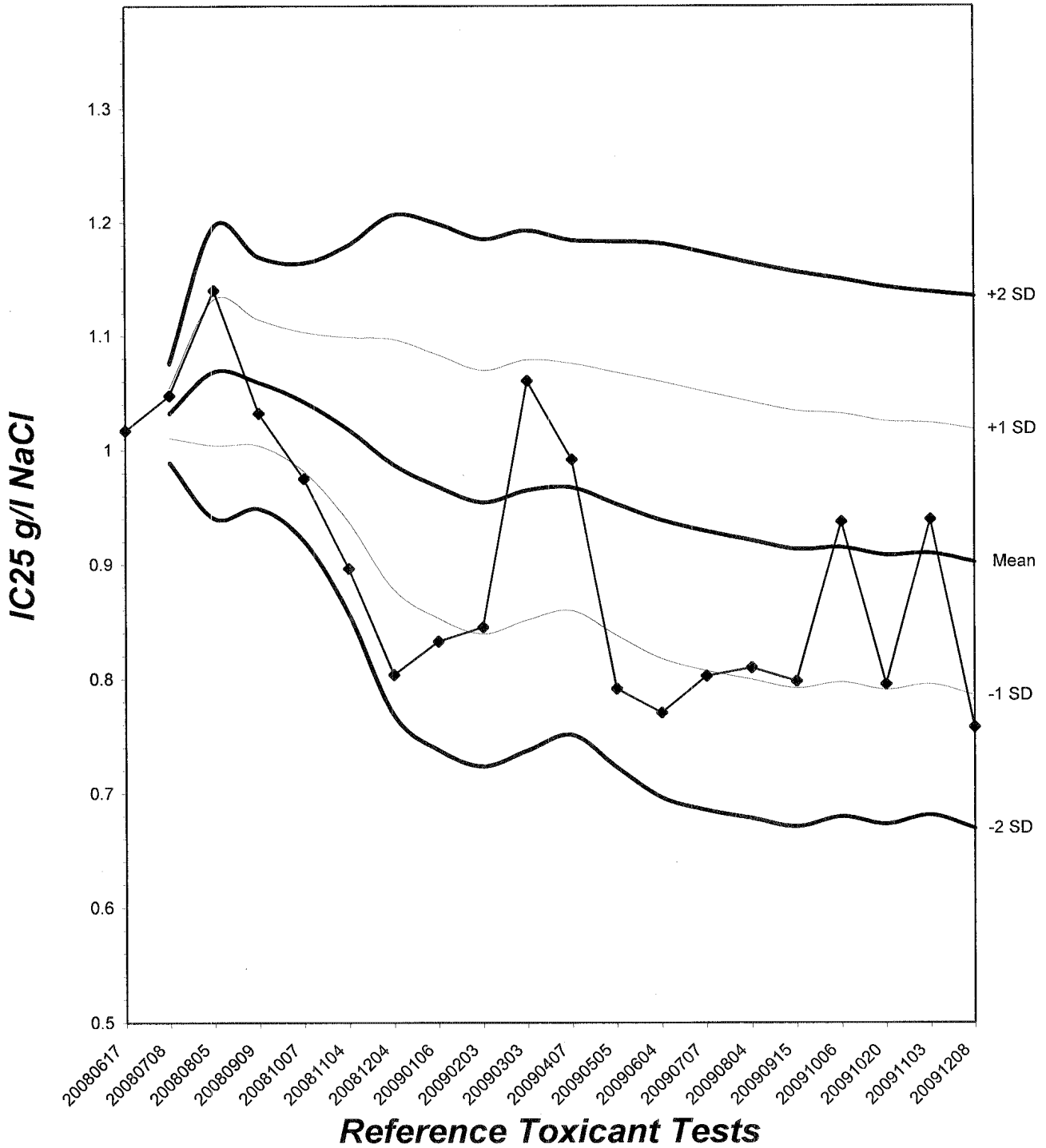
Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.9759	0.947	-0.0043	-0.4159						
Bartlett's Test indicates equal variances (p = 0.27)	5.13764	13.2767								
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	0.5	1	0.70711		2.24497	0.10491	817.57	5.09778	5.2E-26	4, 45
Treatments vs B-Control										

Point	Linear Interpolation (200 Resamples)				
	gm/L	SD	95% CL		Skew
IC05	0.5516	0.0118	0.5284	0.5608	-5.4562
IC10	0.6031	0.0119	0.5774	0.6216	-1.4663
IC15	0.6547	0.0152	0.6281	0.6825	-0.4551
IC20	0.7063	0.0190	0.6734	0.7433	-0.0416
IC25	0.7578	0.0230	0.7215	0.8041	0.1328
IC40	0.9125	0.0358	0.8551	0.9866	0.3331
IC50	1.0412	0.0766	0.9444	1.2179	0.3935



Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 12.9



CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl

Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-091208

Start Date: 12/08/2009

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	0	0	0	0	0	0	0	0	0	0	0	10	R
	4	3	4	2	3	4	3	3	4	3	3	32	10	R
	5	8	7	6	7	0	0	9	7	8	7	59	10	R
	6	9	8	0	0	6	7	12	10	0	12	64	10	R
	7	0	(14)	12	14	10	11	0	0	12	0	59	10	R
	Total	20	19	20	24	20	21	24	21	23	22	214	10	R
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	0	0	0	0	0	0	0	0	0	10	R	
	4	3	4	4	2	4	3	3	4	0	3	30	10	R
	5	0	9	7	8	0	7	8	9	4	8	60	10	R
	6	8	12	0	14	6	14	15	12	6	13	100	10	R
	7	16	0	15	0	11	0	0	0	10	0	52	10	R
	Total	27	25	26	24	21	24	26	25	20	24	242	10	R
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	4	0	0	0	0	0	0	0	3	7	10	R	
	4	0	4	3	3	4	3	2	4	3	0	26	10	R
	5	8	0	9	0	7	0	9	0	8	7	48	10	R
	6	12	6	15	7	14	7	0	7	0	15	83	10	R
	7	0	10	0	14	0	12	11	14	12	0	73	10	R
	Total	24	20	27	24	25	22	22	25	23	25	237	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.

CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl

Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-091208

Start Date: 12/08/2009

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	0	0	0	0	0	0	0	0	0	3	3	10	R
	4	3	4	2	2	3	4	4	4	3	0	29	10	J
	5	0	3	5	0	6	5	0	0	0	4	23	10	J
	6	4	0	0	3	0	0	4	4	6	0	21	10	J
	7	5	6	10	4	6	4	0	0	0	8	43	10	J
	Total	12	13	17	9	15	13	8	8	9	15	114	10	J
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	0	0	0	0	0	0	0	0	0	10	R	
	4	3	0	0	0	2	2	0	0	3	0	10	10	J
	5	0	3	2	0	0	X	2	0	0	3	10	9	J
	6	2	0	X	3	2	-	0	2	0	0	9	8	J
	7	0	0	-	0	3	-	0	0	2	0	5	8	J
	Total	5	3	2	3	7	2	2	2	3	3	34	8	J
4.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	R	
	2	0	0	0	0	0	0	0	0	0	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	-	-	-	-	-	-	-	-	-	-	0	0	J

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-091208

Start Date: 12/08/2009

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst Initials:		Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru	Ru
Time of Readings:		1500	1500	1500	1400	1400	1500	1500	1400	1400	1500	1500	1500	1500	1400
Control	DO	8.1	8.1	8.1	8.5	8.7	8.3	8.4	8.2	8.0	8.3	8.2	7.9	8.0	8.2
	pH	7.8	8.0	7.7	8.0	7.8	8.0	7.8	7.9	7.8	7.9	7.8	7.7	7.8	7.8
	Temp	24.2	24.4	24.4	24.2	24.7	25.1	25.5	25.2	25.9	24.9	25.4	24.2	24.1	24.6
0.25 g/l	DO	8.1	8.1	8.1	8.6	8.7	8.2	8.4	8.0	8.0	8.1	8.2	8.0	8.0	8.3
	pH	7.8	8.0	7.7	8.1	7.8	8.0	7.8	7.9	7.8	7.9	7.8	7.7	7.8	7.9
	Temp	24.2	24.4	24.4	24.4	24.7	25.2	25.6	25.2	25.9	24.8	25.3	24.3	24.1	24.8
0.5 g/l	DO	8.2	8.2	8.1	8.5	8.7	8.3	8.4	7.9	7.9	8.3	8.2	7.9	8.0	8.3
	pH	7.9	8.0	7.8	8.1	7.8	8.0	7.8	7.9	7.9	7.9	7.8	7.7	7.8	7.7
	Temp	24.2	24.5	24.4	24.5	24.7	25.4	25.6	25.3	25.9	24.9	25.4	24.5	24.2	24.9
1.0 g/l	DO	8.2	8.2	8.2	8.4	8.7	8.2	8.5	7.9	7.9	8.2	8.3	8.0	8.1	8.1
	pH	7.9	8.0	7.8	8.1	7.8	8.0	7.8	7.9	7.9	7.9	7.9	7.8	7.8	7.7
	Temp	24.2	24.5	24.5	24.5	24.8	25.3	25.7	25.3	26.0	24.8	25.5	24.5	24.3	25.0
2.0 g/l	DO	8.3	8.2	8.2	8.6	8.6	8.3	8.5	7.8	8.0	8.3	8.2	7.9	8.1	7.7
	pH	7.9	8.0	7.9	8.1	7.9	8.0	7.9	7.9	7.9	7.9	7.9	7.8	7.8	7.7
	Temp	24.2	24.4	24.6	24.4	24.9	25.3	25.9	25.3	26.0	24.9	25.6	24.2	24.2	25.1
4.0 g/l	DO	8.3	8.3	-	-	-	-	-	-	-	-	-	-	-	-
	pH	7.9	8.0	-	-	-	-	-	-	-	-	-	-	-	-
	Temp	24.1	24.4	-	-	-	-	-	-	-	-	-	-	-	-

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)	333	325	328	6290	3700	3850
Alkalinity (mg/l CaCO ₃)	72	70	71	73	71	73
Hardness (mg/l CaCO ₃)	93	94	94	94	94	96

Source of Neonates

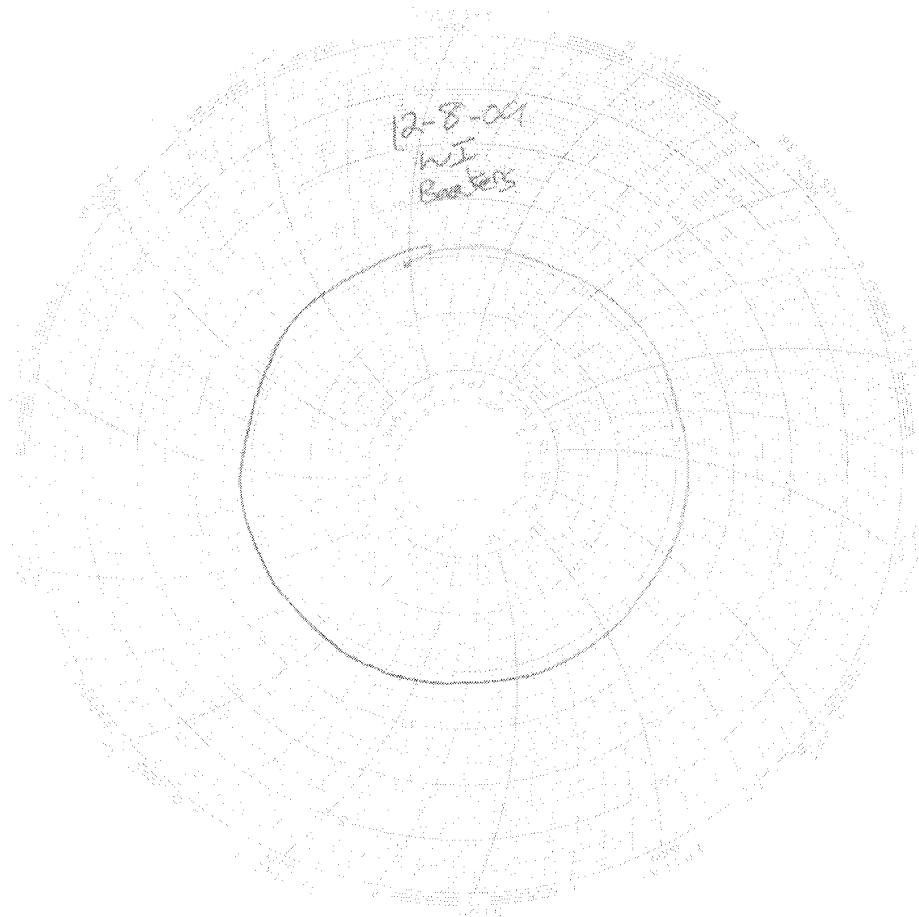
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	2A	2B	3B	1D	3D	1E	2E	2F	3I	2J

Test Temperature Chart

Test No: RT-091208

Date Tested: 12/08/09 to 12/15/09

Acceptable Range: 25+/- 1°C



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TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

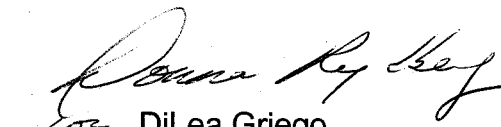
MWH-Pasadena/Boeing

Lot D9L100594

Project ISL0775

Joseph Doak
17461 Derian Avenue
Suite 100
Irvine, CA 92614

TestAmerica Laboratories, Inc.


DiLea Griego
Project Manager

December 17, 2009

Case Narrative

Enclosed is the report for one sample received at the TestAmerica Laboratory in Denver on December 10, 2009. The results included in this report relate only to the samples in this report and have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limits. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Dilution factors and footnotes have been provided to assist in the interpretation of the results. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Laboratories, Inc. utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. A summary of quality control parameters is provided below.

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Quality Control Summary for Lot D9L100594

Sample Receiving

The cooler temperature upon receipt at the laboratory was acceptable at 2.8°C.

Total Mercury- Method 245.1

MS/MSD analyses data performed on a sample from another client and/or lot exhibited percent recoveries and an RPD value outside the QC control limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action was deemed unnecessary.

No other anomalies were observed.

Dissolved Mercury – Method 245.1

No anomalies were observed.

Quality Control Definitions of Qualifiers

Qualifier	Definition
U	Result is less than the method detection limit (MDL).
B	Organics: Method blank contamination. The associated method blank contains the target analyte at a reportable level. Inorganics: Estimated result. Result is less than the RL
J	Organics: Estimated result. Result is less than RL Inorganics: Method blank contamination. The associated method blank contains the target analyte at a reportable level.
E	Estimated result. Result concentrations exceed the calibration range.
p	Relative Percent Difference (RPD) is outside control limits.
*	Surrogate or Relative Percent Difference (RPD) is outside control limits.
DIL	The concentration is estimated or not reported due to dilution.
COL	More than 40% difference between the primary and confirmation detector results. The lower of the two results is reported.
CHI	More than 40% difference between the primary and confirmation detector results. The higher of the two results is reported.
L	Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
a	Spiked analyte recovery is outside stated control limits.
N	Spiked analyte recovery is outside stated control limits.
NC	The recovery and/or RPD were not calculated.
MSB	The recovery and/or RPD were not calculated because the sample amount was greater than four times the spike amount.

