APPENDIX G

Section 30

Outfall 010, January 24, 2009

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

LABORATORY REPORT

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

Project: Routine Outfall 010

Sampled: 01/24/09
Received: 01/26/09
Issued: 02/25/09 15:03

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

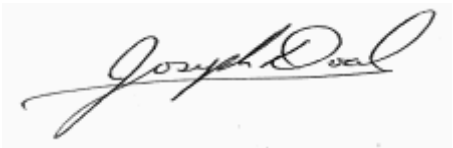
The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. 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.

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
ISA2190-01	Outfall 010	Water

Reviewed By:



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Attention: Bronwyn Kelly

Project ID: Routine Outfall 010
Report Number: ISA2190

Sampled: 01/24/09
Received: 01/26/09

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISA2190-01 (Outfall 010 - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	9B02122	1.3	4.8	ND	1	02/02/09	02/02/09	

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Received: 01/26/09

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISA2190-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	9A28089	0.20	2.0	**0.51**	1	01/28/09	01/28/09	J
Cadmium	EPA 200.8	9A28089	0.11	1.0	ND	1	01/28/09	01/28/09	
Copper	EPA 200.8	9A28089	0.75	2.0	**2.7**	1	01/28/09	01/28/09	
Lead	EPA 200.8	9A28089	0.30	1.0	**1.0**	1	01/28/09	01/28/09	
Thallium	EPA 200.8	9A28089	0.20	1.0	ND	1	01/28/09	01/28/09	

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DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISA2190-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	9A28119	0.20	2.0	**0.45**	1	01/28/09	01/28/09	J
Cadmium	EPA 200.8-Diss	9A28119	0.11	1.0	ND	1	01/28/09	01/28/09	
Copper	EPA 200.8-Diss	9A28119	0.75	2.0	**1.4**	1	01/28/09	01/28/09	J
Lead	EPA 200.8-Diss	9A28119	0.30	1.0	ND	1	01/28/09	01/28/09	
Thallium	EPA 200.8-Diss	9A28119	0.20	1.0	ND	1	01/28/09	01/28/09	

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISA2190-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	9A26071	0.25	0.50	**25**	1	01/26/09	01/26/09	
Nitrate/Nitrite-N	EPA 300.0	9A26071	0.15	0.26	**1.1**	1	01/26/09	01/26/09	
Sulfate	EPA 300.0	9A26071	0.20	0.50	**16**	1	01/26/09	01/26/09	
Total Dissolved Solids	SM2540C	9A27050	10	10	**180**	1	01/27/09	01/27/09	

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MCAWW 245.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISA2190-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	9026067	0.027	0.2	**0.084**	1	01/28/09	01/28/09	J

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MCAWW 245.1-Diss

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISA2190-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/L									
Mercury-diss	MCAWW 245.1-Diss	9026072	0.027	0.2	**0.033**	1	01/28/09	01/28/09	J

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Sampled: 01/24/09
Received: 01/26/09

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 (ISA2190-01) - Water					
EPA 300.0	2	01/24/2009 10:20	01/26/2009 05:00	01/26/2009 09:45	01/26/2009 09:57

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Received: 01/26/09

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B02122 Extracted: 02/02/09											
Blank Analyzed: 02/02/2009 (9B02122-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/02/2009 (9B02122-BS1)											
Hexane Extractable Material (Oil & Grease)	19.2	5.0	1.4	mg/l	20.0		96	78-114			*MNR1*
LCS Dup Analyzed: 02/02/2009 (9B02122-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.5	5.0	1.4	mg/l	20.0		98	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9A28089 Extracted: 01/28/09											
Blank Analyzed: 01/28/2009 (9A28089-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 01/28/2009 (9A28089-BS1)											
Antimony	80.9	2.0	0.20	ug/l	80.0		101	85-115			
Cadmium	80.7	1.0	0.11	ug/l	80.0		101	85-115			
Copper	82.0	2.0	0.75	ug/l	80.0		103	85-115			
Lead	82.2	1.0	0.30	ug/l	80.0		103	85-115			
Thallium	82.3	1.0	0.20	ug/l	80.0		103	85-115			
Matrix Spike Analyzed: 01/28/2009 (9A28089-MS1)						**Source: ISA2208-01**					
Antimony	83.9	2.0	0.20	ug/l	80.0	0.222	105	70-130			
Cadmium	78.4	1.0	0.11	ug/l	80.0	ND	98	70-130			
Copper	76.0	2.0	0.75	ug/l	80.0	2.31	92	70-130			
Lead	73.0	1.0	0.30	ug/l	80.0	0.354	91	70-130			
Thallium	75.3	1.0	0.20	ug/l	80.0	ND	94	70-130			
Matrix Spike Dup Analyzed: 01/28/2009 (9A28089-MSD1)						**Source: ISA2208-01**					
Antimony	83.1	2.0	0.20	ug/l	80.0	0.222	104	70-130	1	20	
Cadmium	77.1	1.0	0.11	ug/l	80.0	ND	96	70-130	2	20	
Copper	75.4	2.0	0.75	ug/l	80.0	2.31	91	70-130	1	20	
Lead	72.5	1.0	0.30	ug/l	80.0	0.354	90	70-130	1	20	
Thallium	74.9	1.0	0.20	ug/l	80.0	ND	94	70-130	1	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9A28119 Extracted: 01/28/09											
Blank Analyzed: 01/28/2009 (9A28119-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 01/28/2009 (9A28119-BS1)											
Antimony	81.0	2.0	0.20	ug/l	80.0		101	85-115			
Cadmium	78.6	1.0	0.11	ug/l	80.0		98	85-115			
Copper	79.4	2.0	0.75	ug/l	80.0		99	85-115			
Lead	81.6	1.0	0.30	ug/l	80.0		102	85-115			
Thallium	81.8	1.0	0.20	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 01/28/2009 (9A28119-MS1)						**Source: ISA1971-01**					
Antimony	84.9	2.0	0.20	ug/l	80.0	0.342	106	70-130			
Cadmium	81.7	1.0	0.11	ug/l	80.0	ND	102	70-130			
Copper	79.5	2.0	0.75	ug/l	80.0	1.55	97	70-130			
Lead	78.3	1.0	0.30	ug/l	80.0	ND	98	70-130			
Thallium	79.0	1.0	0.20	ug/l	80.0	ND	99	70-130			
Matrix Spike Dup Analyzed: 01/28/2009 (9A28119-MSD1)						**Source: ISA1971-01**					
Antimony	84.2	2.0	0.20	ug/l	80.0	0.342	105	70-130	1	20	
Cadmium	81.1	1.0	0.11	ug/l	80.0	ND	101	70-130	1	20	
Copper	78.6	2.0	0.75	ug/l	80.0	1.55	96	70-130	1	20	
Lead	77.8	1.0	0.30	ug/l	80.0	ND	97	70-130	1	20	
Thallium	79.6	1.0	0.20	ug/l	80.0	ND	100	70-130	1	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9A26071 Extracted: 01/26/09											
Blank Analyzed: 01/26/2009 (9A26071-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 01/26/2009 (9A26071-BS1)											
Chloride	4.97	0.50	0.25	mg/l	5.00		99	90-110			
Sulfate	10.1	0.50	0.20	mg/l	10.0		101	90-110			
Matrix Spike Analyzed: 01/26/2009 (9A26071-MS1)						**Source: ISA2191-01**					
Chloride	78.0	10	5.0	mg/l	50.0	35.7	85	80-120			
Sulfate	142	10	4.0	mg/l	100	51.2	91	80-120			
Matrix Spike Analyzed: 01/26/2009 (9A26071-MS2)						**Source: ISA2274-01**					
Chloride	37.7	2.5	1.2	mg/l	5.00	32.7	100	80-120			
Sulfate	40.1	2.5	1.0	mg/l	10.0	30.6	94	80-120			
Matrix Spike Dup Analyzed: 01/26/2009 (9A26071-MSD1)						**Source: ISA2191-01**					
Chloride	70.1	10	5.0	mg/l	50.0	35.7	69	80-120	11	20	*M2*
Sulfate	124	10	4.0	mg/l	100	51.2	72	80-120	14	20	*M2*
Batch: 9A27050 Extracted: 01/27/09											
Blank Analyzed: 01/27/2009 (9A27050-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/27/2009 (9A27050-BS1)											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9A27050 Extracted: 01/27/09											
Duplicate Analyzed: 01/27/2009 (9A27050-DUP1)						**Source: ISA2254-02**					
Total Dissolved Solids	1980	10	10	mg/l		2040			3	10	

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METHOD BLANK/QC DATA

MCAWW 245.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9026067 Extracted: 01/28/09											
Matrix Spike Dup Analyzed: 01/28/2009 (D9A230260001D)						**Source: D9A230260001**					
Mercury	4.25	0.2	0.027	ug/L	5	ND	85	90-110	2	10	*N*
Matrix Spike Analyzed: 01/28/2009 (D9A230260001S)						**Source: D9A230260001**					
Mercury	4.16	0.2	0.027	ug/L	5	ND	83	90-110	2	10	*N*
Blank Analyzed: 01/28/2009 (D9A260000067B)						**Source:**					
Mercury	ND	0.2	0.027	ug/L				-			
LCS Analyzed: 01/28/2009 (D9A260000067C)						**Source:**					
Mercury	4.69	0.2	0.027	ug/L	5		94	90-110			

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METHOD BLANK/QC DATA

MCAWW 245.1-Diss

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9026072 Extracted: 01/28/09											
Matrix Spike Dup Analyzed: 01/28/2009 (D9A230260001D)						**Source: D9A230260001**					
Mercury-diss	4.69	0.2	0.027	ug/L	5	ND	94	90-110	4	10	
Matrix Spike Analyzed: 01/28/2009 (D9A230260001S)						**Source: D9A230260001**					
Mercury-diss	4.5	0.2	0.027	ug/L	5	ND	90	90-110	4	10	
Blank Analyzed: 01/28/2009 (D9A260000072B)						**Source:**					
Mercury-diss	ND	0.2	0.027	ug/L				-			
LCS Analyzed: 01/28/2009 (D9A260000072C)						**Source:**					
Mercury-diss	4.56	0.2	0.027	ug/L	5		91	90-110			