EXECUTIVE SUMMARY - Detection Highlights

D9L100594

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
ISL0775-02 12/07/09 12:25 001				
Mercury	0.053 J	0.20	ug/L	MCAWW 245.1

METHODS SUMMARY

D9L100594

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Dissolved Mercury (CVAA)	MCAWW 245.1	MCAWW 245.1
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1	MCAWW 245.1

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

METHOD / ANALYST SUMMARY

D9L100594

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
MCAWW 245.1	Christopher Grisdale	9582

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

D9L100594

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT</u>	<u>SAMPLE ID</u>	<u>SAMPLED</u> <u>DATE</u>	<u>SAMP</u> <u>TIME</u>
LQWPH	001	ISL0775-02		12/07/09	12:25

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D9L100594

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 245.1		9348214	9348126
	WATER	MCAWW 245.1		9348240	9348137

TestAmerica

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Total Metals

CLP-Like Forms

Lot ID: D9L100594

Client: TestAmerica-Irvine

Method: 7471A

Associated Samples: -001

Batch: 9348214

Total Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9L100594
Lab Code: _____ Case No.: _____ SAS No.: _____
SOW No.: _____

Sample ID. Lab Sample No.
ISL0775-02 D9L100594-001

Were ICP interelement corrections applied? Yes/No YES
Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before Yes/No NO
application of background corrections?

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins
Date: 12/16/09 Title: Metals Analyst

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348214
Sample Aliquot: 10 mL
Dilution Factor: 1

Client Sample ID: ISL0775-02
Lab Sample ID: D9L100594-001
Lab WorkOrder: LOWPH
Date/Time Collected: 12/07/09 12:25
Date/Time Received: 12/10/09 09:30
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 20:11
Instrument ID: 033

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	0.053	0.027	0.20	J

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	7.000	6.895	98.5	5.000	4.927	98.5	5.251	105.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.000	5.132	102.6	5.202	104.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Total Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9L100594

AA CRDL Standard Source: Ultra Scientific

ICP CRDL Standard Source: _____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial		Final		
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.200	0.21300	106.5					

Comments:

Total Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture:
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348214
Sample Aliquot: 10 mL
Dilution Factor: 1

Client Sample ID:
Lab Sample ID: D9L140000-214B
Lab WorkOrder: LQ24D
Date/Time Collected:
Date/Time Received:
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:50
Instrument ID: 033

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	0.027	0.027	0.20	U

Total Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		C	1 C	2 C	3 C	C	C		
Mercury	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	CV	

Comments:

Total Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		1	2	3					
Mercury		0.027							CV

Comments:

Total Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348214
MS Sample Aliquot: 10 mL
MS Dilution Factor: 1

Client Sample ID: LAB MS/MSD
MS Lab Sample ID: D9L100591-001S
MS Lab WorkOrder: LOWNJ
Date/Time Collected: 12/07/09 11:12
Date/Time Received: 12/10/09 09:30
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 20:02
Instrument ID: 033

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Mercury	5.00	0.027	J	2.11		42	N	90 - 110

Total Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348214
MSD Sample Aliquot: 10 mL
MSD Dilution Factor: 1

Client Sample ID: LAB MS/MSD
MSD Lab Sample ID: D9L100591-001D
MSD Lab WorkOrder: LOWNJ
Date/Time Collected: 12/07/09 11:12
Date/Time Received: 12/10/09 09:30
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 20:04
Instrument ID: 033

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Mercury	5.00	0.027	J	1.62		32	N	26	*	90 - 110	10

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348214
Sample Aliquot: 10 mL
Dilution Factor: 1

Client Sample ID:
Lab Sample ID: D9L140000-214C
Lab WorkOrder: LQ24D
Date/Time Collected:
Date/Time Received:
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:53
Instrument ID: 033

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	5.04	101		90 - 110

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

ICP ID Number: _____ Date: 12/26/2008

Flame AA ID Number: Cetac M7500-33 Hg

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Mercury	253.70		0.20	0.027	CV

Comments: _____

Total Metals Analysis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
INTRA-LAB QC	12/14/2009	10.0	10.0
LAB MS/MSD MS	12/14/2009	10.0	10.0
LAB MS/MSD MSD	12/14/2009	10.0	10.0
ISL0775-02	12/14/2009	10.0	10.0
MB9348214	12/14/2009	10.0	10.0
Check Sample	12/14/2009	10.0	10.0

Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Dissolved Metals

CLP-Like Forms

Lot ID: D9L100594

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: -001

Batch: 9348240

Dissolved Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine

SDG No.: D9L100594

Lab Code: _____ Case No.: _____

SAS No.: _____

SOW No.: _____

Sample ID.

Lab Sample No.

ISL0775-02

D9L100594-001

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YES

If yes-were raw data generated before application of background corrections?

Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins

Name: Janice Collins

Date: 12/16/09

Title: Metals Analyst

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348240
Sample Aliquot: 10 mL
Dilution Factor: 1

Client Sample ID: ISL0775-02
Lab Sample ID: D9L100594-001
Lab WorkOrder: LOWPH
Date/Time Collected: 12/07/09 12:25
Date/Time Received: 12/10/09 09:30
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:48
Instrument ID: 033

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	0.027	0.027	0.20	U

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury	7.000	6.895	98.5	5.000	4.927	98.5	5.251	105.0	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.000	5.075	101.5	5.132	102.6	CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Dissolved Metals Analysis
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9L100594

AA CRDL Standard Source: Ultra Scientific

ICP CRDL Standard Source: _____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial		Final		
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.200	0.21300	106.5					

Comments:

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture:
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348240
Sample Aliquot: 10 mL
Dilution Factor: 1

Client Sample ID:
Lab Sample ID: D9L140000-240B
Lab WorkOrder: LQ240
Date/Time Collected:
Date/Time Received:
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:27
Instrument ID: 033

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	0.027	0.027	0.20	U

Dissolved Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		1	2	3	C	C	C		
Mercury	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	0.027 U	CV	

Comments:

Dissolved Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		C	1	C	2	C	3		
Mercury			0.027	U					CV

Comments:

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348240
MS Sample Aliquot: 10 mL
MS Dilution Factor: 1

Client Sample ID: LAB MS/MSD
MS Lab Sample ID: D9L100591-001S
MS Lab WorkOrder: LOWNJ
Date/Time Collected: 12/07/09 11:12
Date/Time Received: 12/10/09 09:30
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:34
Instrument ID: 033

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Mercury	5.00	0.027	U	5.13		102		90 - 110

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348240
MSD Sample Aliquot: 10 mL
MSD Dilution Factor: 1

Client Sample ID: LAB MS/MSD
MSD Lab Sample ID: D9L100591-001D
MSD Lab WorkOrder: LOWNJ
Date/Time Collected: 12/07/09 11:12
Date/Time Received: 12/10/09 09:30
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:41
Instrument ID: 033

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Mercury	5.00	0.027	U	5.13		102		0.010		90 - 110	10

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name: TESTAMERICA DENVER
Lot/SDG Number: D9L100594
Matrix: WATER
% Moisture: N/A
Basis: Wet
Analysis Method: 245.1
Unit: ug/L
QC Batch ID: 9348240
Sample Aliquot: 10 mL
Dilution Factor: 1

Client Sample ID:
Lab Sample ID: D9L140000-240C
Lab WorkOrder: LQ240
Date/Time Collected:
Date/Time Received:
Date Leached:
Date/Time Extracted: 12/14/09 13:00
Date/Time Analyzed: 12/14/09 19:30
Instrument ID: 033

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	5.10	102		90 - 110

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

ICP ID Number: _____ Date: 12/26/2008

Flame AA ID Number: Cetac M7500-33 Hg

Furnace AA ID Number: _____

Analyte	Wave-length (nm)	Back-ground	PQL (ug/L)	MDL (ug/L)	M
Mercury	253.70		0.20	0.027	CV

Comments:

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9L100594

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
INTRA-LAB QC	12/14/2009	10.0	10.0
LAB MS/MSD MS	12/14/2009	10.0	10.0
LAB MS/MSD MSD	12/14/2009	10.0	10.0
ISL0775-02	12/14/2009	10.0	10.0
MB9348240	12/14/2009	10.0	10.0
Check Sample	12/14/2009	10.0	10.0

Comments:

Dissolved Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9L100594

Instrument ID Number: Cetac M7500-33 Hg Method: CV

Start Date: 12/14/2009 End Date: 12/14/2009

Sample ID.	D/F	Time	% R	Analytes																									
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N		
Cal Blank	1.00	15:57																									X		
Std1	1.00	15:59																									X		
Std2	1.00	16:02																									X		
Std3	1.00	16:04																									X		
Std4	1.00	16:06																									X		
Std5	1.00	16:09																									X		
Std6	1.00	16:11																									X		
ICB	1.00	16:15																									X		
ICV	1.00	16:17																									X		
RL	1.00	16:19																									X		
CCV	1.00	16:21																									X		
CCB	1.00	16:24																									X		
CCV	1.00	19:18																									X		
CCB	1.00	19:20																									X		
MB9348240	1.00	19:27																									X		
Check Sample	1.00	19:30																									X		
INTRA-LAB QC	1.00	19:32																									X		
LAB MS/MSD MS	1.00	19:34																									X		
CCV	1.00	19:37																									X		
CCB	1.00	19:39																									X		
LAB MS/MSD MSD	1.00	19:41																									X		
ISL0775-02	1.00	19:48																									X		
CCV	1.00	19:55																									X		
CCB	1.00	19:57																									X		

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Sample Receiving Checklist

Lot #: D9L100594 Date/Time Received: 12/10/09 0930

Company Name & Sampling Site: TA IRVINE - BOEING

PM to Complete This Section: Yes	No	Yes	No	Yes	No
Residual chlorine check required: <input type="checkbox"/>	<input checked="" type="checkbox"/>	Quarantined: <input type="checkbox"/>	<input checked="" type="checkbox"/>	MIS prep: <input type="checkbox"/>	<input checked="" type="checkbox"/>

Quote #: 72743

Special Instructions:

A/R = 12/16/09

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): _____

Temperatures (°C): 2.8° _____

N/A Yes No

Initials

- 1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR. AB
- 2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: _____ No: _____
- 3. Chain of custody present? If no, document on CUR.
- 4. Bottles broken and/or are leaking? If yes, document on CUR.
- 5. Multiphasic samples obvious? If yes, document on CUR.
- 6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR.
- 7. pH of all samples checked and meet requirements? If no, document on CUR.
- 8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
- 9. Did chain of custody agree with labels ID and samples received? If no, document on CUR.
- 10. Were VOA samples without headspace? If no, document on CUR.
- 11. Were VOA vials preserved? Preservative HCl 4±2°C Sodium Thiosulfate Ascorbic Acid
- 12. Did samples require preservation with sodium thiosulfate?
- 13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.
- 14. Sediment present in dissolved/filtered bottles? If yes, document on CUR.
- 15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
- 16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- 17. Are analyses with short holding times requested?
- 18. Was a quick Turn Around (TAT) requested?

TestAmerica Denver
Sample Receiving Checklist

Lot # D92100594

Login Checks:

Initials
JB

N/A Yes No

- 19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding.
- 20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
- 21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
- 22. Were special log in instructions read and followed?
- 23. Were AFCEE metals logged for refrigerated storage?
- 24. Were tests logged checked against the COC? Which samples were confirmed? 1
- 25. Was a Rush form completed for quick TAT?
- 26. Was a Short Hold form completed for any short holds?
- 27. Were special archiving instructions indicated in the General Comments? If so, what were they?

Labeling and Storage Checks:

Initials

Case

- 28. Was the subcontract COC signed and sent with samples to bottle prep?
- 29. Were sample labels double-checked by a second person?
- 30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- 31. Did the sample ID, Date, and Time from label match what was logged?
- 32. Were stickers for special archiving instructions affixed to each box? See #27
- 33. Were AFCEE metals stored refrigerated?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

2.8

SUBCONTRACT ORDER
TestAmerica Irvine

ISL0775

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone : (303) 736-0100
Fax: (303) 431-7171
Project Location: CA - CALIFORNIA
Receipt Temperature: _____ °C Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
----------	-------	-----	---------	----------------	-------	----------

Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)

Sampled: 12/07/09 12:25

Level 4 + EDD-OUT	N/A	12/16/09	01/04/10 12:25	\$0.00	0%	Sub Denver, transfer file EDD
Mercury - 245.1, Diss -OUT	ug/l	12/16/09	01/04/10 12:25	\$36.00	0%	Denver, Boeing, J flags
Mercury - 245.1-OUT	ug/l	12/16/09	01/04/10 12:25	\$36.00	0%	Denver, Boeing, permit, J flags,

Containers Supplied:

125 mL Poly w/HNO3 (Dissolved) (M)	125 mL Poly w/HNO3 (N)
---------------------------------------	---------------------------

Oga Ornelas
Released By

12/9/09 17:00
Date/Time

FedEx
Received By

12/09/09 17:00
Date/Time

Released By

Date/Time

Received By

Date/Time

12/10/09 09:30
Date/Time

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9L100594

Client: TA - Irvine

Batch(es) #: 9348214 & 9348240

Associated Samples: 1

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date: Christopher Biederle 12/15/09

Metals Raw Data RoadMap

<i>LotID</i>		<i>Metal</i>	<i>WorkOrder</i>	<i>Anal Date</i>	<i>TestDesc</i>	<i>Batch</i>	<i>File Id</i>	<i>Instr</i>
D9L100594	1	HG	LQWPH1A	20091214	M2451DS	9348240	091214AB	033
D9L100594	1	HG	LQWPH1A	20091214	M2451_L	9348214	091214AB	033

Tuesday, December 15, 2009

Page 1 of 1

**METALS
PREPARATION LOGS
ICP**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUPPLEMENTAL METALS PREP SHEET

(Used in conjunction with METALS PREP LOG/BATCH SUMMARY)



THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

Hg PREP & ANALYSIS - WATERS

SOP: DEN-MT-0015 QC Batch #: 9348240

Prep Date: 12/14/09	Prep By: CGG	Analysis Date: 12/14/09	Analyst: CGG
---------------------	--------------	-------------------------	--------------

Balance ID: H53865	Thermometer ID: MT 4025
---------------------------	--------------------------------

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	13:00	94	15:00	95

Purple color persists or black ppt present: Yes No If "No", explain in Comments below.