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Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ISA2190-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.095	4.8	15
ISA2190-01	Antimony-200.8	Antimony	ug/l	0.51	2.0	6
ISA2190-01	Cadmium-200.8	Cadmium	ug/l	0.095	1.0	4
ISA2190-01	Chloride - 300.0	Chloride	mg/l	25	0.50	150
ISA2190-01	Copper-200.8	Copper	ug/l	2.69	2.0	14
ISA2190-01	Lead-200.8	Lead	ug/l	1.02	1.0	5.2
ISA2190-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.08	0.26	10
ISA2190-01	Sulfate-300.0	Sulfate	mg/l	16	0.50	250
ISA2190-01	TDS - SM2540C	Total Dissolved Solids	mg/l	184	10	850
ISA2190-01	Thallium-200.8	Thallium	ug/l	0.11	1.0	2

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DATA QUALIFIERS AND DEFINITIONS

J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
N	Spike sample recovery is outside control limits.
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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 010
Report Number: ISA2190

Sampled: 01/24/09
Received: 01/26/09

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
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

TestAmerica Denver

4955 Yarrow Street - Arvada, CO 80002

Method Performed: MCAWW 245.1
Samples: ISA2190-01

Method Performed: MCAWW 245.1-Diss
Samples: ISA2190-01

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 010
Report Number: ISA2190

Sampled: 01/24/09
Received: 01/26/09

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Analysis Performed: Gamma Spec
Samples: ISA2190-01

Analysis Performed: Gross Alpha
Samples: ISA2190-01

Analysis Performed: Gross Beta
Samples: ISA2190-01

Analysis Performed: Radium, Combined
Samples: ISA2190-01

Analysis Performed: Strontium 90
Samples: ISA2190-01

Analysis Performed: Tritium
Samples: ISA2190-01

Analysis Performed: Uranium, Combined
Samples: ISA2190-01

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta
Samples: ISA2190-01

TestAmerica Irvine

Joseph Doak
Project Manager

Test America Version 12/20/07

CHAIN OF CUSTODY FORM

ISA2190 Page 1 of 1

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 010** Stormwater at Building 203
Project Manager: Bronwyn Kelly Sampler: R BANAGA J. MANISCALCO	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)	Oil & Grease (1664-HEM)	Cl⁻, SO_4, NO_3+NO_2-N	TDS	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl	Comments
Outfall 010	W	1L Poly	1	~~1-24-09~~ 10:20	HNO_3	1A	X								
Outfall 010-Dup	W	1L Poly	1		HNO_3	1B	X								
Outfall 010	W	1L Amber	2		None	2A, 2B		X							MS- 1/26/09 07:45
Outfall 010	W	1L Amber	2		HCl	3A, 3B			X						
Outfall 010	W	500 ml Poly	2		None	4A, 4B				X					
Outfall 010	W	500 ml Poly	1		None	5					X				
Outfall 010	W	2.5 Gal Cube 500 ml Amber	1 1	1-24-09 10:20	None None	6A 6B						X			Unfiltered and unpreserved analysis
~~Outfall 010~~	~~W~~	~~1 Gal Poly~~	~~1~~		~~None~~	~~7~~							X		**Test first and second rain event of the season**
Outfall 010	W	1L Poly	1	~~1-24-09~~ 10:20	None	8								X	Filter w/in 24hrs of receipt at lab

ANALYSIS REQUIRED

Field readings:
Temp = 55 @
pH = ~~7.02~~ RA 7.00
Time of readings = 10:20

Relinquished By	Date/Time:	Received By	Date/Time:
~~1-24-09~~ 1-25-09 1035		1-25-09 1035	
	Date/Time:		Date/Time:
1.25.09	1235		
	Date/Time:		Date/Time:
From SC rec fridge			1/26/09 0500

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

Sample Integrity: (check)
Intact ✓ On Ice: 4°C

Data Requirements: (check)
No Level IV ____ All Level IV ____
NPDES Level IV X

NPDES - 2200

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

MWH-Pasadena / Boeing

Lot D9A270139

Project ISA2190

Joseph Doak
17461 Derian Avenue
Suite 100
Irvine, CA 92614

TestAmerica Laboratories, Inc.

DiLea Griego
Project Manager

January 30, 2009

Case Narrative

Enclosed is the report for one sample received at TestAmerica Laboratories, Inc. – Denver laboratory on January 27, 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 the Denver laboratory'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.

Quality Control Summary for Lot D9A270139

Sample Receiving

The cooler temperature for the sample received on January 27, 2009 at the Denver laboratory was 0.7°C. Please note: there were no custody seals present on the cooler upon receipt; client was notified 1/27/09.

Total Mercury –Method 245.1

MS/MSD analyses were performed on a sample from another client and/or lot. The MS/MSD for method 245.1 exhibited spike compound recoveries outside the QC limits for Mercury. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is 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

D9A270139

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ISA2190-01 01/24/09 10:20 001				
Mercury - DISSOLVED	0.033 J	0.20	ug/L	MCAWW 245.1
Mercury	0.084 J	0.20	ug/L	MCAWW 245.1

METHODS SUMMARY

D9A270139

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
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

D9A270139

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 245.1	David Wells	5099

References:

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

SAMPLE SUMMARY

D9A270139

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K6A8E	001	ISA2190-01	01/24/09	10:20

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

D9A270139

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 245.1		9026067	9026036
	WATER	MCAWW 245.1		9026072	9026037

TestAmerica

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Metals

CLP-Like Forms

Lot ID: D9A270139

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: 001

Batch: 9026067

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9A270139

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

SOW No.: _____

Sample ID.	Lab Sample No.
ISA2190-01	D9A270139-001

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: 11/29/09 Title: Metals Analyst

TestAmerica
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TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	ISA2190-01
Lot/SDG Number:	D9A270139	**Lab Sample ID:**	D9A270139-001
Matrix:	WATER	**Lab WorkOrder:**	K6A8E
% Moisture:	N/A	**Date/Time Collected:**	01/24/09 10:20
Basis:	Wet	**Date/Time Received:**	01/27/09 08:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026067	**Date/Time Analyzed:**	01/28/09 15:19
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	**0.084**	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.: D9A270139

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	6.800	97.1	5.000	4.796	95.9	5.030	100.6	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.: D9A270139

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	5.085	101.7	5.087	101.7	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.: D9A270139

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	5.096	101.9			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.: D9A270139

AA CRDL Standard Source: Ultra Scientific

ICP CRDL Standard Source:

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.200	0.19700	98.5					

Comments:

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TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9A270139	**Lab Sample ID:**	D9A260000-067B
Matrix:	WATER	**Lab WorkOrder:**	K59KC
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026067	**Date/Time Analyzed:**	01/28/09 15:00
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

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.: D9A270139

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Mercury	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.: D9A270139

Preparation Blank Matrix (soil/water): WATER

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

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

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9A270139	**MS Lab Sample ID:**	D9A230260-001S
Matrix:	WATER	**MS Lab WorkOrder:**	K58C2
% Moisture:	N/A	**Date/Time Collected:**	01/22/09 10:00
Basis:	Wet	**Date/Time Received:**	01/23/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026067	**Date/Time Analyzed:**	01/28/09 15:07
MS Sample Aliquot:	10 mL	**Instrument ID:**	023
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Mercury	5.00	0.027	U	4.16		83	N	90 - 110

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THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9A270139	**MSD Lab Sample ID:**	D9A230260-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	K58C2
% Moisture:	N/A	**Date/Time Collected:**	01/22/09 10:00
Basis:	Wet	**Date/Time Received:**	01/23/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026067	**Date/Time Analyzed:**	01/28/09 15:09
MSD Sample Aliquot:	10 mL	**Instrument ID:**	023
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Mercury	5.00	0.027	U	4.25		85	N	2.0		90 - 110	10

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TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9A270139	**Lab Sample ID:**	D9A260000-067C
Matrix:	WATER	**Lab WorkOrder:**	K59KC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026067	**Date/Time Analyzed:**	01/28/09 19:36
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	4.69	94		90 - 110

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9A270139

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

Flame AA ID Number: Cetac M7500 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 Analvsis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9A270139

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	1/28/2009	10.0	10.0
LAB MS/MSD MS	1/28/2009	10.0	10.0
LAB MS/MSD MSD	1/28/2009	10.0	10.0
MB9026067	1/28/2009	10.0	10.0
Check Sample	1/28/2009	10.0	10.0
ISA2190-01	1/28/2009	10.0	10.0

Comments:

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9A270139

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 1/28/2009 End Date: 1/28/2009

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal Blank	1.00	14:03																X								
Std1	1.00	14:05																X								
Std2	1.00	14:07																X								
Std3	1.00	14:10																X								
Std4	1.00	14:15																X								
Std5	1.00	14:17																X								
Std6	1.00	14:19																X								
ICB	1.00	14:22																X								
ICV	1.00	14:24																X								
RL	1.00	14:26																X								
CCV	1.00	14:30																X								
CCB	1.00	14:32																X								
CCV	1.00	14:55																X								
CCB	1.00	14:58																X								
MB9026067	1.00	15:00																X								
INTRA-LAB QC	1.00	15:05																X								
LAB MS/MSD MS	1.00	15:07																X								
LAB MS/MSD MSD	1.00	15:09																X								
ISA2190-01	1.00	15:19																X								
CCV	1.00	15:21																X								
CCB	1.00	15:23																X								
CCV	1.00	19:29																X								
CCB	1.00	19:32																X								
Check Sample	1.00	19:36																X								
CCV	1.00	19:58																X								
CCB	1.00	20:01																X								