Digestion Tube Lot # :

For dissolved mercury only, were samples filtered in the lab? Yes No

One or more samples were filtered prior to analysis at the instrument. Yes No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

Reagents Used

Reagent	Manufacturer	Lot #	Standards Log #	Vol (mL)
HNO ₃	JT Baker	H14024		0.25
H ₂ SO ₄	Fisher	G35029		0.5
HCl	JT Baker	H39037		used by instrument
10% SnCl ₂	Fisher	H13584	STD-7504-09	added by instrument
NaCl / NH ₂ OH	Fisher	H14615	STD-7384-09	0.6
	Fisher	H26621		
KMnO ₄	Fisher	G45641	STD-7503-09	1.5
K ₂ S ₂ O ₈	Fisher	085907	STD-5798-09	0.8

Parent Calibration Stock Standards

	Lot #	Verification #	Exp. Date
Second Source	B2-HG02064	STD-1957-09	04/02/10
Primary Calibration	K00200	STD-1955-09	04/02/10

Standards Preparation

Final digestate volume = 10 mls

Standards	Final Conc	Parent Standard	Standards Log #	Vol (mL)	Pipette
Cal Working	10 mg/L	Primary Cal	See Attached Standards Log Printouts	1.00	7
Daily Cal Working	100 ug/L	Cal Working		1.00	7
ICAL 0.2	0.2 ug/L	Daily Cal Working		0.2	7
ICAL 0.5	0.5 ug/L	Daily Cal Working		0.5	7
ICAL 1	1.0 ug/L	Daily Cal Working		1.0	7
ICAL 2	2.0 ug/L	Daily Cal Working		2.0	7
ICAL 5	5.0 ug/L	Daily Cal Working		5.0	24
ICAL 10	10 ug/L	Daily Cal Working		10.0	24
CCV	5 ug/L	Daily Cal Working		5.0	7
ICV Intermed	700 ug/L	ICV Stock		0.70	7
ICV Daily Working	7.0 ug/L	ICV Intermed		1.00	7
LCS	5 ug/L	Daily Cal Working		0.5	7
MS/MSD	5 ug/L	Daily Cal Working		0.5	7
RL	0.2 ug/L	Daily Cal Working		0.2	7

Second Source ICV Intermediate Stock Standard Prep

Standards Log #: STD-7171-09

NOTE: Details for each reagent & standard prep are documented in the attached Standards Preparation Logbook Record.

Comments *Dissolved - Boiling*

I certify that all information above is correct and complete.


Signature: *Cris Fridahl*

Date: *12/15/09*

REVIEWED BY: *[Signature]*

Date: *12/15/09*

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prep Date: 12/14/09 
Due Date: 12/16/09

<u>Lot</u>	<u>Work Order</u>			<u>Initial Weight/Volume</u>
D9L140000 Water	LQ240	B 1	Due Date: SDG:	<u>10 mL</u>
D9L140000 Water	LQ240	C 2	Due Date: SDG:	<u>10 mL</u>
D9L100591 Water	LQWNJ Dissolved	3	Due Date: 12/16/09 SDG:	<u>10 mL</u>
D9L100591 Water	LQWNJ Dissolved	S 4	Due Date: 12/16/09 SDG:	<u>10 mL</u>
D9L100591 Water	LQWNJ Dissolved	D 5	Due Date: 12/16/09 SDG:	<u>10 mL</u>
D9L100594 Water	LQWPH Dissolved	6	Due Date: 12/16/09 SDG:	<u>10 mL</u>

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

** Run MS/D Twice!*

SUPPLEMENTAL METALS PREP SHEET

(Used in conjunction with METALS PREP LOG/BATCH SUMMARY)



THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

Hg PREP & ANALYSIS - WATERS

SOP: DEN-MT-0015 QC Batch #: 9348214

Prep Date: 12/14/09	Prep By: CGG	Analysis Date: 12/14/09	Analyst: CGG
---------------------	--------------	-------------------------	--------------

Balance ID: H53865	Thermometer ID: MT 4025
---------------------------	--------------------------------

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	13:00	94	15:00	95

Purple color persists or black ppt present: Yes No If "No", explain in Comments below.

Digestion Tube Lot # :

For dissolved mercury only, were samples filtered in the lab? Yes No

One or more samples were filtered prior to analysis at the instrument. Yes No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.
Analyst(s) Initials: CG

Reagents Used

Reagent	Manufacturer	Lot #	Standards Log #	Vol (mL)
HNO ₃	JT Baker	H14024		0.25
H ₂ SO ₄	Fisher	G35029		0.5
HCl	JT Baker	H39037		used by instrument
10% SnCl ₂	Fisher	H13584	STD-7504-09	added by instrument
NaCl / NH ₂ OH	Fisher	H14615	STD-7384-09	0.6
	Fisher	H26621		
KMnO ₄	Fisher	G45641	STD-7503-09	1.5
K ₂ S ₂ O ₈	Fisher	085907	STD-5798-09	0.8

Parent Calibration Stock Standards

	Lot #	Verification #	Exp. Date
Second Source	B2-HG02064	STD-1957-09	04/02/10
Primary Calibration	K00200	STD-1955-09	04/02/10

Standards Preparation Final digestate volume = 10 mls

Standards	Final Conc	Parent Standard	Standards Log #	Vol (mL)	Pipette
Cal Working	10 mg/L	Primary Cal	See Attached Standards Log Printouts	1.00	7
Daily Cal Working	100 ug/L	Cal Working		1.00	7
ICAL 0.2	0.2 ug/L	Daily Cal Working		0.2	7
ICAL 0.5	0.5 ug/L	Daily Cal Working		0.5	7
ICAL 1	1.0 ug/L	Daily Cal Working		1.0	7
ICAL 2	2.0 ug/L	Daily Cal Working		2.0	7
ICAL 5	5.0 ug/L	Daily Cal Working		5.0	24
ICAL 10	10 ug/L	Daily Cal Working		10.0	24
CCV	5 ug/L	Daily Cal Working		5.0	7
ICV Intermed	700 ug/L	ICV Stock		0.70	7
ICV Daily Working	7.0 ug/L	ICV Intermed		1.00	7
LCS	5 ug/L	Daily Cal Working		0.5	7
MS/MSD	5 ug/L	Daily Cal Working		0.5	7
RL	0.2 ug/L	Daily Cal Working		0.2	7

Second Source ICV Intermediate Stock Standard Prep Standards Log #: STD-7171-09

NOTE: Details for each reagent & standard prep are documented in the attached Standards Preparation Logbook Record.

Comments Total - Bocine

I certify that all information above is correct and complete.

Signature: Chris Toth Date: 12/15/09

REVIEWED BY: [Signature] Date: 12/15/09

Batch Number: 9348214

TestAmerica Laboratories, Inc. Metals Prep Log/ Batch Summary

Prepared By: CD

Prep Date: 12/14/09 *MS*
Due Date: 12/16/09

<u>Lot</u>	<u>Work Order</u>			<u>Initial Weight/Volume</u>
D9L140000 Water	LQ24D	B 1	Due Date: SDG:	<u>10 mL</u>
D9L140000 Water	LQ24D	C 2	Due Date: SDG:	<u>10 mL</u>
D9L100591 Water	LQWNJ Total	3	Due Date: 12/16/09 SDG:	<u>10 mL</u>
D9L100591 Water	LQWNJ Total	S 4	Due Date: 12/16/09 SDG:	<u>10 mL</u>
D9L100591 Water	LQWNJ Total	D 5	Due Date: 12/16/09 SDG:	<u>10 mL</u>
D9L100594 Water	LQWPH Total	6	Due Date: 12/16/09 SDG:	<u>10 mL</u>

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

** Run MS/D Twice!*

**METALS
SAMPLE DATA
CVAA**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Denver

Standards Preparation Logbook Record

Dec-15-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD1955-09, 1000 mg/L HG Calibration Stock Standard (ULTRA) Analyst: GRISDALEC

Vendor: Ultra (Metals) Lot No.: K00200 Vendor's Expiration Date: 04-02-2010
Solvent: 2% HNO3
Date Prep./Opened: 04-02-2009 Date Received: 04-02-2009
Date Expires(1): 04-02-2010 (1 Year) ✓
Date Expires(2): 04-02-2010 (None)
(METALS)-Inventory ID: 842

<u>Component</u>	<u>Initial Conc (ug/ml)</u>	<u>Final Conc (ug/ml)</u>
HG	1,000.0	1,000.0

STD1957-09, Hg Inorganic Ventures ICV 100PPM std Analyst: GRISDALEC

Vendor: Inorganic Ventures Lot No.: B2-HG02064 Vendor's Expiration Date: 04-02-2010
Solvent: Neat
Date Prep./Opened: 04-02-2009 Date Received: 04-02-2009
Date Expires(1): 04-02-2010 (1 Year) ✓
Date Expires(2): 04-02-2010 (None)
(METALS)-Inventory ID: 843

<u>Component</u>	<u>Initial Conc (%)</u>	<u>Final Conc (%)</u>
HG	100.00	100.00

STD7170-09, 10 mg/L Hg Calibration Std Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 11-23-2009
Date Expires(1): 12-23-2009 (1 Month) ✓
Date Expires(2): 04-02-2010 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD1955-09, 1000 mg/L HG Calibration Stock Standard (ULTRA) aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-02-2010 Parent Date Expires(2): 04-02-2010

<u>Component</u>	<u>Initial Conc (ug/ml)</u>	<u>Final Conc (mg/L)</u>
HG	1,000.0	10.000

STD7448-09, Hg Inorganic Ventures ICV 700ppb

Analyst: grisdalec

Solvent: 1% HNO3 Lot No.: H12022
Date Prep./Opened: 12-07-2009
Date Expires(1): 12-21-2009 (2 Weeks)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Volume (ml): 100.00

Parent Std No.: STD1957-09, Hg Inorganic Ventures ICV 100PPM std Aliquot Amount (ml): 0.7000
Parent Date Expires(1): 04-02-2010 Parent Date Expires(2): 04-02-2010

Component	Initial Conc (%)	Final Conc (ug/L)
HG	100.00	7,000,000

STD7598-09, 100 ppb Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H14024
Date Prep./Opened: 12-14-2009
Date Expires(1): 12-15-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Volume (ml): 100.00

Parent Std No.: STD7170-09, 10 mg/L Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 12-23-2009 Parent Date Expires(2): 04-02-2010

Component	Initial Conc (mg/L)	Final Conc (ug/ml)
HG	10.000	0.1000

STD7599-09, Blank Daily Hg Calibration Std

Analyst: grisdalec

Vendor: Baker Lot No.: H14024
Solvent: 1% HN03
Date Prep./Opened: 12-14-2009
Date Expires(1): 06-14-2010 (6 Months)
Date Expires(2): 12-14-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

Component	Initial Conc (%)	Final Conc (%)
Nitric Acid	1.0000	1.0000

STD7600-09, 0.2 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H14024
Date Prep./Opened: 12-14-2009
Date Expires(1): 12-15-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Volume (ml): 100.00

Parent Std No.: STD7598-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.2000
 Parent Date Expires(1): 12-15-2009 Parent Date Expires(2): 04-02-2010

<u>Component</u>	<u>Initial Conc (ug/ml)</u>	<u>Final Conc (ug/ml)</u>
HG	0.1000	0.0002

STD7601-09, 0.5 ppb Daily Hg Calibration Std

Analyst: grisdalec
 Volume (ml): 100.00

Solvent: 1% HN03 Lot No.: H14024
 Date Prep./Opened: 12-14-2009
 Date Expires(1): 12-15-2009 (1 Day)
 Date Expires(2): 04-02-2010 (None)
 Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD7598-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.5000
 Parent Date Expires(1): 12-15-2009 Parent Date Expires(2): 04-02-2010

<u>Component</u>	<u>Initial Conc (ug/ml)</u>	<u>Final Conc (ug/ml)</u>
HG	0.1000	0.0005

STD7602-09, 1.0 ppb Daily Hg Calibration Std

Analyst: grisdalec
 Volume (ml): 100.00

Solvent: 1% HN03 Lot No.: H14024
 Date Prep./Opened: 12-14-2009
 Date Expires(1): 12-15-2009 (1 Day)
 Date Expires(2): 04-02-2010 (None)
 Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD7598-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 1.0000
 Parent Date Expires(1): 12-15-2009 Parent Date Expires(2): 04-02-2010

<u>Component</u>	<u>Initial Conc (ug/ml)</u>	<u>Final Conc (ug/ml)</u>
HG	0.1000	0.0010

STD7603-09, 2.0 ppb Daily Hg Calibration Std

Analyst: grisdalec
 Volume (ml): 100.00

Solvent: 1% HN03 Lot No.: H14024
 Date Prep./Opened: 12-14-2009
 Date Expires(1): 12-15-2009 (1 Day)
 Date Expires(2): 04-02-2010 (None)
 Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD7598-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 2.0000
 Parent Date Expires(1): 12-15-2009 Parent Date Expires(2): 04-02-2010

<u>Component</u>	<u>Initial Conc (ug/ml)</u>	<u>Final Conc (ug/ml)</u>
HG	0.1000	0.0020

STD7604-09, 5.0 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H14024
Date Prep./Opened: 12-14-2009
Date Expires(1): 12-15-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Volume (ml): 100.00

Parent Std No.: STD7598-09, 100 ppb Hg Calibration Std

Aliquot Amount (ml): 5.0000

Parent Date Expires(1): 12-15-2009 Parent Date Expires(2): 04-02-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
HG	0.1000	0.0050

STD7605-09, 10.0 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H14024
Date Prep./Opened: 12-14-2009
Date Expires(1): 12-15-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Volume (ml): 100.00

Date Consumed: 12-06-2006

Parent Std No.: STD7598-09, 100 ppb Hg Calibration Std

Aliquot Amount (ml): 10.000

Parent Date Expires(1): 12-15-2009 Parent Date Expires(2): 04-02-2010

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
HG	0.1000	0.0100

STD7606-09, Hg Daily ICV 7ppb Calibration Std

Analyst: grisdalec

Solvent: 1% HNO3 Lot No.: H14024
Date Prep./Opened: 12-14-2009
Date Expires(1): 12-15-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Volume (ml): 100.00

Parent Std No.: STD7448-09, Hg Inorganic Ventures ICV 700ppb

Aliquot Amount (ml): 1.0000

Parent Date Expires(1): 12-21-2009 Parent Date Expires(2): 04-02-2010

Component	Initial Conc (ug/L)	Final Conc (ug/L)
HG	7,000,000	70,000

Reviewed By:

Christopher Grisdale

12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
1	Cal Blank				0.00	1.0	0.00	ppb		12/14/09 15:57	
2	Sid1				0.20	1.0	0.20	ppb	100.0%	12/14/09 15:59	
3	Sid2				0.50	1.0	0.50	ppb	100.0%	12/14/09 16:02	
4	Sid3				1.00	1.0	1.00	ppb	100.0%	12/14/09 16:04	
5	Sid4				2.00	1.0	2.00	ppb	100.0%	12/14/09 16:06	
6	Sid5				5.00	1.0	5.00	ppb	100.0%	12/14/09 16:09	
7	Sid6				10.00	1.0	10.00	ppb	100.0%	12/14/09 16:11	
8	ICB				0.01	1.0	0.01	ppb		12/14/09 16:15	
9	ICV				6.89	1.0	6.89	ppb	98.5%	12/14/09 16:17	
10	RL				0.21	1.0	0.21	ppb		12/14/09 16:19	
11	CCV				4.93	1.0	4.93	ppb	98.5%	12/14/09 16:21	
12	CCB				0.01	1.0	0.01	ppb		12/14/09 16:24	
13	LOQ36C	D9L140000	9348211	AQUEOUS	0.02	1.0	0.02	ppb	96.7%	12/14/09 16:26	
14	LOQ36C	D9L140000 = 5.00	9348211	AQUEOUS	4.84	1.0	4.84	ppb	96.7%	12/14/09 16:28	
15	LOQVMD	D9L100474-1	9348211	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 16:31	
16	LOQ4T	D9L100644-1	9348211	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 16:33	
17	LOQ4TS	D9L100644-1 = 5.00	9348211	AQUEOUS	2.75	1.0	2.75	ppb		12/14/09 16:35	
18	LOQ4TD	D9L100644-1 = 5.00	9348211	AQUEOUS	2.30	1.0	2.30	ppb		12/14/09 16:38	
19	LOQ4X	D9L100644-2	9348211	AQUEOUS	-0.19	1.0	-0.19	ppb		12/14/09 16:51	
20	LOQ40	D9L100644-3	9348211	AQUEOUS	-0.01	1.0	-0.01	ppb		12/14/09 16:53	
21	LOQ41	D9L100644-4	9348211	AQUEOUS	-0.00	1.0	-0.00	ppb		12/14/09 16:55	
22	LOQ42	D9L100644-5	9348211	AQUEOUS	0.01	1.0	0.01	ppb	101.3%	12/14/09 16:58	
23	CCV	= 5.00			5.06	1.0	5.06	ppb	101.3%	12/14/09 17:00	
24	CCB				0.00	1.0	0.00	ppb		12/14/09 17:02	
25	LOV9K	D9L100546-1	9348211	AQUEOUS	0.04	1.0	0.04	ppb		12/14/09 17:04	
26	LOV96	D9L100546-1	9348211	AQUEOUS	0.04	1.0	0.04	ppb		12/14/09 17:07	
27	LOWAC	D9L100549-1	9348211	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 17:09	
28	LOQK0	D9L120490-1	9348211	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 17:11	
29	LOQK2	D9L120490-2	9348211	AQUEOUS	4.44	1.0	4.44	ppb		12/14/09 17:14	
30	LOQK3	D9L120490-2 = 5.00	9348211	AQUEOUS	3.24	1.0	3.24	ppb		12/14/09 17:16	
31	LOQK4	D9L120490-2 = 5.00	9348211	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 17:18	
32	LOQK5	D9L110000	9348246	AQUEOUS	4.61	1.0	4.61	ppb		12/14/09 17:21	
33	LOQ5JCT	D9L140000 = 5.00	9348246		0.45	1.0	0.45	ppb	9.0%	12/14/09 17:23	
34	LOQWDT	D9L100612-1	9348246	LEACHATE	0.10	1.0	0.10	ppb		12/14/09 17:25	

NA Both prep
correction

NA, samples return below.

Sub 12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV:

CA/CCV:

Sample ID Lot No. Batch Matrix Raw DF Result Units %R Analyzed Date Comment

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
35	CCV	= 5.00			5.14	1.0	5.14	ppb	102.7%	12/14/09 17:27	
36	CCB				0.00	1.0	0.00	ppb		12/14/09 17:30	
37	LQWWDDET	D9L100612-1	9348246	LEACHATE	5.34	5.0	5.34	ppb		12/14/09 17:32	<i>NA samples from below.</i>
38	LQWWDST	D9L100612-1 = 5.00	9348246	LEACHATE	5.28	1.0	5.28	ppb		12/14/09 17:34	
39	LQWWDST	D9L100612-1 = 5.00	9348246	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 17:37	
40	LQW60BT	D9L100000	9348249		4.66	1.0	4.66	ppb		12/14/09 17:39	
41	LQ6ACT	D9L140000 = 5.00	9348249		0.01	1.0	0.01	ppb	0.2%	12/14/09 17:41	
42	LQMA1T	D9L070416-1	9348249	LEACHATE	4.73	1.0	4.73	ppb		12/14/09 17:44	
43	LQMA1ST	D9L070416-1 = 5.00	9348249	LEACHATE	5.01	1.0	5.01	ppb		12/14/09 17:46	
44	LQMA1DT	D9L070416-1 = 5.00	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 17:48	
45	LQMA2T	D9L070416-2	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 17:50	
46	LQMA2T	D9L070416-4	9348249	LEACHATE	0.01	1.0	0.02	ppb		12/14/09 17:53	
47	CCV	= 5.00			5.24	1.0	5.24	ppb	104.8%	12/14/09 17:55	
48	CCB				0.01	1.0	0.01	ppb		12/14/09 17:57	
49	LQMA5T	D9L070416-5	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:00	
50	LQMA6T	D9L070416-6	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:02	
51	LQMA8T	D9L070416-8	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:04	
52	LQMA9T	D9L070416-9	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:07	
53	LQMCAT	D9L070416-10	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:09	
54	LQMCCT	D9L070416-11	9348249	LEACHATE	0.03	1.0	0.03	ppb		12/14/09 18:11	
55	LQMCDT	D9L070416-12	9348249	LEACHATE	0.57	1.0	0.57	ppb		12/14/09 18:14	
56	LQMCET	D9L070416-13	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:16	
57	LQMCFT	D9L070416-14	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:18	
58	LQW60BT	D9L100000	9348253		4.83	1.0	4.83	ppb		12/14/09 18:20	
59	CCV	= 5.00			5.16	1.0	5.16	ppb	103.3%	12/14/09 18:23	
60	CCB				0.00	1.0	0.00	ppb		12/14/09 18:25	
61	LQ6BCT	D9L140000 = 5.00	9348253		0.01	1.0	0.01	ppb	0.2%	12/14/09 18:27	
62	LQMA3T	D9L070416-3	9348253	LEACHATE	4.88	1.0	4.88	ppb		12/14/09 18:30	
63	LQMA3ST	D9L070416-3 = 5.00	9348253	LEACHATE	4.99	1.0	4.99	ppb		12/14/09 18:32	
64	LQMA3DT	D9L070416-3 = 5.00	9348253	LEACHATE	0.01	1.0	0.01	ppb		12/14/09 18:34	
65	LQMA7T	D9L070416-7	9348253	LEACHATE	0.02	1.0	0.02	ppb		12/14/09 18:37	
66	LQ1P6BK	D9L110000	9348256		5.15	1.0	5.15	ppb		12/14/09 18:39	
67	LQ260CK	D9L140000 = 5.00	9348256		0.01	1.0	0.01	ppb	0.2%	12/14/09 18:41	
68	LQTDK	D9L090508-1	9348256	LEACHATE	4.58	1.0	4.58	ppb		12/14/09 18:44	

for 12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
69	LQ1P8BT	D9L100591-1 = 5.00	9348256	LEACHATE	4.81	1.0	4.81	ppb		12/14/09 18:46	NA Sample's return
70	LQ1P8BT	D9L100591-1 = 5.00	9348256	LEACHATE	0.02	1.0	0.02	ppb		12/14/09 18:46	at end.
71	CCV	= 5.00			5.13	1.0	5.13	ppb	102.6%	12/14/09 18:50	
72	CCB				0.00	1.0	0.00	ppb		12/14/09 18:53	
73	LQ1P8BT	D9L110000	9348264		0.01	1.0	0.01	ppb		12/14/09 18:55	
74	LQ28FCT	D9L140000 = 5.00	9348264		4.97	1.0	4.97	ppb	99.4%	12/14/09 18:57	
75	LQ1P8BT	D9L080601-1	9348264	LEACHATE	0.02	1.0	0.02	ppb		12/14/09 19:00	
76	LQ1P8BT	D9L080601	9348264	LEACHATE	0.01	5.0	0.01	ppb		12/14/09 19:02	NC
77	LQ1P8BT	D9L080601-1 = 5.00	9348264	LEACHATE	3.71	1.0	3.71	ppb		12/14/09 19:04	
78	LQ1P8BT	D9L080601-1 = 5.00	9348264	LEACHATE	3.67	1.0	3.67	ppb		12/14/09 19:07	
79	LQ1P8BT	D9L080601-1 = 5.00	9348264	LEACHATE	3.56	1.0	3.56	ppb		12/14/09 19:09	
80	LQ1P8BT	D9L110000	9348265		-0.02	1.0	-0.02	ppb		12/14/09 19:11	
81	LQ28KCT	D9L140000 = 5.00	9348265	LEACHATE	4.89	1.0	4.90	ppb	97.9%	12/14/09 19:14	
82	CCV	= 5.00			5.25	1.0	5.25	ppb	105.0%	12/14/09 19:18	
83	CCB				0.01	1.0	0.01	ppb		12/14/09 19:20	
84	LQW46ST	D9L100645-1 = 5.00	9348265	LEACHATE	2.48	1.0	2.48	ppb		12/14/09 19:23	
85	LQW46DT	D9L100645-1 = 5.00	9348265	LEACHATE	3.21	1.0	3.21	ppb		12/14/09 19:25	
86	LQ240BF	D9L140000	9348240		0.01	1.0	0.01	ppb		12/14/09 19:27	
87	LQ240CF	D9L140000 = 5.00	9348240		5.10	1.0	5.10	ppb	101.9%	12/14/09 19:30	
88	LQW46ST	D9L100591-1	9348240	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 19:32	
89	LQW46DT	D9L100591-1 = 5.00	9348240	AQUEOUS	5.13	1.0	5.13	ppb		12/14/09 19:34	
90	CCV	= 5.00			5.07	1.0	5.07	ppb	101.5%	12/14/09 19:37	
91	CCB				0.01	1.0	0.01	ppb		12/14/09 19:39	
92	LQW46ST	D9L100591-1 = 5.00	9348240	AQUEOUS	5.13	1.0	5.13	ppb		12/14/09 19:41	
93	LQW46DT	D9L100591-1 = 5.00	9348240	AQUEOUS	5.29	1.0	5.29	ppb		12/14/09 19:43	NA Confirms above
94	LQW46ST	D9L100591-1 = 5.00	9348240	AQUEOUS	5.05	1.0	5.05	ppb		12/14/09 19:46	
95	LQW46DT	D9L100591-1 = 5.00	9348240	AQUEOUS	0.03	1.0	0.03	ppb		12/14/09 19:48	
96	LQ240BF	D9L140000	9348214		0.01	1.0	0.01	ppb		12/14/09 19:50	
97	LQ240CF	D9L140000 = 5.00	9348214		5.03	1.0	5.03	ppb	100.7%	12/14/09 19:53	
98	CCV	= 5.00			5.13	1.0	5.13	ppb	102.6%	12/14/09 19:55	
99	CCB				0.00	1.0	0.00	ppb		12/14/09 19:57	
100	LQW46ST	D9L100591-1	9348214	AQUEOUS	2.11	1.0	2.11	ppb		12/14/09 20:02	
101	LQW46DT	D9L100591-1 = 5.00	9348214	AQUEOUS							
102	LQW46ST	D9L100591-1 = 5.00	9348214	AQUEOUS							

✓ CS 12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
103	LQWNJD	D9L100591-1 = 5.00	9348214	AQUEOUS	1.62	1.0	1.62	ppb		12/14/09 20:04	
104	LQWNJS	D9L100591-1 = 5.00	9348214	AQUEOUS	2.19	1.0	2.19	ppb		12/14/09 20:07	
105	LQWNJD	D9L100591-1 = 5.00	9348214	AQUEOUS	1.65	1.0	1.65	ppb		12/14/09 20:09	MT CONFUS ABOVE.
106	LQWPH	D9L100594-1	9348214	AQUEOUS	0.05	1.0	0.05	ppb		12/14/09 20:11	
107	CCV	= 5.00			5.20	1.0	5.20	ppb	104.0%	12/14/09 20:14	
108	CCB				-0.01	1.0	-0.01	ppb		12/14/09 20:16	
109	LQ24HB	D9L140000	9348215		0.00	1.0	0.00	ppb		12/14/09 20:18	
110	LQ24HC	D9L140000 = 5.00	9348215		5.06	1.0	5.06	ppb	101.2%	12/14/09 20:20	
111	LQXX9	D9L110470-1	9348215	AQUEOUS	-0.00	1.0	-0.00	ppb		12/14/09 20:23	
112	LQX0A	D9L110470-2	9348215	AQUEOUS	0.36	1.0	0.36	ppb		12/14/09 20:25	
113	LQVKL	D9L100464-2	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 20:27	
114	LQVKS	D9L100464-2 = 5.00	9348215	AQUEOUS	4.62	1.0	4.62	ppb		12/14/09 20:30	
115	CCV	= 5.00			5.22	1.0	5.22	ppb	104.3%	12/14/09 20:32	
116	CCB				0.00	1.0	0.00	ppb		12/14/09 20:34	
117	LQVKLD	D9L100464-2 = 5.00	9348215	AQUEOUS	4.54	1.0	4.54	ppb		12/14/09 20:37	
118	LQVKT	D9L100464-3	9348215	AQUEOUS	-0.00	1.0	-0.00	ppb		12/14/09 20:39	
119	LQVWV	D9L100464-4	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 20:41	
120	LQVKX	D9L100464-5	9348215	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 20:44	
121	LQVK3	D9L100464-6	9348215	AQUEOUS	0.03	1.0	0.03	ppb		12/14/09 20:46	
122	LQVRG	D9L100491-1	9348215	AQUEOUS	0.60	1.0	0.60	ppb		12/14/09 20:48	
123	LQVRQ	D9L100491-2	9348215	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 20:51	
124	LQVRR	D9L100491-3	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 20:53	
125	LQVRT	D9L100491-4	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 20:55	
126	LQVRW	D9L100491-5	9348215	AQUEOUS	0.14	1.0	0.14	ppb		12/14/09 20:57	
127	CCV	= 5.00			5.16	1.0	5.16	ppb	103.1%	12/14/09 21:00	
128	CCB				0.00	1.0	0.00	ppb		12/14/09 21:02	
129	LQVRX	D9L100491-6	9348215	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 21:04	
130	LQVRO	D9L100491-7	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:07	
131	LQVR1	D9L100491-8	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:09	
132	LQVR2	D9L100491-9	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:11	
133	LQVR4	D9L100491-10	9348215	AQUEOUS	0.05	1.0	0.05	ppb		12/14/09 21:14	
134	LQVR7	D9L100491-11	9348215	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:16	
135	LQWTE	D9L100608-1	9348215	AQUEOUS	0.03	1.0	0.03	ppb		12/14/09 21:18	
136	LQ24LB	D9L140000	9348216		0.01	1.0	0.01	ppb		12/14/09 21:21	

2012/15/09

MT CONFUS ABOVE.