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Dissolved Metals

CLP-Like Forms

Lot ID: D9A270139

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: -001

Batch: 9026072

Dissolved Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine

SDG No.: D9A270139

Lab Code: _____ Case No.: _____

SAS No.: _____

SOW No.: _____

Sample ID.	Lab Sample No.
ISA2190-01	D9A270139-001

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: 11/29/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	ISA2190-01
Lot/SDG Number:	D9A270139	**Lab Sample ID:**	D9A270139-001
Matrix:	WATER	**Lab WorkOrder:**	K6A8E
% Moisture:	N/A	**Date/Time Collected:**	01/24/09 10:20
Basis:	Wet	**Date/Time Received:**	01/27/09 08:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026072	**Date/Time Analyzed:**	01/28/09 14:53
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

CAS No.	Analyte	Conc.	MDL	RL	Q
7439-97-6	Mercury	**0.033**	0.027	0.20	J

Dissolved Metals Analysis
-2A-
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9A270139

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Mercury	7.000	6.800	97.1	5.000	4.796	95.9	5.030	100.6	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.: D9A270139

AA CRDL Standard Source: Ultra Scientific

ICP CRDL Standard Source:

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.200	0.19700	98.5					

Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9A270139	**Lab Sample ID:**	D9A260000-072B
Matrix:	WATER	**Lab WorkOrder:**	K59KG
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026072	**Date/Time Analyzed:**	01/28/09 14:35
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

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

Dissolved Metals Analysis

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BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9A270139

Preparation Blank Matrix (soil/water): WATER

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

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

Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9A270139	**MS Lab Sample ID:**	D9A230260-001S
Matrix:	WATER	**MS Lab WorkOrder:**	K58C2
% Moisture:	N/A	**Date/Time Collected:**	01/22/09 10:00
Basis:	Wet	**Date/Time Received:**	01/23/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026072	**Date/Time Analyzed:**	01/28/09 14:42
MS Sample Aliquot:	10 mL	**Instrument ID:**	023
MS Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MS Result	C	% Rec	Q	QC Limit
Mercury	5.00	0.027	U	4.50		90		90 - 110

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9A270139	**MSD Lab Sample ID:**	D9A230260-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	K58C2
% Moisture:	N/A	**Date/Time Collected:**	01/22/09 10:00
Basis:	Wet	**Date/Time Received:**	01/23/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026072	**Date/Time Analyzed:**	01/28/09 14:44
MSD Sample Aliquot:	10 mL	**Instrument ID:**	023
MSD Dilution Factor:	1		

Analyte	Spike Amount	Sample Result	C	MSD Result	C	% Rec	Q	RPD	Q	QC Limits	
										% Rec	RPD
Mercury	5.00	0.027	U	4.69		94		4.0		90 - 110	10

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9A270139	**Lab Sample ID:**	D9A260000-072C
Matrix:	WATER	**Lab WorkOrder:**	K59KG
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	01/28/09 11:30
QC Batch ID:	9026072	**Date/Time Analyzed:**	01/28/09 14:37
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	4.56	91		90 - 110

Dissolved Metals Analysis

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DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9A270139

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

Flame AA ID Number: Cetac M7500 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

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PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9A270139

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	1/28/2009	10.0	10.0
LAB MS/MSD MS	1/28/2009	10.0	10.0
LAB MS/MSD MSD	1/28/2009	10.0	10.0
MB9026072	1/28/2009	10.0	10.0
Check Sample	1/28/2009	10.0	10.0
ISA2190-01	1/28/2009	10.0	10.0

Comments:

Dissolved Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9A270139

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 1/28/2009 End Date: 1/28/2009

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN				
Cal Blank	1.00	14:03																X												
Std1	1.00	14:05																X												
Std2	1.00	14:07																X												
Std3	1.00	14:10																X												
Std4	1.00	14:15																X												
Std5	1.00	14:17																X												
Std6	1.00	14:19																X												
ICB	1.00	14:22																X												
ICV	1.00	14:24																X												
RL	1.00	14:26																X												
CCV	1.00	14:30																X												
CCB	1.00	14:32																X												
MB9026072	1.00	14:35																X												
Check Sample	1.00	14:37																X												
INTRA-LAB QC	1.00	14:39																X												
LAB MS/MSD MS	1.00	14:42																X												
LAB MS/MSD MSD	1.00	14:44																X												
ISA2190-01	1.00	14:53																X												
CCV	1.00	14:55																X												
CCB	1.00	14:58																X												

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

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9A270139 Date/Time Received: 1/27/9 0830

Company Name & Sampling Site: TA Irvine

PM to Complete This Section: *Yes* *No* *Yes* *No*
Residual chlorine check required: ☐ ☒ Quarantined : ☐ ☒

Quote #: 72743

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 0.7

N/A	*Yes*	*No*		*Initials*
☐	☑	☐	1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.	
☐	☑	☐	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 # D9A270139

Login Checks:

Initials [signature]

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? All
☑	☐	☐	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 [signature]

☑	☐	☐	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).

SUBCONTRACT ORDER

TestAmerica Irvine

ISA2190

0.7°C @ 1/27/09 IR1

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: ISA2190-01	**Water**		Sampled: **01/24/09 10:20**			**Instant Nofication**
Level 4 + EDD-OUT		02/04/09	02/21/09 10:20	$0.00	0%	Sub to Denver, transfer file EDD
Mercury - 245.1, Diss -OUT		02/04/09	02/21/09 10:20	$0.00	0%	Denver, Boeing, J flags
Mercury - 245.1-OUT		02/04/09	02/21/09 10:20	$0.00	0%	Denver, Boeing, permit, J flags

Containers Supplied:
1 L Poly w/HNO3 (B) 125 mL Poly (M)

Released By	Date/Time	Received By	Date/Time
Margarita Sales	1/26/09 17:00		
			1/27/9 0830
Released By	Date/Time	Received By	Date/Time

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9A270139

Client: TA - Irvine

Batch(es) #: 9026072, 9026067

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: 1/29/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9A270139	1	HG	K6A8E1AC	20090128	M2451DS	9026072	090128AD	023
D9A270139	1	HG	K6A8E1AA	20090128	M2451_L	9026067	090128AD	023

METALS
PREPARATION LOGS
CVAA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SUPPLEMENTAL METALS PREP SHEET

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

Hg PREP & ANALYSIS - WATERS

SOP: DEN-MT-0015/0017 **QC Batch:** 902072

Prep Date: 1/28/09	Prep By: DAW	Analysis Date: 1/28/09	Analyst: DAW
Balance ID: H53865		***Thermometer ID:*** MT 4025	

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	11:30	92	13:30	92

Purple color persists or black ppt present: [X] 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	G25032		0.25
H_2SO_4	Fisher	E49F06		0.5
HCl	JT Baker	G48030		used by instrument
10% $SnCl_2$	Fisher	G45629	STD-0350-09	added by instrument
NaCl / NH_2OH	Fisher	G28618	STD-0352-09	0.6
	Fisher	G06476		
$KMnO_4$	Fisher	G10662	STD-0351-09	1.5
$K_2S_2O_8$	Fisher	062611	STD-0305-09	0.8

Parent Calibration Stock Standards

	Lot #	Verification #	Exp. Date
Second Source	A2-HG02056	STD-2364-08	05/01/09
Primary Calibration	H00091	STD-1683-08	04/03/09

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-0377-09

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

Comments

I certify that all information above is correct and complete.

Signature: ***Date:*** 1/29/09

REVIEWED BY: DG **Date:** 1/29/09

Batch Number: **9026072**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By:

Prep Date: ~~01/26/09~~ 1/28/09

Due Date: 01/29/09

Lot		Work Order			Initial Weight/Volume
D9A260000 Water	1	**K59KG**	B	Due Date: SDG:	10 mL
D9A260000 Water	2	**K59KG**	C	Due Date: SDG:	10 mL
D9A230260 Water	3	**K58C2** Dissolved		Due Date: 01/29/09 SDG:	10 mL
D9A230260 Water	4	**K58C2** Dissolved	S	Due Date: 01/29/09 SDG:	10 mL
D9A230260 Water	5	**K58C2** Dissolved	D	Due Date: 01/29/09 SDG:	10 mL
D9A270135 Water	6	**K6A8A** Dissolved		Due Date: 02/02/09 SDG:	10 mL
D9A270139 Water	7	**K6A8E** Dissolved		Due Date: 02/02/09 SDG:	10 mL

Comments:

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

1130-7 1370
92
92

SUPPLEMENTAL METALS PREP SHEET

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

Hg PREP & ANALYSIS - WATERS

SOP: DEN-MT-0015/0017 **QC Batch:** 9026067

Prep Date: 1/28/09	Prep By: DAW	Analysis Date: 1/28/09	Analyst: DAW
Balance ID: H53865		***Thermometer ID:*** MT 4025	

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	11:30	92	13:30	92

Purple color persists or black ppt present: [X] 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	G25032		0.25
H_2SO_4	Fisher	E49F06		0.5
HCl	JT Baker	G48030		used by instrument
10% $SnCl_2$	Fisher	G45629	STD-0350-09	added by instrument
NaCl / NH_2OH	Fisher	G28618	STD-0352-09	0.6
	Fisher	G06476		
$KMnO_4$	Fisher	G10662	STD-0351-09	1.5
$K_2S_2O_8$	Fisher	062611	STD-0305-09	0.8

Parent Calibration Stock Standards

	Lot #	Verification #	Exp. Date
Second Source	A2-HG02056	STD-2364-08	05/01/09
Primary Calibration	H00091	STD-1683-08	04/03/09

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-0377-09

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

Comments

I certify that all information above is correct and complete.

Signature: ***Date:*** 1/29/09

REVIEWED BY: DB **Date:** 1/29/09

Batch Number: **9026067**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By:

Prep Date: ~~01/26/09~~ 1/28/09

Due Date: 01/29/09

Lot	Work Order			Initial Weight/Volume
1 D9A260000 Water	**K59KC**	B	Due Date: SDG:	10 mL
2 D9A260000 Water	**K59KC**	C	Due Date: SDG:	10 mL
3 D9A230260 Water	**K58C2** Total		Due Date: 01/29/09 SDG:	10 mL
4 D9A230260 Water	**K58C2** Total	S	Due Date: 01/29/09 SDG:	10 mL
5 D9A230260 Water	**K58C2** Total	D	Due Date: 01/29/09 SDG:	10 mL
6 D9A270135 Water	**K6A8A** Total		Due Date: 02/02/09 SDG:	10 mL
7 D9A270139 Water	**K6A8E** Total		Due Date: 02/02/09 SDG:	10 mL

Comments:

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

METALS
SAMPLE DATA
CVAA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Denver

Standards Preparation Logbook Record

Jan-28-2009

Logbook: \\Densvr06\StdsLog\metals.std

STD1683-08, 1000 mg/L Hg Calibration Stock Standard (Ultra) — Analyst: grisdalec

Vendor: Ultra Scientific (Metals) Lot No.: H00091 Vendor's Expiration Date: 05-01-2009
Solvent: 2% HN03
Date Prep./Opened: 04-03-2008 Date Received: 03-31-2008
Date Expires(1): 04-03-2009 (1 Year)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

STD2364-08, Hg Inorganic Ventures ICV 100ppm Std — Analyst: grisdalec

Vendor: Inorganic Ventures Lot No.: A2-HG02056 Vendor's Expiration Date: 06-01-2009
Solvent: 3.3%HCl
Date Prep./Opened: 05-01-2008 Date Received: 05-02-2007
Date Expires(1): 05-01-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

STD0377-09, Hg Inorganic Ventures ICV 700ppb — Analyst: wellsd

Solvent: 1% HNO3 Lot No.: G02058 Volume (ml): 100.00
Date Prep./Opened: 01-21-2009
Date Expires(1): 02-04-2009 (2 Weeks)
Date Expires(2): 02-08-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD2364-08, Hg Inorganic Ventures ICV 100ppm Std Aliquot Amount (ml): 0.7000
Parent Date Expires(1): 05-01-2009 Parent Date Expires(2): 06-01-2009

STD0437-09, 10 mg/L Hg Calibration Std — Analyst: wellsd

Solvent: 1% HN03 Lot No.: G02058 Volume (ml): 100.00
Date Prep./Opened: 01-26-2009
Date Expires(1): 02-26-2009 (1 Month)
Date Expires(2): 02-26-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD1683-08, 1000 mg/L Hg Calibration Stock Standard (Ultra) Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-03-2009 Parent Date Expires(2): 05-01-2009

STD0497-09, 100 ppb Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Expires(2): 02-26-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0437-09, 10 mg/L Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 02-26-2009 Parent Date Expires(2): 02-26-2009

STD0498-09, Blank Daily Hg Calibration Std

Analyst: wellsd

Vendor: Baker Lot No.: G17027
Solvent: 1% HN03
Date Prep./Opened: 01-28-2009
Date Expires(1): 07-28-2009 (6 Months)
Date Expires(2): 01-28-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

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

STD0499-09, 0.2 ppb Daily Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0497-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.2000
Parent Date Expires(1): 01-29-2009 Parent Date Expires(2): 02-26-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
Mercuric Nitrate	100.00	0.2000

STD0500-09, 0.5 ppb Daily Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0497-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 01-29-2009 Parent Date Expires(2): 02-26-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
Mercuric Nitrate	100.00	0.5000

STD0501-09, 1.0 ppb Daily Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0497-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 01-29-2009 Parent Date Expires(2): 02-26-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
Mercuric Nitrate	100.00	1.0000

STD0502-09, 2.0 ppb Daily Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0497-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 2.0000
Parent Date Expires(1): 01-29-2009 Parent Date Expires(2): 02-26-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
Mercuric Nitrate	100.00	2.0000

STD0503-09, 5.0 ppb Daily Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0497-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 01-29-2009 Parent Date Expires(2): 02-26-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
Mercuric Nitrate	100.00	5.0000

STD0504-09, 10.0 ppb Daily Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 01-28-2009 Date Consumed: 12-06-2006
Date Expires(1): 01-29-2009 (1 Day)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0497-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 10.000
Parent Date Expires(1): 01-29-2009 Parent Date Expires(2): 02-26-2009

Component	Initial Conc (ug/ml)	Final Conc (ug/ml)
Mercuric Nitrate	100.00	10.000

STD0505-09, Hg Daily ICV 7ppb Calibration Std — Analyst: wellsd

Solvent: 1% HNO3 — Lot No.: G17027 — Volume (ml): 100.00
Date Prep./Opened: 01-28-2009
Date Expires(1): 01-29-2009 (1 Day)
Date Expires(2): 02-08-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0377-09, Hg Inorganic Ventures ICV 700ppb — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 02-04-2009 Parent Date Expires(2): 02-08-2009

Component	Initial Conc (ug/L)	Final Conc (ug/L)
Hg	700.00	7.0000

Reviewed By: 090128AD

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 01/29/09 07:52:11

Sequence: 090128AD **Date:** 01/28/09 14:03 **Analyst:** daw **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
1	Cal Blank				0.00	1.0	0.00	ppb		01/28/09 14:03		☐
2	Std1	= 0.200			0.20	1.0	0.20	ppb	100.0%	01/28/09 14:05		☐
3	Std2	= 0.500			0.50	1.0	0.50	ppb	100.0%	01/28/09 14:07		☐
4	Std3	= 1.00			1.00	1.0	1.00	ppb	100.0%	01/28/09 14:10		☐
5	Std4	= 2.00			2.00	1.0	2.00	ppb	100.0%	01/28/09 14:15		☐
6	Std5	= 5.00			5.00	1.0	5.00	ppb	100.0%	01/28/09 14:17		☐
7	Std6	= 10.0			10.00	1.0	10.00	ppb	100.0%	01/28/09 14:19		☐
8	ICB				0.01	1.0	0.01	ppb		01/28/09 14:22		☐
9	ICV	= 7.00			6.80	1.0	6.80	ppb	97.1%	01/28/09 14:24		☐
10	RL	= 0.200		AQUEOUS	0.20	1.0	0.20	ppb		01/28/09 14:26		☐
11	CCV	= 5.00			4.80	1.0	4.80	ppb	95.9%	01/28/09 14:30		☐
12	CCB				0.01	1.0	0.01	ppb		01/28/09 14:32		☐
13	K59KGBF	D9A260000	9026072		0.01	1.0	0.01	ppb		01/28/09 14:35		☐
14	K59KGCF	D9A260000 = 5.00	9026072		4.55	1.0	4.55	ppb	91.1%	01/28/09 14:37		☐
15	K58C2F	D9A230260-1	9026072	AQUEOUS	0.00	1.0	0.00	ppb		01/28/09 14:39		☐
16	K58C2SF	D9A230260-1 = 5.00	9026072	AQUEOUS	4.50	1.0	4.50	ppb		01/28/09 14:42		☐
17	K58C2DF	D9A230260-1 = 5.00	9026072	AQUEOUS	4.69	1.0	4.69	ppb		01/28/09 14:44		☐
18	K58C2SF	D9A230260-1 = 5.00	9026072	AQUEOUS	4.70	1.0	4.70	ppb		01/28/09 14:46	> MA reported	☐
19	K58C2DF	D9A230260-1 = 5.00	9026072	AQUEOUS	4.64	1.0	4.64	ppb		01/28/09 14:48		☐
20	K6A8AF	D9A270135-1	9026072	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 14:51		☐
21	K6A8EF	D9A270139-1	9026072	AQUEOUS	0.03	1.0	0.03	ppb		01/28/09 14:53		☐
22	CCV	= 5.00			5.03	1.0	5.03	ppb	100.6%	01/28/09 14:55		☐
23	CCB				0.01	1.0	0.01	ppb		01/28/09 14:58		☐
24	K59KCB	D9A260000	9026067		0.01	1.0	0.01	ppb		01/28/09 15:00		☐
25	~~K59KCC~~	~~D9A260000 = 5.00~~	~~9026067~~		~~4.39~~	~~1.0~~	~~4.39~~	~~ppb~~	~~87.9%~~	~~01/28/09 15:02~~	See review 1/29/09	☐
26	K58C2	D9A230260-1	9026067	AQUEOUS	0.00	1.0	0.00	ppb		01/28/09 15:05		☐
27	K58C2S	D9A230260-1 = 5.00	9026067	AQUEOUS	4.16	1.0	4.16	ppb		01/28/09 15:07		☐
28	K58C2D	D9A230260-1 = 5.00	9026067	AQUEOUS	4.25	1.0	4.25	ppb		01/28/09 15:09		☐
29	K58C2S	D9A230260-1 = 5.00	9026067	AQUEOUS	4.32	1.0	4.32	ppb		01/28/09 15:12	> MA reported	☐
30	K58C2D	D9A230260-1 = 5.00	9026067	AQUEOUS	4.29	1.0	4.29	ppb		01/28/09 15:14		☐
31	K6A8A	D9A270135-1	9026067	AQUEOUS	0.05	1.0	0.05	ppb		01/28/09 15:16		☐
32	K6A8E	D9A270139-1	9026067	AQUEOUS	0.08	1.0	0.08	ppb		01/28/09 15:19		☐
33	CCV	= 5.00			5.09	1.0	5.09	ppb	101.7%	01/28/09 15:21		☐
34	CCB				0.01	1.0	0.01	ppb		01/28/09 15:23		☐