✓ 05 12/15/09

Denver

RUN SUMMARY

Method: CV/HG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
137	LQ24LC	D9L140000 = 5.00	9348216		4.89	1.0	4.89	ppb	97.8%	12/14/09 21:23	
138	LOXX6	D9L110467-1	9348216	AQUEOUS	2.46	1.0	2.46	ppb		12/14/09 21:25	
139	CCV	= 5.00			5.14	1.0	5.14	ppb	102.7%	12/14/09 21:28	
140	CCB				0.00	1.0	0.00	ppb		12/14/09 21:30	
141	LOXX6S	D9L110467-1 = 5.00	9348216	AQUEOUS	6.92	1.0	6.92	ppb		12/14/09 21:32	
142	LOXX6D	D9L110467-1 = 5.00	9348216	AQUEOUS	6.90	1.0	6.90	ppb		12/14/09 21:34	
143	LOXX8	D9L110467-2	9348216	AQUEOUS	1.72	1.0	1.72	ppb		12/14/09 21:37	
144	LOX0E	D9L110467-3	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:39	
145	LOX0F	D9L110467-4	9348216	AQUEOUS	1.04	1.0	1.04	ppb		12/14/09 21:41	
146	LOX0H	D9L110467-5	9348216	AQUEOUS	0.13	1.0	0.13	ppb		12/14/09 21:44	
147	LOX0K	D9L110467-6	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:46	
148	LOX0M	D9L110467-7	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:48	
149	LOX0N	D9L110467-8	9348216	AQUEOUS	0.16	1.0	0.16	ppb		12/14/09 21:51	
150	LOX0P	D9L110467-9	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 21:53	
151	CCV	= 5.00			5.14	1.0	5.14	ppb	102.7%	12/14/09 21:55	
152	CCB				0.00	1.0	0.00	ppb		12/14/09 21:58	
153	LOX0R	D9L110467-10	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:00	
154	LOX0T	D9L110467-11	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:02	
155	LOX0V	D9L110467-12	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:05	
156	LOX00	D9L110467-13	9348216	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 22:07	
157	LOX01	D9L110467-14	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:09	
158	LOX02	D9L110467-15	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:12	
159	LO17C	D9L120434-1	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:14	
160	LO17M	D9L120434-2	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:16	
161	LO17N	D9L120434-3	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:18	
162	LO17Q	D9L120434-4	9348216	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:21	
163	CCV	= 5.00			5.14	1.0	5.14	ppb	102.7%	12/14/09 22:23	
164	CCB				0.00	1.0	0.00	ppb		12/14/09 22:25	
165	LQ24NB	D9L140000	9348228		0.01	1.0	0.01	ppb		12/14/09 22:28	
166	LQ24NC	D9L140000 = 5.00	9348228		4.51	1.0	4.51	ppb	90.1%	12/14/09 22:30	
167	LQ18J	D9L120449-1	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:32	
168	LQ19K	D9L120449-2	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:35	
169	LQ19L	D9L120449-3	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:37	
170	LQ19M	D9L120449-4	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:39	

✓ 12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
171	LQ19N	D9L120449-5	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:42	
172	LQ19P	D9L120449-6	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:44	
173	LQ19Q	D9L120449-7	9348228	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 22:46	
174	LQ19T	D9L120449-8	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:49	
175	CCV	= 5.00			5.24	1.0	5.24	ppb	104.8%	12/14/09 22:51	
176	CCB				0.00	1.0	0.00	ppb		12/14/09 22:53	
177	LQ19V	D9L120449-9	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:56	
178	LQ19W	D9L120449-10	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 22:58	
179	LQ19X	D9L120449-11	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:00	
180	LQ190	D9L120449-12	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:03	
181	LQ12C	D9L120417-1	9348228	AQUEOUS	0.05	1.0	0.05	ppb		12/14/09 23:05	
182	LQ12CS	D9L120417-1 = 5.00	9348228	AQUEOUS	3.75	1.0	3.75	ppb		12/14/09 23:07	
183	LQ12CD	D9L120417-1 = 5.00	9348228	AQUEOUS	3.82	1.0	3.82	ppb		12/14/09 23:10	
184	LQ12E	D9L120417-2	9348228	AQUEOUS	0.03	1.0	0.03	ppb		12/14/09 23:12	
185	LQ2KP	D9L120489-1	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:14	
186	LQ2KQ	D9L120489-2	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:17	
187	CCV	= 5.00			5.14	1.0	5.14	ppb	102.8%	12/14/09 23:19	
188	CCB				0.00	1.0	0.00	ppb		12/14/09 23:21	
189	LQ2KR	D9L120489-3	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:24	
190	LQ2KT	D9L120489-4	9348228	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 23:26	
191	LQ2KV	D9L120489-5	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:28	
192	LQ2KW	D9L120489-6	9348228	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:30	
193	LQ24VB	D9L140000	9348234		0.01	1.0	0.01	ppb		12/14/09 23:33	
194	LQ24VC	D9L140000 = 5.00	9348234		5.05	1.0	5.05	ppb	100.9%	12/14/09 23:35	
195	LQWD3	D9L100551-12	9348234	AQUEOUS	0.02	1.0	0.02	ppb		12/14/09 23:37	
196	LQWD3S	D9L100551-12 = 5.00	9348234	AQUEOUS	5.15	1.0	5.15	ppb		12/14/09 23:40	
197	LQWD3D	D9L100551-12 = 5.00	9348234	AQUEOUS	5.01	1.0	5.01	ppb		12/14/09 23:42	
198	LQ243BF	D9L140000	9348242		0.01	1.0	0.01	ppb		12/14/09 23:44	
199	CCV	= 5.00			5.12	1.0	5.12	ppb	102.5%	12/14/09 23:47	
200	CCB				0.00	1.0	0.00	ppb		12/14/09 23:49	
201	LQ243CF	D9L140000 = 5.00	9348242		5.01	1.0	5.01	ppb	100.2%	12/14/09 23:51	
202	LQ0LNF	D9L110557-2	9348242	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:54	
203	LQ0LNPSF	D9L110557	9348242	AQUEOUS	0.01	5.0	0.01	ppb		12/14/09 23:56	NC
204	LQ0LWF	D9L110557-6	9348242	AQUEOUS	0.01	1.0	0.01	ppb		12/14/09 23:58	

CS 12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment
205	LQ0L9F	D9L110557-9	9348242	AQUEOUS	0.01	1.0	0.01	ppb		12/15/09 00:01	
206	LQCVJB	D9L020000	9336261		0.01	1.0	0.01	ppb		12/15/09 00:03	
207	LQCVJC	D9L020000 = 5.00	9336261		5.05	1.0	5.05	ppb	101.0%	12/15/09 00:05	
208	LQCAP	D9L020404-1	9336261	AQUEOUS	0.01	1.0	0.01	ppb		12/15/09 00:08	
209	LQCVJL	D9L020000 = 5.00	9336261		5.14	1.0	5.14	ppb	102.8%	12/15/09 00:10	
210	CCV	= 5.00			5.03	1.0	5.03	ppb	100.7%	12/15/09 00:12	
211	CCB				0.00	1.0	0.00	ppb		12/15/09 00:15	
212	LQ1QDBT	D9L110000	9348246		0.01	1.0	0.01	ppb		12/15/09 00:20	
213	LQ2SUCT	D9L140000 = 5.00	9348246		4.82	1.0	4.82	ppb	96.3%	12/15/09 00:23	
214	LQWWDT	D9L100612-1	9348246	LEACHATE	0.47	1.0	0.47	ppb		12/15/09 00:25	
215	CCV	= 5.00			5.03	1.0	5.03	ppb	100.5%	12/15/09 00:27	
216	CCB				0.00	1.0	0.00	ppb		12/15/09 00:30	
217	LQWWDPT	D9L100612	9348246	LEACHATE	0.10	5.0	0.10	ppb		12/15/09 00:32	N/A
218	LQWWDST	D9L100612-1 = 5.00	9348246	LEACHATE	5.28	1.0	5.28	ppb		12/15/09 00:34	
219	LQWWDST	D9L100612-1 = 5.00	9348246	LEACHATE	5.24	1.0	5.24	ppb		12/15/09 00:37	
220	LQW60BT	D9L100000	9348249		0.01	1.0	0.01	ppb		12/15/09 00:39	
221	LQ26ACT	D9L140000 = 5.00	9348249		4.89	1.0	4.89	ppb	97.7%	12/15/09 00:41	
222	LQMA1T	D9L070416-1	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 00:43	
223	LQMA1ST	D9L070416-1 = 5.00	9348249	LEACHATE	4.86	1.0	4.86	ppb		12/15/09 00:46	
224	LQMA1DT	D9L070416-1 = 5.00	9348249	LEACHATE	4.82	1.0	4.82	ppb		12/15/09 00:48	
225	LQMA2T	D9L070416-2	9348249	LEACHATE	0.00	1.0	0.01	ppb		12/15/09 00:50	
226	LQMA4T	D9L070416-4	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 00:53	
227	CCV	= 5.00			5.05	1.0	5.05	ppb	101.1%	12/15/09 00:55	
228	CCB				0.00	1.0	0.00	ppb		12/15/09 00:57	
229	LQMA5T	D9L070416-5	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:00	
230	LQMA6T	D9L070416-6	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:02	
231	LQMA8T	D9L070416-8	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:04	
232	LQMA9T	D9L070416-9	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:06	
233	LQMCAT	D9L070416-10	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:09	
234	LQMCCT	D9L070416-11	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:11	
235	LQMCDT	D9L070416-12	9348249	LEACHATE	0.02	1.0	0.02	ppb		12/15/09 01:13	
236	LQMCET	D9L070416-13	9348249	LEACHATE	0.56	1.0	0.56	ppb		12/15/09 01:16	
237	LQMCFT	D9L070416-14	9348249	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:18	
238	LQW63BT	D9L100000	9348253		0.01	1.0	0.01	ppb		12/15/09 01:20	

✓ CG 12/15/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury)

Instrument: A (033)

Reported: 12/15/09 11:06:29

Sequence: 091214AB

Date: 12/14/09 15:57

Analyst: CGG

ICV: _____

CAL/CCV: _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
239	CCV	= 5.00			5.11	1.0	5.11	ppb	102.3%	12/15/09 01:23		<input type="checkbox"/>
240	CCB				0.00	1.0	0.00	ppb		12/15/09 01:25		<input type="checkbox"/>
241	LQ26RCT	D9L140000 = 5.00	9348253		4.84	1.0	4.84	ppb	96.8%	12/15/09 01:27		<input type="checkbox"/>
242	LQMA3T	D9L070416-3	9348253	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:29		<input type="checkbox"/>
243	LQMA3T	D9L070416-3 = 5.00	9348253	LEACHATE	5.05	1.0	5.05	ppb		12/15/09 01:32		<input type="checkbox"/>
244	LQMA3DT	D9L070416-3 = 5.00	9348253	LEACHATE	4.86	1.0	4.86	ppb		12/15/09 01:34		<input type="checkbox"/>
245	LQMA7T	D9L070416-7	9348253	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:36		<input type="checkbox"/>
246	LQ1P6BK	D9L110000	9348256		0.01	1.0	0.02	ppb		12/15/09 01:39		<input type="checkbox"/>
247	LQ260CK	D9L140000 = 5.00	9348256		5.12	1.0	5.12	ppb	102.4%	12/15/09 01:41		<input type="checkbox"/>
248	LQTD DK	D9L090598-1	9348256	LEACHATE	0.01	1.0	0.01	ppb		12/15/09 01:43		<input type="checkbox"/>
249	LQTD DSK	D9L090598-1 = 5.00	9348256	LEACHATE	4.83	1.0	4.83	ppb		12/15/09 01:46		<input type="checkbox"/>
250	LQTD DDK	D9L090598-1 = 5.00	9348256	LEACHATE	4.96	1.0	4.96	ppb		12/15/09 01:48		<input type="checkbox"/>
251	CCV	= 5.00			5.04	1.0	5.04	ppb	100.7%	12/15/09 01:50		<input type="checkbox"/>
252	CCB				0.00	1.0	0.00	ppb		12/15/09 01:53		<input type="checkbox"/>

✓ us 12/15/09

Report Generated By CETAC QuickTrace

Analyst: GrisdaleC

Worksheet file: C:\Program Files\QuickTrace\Worksheets\091214AB.wsz

Date Started: 12/14/2009 3:50:06 PM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
Cal Blank	STD	12/14/09 03:57:39 pm	0.000	✓ 120	20.59		1.00	1.00	1.00
Std1	STD	12/14/09 03:59:56 pm	0.200	✓ 3270	0.52		1.00	1.00	1.00
Std2	STD	12/14/09 04:02:14 pm	0.500	✓ 7918	0.64		1.00	1.00	1.00
Std3	STD	12/14/09 04:04:33 pm	1.000	✓ 15204	0.49		1.00	1.00	1.00
Std4	STD	12/14/09 04:06:52 pm	2.000	✓ 31186	1.49		1.00	1.00	1.00
Std5	STD	12/14/09 04:09:12 pm	5.000	✓ 78209	1.78		1.00	1.00	1.00
Std6	STD	12/14/09 04:11:32 pm	10.000	✓ 156800	0.12		1.00	1.00	1.00

Calibration

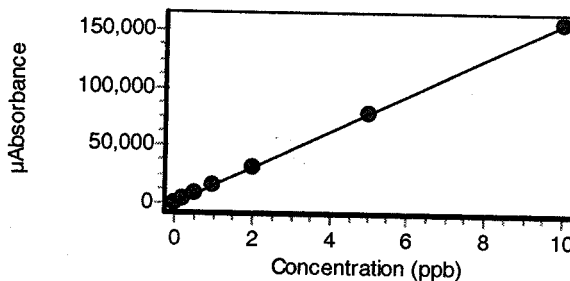
Equation: $A = -60.839 + 15675.620C$

R2: 0.99999 ✓

SEE: 242.1875

Flags:

Handwritten:
12/15/09



ICB	ICB	12/14/09 04:15:01 pm	0.008	✓ 59	13.49		1.00	1.00	1.00
ICV	ICV	12/14/09 04:17:22 pm	6.895	✓ 108025	0.19		1.00	1.00	1.00
% Recovery			98.50	✓					
RL	CRDL	12/14/09 04:19:39 pm	0.213	✓ 3282	0.06		1.00	1.00	1.00
% Recovery			106.63	✓					

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CCV	CCV	12/14/09 04:21:59 pm	4.927 ✓	77169	1.24		1.00	1.00	1.00
% Recovery		98.54 ✓							
CCB	CCB	12/14/09 04:24:16 pm	0.008 ✓	67	4.19		1.00	1.00	1.00
LQ236B	UNK	12/14/09 04:26:33 pm	0.016	190	3.34		1.00	1.00	1.00
LQ236C	UNK	12/14/09 04:28:50 pm	4.835	75724	0.93		1.00	1.00	1.00
LQVMD	UNK	12/14/09 04:31:08 pm	0.011	119	0.66		1.00	1.00	1.00
LQW4T	UNK	12/14/09 04:33:26 pm	0.010	96	23.03		1.00	1.00	1.00
LQW4TS	UNK	12/14/09 04:35:44 pm	2.750	43049	1.65		1.00	1.00	1.00
LQW4TD	UNK	12/14/09 04:38:02 pm	2.300	35986	0.67		1.00	1.00	1.00
LQW4X	UNK	12/14/09 04:51:04 pm	-0.188	-3005	0.33		1.00	1.00	1.00
LQW40	UNK	12/14/09 04:53:23 pm	-0.008	-194	0.85		1.00	1.00	1.00
LQW41	UNK	12/14/09 04:55:42 pm	-0.004	-128	9.54		1.00	1.00	1.00
LQW42	UNK	12/14/09 04:58:01 pm	0.008	68	4.00		1.00	1.00	1.00
CCV	CCV	12/14/09 05:00:21 pm	5.063 ✓	79296	0.19		1.00	1.00	1.00
% Recovery		101.25 ✓							
CCB	CCB	12/14/09 05:02:38 pm	0.004 ✓	5	91.54		1.00	1.00	1.00
LQV9K	UNK	12/14/09 05:04:58 pm	0.013	149	1.41		1.00	1.00	1.00
LQV96	UNK	12/14/09 05:07:18 pm	0.042	593	1.90		1.00	1.00	1.00
LQWAC	UNK	12/14/09 05:09:35 pm	0.010	100	3.21		1.00	1.00	1.00