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 01/29/09 07:52:11

Sequence: 090128AD **Date:** 01/28/09 14:03 **Analyst:** daw **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
35	K6DGEB	D9A280000	9028135		0.01	1.0	0.01	ppb		01/28/09 15:25		☐
36	K6DGEC	D9A280000 = 5.00	9028135		4.48	1.0	4.48	ppb	89.7%	01/28/09 15:28		☐
37	K57W3	D9A230211-1	9028135	AQUEOUS	0.05	1.0	0.05	ppb		01/28/09 15:30		☐
38	K57W5	D9A230211-2	9028135	AQUEOUS	0.09	1.0	0.09	ppb		01/28/09 15:32		☐
39	K57W9	D9A230211-3	9028135	AQUEOUS	0.08	1.0	0.08	ppb		01/28/09 15:35		☐
40	K57HG	D9A230169-1	9028135	AQUEOUS	0.18	1.0	0.18	ppb		01/28/09 15:37		☐
41	K57HGS	D9A230169-1 = 5.00	9028135	AQUEOUS	3.31	1.0	3.31	ppb		01/28/09 15:39		☐
42	K57HGD	D9A230169-1 = 5.00	9028135	AQUEOUS	3.04	1.0	3.04	ppb		01/28/09 15:42		☐
43	CCV	= 5.00			5.03	1.0	5.03	ppb	100.6%	01/28/09 15:44		☐
44	CCB				0.01	1.0	0.01	ppb		01/28/09 15:46		☐
45	K59F4BT	D9A250000	9028212		0.02	1.0	0.02	ppb		01/28/09 15:49		☐
46	K6DTRCT	D9A280000 = 5.00	9028212		4.89	1.0	4.89	ppb	97.9%	01/28/09 15:51		☐
47	K53RKT	D9A210205-1	9028212	LEACHATE	0.14	1.0	0.14	ppb		01/28/09 15:53		☐
48	K53RKP5T	D9A210205	9028212	LEACHATE	0.03	5.0	0.03	ppb		01/28/09 15:55		☐
49	K53RNT	D9A210205-2	9028212	LEACHATE	0.52	1.0	0.52	ppb		01/28/09 15:58		☐
50	CCV	= 5.00			4.96	1.0	4.96	ppb	99.2%	01/28/09 16:00		☐
51	CCB				0.01	1.0	0.01	ppb		01/28/09 16:02		☐
52	~~K6DGGB~~	~~D9A280000~~	~~9028138~~		~~0.06~~	~~1.0~~	~~0.06~~	~~ppb~~		~~01/28/09 16:05~~		☐
53	K6DGGC	D9A280000 = 5.00	9028138		4.80	1.0	4.80	ppb	96.1%	01/28/09 16:07		☐
54	K57J3	D9A230179-1	9028138	AQUEOUS	0.09	1.0	0.09	ppb		01/28/09 16:09		☐
55	K57J7	D9A230179-2	9028138	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 16:12		☐
56	K57J8	D9A230179-3	9028138	AQUEOUS	0.02	1.0	0.02	ppb		01/28/09 16:14		☐
57	K57KA	D9A230179-4	9028138	AQUEOUS	0.02	1.0	0.02	ppb		01/28/09 16:16		☐
58	K57KC	D9A230179-5	9028138	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 16:19		☐
59	K57LE	D9A230185-1	9028138	AQUEOUS	0.08	1.0	0.08	ppb		01/28/09 16:21		☐
60	K57LP	D9A230185-2	9028138	AQUEOUS	0.28	1.0	0.28	ppb		01/28/09 16:23		☐
61	~~K57MP~~			~~AQUEOUS~~	~~0.02~~	~~1.0~~	~~0.02~~	~~ppb~~		~~01/28/09 16:25~~		☐
62	CCV	= 5.00			5.04	1.0	5.04	ppb	100.8%	01/28/09 16:28		☐
63	CCB				0.01	1.0	0.01	ppb		01/28/09 16:30		☐
64	~~K57M9~~	~~D9A230192-1~~	~~9028138~~	~~AQUEOUS~~	~~0.01~~	~~1.0~~	~~0.01~~	~~ppb~~		~~01/28/09 16:32~~		☐
65	K57NN	D9A230192-2	9028138	AQUEOUS	0.18	1.0	0.18	ppb		01/28/09 16:35		☐
66	K57NP	D9A230192-3	9028138	AQUEOUS	0.15	1.0	0.15	ppb		01/28/09 16:37		☐
67	K57NQ	D9A230192-4	9028138	AQUEOUS	0.03	1.0	0.03	ppb		01/28/09 16:39		☐
68	~~K57NT~~	~~D9A230192-5~~	~~9028138~~	~~AQUEOUS~~	~~0.01~~	~~1.0~~	~~0.01~~	~~ppb~~		~~01/28/09 16:42~~		☐

NA used 1/29/09

NA used 1/29/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 01/29/09 07:52:11

Sequence: 090128AD **Date:** 01/28/09 14:03 **Analyst:** daw **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
69	~~K57NV~~	~~D9A230192-6~~	~~9028138~~	~~AQUEOUS~~	~~0.17~~	~~1.0~~	~~0.17~~	~~ppb~~		~~01/28/09 16:44~~		☐
70	K57NW 5X	D9A230192-7	9028138	AQUEOUS	1.50	5.0	7.49	ppb		01/28/09 16:46	WA need w:1/29/09	☐
71	K57NX	D9A230192-8	9028138	AQUEOUS	0.34	1.0	0.34	ppb		01/28/09 16:49		☐
72	K57N1	D9A230192-9	9028138	AQUEOUS	0.17	1.0	0.17	ppb		01/28/09 16:51		☐
73	~~K57N2~~	~~D9A230192-10~~	~~9028138~~	~~AQUEOUS~~	~~0.43~~	~~1.0~~	~~0.43~~	~~ppb~~		~~01/28/09 16:53~~		☐
74	CCV	= 5.00			5.04	1.0	5.04	ppb	100.8%	01/28/09 16:56		☐
75	CCB				0.01	1.0	0.01	ppb		01/28/09 16:58		☐
76	~~K57EG~~	~~D9A230156-2~~	~~9028138~~	~~AQUEOUS~~	~~5.16~~	~~1.0~~	~~5.16~~	~~ppb~~		~~01/28/09 17:00~~		☐
77	K57EGS	D9A230156-2 = 5.00	9028138	AQUEOUS	4.95	1.0	4.95	ppb		01/28/09 17:02	WA need w:1/29/09	☐
78	~~K57EGD~~	~~D9A230156-2 = 5.00~~	~~9028138~~	~~AQUEOUS~~	~~0.16~~	~~1.0~~	~~0.16~~	~~ppb~~		~~01/28/09 17:05~~		☐
79	K6DG1B	D9A280000	9028139		0.03	1.0	0.03	ppb		01/28/09 17:07		☐
80	K6DG1C	D9A280000 = 5.00	9028139		4.75	1.0	4.75	ppb	95.0%	01/28/09 17:09		☐
81	K52AE	F9A200204-1	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:12		☐
82	K52AES	F9A200204-1 = 5.00	9028139	AQUEOUS	4.68	1.0	4.68	ppb		01/28/09 17:14		☐
83	K52AED	F9A200204-1 = 5.00	9028139	AQUEOUS	4.72	1.0	4.72	ppb		01/28/09 17:16		☐
84	K52AR	F9A200204-2	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:19		☐
85	K52AX	F9A200204-3	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:21		☐
86	CCV	= 5.00			5.14	1.0	5.14	ppb	102.9%	01/28/09 17:23		☐
87	CCB				0.01	1.0	0.01	ppb		01/28/09 17:25		☐
88	K53HL	F9A210179-1	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:28		☐
89	K53H6	F9A210179-2	9028139	AQUEOUS	0.07	1.0	0.07	ppb		01/28/09 17:30		☐
90	K555W	F9A220217-2	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:32		☐
91	K5559	F9A220217-3	9028139	AQUEOUS	0.02	1.0	0.02	ppb		01/28/09 17:35		☐
92	K58AR	F9A230256-2	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:37		☐
93	K58CK	F9A230256-3	9028139	AQUEOUS	0.02	1.0	0.02	ppb		01/28/09 17:39		☐
94	K582W	F9A240135-1	9028139	AQUEOUS	0.02	1.0	0.02	ppb		01/28/09 17:42		☐
95	K5827	F9A240135-2	9028139	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 17:44		☐
96	CCV	= 5.00			5.17	1.0	5.17	ppb	103.4%	01/28/09 17:46		☐
97	CCB				0.01	1.0	0.01	ppb		01/28/09 17:49		☐
98	K59J7B	D9A260000	9026062		0.01	1.0	0.01	ppb		01/28/09 17:51		☐
99	K59J7C	D9A260000 = 5.00	9026062		4.73	1.0	4.73	ppb	94.6%	01/28/09 17:53		☐
100	K57XK	D9A230212-1	9026062	AQUEOUS	0.70	1.0	34.85	ppb		01/28/09 17:55		☐
101	K57XKS	D9A230212-1 = 250	9026062	AQUEOUS	5.40	1.0	269.90	ppb		01/28/09 17:58		☐
102	K57XKX	D9A230212-1 = 250	9026062	AQUEOUS	0.57	1.0	28.65	ppb		01/28/09 18:00		☐

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 01/29/09 07:52:11

Sequence: 090128AD **Date:** 01/28/09 14:03 **Analyst:** daw **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
103	K6C81BT	D9A270000	9028209		0.01	1.0	0.01	ppb		01/28/09 18:02		☐
104	K6DTLCT	D9A280000 = 5.00	9028209		4.81	1.0	4.81	ppb	96.2%	01/28/09 18:05		☐
105	K6AHTT	D9A260170-1	9028209	LEACHATE	0.01	1.0	0.01	ppb		01/28/09 18:07		☐
106	K6AHTST	D9A260170-1 = 5.00	9028209	LEACHATE	4.56	1.0	4.56	ppb		01/28/09 18:09		☐
107	K6AHTDT	D9A260170-1 = 5.00	9028209	LEACHATE	4.81	1.0	4.81	ppb		01/28/09 18:12		☐
108	CCV	= 5.00			5.09	1.0	5.09	ppb	101.9%	01/28/09 18:14		☐
109	CCB				0.02	1.0	0.02	ppb		01/28/09 18:16		☐
110	K6C8VBT	D9A270000	9028210		0.01	1.0	0.01	ppb		01/28/09 18:19		☐
111	K6DTPCT	D9A280000 = 5.00	9028210		5.06	1.0	5.06	ppb	101.3%	01/28/09 18:21		☐
112	K58N0T	D9A230295-1	9028210	LEACHATE	0.01	1.0	0.01	ppb		01/28/09 18:23		☐
113	K58N0ST	D9A230295-1 = 5.00	9028210	LEACHATE	4.60	1.0	4.60	ppb		01/28/09 18:26		☐
114	K58N0DT	D9A230295-1 = 5.00	9028210	LEACHATE	4.73	1.0	4.73	ppb		01/28/09 18:28		☐
115	K6DGGB	D9A280000	9028138		0.01	1.0	0.01	ppb		01/28/09 18:30		☐
116	K6DGGC	D9A280000 = 5.00	9028138		4.97	1.0	4.97	ppb	99.5%	01/28/09 18:32		☐
117	CCV	= 5.00			5.06	1.0	5.06	ppb	101.2%	01/28/09 18:35		☐
118	CCB				0.01	1.0	0.01	ppb		01/28/09 18:37		☐
119	~~K508T~~	~~D9A190148-1~~	~~9028134~~	~~AQUEOUS~~	~~5.54~~	~~1.0~~	~~5.54~~	~~ppb~~		~~01/28/09 18:39~~		☐
120	K508TS	D9A190148-1 = 5.00	9028134	AQUEOUS	10.00	1.0	10.00	ppb		01/28/09 18:42	NA used see dil w 1/29/09	☐
121	~~K508TD~~	~~D9A190148-1 = 5.00~~	~~9028134~~	~~AQUEOUS~~	~~10.22~~	~~1.0~~	~~10.22~~	~~ppb~~		~~01/28/09 18:45~~		☐
122	K508W	D9A190148-2	9028134	AQUEOUS	2.82	1.0	2.82	ppb		01/28/09 18:49		☐
123	K508X	D9A190148-3	9028134	AQUEOUS	0.65	1.0	0.66	ppb		01/28/09 18:51		☐
124	K5080	D9A190148-4	9028134	AQUEOUS	0.31	1.0	0.31	ppb		01/28/09 18:53		☐
125	K5081	D9A190148-5	9028134	AQUEOUS	0.98	1.0	0.98	ppb		01/28/09 18:56		☐
126	CCV	= 5.00			5.04	1.0	5.04	ppb	100.9%	01/28/09 18:58		☐
127	CCB				0.01	1.0	0.01	ppb		01/28/09 19:00		☐
128	~~K5083~~	~~D9A190148-6~~	~~9028134~~	~~AQUEOUS~~	~~166.83~~	~~1.0~~	~~166.27~~	~~ppb~~		~~01/28/09 19:03~~		☐
129	K5084	D9A190148-7	9028134	AQUEOUS	5.51	1.0	5.52	ppb		01/28/09 19:06		☐
130	~~K5085~~	~~D9A190148-8~~	~~9028134~~	~~AQUEOUS~~	~~73.64~~	~~1.0~~	~~73.64~~	~~ppb~~		~~01/28/09 19:09~~	See dil	☐
131	K5086	D9A190148-9	9028134	AQUEOUS	0.01	1.0	0.01	ppb		01/28/09 19:14		☐
132	~~K59X4~~	~~D9A260124-1~~	~~9028134~~	~~AQUEOUS~~	~~11.51~~	~~1.0~~	~~11.51~~	~~ppb~~		~~01/28/09 19:16~~	w 1/29/09	☐
133	K59X5	D9A260124-2	9028134	AQUEOUS	2.63	1.0	2.63	ppb		01/28/09 19:21		☐
134	~~K59X6~~	~~D9A260124-3~~	~~9028134~~	~~AQUEOUS~~	~~19.00~~	~~1.0~~	~~19.00~~	~~ppb~~		~~01/28/09 19:23~~		☐
135	K59X7	D9A260124-4	9028134	AQUEOUS	1.44	1.0	14.38	ppb		01/28/09 19:27		☐
136	CCV	= 5.00			5.09	1.0	5.09	ppb	101.7%	01/28/09 19:29		☐

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 01/29/09 07:52:11

Sequence: 090128AD **Date:** 01/28/09 14:03 **Analyst:** daw **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
137	CCB				0.01	1.0	0.01	ppb		01/28/09 19:32		☐
138	K59KCC	D9A260000 = 5.00	9026067		4.69	1.0	4.69	ppb	93.8%	01/28/09 19:36		☐
139	K508T 2X	D9A190148-1	9028134	AQUEOUS	2.85	2.0	5.70	ppb		01/28/09 19:39		☐
140	K508TS 2X	D9A190148-1 = 5.00	9028134	AQUEOUS	4.97	2.0	9.94	ppb		01/28/09 19:42		☐
141	K508TD 2X	D9A190148-1 = 5.00	9028134	AQUEOUS	5.18	2.0	10.35	ppb		01/28/09 19:44		☐
142	K5083 5X	D9A190148-6	9028134	AQUEOUS	3.34	5.0	166.85	ppb		01/28/09 19:46		☐
143	~~K5085 1000X~~	~~D9A190148-8~~	~~9028134~~	~~AQUEOUS~~	~~0.29~~	~~1000~~	~~288.00~~	~~ppb~~		~~01/28/09 19:48~~	NA used 1/29/09	☐
144	K5085 100X	D9A190148-8	9028134	AQUEOUS	2.77	100	277.30	ppb		01/28/09 19:51		☐
145	K59X4 5X	D9A260124-1	9028134	AQUEOUS	2.41	5.0	12.07	ppb		01/28/09 19:54		☐
146	K59X6 10X	D9A260124-3	9028134	AQUEOUS	1.99	10.0	19.85	ppb		01/28/09 19:56		☐
147	CCV	= 5.00			5.10	1.0	5.10	ppb	101.9%	01/28/09 19:58		☐
148	CCB				0.01	1.0	0.01	ppb		01/28/09 20:01		☐

CETAC Hg Analysis Report

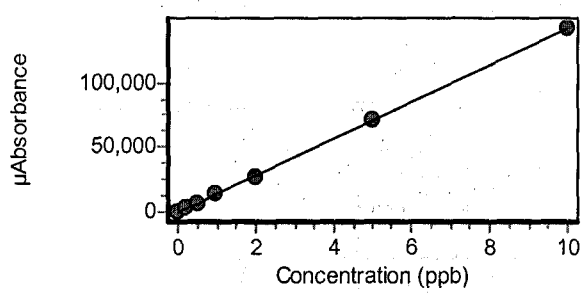
Analyst: wellsd
Worksheet file: C:\Program Files\QuickTrace\Worksheets\090128AD.wsz
Date Started: 1/28/2009 1:58:48 PM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
Cal Blank	STD	01/28/09 02:03:10 pm	0.000	69	6.10		1.00	1.00	1.00
Std1	STD	01/28/09 02:05:27 pm	0.200	2832	1.47		1.00	1.00	1.00
Std2	STD	01/28/09 02:07:45 pm	0.500	6653	2.29		1.00	1.00	1.00
Std3	STD	01/28/09 02:10:04 pm	1.000	14457	1.02		1.00	1.00	1.00
Std4	STD	01/28/09 02:15:03 pm	2.000	27135	1.27		1.00	1.00	1.00
Std5	STD	01/28/09 02:17:23 pm	5.000	71627	0.77		1.00	1.00	1.00
Std6	STD	01/28/09 02:19:43 pm	10.000	141933	1.14		1.00	1.00	1.00

Calibration

Equation: A = -192.293 + 14227.360C
R2: 0.99987
SEE: 649.3975
Flags:



ICB	ICB	01/28/09 02:22:10 pm	0.009	-68	14.26		1.00	1.00	1.00
ICV	ICV	01/28/09 02:24:31 pm	6.800	96558	2.29		1.00	1.00	1.00
% Recovery 97.15									
RL	CRDL	01/28/09 02:26:49 pm	0.197	2604	0.76		1.00	1.00	1.00
% Recovery 98.27									