NA Batch [re]prepared.
 vs 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LQ2K0	UNK	12/14/09 05:11:32 pm	0.018	223	1.02		1.00	1.00
<i>MA Batch reprepared.</i>								
LQ2K2	UNK	12/14/09 05:14:09 pm	4.440	69535	1.76		1.00	1.00
<i>CS 12/15/09</i>								
LQ2K2S	UNK	12/14/09 05:16:26 pm	3.245	50802	0.17		1.00	1.00
LQ2K2D	UNK	12/14/09 05:18:44 pm	0.009	86	9.54		1.00	1.00
<i>MA see rerun below</i>								
LQ1QDB	UNK	12/14/09 05:21:02 pm	4.612	72231	2.32		1.00	1.00
LQ25JC	UNK	12/14/09 05:23:20 pm	0.452	7032	0.72		1.00	1.00
LQWWD	UNK	12/14/09 05:25:39 pm	0.099	1485	1.97		1.00	1.00
CCV	CCV	12/14/09 05:27:59 pm	5.135	80433	0.19		1.00	1.00
<i>% Recovery 102.70</i>								
CCB	CCB	12/14/09 05:30:16 pm	0.005	13	34.06		1.00	1.00
LQWWDP5	UNK	12/14/09 05:32:35 pm	5.342	83675	2.37		1.00	1.00
LQWWDS	UNK	12/14/09 05:34:54 pm	5.277	82664	0.86		1.00	1.00
LQWWDD	UNK	12/14/09 05:37:13 pm	0.011	111	6.43 s		1.00	1.00
LQW60B	UNK	12/14/09 05:39:33 pm	4.656	72921	1.14		1.00	1.00
LQ26AC	UNK	12/14/09 05:41:50 pm	0.012	127	9.25 s		1.00	1.00
LQMA1	UNK	12/14/09 05:44:07 pm	4.728	74054	3.09		1.00	1.00
LQMA1S	UNK	12/14/09 05:46:24 pm	5.010	78475	1.02		1.00	1.00
LQMA1D	UNK	12/14/09 05:48:42 pm	0.010	104	2.84		1.00	1.00

CS 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LQMA2	UNK	12/14/09 05:50:59 pm	0.011	118	11.71	s	1.00	1.00
<i>NA, see serum below.</i>								
LQMA4	UNK	12/14/09 05:53:17 pm	0.015	182	2.89		1.00	1.00
<i>CS 12/15/09</i>								
CCV	CCV	12/14/09 05:55:37 pm	5.240	82084	0.25		1.00	1.00
% Recovery	104.81	✓						
CCB	CCB	12/14/09 05:57:54 pm	0.006	29	11.98		1.00	1.00
LQMA5	UNK	12/14/09 06:00:12 pm	0.013	135	8.35	s	1.00	1.00
LQMA6	UNK	12/14/09 06:02:31 pm	0.011	115	2.45		1.00	1.00
LQMA8	UNK	12/14/09 06:04:50 pm	0.011	105	1.89		1.00	1.00
LQMA9	UNK	12/14/09 06:07:09 pm	0.010	97	6.83		1.00	1.00
LQMCA	UNK	12/14/09 06:09:29 pm	0.011	108	1.05		1.00	1.00
LQMCC	UNK	12/14/09 06:11:48 pm	0.026	351	2.52		1.00	1.00
LQMCD	UNK	12/14/09 06:14:06 pm	0.575	8955	0.99		1.00	1.00
LQMCE	UNK	12/14/09 06:16:23 pm	0.013	136	1.90		1.00	1.00
LQMCF	UNK	12/14/09 06:18:40 pm	0.011	112	3.53		1.00	1.00
LQW63B	UNK	12/14/09 06:20:57 pm	4.833	75702	1.28		1.00	1.00
CCV	CCV	12/14/09 06:23:17 pm	5.165	80907	0.18		1.00	1.00
% Recovery	103.30	✓						
CCB	CCB	12/14/09 06:25:34 pm	0.004	8	43.21		1.00	1.00
LQ26BC	UNK	12/14/09 06:27:52 pm	0.012	121	1.16		1.00	1.00

CS 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LQMA5	UNK	12/14/09 06:30:10 pm	4.881	76459	5.00	s	1.00	1.00
<p><i>NA, see rerun below.</i></p> <p><i>US 12/15/09</i></p>								
LQMA3S	UNK	12/14/09 06:32:28 pm	4.986	78102	0.54		1.00	1.00
LQMA3D	UNK	12/14/09 06:34:47 pm	0.008	68	8.48		1.00	1.00
LQMA7	UNK	12/14/09 06:37:06 pm	0.017	201	1.09		1.00	1.00
LQ1P6B	UNK	12/14/09 06:39:25 pm	5.154	80731	0.63		1.00	1.00
LQ260C	UNK	12/14/09 06:41:45 pm	0.011	109	5.08	s	1.00	1.00
LQTDD	UNK	12/14/09 06:44:04 pm	4.584	71798	1.14		1.00	1.00
LQTDDS	UNK	12/14/09 06:46:22 pm	4.813	75389	1.18		1.00	1.00
LQTDDD	UNK	12/14/09 06:48:39 pm	0.021	275	1.08		1.00	1.00
CCV	CCV	12/14/09 06:50:59 pm	5.129 ✓	80339	0.52		1.00	1.00
% Recovery	102.58 ✓							
CCB	CCB	12/14/09 06:53:16 pm	0.005 ✓	11	8.42		1.00	1.00
LQ1P8B	UNK	12/14/09 06:55:34 pm	0.009 ✓	86	3.67		1.00	1.00
LQ28FC	UNK	12/14/09 06:57:51 pm	4.971 ✓	77867	0.15		1.00	1.00
LQP6F	UNK	12/14/09 07:00:09 pm	0.017	200	0.88		1.00	1.00
LQP6FP5	UNK	12/14/09 07:02:27 pm	0.012	120	7.14	s	1.00	1.00
LQP6FS	UNK	12/14/09 07:04:45 pm	3.711 ✓	58117	4.06		1.00	1.00
LQP6FD	UNK	12/14/09 07:07:04 pm	3.672 ✓	57497	0.35		1.00	1.00

US 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQP6FZ	UNK	12/14/09 07:09:23 pm	3.559 ✓	55720	0.23		1.00	1.00
LQ1QKB ✓	UNK	12/14/09 07:11:42 pm	-0.022 ✓	-410	7.57		1.00	1.00
LQ28KC	UNK	12/14/09 07:14:01 pm	4.895 ✓	76669	0.08		1.00	1.00
LQW46	UNK	12/14/09 07:16:21 pm	0.075	1108	1.09		1.00	1.00
CCV % Recovery 105.01 ✓	CCV	12/14/09 07:18:41 pm	5.251 ✓	82247	0.51		1.00	1.00
CCB	CCB	12/14/09 07:20:58 pm	0.008 ✓	64	7.60		1.00	1.00
LQW46S	UNK	12/14/09 07:23:16 pm	2.478 ✓	38788	0.79		1.00	1.00
LQW46D	UNK	12/14/09 07:25:34 pm	3.210 ✓	50262	0.95		1.00	1.00
LQ240B	UNK	12/14/09 07:27:52 pm	0.012 ✓	122	5.45 s		1.00	1.00
LQ240C	UNK	12/14/09 07:30:10 pm	5.096 ✓	79814	0.05		1.00	1.00
LQWNJ	UNK	12/14/09 07:32:28 pm	0.021	263	4.13		1.00	1.00
LQWNJS	UNK	12/14/09 07:34:46 pm	5.128 ✓	80329	0.49		1.00	1.00
CCV % Recovery 101.51 ✓	CCV	12/14/09 07:37:05 pm	5.075 ✓	79498	0.62		1.00	1.00
CCB	CCB	12/14/09 07:39:22 pm	0.006 ✓	32	15.70		1.00	1.00
LQWNJD	UNK	12/14/09 07:41:41 pm	5.129 ✓	80338	0.39		1.00	1.00
LQWNJS	UNK	12/14/09 07:43:59 pm	5.292	82888	1.11		1.00	1.00
<i>NA, CONFIRMS above. CO 12/15/09</i>								
LQWNJD	UNK	12/14/09 07:46:17 pm	5.055	79178	0.77		1.00	1.00

✓ CO 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LQWPH	UNK	12/14/09 07:48:36 pm	0.026	339	1.07		1.00	1.00
LQ24DB	UNK	12/14/09 07:50:55 pm	0.010 ✓	100	13.36		1.00	1.00
LQ24DC	UNK	12/14/09 07:53:14 pm	5.035 ✓	78858	0.73		1.00	1.00
CCV	CCV	12/14/09 07:55:34 pm	5.132 ✓	80386	0.08		1.00	1.00
% Recovery		102.64 ✓						
CCB	CCB	12/14/09 07:57:51 pm	0.005 ✓	13	17.37		1.00	1.00
LQWNJ	UNK	12/14/09 08:00:10 pm	0.027	367	0.69		1.00	1.00
LQWNJS	UNK	12/14/09 08:02:30 pm	2.108 ✓	32982	0.28		1.00	1.00
LQWNJD	UNK	12/14/09 08:04:48 pm	1.619 ✓	25314	0.98		1.00	1.00
LQWNJS	UNK	12/14/09 08:07:08 pm	2.128	33291	0.17		1.00	1.00
<i>NA, CONFIRMS above as 12/15/09</i>								
LQWNJD	UNK	12/14/09 08:09:26 pm	1.647	25761	0.95		1.00	1.00
LQWPH	UNK	12/14/09 08:11:44 pm	0.053	774	0.25		1.00	1.00
CCV	CCV	12/14/09 08:14:04 pm	5.202 ✓	81487	0.27		1.00	1.00
% Recovery		104.04 ✓						
CCB	CCB	12/14/09 08:16:21 pm	-0.008 ✓	-184	5.00		1.00	1.00
LQ24HB	UNK	12/14/09 08:18:39 pm	0.000 ✓	-63	19.10		1.00	1.00
LQ24HC	UNK	12/14/09 08:20:57 pm	5.059 ✓	79242	0.46		1.00	1.00
LQXX9	UNK	12/14/09 08:23:16 pm	-0.003	-103	6.35		1.00	1.00
LQX0A	UNK	12/14/09 08:25:34 pm	0.362	5609	4.08		1.00	1.00

✓ as 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQVKL	UNK	12/14/09 08:27:52 pm	0.009	85	9.73		1.00	1.00
LQVKLS	UNK	12/14/09 08:30:11 pm	4.617	72317	0.22		1.00	1.00
CCV	CCV	12/14/09 08:32:31 pm	5.217	81723	0.14		1.00	1.00
% Recovery		104.35						
CCB	CCB	12/14/09 08:34:48 pm	0.004	5	56.83		1.00	1.00
LQVKLD	UNK	12/14/09 08:37:07 pm	4.543	71158	0.12		1.00	1.00
LQVKT	UNK	12/14/09 08:39:26 pm	-0.002	-96	8.90		1.00	1.00
LQVKW	UNK	12/14/09 08:41:45 pm	0.007	51	2.48		1.00	1.00
LQVKX	UNK	12/14/09 08:44:05 pm	0.018	222	1.35		1.00	1.00
LQVK3	UNK	12/14/09 08:46:24 pm	0.026	349	0.64		1.00	1.00
LQVRG	UNK	12/14/09 08:48:42 pm	0.595	9273	1.04		1.00	1.00
LQVRQ	UNK	12/14/09 08:51:00 pm	0.017	208	1.79		1.00	1.00
LQVRR	UNK	12/14/09 08:53:19 pm	0.010	102	5.38 s		1.00	1.00
LQVRT	UNK	12/14/09 08:55:37 pm	0.010	93	4.67		1.00	1.00
LQVRW	UNK	12/14/09 08:57:56 pm	0.135	2049	0.11		1.00	1.00
CCV	CCV	12/14/09 09:00:16 pm	5.156	80767	0.19		1.00	1.00
% Recovery		103.13						
CCB	CCB	12/14/09 09:02:33 pm	0.004	-3	155.31		1.00	1.00
LQVRX	UNK	12/14/09 09:04:51 pm	0.021	270	1.45		1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LQVR0	UNK	12/14/09 09:07:10 pm	0.011	106	3.29		1.00	1.00 1.00
LQVR1	UNK	12/14/09 09:09:29 pm	0.010	100	1.90		1.00	1.00 1.00
LQVR2	UNK	12/14/09 09:11:48 pm	0.008	66	2.55		1.00	1.00 1.00
LQVR4	UNK	12/14/09 09:14:07 pm	0.045	642	1.07		1.00	1.00 1.00
LQVR7	UNK	12/14/09 09:16:27 pm	0.010	100	1.75		1.00	1.00 1.00
LQWTE	UNK	12/14/09 09:18:46 pm	0.028	371	0.32		1.00	1.00 1.00
LQ24LB	UNK	12/14/09 09:21:04 pm	0.012 /	130	1.84		1.00	1.00 1.00
LQ24LC	UNK	12/14/09 09:23:23 pm	4.888 /	76569	2.24		1.00	1.00 1.00
LQXX6	UNK	12/14/09 09:25:42 pm	2.461	38519	1.43		1.00	1.00 1.00
CCV	CCV	12/14/09 09:28:02 pm	5.137 /	80466	0.47		1.00	1.00 1.00
% Recovery 102.74 ✓								
CCB	CCB	12/14/09 09:30:19 pm	0.004 /	2	132.88		1.00	1.00 1.00
LQXX6S	UNK	12/14/09 09:32:37 pm	6.917 /	108366	0.83		1.00	1.00 1.00
LQXX6D	UNK	12/14/09 09:34:56 pm	6.898 /	108064	1.05		1.00	1.00 1.00
LQXX8	UNK	12/14/09 09:37:15 pm	1.719	26882	0.11		1.00	1.00 1.00
LQX0E	UNK	12/14/09 09:39:34 pm	0.009	86	13.57		1.00	1.00 1.00
LQX0F	UNK	12/14/09 09:41:52 pm	1.042	16279	0.29		1.00	1.00 1.00
LQX0H	UNK	12/14/09 09:44:12 pm	0.134	2036	0.28		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQX0K	UNK	12/14/09 09:46:31 pm	0.010	98	3.94		1.00	1.00
LQX0M	UNK	12/14/09 09:48:51 pm	0.008	69	7.21		1.00	1.00
LQX0N	UNK	12/14/09 09:51:10 pm	0.158	2410	0.35		1.00	1.00
LQX0P	UNK	12/14/09 09:53:29 pm	0.010	89	1.02		1.00	1.00
CCV	CCV	12/14/09 09:55:49 pm	5.136 ✓	80452	0.11		1.00	1.00
% Recovery		102.72 ✓						
CCB	CCB	12/14/09 09:58:06 pm	0.003 ✓	-10	15.85		1.00	1.00
LQX0R	UNK	12/14/09 10:00:26 pm	0.008	60	7.49		1.00	1.00
LQX0T	UNK	12/14/09 10:02:45 pm	0.006	36	2.91		1.00	1.00
LQX0V	UNK	12/14/09 10:05:04 pm	0.008	71	4.60		1.00	1.00
LQX00	UNK	12/14/09 10:07:23 pm	0.023	297	1.09		1.00	1.00
LQX01	UNK	12/14/09 10:09:42 pm	0.006	39	7.67		1.00	1.00
LQX02	UNK	12/14/09 10:12:01 pm	0.012	123	3.63		1.00	1.00
LQ17C	UNK	12/14/09 10:14:20 pm	0.011	109	1.85		1.00	1.00
LQ17M	UNK	12/14/09 10:16:39 pm	0.012	133	1.15		1.00	1.00
LQ17N	UNK	12/14/09 10:18:58 pm	0.011	115	2.98		1.00	1.00
LQ17Q	UNK	12/14/09 10:21:18 pm	0.011	116	5.25 s		1.00	1.00
CCV	CCV	12/14/09 10:23:38 pm	5.135 ✓	80435	0.18		1.00	1.00
% Recovery		102.70 ✓						