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.
							ODF	
CCV	CCV	01/28/09 02:30:36 pm	4.796	68044	1.41		1.00	1.00
% Recovery 95.92							1.00	
CCB	CCB	01/28/09 02:32:53 pm	0.013	-7	26.93		1.00	1.00
							1.00	
K59KGB	UNK	01/28/09 02:35:11 pm	0.009	-70	6.86		1.00	1.00
							1.00	
K59KGC	UNK	01/28/09 02:37:28 pm	4.555	64616	0.97		1.00	1.00
							1.00	
K58C2	UNK	01/28/09 02:39:46 pm	0.003	-145	2.85		1.00	1.00
							1.00	
K58C2S	UNK	01/28/09 02:42:04 pm	4.503	63870	3.58		1.00	1.00
							1.00	
K58C2D	UNK	01/28/09 02:44:22 pm	4.689	66518	0.51		1.00	1.00
							1.00	
K58C2S	UNK	01/28/09 02:46:40 pm	4.700	66678	0.49		1.00	1.00
							1.00	
K58C2D	UNK	01/28/09 02:48:58 pm	4.639	65811	1.31		1.00	1.00
							1.00	
K6A8A	UNK	01/28/09 02:51:17 pm	0.013	-2	550.23		1.00	1.00
							1.00	
K6A8E	UNK	01/28/09 02:53:35 pm	0.033	284	4.73		1.00	1.00
							1.00	
CCV	CCV	01/28/09 02:55:55 pm	5.030	71377	0.56		1.00	1.00
% Recovery 100.61							1.00	
CCB	CCB	01/28/09 02:58:13 pm	0.010	-45	11.25		1.00	1.00
							1.00	
K59KCB	UNK	01/28/09 03:00:32 pm	0.008	-84	14.80		1.00	1.00
							1.00	
~~K59KCC~~	~~UNK~~	~~01/28/09 03:02:51 pm~~	~~4.395~~	~~62341~~	~~1.71~~		~~1.00~~	~~1.00~~
see www 1/29/09							1.00	
K58C2	UNK	01/28/09 03:05:11 pm	0.000	-197	0.85		1.00	1.00
							1.00	
K58C2S	UNK	01/28/09 03:07:31 pm	4.165	59072	3.49		1.00	1.00
							1.00	

not needed

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K58C2D	UNK	01/28/09 03:09:51 pm	4.248	60240	1.21		1.00	1.00 1.00
K58C2S	UNK	01/28/09 03:12:11 pm	4.323	61318	2.59		1.00	1.00 1.00
K58C2D	UNK	01/28/09 03:14:31 pm	4.289	60834	0.13		1.00	1.00 1.00
K6A8A	UNK	01/28/09 03:16:48 pm	0.050	525	3.24		1.00	1.00 1.00
K6A8E	UNK	01/28/09 03:19:05 pm	0.084	997	2.79		1.00	1.00 1.00
CCV	CCV	01/28/09 03:21:25 pm	5.085	72148	0.51		1.00	1.00 1.00
% Recovery 101.69								
CCB	CCB	01/28/09 03:23:42 pm	0.011	-36	6.68		1.00	1.00 1.00
K6DGEB	UNK	01/28/09 03:25:59 pm	0.006	-108	25.87		1.00	1.00 1.00
K6DGEC	UNK	01/28/09 03:28:17 pm	4.484	63610	0.25		1.00	1.00 1.00
K57W3	UNK	01/28/09 03:30:35 pm	0.048	485	3.02		1.00	1.00 1.00
K57W5	UNK	01/28/09 03:32:53 pm	0.088	1060	0.50		1.00	1.00 1.00
K57W9	UNK	01/28/09 03:35:11 pm	0.077	906	0.54		1.00	1.00 1.00
K57HG	UNK	01/28/09 03:37:30 pm	0.176	2319	0.36		1.00	1.00 1.00
K57HGS	UNK	01/28/09 03:39:49 pm	3.310	46898	0.19		1.00	1.00 1.00
K57HGD	UNK	01/28/09 03:42:08 pm	3.041	43077	1.50		1.00	1.00 1.00
CCV	CCV	01/28/09 03:44:28 pm	5.031	71383	0.23		1.00	1.00 1.00
% Recovery 100.62								
CCB	CCB	01/28/09 03:46:45 pm	0.008	-75	4.00		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K59F4B	UNK	01/28/09 03:49:05 pm	0.018	63	26.49		1.00	1.00 1.00
K6DTRC	UNK	01/28/09 03:51:25 pm	4.893	69425	3.24		1.00	1.00 1.00
K53RK	UNK	01/28/09 03:53:42 pm	0.135	1734	1.59		1.00	1.00 1.00
K53RKP5	UNK	01/28/09 03:55:59 pm	0.027	196	2.54		1.00	1.00 1.00
K53RN	UNK	01/28/09 03:58:16 pm	0.523	7251	0.93		1.00	1.00 1.00
CCV	CCV	01/28/09 04:00:36 pm	4.960	70369	0.85		1.00	1.00 1.00
% Recovery 99.19								
CCB	CCB	01/28/09 04:02:53 pm	0.011	-29	15.56		1.00	1.00 1.00
~~K6DGGB~~	~~UNK~~	~~01/28/09 04:05:10 pm~~	~~0.056~~	~~598~~	~~0.38~~		~~1.00~~	~~1.00~~ 1.00
K6DGGC	UNK	01/28/09 04:07:28 pm	4.804	68152	2.29		1.00	1.00 1.00
K57J3	UNK	01/28/09 04:09:46 pm	0.094	1139	0.99		1.00	1.00 1.00
K57J7	UNK	01/28/09 04:12:05 pm	0.011	-33	8.94		1.00	1.00 1.00
K57J8	UNK	01/28/09 04:14:23 pm	0.016	38	9.81		1.00	1.00 1.00
K57KA	UNK	01/28/09 04:16:42 pm	0.016	35	10.41		1.00	1.00 1.00
K57KC	UNK	01/28/09 04:19:02 pm	0.011	-36	8.84		1.00	1.00 1.00
K57LE	UNK	01/28/09 04:21:21 pm	0.081	959	0.13		1.00	1.00 1.00
K57LP	UNK	01/28/09 04:23:41 pm	0.276	3735	0.59		1.00	1.00 1.00
~~K57MP~~	~~UNK~~	~~01/28/09 04:25:58 pm~~	~~0.023~~	~~136~~	~~3.02~~		~~1.00~~	~~1.00~~ 1.00

NA used 1/28/09 1/29/09 1/29/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CCV	CCV	01/28/09 04:28:18 pm	5.042	71546	0.25		1.00	1.00
% Recovery 100.85							1.00	
CCB	CCB	01/28/09 04:30:35 pm	0.010	-44	3.62		1.00	1.00
							1.00	
K57M9	UNK	01/28/09 04:32:53 pm	0.012	-27	7.91		1.00	1.00
							1.00	
K57NN	UNK	01/28/09 04:35:10 pm	0.182	2394	0.60		1.00	1.00
							1.00	
K57NP	UNK	01/28/09 04:37:28 pm	0.153	1982	0.31		1.00	1.00
							1.00	
K57NQ	UNK	01/28/09 04:39:46 pm	0.033	275	1.43		1.00	1.00
							1.00	
K57NT	UNK	01/28/09 04:42:04 pm	0.011	-32	15.08		1.00	1.00
							1.00	
K57NV	UNK	01/28/09 04:44:23 pm	0.171	2242	0.37		1.00	1.00
							1.00	
K57NW 5X	UNK	01/28/09 04:46:42 pm	1.499	21133	0.79		1.00	1.00
							1.00	
K57NX	UNK	01/28/09 04:49:01 pm	0.343	4682	0.41		1.00	1.00
							1.00	
K57N1	UNK	01/28/09 04:51:21 pm	0.172	2261	1.20		1.00	1.00
							1.00	
K57N2	UNK	01/28/09 04:53:40 pm	0.430	5922	1.01		1.00	1.00
							1.00	
CCV	CCV	01/28/09 04:56:00 pm	5.039	71495	0.38		1.00	1.00
% Recovery 100.77							1.00	
CCB	CCB	01/28/09 04:58:17 pm	0.013	-7	43.74		1.00	1.00
							1.00	
K57EG	UNK	01/28/09 05:00:35 pm	5.157	73172	0.11		1.00	1.00
							1.00	
K57EGS	UNK	01/28/09 05:02:53 pm	4.953	70282	3.42		1.00	1.00
							1.00	
K57EGD	UNK	01/28/09 05:05:10 pm	0.156	2020	0.27		1.00	1.00
							1.00	

NA used 1/29/09

NA used 1/29/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K6DG1B	UNK	01/28/09 05:07:28 pm	0.030	238	0.39		1.00	1.00 1.00
K6DG1C	UNK	01/28/09 05:09:46 pm	4.752	67420	0.22		1.00	1.00 1.00
K52AE	UNK	01/28/09 05:12:04 pm	0.012	-23	9.60		1.00	1.00 1.00
K52AES	UNK	01/28/09 05:14:22 pm	4.678	66369	0.98		1.00	1.00 1.00
K52AED	UNK	01/28/09 05:16:41 pm	4.717	66913	0.63		1.00	1.00 1.00
K52AR	UNK	01/28/09 05:19:00 pm	0.012	-17	66.05		1.00	1.00 1.00
K52AX	UNK	01/28/09 05:21:19 pm	0.013	-1	221.50		1.00	1.00 1.00
CCV	CCV	01/28/09 05:23:39 pm	5.145	73012	0.57		1.00	1.00 1.00
% Recovery 102.91								
CCB	CCB	01/28/09 05:25:56 pm	0.015	17	18.03		1.00	1.00 1.00
K53HL	UNK	01/28/09 05:28:16 pm	0.011	-34	8.38		1.00	1.00 1.00
K53H6	UNK	01/28/09 05:30:36 pm	0.074	860	0.87		1.00	1.00 1.00
K555W	UNK	01/28/09 05:32:54 pm	0.014	13	35.17		1.00	1.00 1.00
K5559	UNK	01/28/09 05:35:12 pm	0.023	132	11.40	s	1.00	1.00 1.00
K58AR	UNK	01/28/09 05:37:30 pm	0.014	1	336.72		1.00	1.00 1.00
K58CK	UNK	01/28/09 05:39:48 pm	0.018	58	4.36		1.00	1.00 1.00
K582W	UNK	01/28/09 05:42:06 pm	0.017	49	3.58		1.00	1.00 1.00
K5827	UNK	01/28/09 05:44:24 pm	0.006	-109	3.00		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.
							ODF	
CCV	CCV	01/28/09 05:46:44 pm	5.170	73363	0.39		1.00	1.00
% Recovery 103.40							1.00	
CCB	CCB	01/28/09 05:49:01 pm	0.015	27	5.95		1.00	1.00
							1.00	
K59J7B	UNK	01/28/09 05:51:19 pm	0.011	-32	14.81		1.00	1.00
							1.00	
K59J7C	UNK	01/28/09 05:53:38 pm	4.728	67078	1.48		1.00	1.00
							1.00	
K57XK	UNK	01/28/09 05:55:57 pm	0.697	9721	1.28		1.00	1.00
							1.00	
K57XKS	UNK	01/28/09 05:58:16 pm	5.398	76608	0.66		1.00	1.00
							1.00	
K57XKX	UNK	01/28/09 06:00:36 pm	0.573	7955	0.61		1.00	1.00
							1.00	
K6C81B	UNK	01/28/09 06:02:56 pm	0.008	-72	5.42		1.00	1.00
							1.00	
K6DTLC	UNK	01/28/09 06:05:14 pm	4.808	68215	3.01		1.00	1.00
							1.00	
K6AHT	UNK	01/28/09 06:07:32 pm	0.011	-33	6.59		1.00	1.00
							1.00	
K6AHTS	UNK	01/28/09 06:09:51 pm	4.562	64719	6.92	s	1.00	1.00
							1.00	
K6AHTD	UNK	01/28/09 06:12:09 pm	4.814	68302	2.87		1.00	1.00
							1.00	
CCV	CCV	01/28/09 06:14:29 pm	5.095	72292	0.43		1.00	1.00
% Recovery 101.89							1.00	
CCB	CCB	01/28/09 06:16:46 pm	0.017	45	6.54		1.00	1.00
							1.00	
K6CV8B	UNK	01/28/09 06:19:04 pm	0.014	1	337.09		1.00	1.00
							1.00	
K6DTPC	UNK	01/28/09 06:21:23 pm	5.064	71849	1.13		1.00	1.00
							1.00	
K58N0	UNK	01/28/09 06:23:41 pm	0.009	-57	8.20		1.00	1.00
							1.00	