✓ 09 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
CCB	CCB	12/14/09 10:25:55 pm	0.004 /	-4	56.86		1.00	1.00 1.00
LQ24NB	UNK	12/14/09 10:28:14 pm	0.009 /	78	6.47		1.00	1.00 1.00
LQ24NC	UNK	12/14/09 10:30:34 pm	4.507 /	70592	0.37		1.00	1.00 1.00
LQ19J	UNK	12/14/09 10:32:53 pm	0.013	147	1.85		1.00	1.00 1.00
LQ19K	UNK	12/14/09 10:35:13 pm	0.008	61	1.36		1.00	1.00 1.00
LQ19L	UNK	12/14/09 10:37:32 pm	0.007	47	12.00		1.00	1.00 1.00
LQ19M	UNK	12/14/09 10:39:52 pm	0.008	69	3.17		1.00	1.00 1.00
LQ19N	UNK	12/14/09 10:42:11 pm	0.008	65	5.34		1.00	1.00 1.00
LQ19P	UNK	12/14/09 10:44:31 pm	0.008	72	3.16		1.00	1.00 1.00
LQ19Q	UNK	12/14/09 10:46:50 pm	0.019	243	0.99		1.00	1.00 1.00
LQ19T	UNK	12/14/09 10:49:09 pm	0.011	107	1.43		1.00	1.00 1.00
CCV	CCV	12/14/09 10:51:29 pm	5.240 /	82081	0.44		1.00	1.00 1.00
% Recovery		104.80 /						
CCB	CCB	12/14/09 10:53:46 pm	0.003 /	-10	53.07		1.00	1.00 1.00
LQ19V	UNK	12/14/09 10:56:06 pm	0.010	97	4.16		1.00	1.00 1.00
LQ19W	UNK	12/14/09 10:58:26 pm	0.011	109	2.63		1.00	1.00 1.00
LQ19X	UNK	12/14/09 11:00:45 pm	0.009	78	4.04		1.00	1.00 1.00
LQ190	UNK	12/14/09 11:03:05 pm	0.010	98	0.70		1.00	1.00 1.00

✓ 09 12/15/09 72

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQ12C	UNK	12/14/09 11:05:25 pm	0.049	705	0.13		1.00	1.00
LQ12CS	UNK	12/14/09 11:07:44 pm	3.745 ✓	58652	0.40		1.00	1.00
LQ12CD	UNK	12/14/09 11:10:04 pm	3.819 ✓	59810	1.09		1.00	1.00
LQ12E	UNK	12/14/09 11:12:24 pm	0.030	402	1.69		1.00	1.00
LQ2KP	UNK	12/14/09 11:14:44 pm	0.011	113	1.88		1.00	1.00
LQ2KQ	UNK	12/14/09 11:17:03 pm	0.012	125	2.32		1.00	1.00
CCV % Recovery 102.82 ✓	CCV	12/14/09 11:19:23 pm	5.141 ✓	80530	0.24		1.00	1.00
CCB	CCB	12/14/09 11:21:40 pm	0.004 ✓	10	16.71		1.00	1.00
LQ2KR	UNK	12/14/09 11:24:00 pm	0.012	125	1.66		1.00	1.00
LQ2KT	UNK	12/14/09 11:26:20 pm	0.017	200	1.44		1.00	1.00
LQ2KV	UNK	12/14/09 11:28:39 pm	0.013	146	1.20		1.00	1.00
LQ2KW	UNK	12/14/09 11:30:59 pm	0.007	55	8.45		1.00	1.00
LQ24VB	UNK	12/14/09 11:33:19 pm	0.010 ✓	92	5.64		1.00	1.00
LQ24VC	UNK	12/14/09 11:35:39 pm	5.045 ✓	79019	0.13		1.00	1.00
LQWD3	UNK	12/14/09 11:37:59 pm	0.023	302	1.50		1.00	1.00
LQWD3S	UNK	12/14/09 11:40:19 pm	5.147 ✓	80629	0.04		1.00	1.00
LQWD3D	UNK	12/14/09 11:42:39 pm	5.012 ✓	78500	0.85		1.00	1.00

✓ 12/15/09

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQ243B	UNK	12/14/09 11:44:59 pm	0.006 ✓	27	17.08		1.00	1.00 1.00
CCV % Recovery 102.47 ✓	CCV	12/14/09 11:47:19 pm	5.124	80254	0.04		1.00	1.00 1.00
CCB	CCB	12/14/09 11:49:36 pm	0.005 ✓	10	15.87		1.00	1.00 1.00
LQ243C	UNK	12/14/09 11:51:56 pm	5.008	78436	0.07		1.00	1.00 1.00
LQ0LN	UNK	12/14/09 11:54:16 pm	0.009 ✓	84	3.99		1.00	1.00 1.00
LQ0LNP5	UNK	12/14/09 11:56:36 pm	0.008 ✓	66	1.57		1.00	1.00 1.00
LQ0LW	UNK	12/14/09 11:58:56 pm	0.011	115	2.91		1.00	1.00 1.00
LQ0L9	UNK	12/15/09 12:01:16 am	0.015	173	1.22		1.00	1.00 1.00
LQCVJB	UNK	12/15/09 12:03:36 am	0.010 ✓	98	1.82		1.00	1.00 1.00
LQCVJC	UNK	12/15/09 12:05:56 am	5.048 ✓	79068	0.15		1.00	1.00 1.00
LQCVJL LQCAP cups switched	UNK	12/15/09 12:08:16 am	0.007	56	4.03		1.00	1.00 1.00
LQCAP LQCVJL as 12/15/09	UNK	12/15/09 12:10:36 am	5.138	80483	0.23		1.00	1.00 1.00
CCV % Recovery 100.71 ✓	CCV	12/15/09 12:12:56 am	5.035 ✓	78871	0.19		1.00	1.00 1.00
CCB	CCB	12/15/09 12:15:13 am	0.002 ✓	-25	5.74		1.00	1.00 1.00
LQ1QDB	UNK	12/15/09 12:20:50 am	0.009 ✓	84	5.39		1.00	1.00 1.00
LQ25JC	UNK	12/15/09 12:23:08 am	4.815 ✓	75423	0.17		1.00	1.00 1.00
LQWWD	UNK	12/15/09 12:25:27 am	0.475	7387	0.10		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
CCV % Recovery 100.55	CCV	12/15/09 12:27:47 am	5.027	78749	1.10		1.00	1.00
CCB	CCB	12/15/09 12:30:04 am	0.003	-21	21.25		1.00	1.00
LQWWDP5	UNK	12/15/09 12:32:22 am	0.097	1464	0.19		1.00	1.00
LQWWDS	UNK	12/15/09 12:34:41 am	5.280	82709	0.30		1.00	1.00
LQWWDD	UNK	12/15/09 12:37:00 am	5.236	82010	2.28		1.00	1.00
LQW60B	UNK	12/15/09 12:39:20 am	0.007	54	4.25		1.00	1.00
LQ26AC	UNK	12/15/09 12:41:39 am	4.887	76552	0.56		1.00	1.00
LQMA1	UNK	12/15/09 12:43:56 am	0.008	64	7.30		1.00	1.00
LQMA1S	UNK	12/15/09 12:46:13 am	4.864	76180	0.26		1.00	1.00
LQMA1D	UNK	12/15/09 12:48:30 am	4.821	75503	0.38		1.00	1.00
LQMA2	UNK	12/15/09 12:50:48 am	0.005	22	10.65		1.00	1.00
LQMA4	UNK	12/15/09 12:53:06 am	0.011	110	2.20		1.00	1.00
CCV % Recovery 101.05	CCV	12/15/09 12:55:25 am	5.053	79143	0.07		1.00	1.00
CCB	CCB	12/15/09 12:57:42 am	0.004	7	48.01		1.00	1.00
LQMA5	UNK	12/15/09 01:00:00 am	0.014	160	1.10		1.00	1.00
LQMA6	UNK	12/15/09 01:02:19 am	0.011	107	1.07		1.00	1.00
LQMA8	UNK	12/15/09 01:04:37 am	0.011	104	2.64		1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQMA9	UNK	12/15/09 01:06:56 am	0.010	92	1.09		1.00	1.00 1.00
LQMCA	UNK	12/15/09 01:09:16 am	0.009	86	5.73		1.00	1.00 1.00
LQMCC	UNK	12/15/09 01:11:35 am	0.010	100	2.04		1.00	1.00 1.00
LQMCD	UNK	12/15/09 01:13:55 am	0.023	304	1.47		1.00	1.00 1.00
LQMCE	UNK	12/15/09 01:16:12 am	0.557	8675	0.52		1.00	1.00 1.00
LQMCF	UNK	12/15/09 01:18:29 am	0.013	141	1.49		1.00	1.00 1.00
LQW63B	UNK	12/15/09 01:20:46 am	0.010 ✓	98	2.68		1.00	1.00 1.00
CCV	CCV	12/15/09 01:23:06 am	5.113 ✓	80082	0.12		1.00	1.00 1.00
% Recovery		102.25 ✓						
CCB	CCB	12/15/09 01:25:23 am	0.005 ✓	23	8.16		1.00	1.00 1.00
LQ26RC	UNK	12/15/09 01:27:41 am	4.839	75788	0.11		1.00	1.00 1.00
LQMA3	UNK	12/15/09 01:29:58 am	0.010	95	3.89		1.00	1.00 1.00
LQMA3S	UNK	12/15/09 01:32:16 am	5.050 ✓	79108	2.16		1.00	1.00 1.00
LQMA3D	UNK	12/15/09 01:34:35 am	4.855 ✓	76044	0.20		1.00	1.00 1.00
LQMA7	UNK	12/15/09 01:36:53 am	0.009	79	3.80		1.00	1.00 1.00
LQ1P6B	UNK	12/15/09 01:39:12 am	0.015 ✓	177	1.74		1.00	1.00 1.00
LQ260C	UNK	12/15/09 01:41:32 am	5.120 ✓	80191	0.90		1.00	1.00 1.00
LQTDD	UNK	12/15/09 01:43:51 am	0.010	97	1.50		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	μAbs	%RSD	Flags	Wt.	Vol. ODF
LQTDDS	UNK	12/15/09 01:46:11 am	4.827	75612	1.18		1.00	1.00
LQTDDD	UNK	12/15/09 01:48:28 am	4.962	77721	0.14		1.00	1.00
CCV % Recovery 100.73	CCV	12/15/09 01:50:48 am	5.037	78893	0.72		1.00	1.00
CCB	CCB	12/15/09 01:53:05 am	0.005	16	30.57		1.00	1.00

77
JCS 12/15/09

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	40.00	90.00	68.00	4	1.50	50	253.65

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
26.00	30.00		

Standby Mode

Enabled: Yes

Standby Options: pump slow

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration
(ppb)
0.2000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration
(ppb)
0.2000

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
5.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
7.0000	90.0000	110.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.2000	70.0000	130.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

✓ 00 12/15/09

SUBCONTRACT ORDER

TestAmerica Irvine

ISL0775

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone : (916) 373-5600
Fax: (916) 372-1059
Project Location: CA - CALIFORNIA
Receipt Temperature: / °C Ice: Y / N

Analysis Units Due Expires Interlab Price Surch Comments

Sample ID: ISL0775-02 (Outfall 010 (Comp) - Water)

Sampled: 12/07/09 12:25

Analysis	Units	Due	Expires	Interlab Price Surch	Comments
1613-Dioxin-HR-Alta	ug/l	12/16/09	12/14/09 12:25	\$1,400.00 0%	J flags, 17 congeners, no TEQ, ug/L, sub=West Sac
Level 4 Data Package - Out	N/A	12/16/09	01/04/10 12:25	\$0.00 0%	

Containers Supplied:

1 L Amber (C) 1 L Amber (D)

Olga Ornelas 12/9/09 17:00
Released By Date/Time

FedEx 12/9/09 17:00
Received By Date/Time

Released By Date/Time

Cheng Jue 12/10/09 -0945
Received By Date/Time

CLIENT TAL-IRVING PM LL LOG # 62386
LOT# (QUANTIMS ID) 696100506 QUOTE# 84779 LOCATION W2A
DATE RECEIVED 12/10/09 TIME RECEIVED 0930 Checked (✓)
DELIVERED BY FEDEX ON TRAC CLIENT
 GOLDENSTATE UPS GO-GETTERS OTHER
 TAL COURIER TAL SF VALLEY LOGISTICS
CUSTODY SEAL STATUS INTACT BROKEN N/A
CUSTODY SEAL #(S) Seal
SHIPPING CONTAINER(S) TAL CLIENT N/A
COC #(S) NA
TEMPERATURE BLANK Observed: NA Corrected: _____
SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)
Observed: 1,10 Average 1 Corrected Average 1
LABORATORY THERMOMETER ID:
IR UNIT: #4 #5 OTHER _____

ev 12/10/09
Initials Date

pH MEASURED YES ANOMALY N/A
LABELED BY _____
LABELS CHECKED BY _____
PEER REVIEW _____ NA
SHORT HOLD TEST NOTIFICATION METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL N/A
SAMPLE RECEIVING
WETCHEM N/A
VOA-ENCORES N/A
 COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES N/A
 CLOUSEAU TEMPERATURE EXCEEDED (2 °C - 6 °C)^{*1} N/A
 WET ICE BLUE ICE GEL PACK NO COOLING AGENTS USED PM NOTIFIED
if 10 DEC 09
Initials Date

Notes _____

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

Lot

ID:

69L100506

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB	2																			
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
___AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
___CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
___CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. BOEING NPDES

SSFL MWH-Pasadena/Boeing

Lot #: F9L100525

Joseph Doak

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817

TESTAMERICA LABORATORIES, INC.


Kay Clay
Project Manager

Case Narrative
LOT NUMBER: F9L100525
Revised 01-25-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on December 10, 2009. This sample is associated with your SSFL MWH-Pasadena/Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. **TestAmerica St. Louis' Florida certification number is E87689.** The case narrative is an integral part of this report.

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

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Report revised to include uranium results by KPA.

Report revised to remove Iso-uranium results.

Strontium Method: 905 MOD

The Strontium carrier recovery is outside the lower control limit (40%). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

Affected Sample:

F9L100525 (1): ISL0775-02

METHODS SUMMARY

F9L100525

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Isotopic Uranium by Alpha Spectroscopy	EML A-01-R MOD	
Radium-226 by GFPC	EPA 903.0 MOD	EPA 903.0
Radium-228 by GFPC	EPA 904 MOD	EPA 904
Strontium 90 by GFPC	EPA 905 MOD	
Total Uranium By Laser Phosphorimetry	ASTM 5174-91	

References:

- ASTM Annual Book Of ASTM Standards.
- EML "ENVIRONMENTAL MEASUREMENTS LABORATORY PROCEDURES MANUAL"
HASL-300 28TH EDITION, VOLUME I and II DEPARTMENT OF ENERGY
- EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY
PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

SAMPLE SUMMARY

F9L100525

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LQV4R	001	ISL0775-02	12/07/09	12:25

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ISL0775-02

Radiochemistry

Lab Sample ID: F9L100525-001
 Work Order: LQV4R
 Matrix: WATER

Date Collected: 12/07/09 1225
 Date Received: 12/10/09 0930

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L		Batch # 9349219	Yld %
Cesium 137	0.06	U	10	20	20	12/15/09	01/08/10
Potassium 40	-60	U	380		250	12/15/09	01/08/10
Gross Alpha/Beta EPA 900				pCi/L		Batch # 9355152	Yld %
Gross Alpha	2.4	J	1.5	3.0	2.0	12/21/09	12/26/09
Gross Beta	8.9		1.4	4.0	1.2	12/21/09	12/26/09
Radium 226 by EPA 903.0 MOD				pCi/L		Batch # 9345208	Yld % 66
Radium (226)	0.12	U	0.11	1.00	0.17	12/11/09	01/05/10
Radium 228 by GFPC EPA 904 MOD				pCi/L		Batch # 9345210	Yld % 59
Radium 228	0.44	U	0.64	1.00	1.1	12/11/09	01/04/10
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L		Batch # 9365109	Yld %
Tritium	-26	U	77	500	160	01/04/10	01/04/10
SR-90 BY GFPC EPA-905 MOD				pCi/L		Batch # 9345211	Yld % 32
Strontium 90	-1.29	U	0.89	3.00	1.7	12/11/09	12/23/09
Total Uranium by KPA ASTM 5174-91				pCi/L		Batch # 0015135	Yld %
Total Uranium	0.577	J	0.067	0.677	0.21	01/15/10	01/18/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F9L100525
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch #	9349219	Yld %	F9L150000-219B
Cesium 137	2.7	U	6.4	20.0	11	12/15/09	01/08/10
Potassium 40	-60	U	200		200	12/15/09	01/08/10
Radium 226 by EPA 903.0 MOD			pCi/L	Batch #	9345208	Yld % 100	F9L110000-208B
Radium (226)	0.059	U	0.083	1.00	0.14	12/11/09	01/05/10
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch #	9345210	Yld % 84	F9L110000-210B
Radium 228	0.32	U	0.46	1.00	0.77	12/11/09	01/04/10
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch #	9345211	Yld % 79	F9L110000-211B
Strontium 90	0.02	U	0.23	3.00	0.41	12/11/09	12/23/09
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch #	0015135	Yld %	F0A150000-135B
Total Uranium	0.496	J	0.060	0.677	0.21	01/15/10	01/18/10
Gross Alpha/Beta EPA 900			pCi/L	Batch #	9355152	Yld %	F9L210000-152B
Gross Alpha	0.11	U	0.43	2.00	0.81	12/21/09	12/26/09
Gross Beta	-0.59	U	0.57	4.00	1.1	12/21/09	12/26/09
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch #	9365109	Yld %	F9L310000-109B
Tritium	120	U	100	500	160	01/04/10	01/04/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F9L100525
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2σ+/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Total Uranium by KPA ASTM 5174-91							
Total Uranium	27.1	28.4	3.5	0.2		105	F0A150000-135C (90 - 120)
	Batch #:	0015135				Analysis Date:	01/18/10
Total Uranium by KPA ASTM 5174-91							
Total Uranium	5.42	6.18	0.64	0.21		114	F0A150000-135C (90 - 120)
	Batch #:	0015135				Analysis Date:	01/18/10
Gamma Cs-137 & Hits by EPA 901.1 MOD							
Americium 241	141000	130000	10000	500		92	F9L150000-219C (90 - 110)
Cesium 137	53100	48500	2800	200		91	(90 - 110)
Cobalt 60	87900	79200	4400	100		90	(90 - 110)
	Batch #:	9349219				Analysis Date:	01/08/10
Gross Alpha/Beta EPA 900							
Gross Alpha	49.4	45.1	5.3	1.4		91	F9L210000-152C (80 - 140)
	Batch #:	9355152				Analysis Date:	12/26/09
Gross Alpha/Beta EPA 900							
Gross Beta	68.3	70.4	6.0	1.0		103	F9L210000-152C (77 - 123)
	Batch #:	9355152				Analysis Date:	12/26/09
TRITIUM (Distill) by EPA 906.0 MOD							
Tritium	4560	4380	460	160		96	F9L310000-109C (85 - 112)
	Batch #:	9365109				Analysis Date:	01/04/10

NOTE (S)

MDC is determined by instrument performance only
 Calculations are performed before rounding to avoid round-off error in calculated results

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F9L100525
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2σ+/-)	% Yld	% Rec	QC Control Limits	Lab Sample ID Precision
Radium 226 by EPA	903.0 MOD		pCi/L				F9L110000-208C
Radium (226)	11.3	10.7	1.0	108	95	(45 - 150)	
Spk 2	11.3	11.2	1.1	109	99	(45 - 150)	4 %RPD
	Batch #:	9345208				Analysis Date: 01/05/10	
Radium 228 by GFPC EPA	904 MOD		pCi/L				F9L110000-210C
Radium 228	6.53	6.51	0.86	89	100	(64 - 150)	
Spk 2	6.53	6.06	0.85	86	93	(64 - 150)	7 %RPD
	Batch #:	9345210				Analysis Date: 01/04/10	
SR-90 BY GFPC EPA-905 MOD			pCi/L				F9L110000-211C
Strontium 90	6.83	6.68	0.82	78	98	(90 - 143)	
Spk 2	6.83	6.57	0.82	77	96	(90 - 143)	2 %RPD
	Batch #:	9345211				Analysis Date: 12/23/09	

NOTE (S)

Calculations are performed before rounding to avoid round-off error in calculated results

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F9L100525
 Matrix: WATER

Date Sampled: 12/07/09
 Date Received: 12/10/09

Parameter	SAMPLE Result	Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD		F9L100525-001
Cesium 137	0.06 U	10		0.0 U	9.6		200 %RPD
Potassium 40	-60 U	380		-130 U	820		72 %RPD
	Batch #:	9349219 (Sample)		9349219 (Duplicate)			
Gross Alpha/Beta EPA 900				pCi/L	900.0 MOD		F9L100525-001
Gross Alpha	2.4 J	1.5		3.5	1.6		38 %RPD
Gross Beta	8.9	1.4		8.8	1.4		2 %RPD
	Batch #:	9355152 (Sample)		9355152 (Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD		F9L100525-001
Tritium	-26 U	77		34 U	87		1480 %RPD
	Batch #:	9365109 (Sample)		9365109 (Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.
 Calculations are performed before rounding to avoid round-off error in calculated results

- J Result is greater than sample detection limit but less than stated reporting limit.
- U Result is less than the sample detection limit.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F9L100528 Date Sampled: 12/07/09 1112
 Matrix: WATER Date Received: 12/10/09 0930

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID		QC Control Limits
							% Yld	%Rec	
Total Uranium by KPA ASTM 5			pCi/L	5174-91		F9L100528-001			
Total Uranium	27.1	29.4	3.6	0.443	J	0.052	107		(62 - 150)
	Spk2 27.1	29.0	3.5	0.443	J	0.052	105		(62 - 150)
						Precision:	2	%RPD	
Batch #:		0015135	Analysis date:		01/18/10				

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

J Result is greater than sample detection limit but less than stated reporting

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F9L100528
 Matrix: WATER

Date Sampled: 12/07/09
 Date Received: 12/10/09

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L		906.0 MOD		F9L100528-001		
Tritium	4560	4360	460	-6	82		96		(62 - 147)
	Batch #:	9365109		Analysis Date:	01/04/10				
Gross Alpha/Beta EPA 900			pCi/L		900.0 MOD		F9L100525-001		
Gross Alpha	49.4	47.6	6.2	2.4	1.5		91		(33 - 150)
	Batch #:	9355152		Analysis Date:	12/26/09				
Gross Alpha/Beta EPA 900			pCi/L		900.0 MOD		F9L100525-001		
Gross Beta	68.3	81.5	6.8	8.9	1.4		106		(71 - 146)
	Batch #:	9355152		Analysis Date:	12/26/09				

NOTE(S)

Data are incomplete without the case narrative.
 Calculations are performed before rounding to avoid round-off errors in calculated results.

CHAIN OF CUSTODY FORM

CSL0775

Client Name/Address: MWH-Arcadia 618 Michilinda Ave. Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak		Project: Boeing-SSFL NPDES Routine Outfall 010 GRAB Stormwater at Building 203		ANALYSIS REQUIRED		Field readings: Temp °F = 56.1 F pH = 6.82 Time of readings = 1225
Project Manager: Bronwyn Kelly Sampler: S. Dawson		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Oil & Grease (1894-HEM)		Comments
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Outfall 010	W	1L Amber	2	12/7/09 12:35	HCl	2000
These Samples are the Grab Portion of Outfall 010 for this storm event. Composite samples will follow and are to be added to this work order.						
Relinquished By Joseph Doak	Date/Time: 12/7/09 15:35	Received By Mick Quinn	Date/Time: 12-27-09 15:35	Turn-around time: (Check)		
Relinquished By Mick Quinn	Date/Time: 12-27-09 17:55	Received By Subanka	Date/Time: 12/7/09 17:55	24 Hour: _____	72 Hour: _____	10 Day: <input checked="" type="checkbox"/>
Relinquished By	Date/Time:	Received By	Date/Time:	48 Hour: _____	5 Day: _____	Normal: _____
				Sample integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>	Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>	

A169



THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F9L100441 F9L100528

~~445~~ RD 12/10/09

~~447~~

448

(525)

CONDITION UPON RECEIPT FORM

Client: TA Sumner

Quote No: 77635

COC/RFA No: Del 060407710775

369

Initiated By: R. D.

Date: 12-10-09

Time: 0930

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____ Multiple Packages: Y (N)

Shipping # (s):*	Sample Temperature (s):**
1. <u>42892132 2330</u>	1. <u>ambient RD for PC</u>
2. _____	2. <u>RD 12/10/09</u>
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____
6. _____	6. _____
7. _____	7. _____
8. _____	8. _____
9. _____	9. _____
10. _____	10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or Solids

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>(Y)</u> N	Are there custody seals present on the cooler?	8. Y <u>(N)</u>	Are there custody seals present on bottles?
2. Y <u>(N)</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>(N/A)</u>	Do custody seals on bottles appear to be tampered with?
3. <u>(Y)</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>(Y)</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>(Y)</u> N	Sample received with Chain of Custody?	11. <u>(Y)</u> N	Sample received in proper containers?
5. <u>(Y)</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N <u>(N/A)</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. Y <u>(N)</u>	Was sample received broken?	13. <u>(Y)</u> N <u>(N/A)</u>	Was Internal COC/Workshare received?
7. <u>(Y)</u> N	Is sample volume sufficient for analysis?	14. <u>(Y)</u> N <u>(N/A)</u>	Was pH taken by original TestAmerica lab?

*For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes:

Corrective Action:

Client Contact Name: _____

Informed by: _____

Sample(s) processed "as is"

Sample(s) on hold until: _____

If released, notify: _____

Project Management Review: Jayna Pohl

Date: 12-13-09

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004, REVISED 10/21/08 \Sls\701\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc

APPENDIX G

Section 16

Outfall 010, BMP Effectiveness, December 7, 2009

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: 12/07/09
Received: 12/08/09
Issued: 12/18/09 17:35

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID

ISL0973-01

CLIENT ID

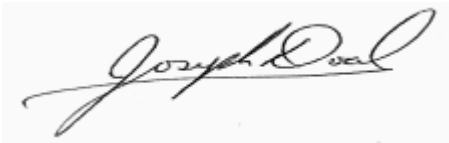
010 EFF-1

MATRIX

Water

I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.

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: ISL0973

Sampled: 12/07/09
Received: 12/08/09

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISL0973-01 (010 EFF-1 - Water)									
Reporting Units: g/cc									
Density	Displacement	9L15068	N/A	NA	0.99	1	DC	12/15/09	
Sample ID: ISL0973-01 (010 EFF-1 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	9L15069	10	10	18	1	DC	12/15/09	

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: ISL0973

Sampled: 12/07/09
Received: 12/08/09

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9L15068 Extracted: 12/15/09										
Duplicate Analyzed: 12/15/2009 (9L15068-DUP1)										
Density	0.998	NA	g/cc		Source: ISL0975-07 0.998			0	20	

TestAmerica Irvine

Joseph Doak
Project Manager

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MWH-Pasadena/Boeing
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Monitoring Program
Report Number: ISL0973

Sampled: 12/07/09
Received: 12/08/09

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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Monitoring Program
Report Number: ISL0973

Sampled: 12/07/09
Received: 12/08/09

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

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2560973

CHAIN OF CUSTODY FORM

Client Name/Address: MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing BMP Effectiveness Monitoring Program		ANALYSIS REQUIRED			
Del Mar Contact: Joe Doak Project Manager: Bronwyn Kelly Sampler: S Dawson		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Comments			
Sample Description 010 EFF-1	Sample Matrix W	Container Type Poly-1L	# of Cont. 1	Sampling Date/Time 12/7/09 - 1445	Preservative None	Bottle # 1	Suspended Sediment Concentration (SSC, ASTM-D3977-1997) X
<p>SD</p>							
Relinquished By <i>[Signature]</i>		Date/Time 12-8-09 14:37		Received By <i>[Signature]</i>		Date/Time 12-8-09 14:37	
Relinquished By <i>[Signature]</i>		Date/Time 12-8-07 20:05		Received By Van Buren		Date/Time 12/8/09 20:05	
Relinquished By <i>[Signature]</i>		Date/Time 12-8-07 20:05		Received By		Date/Time	

0.0
12/10/09
12/11/09

Turn around Time: (check)
 24 Hours _____ 5 Days _____
 48 Hours _____ 10 Days _____
 72 Hours _____ Normal _____ X _____
 Perchlorate Only 72 Hours _____
 Metals Only 72 Hours _____
 Sample Integrity: (Check)
 Intact _____ On Ice: _____

1.5 oc (M2)