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K58N0S	UNK	01/28/09 06:26:00 pm	4.600	65258	3.16		1.00	1.00 1.00
K58N0D	UNK	01/28/09 06:28:19 pm	4.730	67108	1.92		1.00	1.00 1.00
K6DGGB	UNK	01/28/09 06:30:38 pm	0.008	-76	5.62		1.00	1.00 1.00
K6DGGC	UNK	01/28/09 06:32:57 pm	4.973	70556	0.68		1.00	1.00 1.00
CCV	CCV	01/28/09 06:35:17 pm	5.062	71831	0.86		1.00	1.00 1.00
% Recovery 101.25								
CCB	CCB	01/28/09 06:37:34 pm	0.015	17	27.35		1.00	1.00 1.00
~~K508T~~	UNK	01/28/09 06:39:54 pm	~~5.539~~	~~78617~~	~~1.12~~		~~1.00~~	~~1.00~~ 1.00
K508TS	UNK	01/28/09 06:42:13 pm	10.000	142076	1.29		1.00	1.00 1.00
~~K508TD~~	UNK	01/28/09 06:45:46 pm	~~10.218~~	~~145185~~	~~0.49~~	~~O~~	~~1.00~~	~~1.00~~ 1.00
K508W	UNK	01/28/09 06:49:18 pm	2.817	39893	3.98		1.00	1.00 1.00
K508X	UNK	01/28/09 06:51:37 pm	0.655	9130	2.11		1.00	1.00 1.00
K5080	UNK	01/28/09 06:53:55 pm	0.311	4238	1.60		1.00	1.00 1.00
K5081	UNK	01/28/09 06:56:14 pm	0.980	13753	1.51		1.00	1.00 1.00
CCV	CCV	01/28/09 06:58:33 pm	5.044	71573	0.58		1.00	1.00 1.00
% Recovery 100.88								
CCB	CCB	01/28/09 07:00:51 pm	0.014	6	38.40		1.00	1.00 1.00
~~K5083~~	UNK	01/28/09 07:03:09 pm	~~16.827~~	~~239208~~	~~0.45~~	~~O~~	~~1.00~~	~~1.00~~ 1.00
K5084	UNK	01/28/09 07:06:51 pm	5.515	78272	0.58		1.00	1.00 1.00

see d.l 1/29/09

see d.l 1/29/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
~~K5085~~ see dil 1/29/09	UNK	01/28/09 07:09:10 pm	73.635	1047439	0.00	S	~~1.00~~ 1.00	~~1.00~~ 1.00
K5086	UNK	01/28/09 07:14:06 pm	0.008	-80	36.96		1.00 1.00	1.00
~~K59X4~~	UNK	01/28/09 07:16:25 pm	11.507	163528	1.08	O	~~1.00~~ 1.00	~~1.00~~ 1.00
K59X5 1/29/09 see dil	UNK	01/28/09 07:21:18 pm	2.629	37213	0.71		1.00 1.00	1.00
~~K59X6~~	UNK	01/28/09 07:23:37 pm	19.001	270144	0.53	O	~~1.00~~ 1.00	~~1.00~~ 1.00
K59X7 10x	UNK	01/28/09 07:27:29 pm	1.438	20260	0.52		1.00 1.00	1.00
CCV % Recovery 101.73	CCV	01/28/09 07:29:49 pm	5.087	72176	0.52		1.00 1.00	1.00
CCB	CCB	01/28/09 07:32:06 pm	0.015	21	12.32		1.00 1.00	1.00
K59KCC	UNK	01/28/09 07:36:27 pm	4.691	66541	1.63		1.00 1.00	1.00
K508T 2X	UNK	01/28/09 07:39:41 pm	2.848	40324	1.06		1.00 1.00	1.00
K508TS 2X	UNK	01/28/09 07:42:00 pm	4.971	70529	2.91		1.00 1.00	1.00
K508TD 2X	UNK	01/28/09 07:44:18 pm	5.176	73443	0.70		1.00 1.00	1.00
K5083 5X +10x	UNK	01/28/09 07:46:37 pm	3.337	47283	0.63		1.00 1.00	1.00
~~K5085 1000X~~ not used 1/29/09	UNK	01/28/09 07:48:56 pm	0.288	3900	0.24		~~1.00~~ 1.00	~~1.00~~ 1.00
K5085 100X	UNK	01/28/09 07:51:56 pm	2.773	39264	0.86		1.00 1.00	1.00
K59X4 5X	UNK	01/28/09 07:54:16 pm	2.413	34140	0.35		1.00 1.00	1.00
K59X6 10X	UNK	01/28/09 07:56:34 pm	1.985	28046	0.74		1.00 1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.
							ODF	
CCV	CCV	01/28/09 07:58:54 pm	5.096	72306	0.61		1.00	1.00
% Recovery 101.91							1.00	
CCB	CCB	01/28/09 08:01:12 pm	0.012	-27	23.89		1.00	1.00
							1.00	

Analysis Parameters

Instrument

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	50.00	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)
25.00	29.00		

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
Lower (%)	Upper (%)	Lower (%)	Upper (%)	Determination
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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. BOEING NPDES

SSFL MWH-Pasadena/Boeing

Lot #: F9A280105

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Sherryl Adam
Project Manager

February 24, 2009

Case Narrative
LOT NUMBER: **F9A280105**

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on January 27, 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 on the following page.

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. The case narrative is an integral part of this report.

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.

Radium-226 by GFPC
The Radium 226 portion of the sample was double traced with barium carrier due to a lack of precipitate.

Affected Samples:
F9A280105 (1): ISA2190-01

METHODS SUMMARY

F9A280105

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
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	
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 Ph osphorimetry	ASTM 5174-91	

References:

ASTM Annual Book Of ASTM Standards.

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

SAMPLE SUMMARY

F9A280105

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K6DD5	001	ISA2190-01	01/24/09	10:20

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: ISA2190-01

Radiochemistry

Lab Sample ID: F9A280105-001
Work Order: K6DD5
Matrix: WATER

Date Collected: 01/24/09 1020
Date Received: 01/27/09 0945

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 # 9030092**		**Yld %**
Cesium 137	-1.2	U	7.4	20.0	14	01/30/09	02/18/09
Potassium 40	-90	U	620		250	01/30/09	02/18/09
Gross Alpha/Beta EPA 900				**pCi/L**	**Batch # 9026139**		**Yld %**
Gross Alpha	0.44	U	0.89	3.00	1.6	01/28/09	02/01/09
Gross Beta	4.36		0.96	4.00	0.99	01/28/09	02/01/09
Radium 226 by EPA 903.0 MOD				**pCi/L**	**Batch # 9029072**		**Yld % 92**
Radium (226)	0.04	U	0.14	1.00	0.25	01/29/09	02/23/09
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**Batch # 9029073**		**Yld % 80**
Radium 228	0.11	U	0.27	1.00	0.46	01/29/09	02/23/09
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**Batch # 9041114**		**Yld %**
Tritium	30	U	170	500	290	02/10/09	02/20/09
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**Batch # 9029361**		**Yld % 74**
Strontium 90	0.12	U	0.38	3.00	0.64	01/29/09	02/08/09
Total Uranium by KPA ASTM 5174-91				**pCi/L**	**Batch # 9030382**		**Yld %**
Total Uranium	0.176	U	0.021	0.677	0.21	01/30/09	01/31/09

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC.

U Result is less than the sample detection limit.

TestAmerica Irvine

Client Sample ID: ISA2190-01 DUP

Radiochemistry

Lab Sample ID: F9A280105-001X
Work Order: K6DD5
Matrix: WATER

Date Collected: 01/24/09 1020
Date Received: 01/27/09 0945

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 # 9030092**		**Yld %**
Cesium 137	-0.1	U	8.2	20.0	15	01/30/09	02/18/09
Potassium 40	-90	U	3700		300	01/30/09	02/18/09
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**Batch # 9041114**		**Yld %**
Tritium	40	U	170	500	290	02/10/09	02/20/09

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.
Bold results are greater than the MDC.

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F9A280105
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC		Prep Date	Analysis Date	Lab Sample ID
Gross Alpha/Beta EPA 900			pCi/L	Batch # 9026139		Yld %			F9A260000-139B
Gross Alpha	0.25	U	0.55	2.00	0.98		01/28/09	02/01/09	
Gross Beta	-0.38	U	0.55	4.00	1.0		01/28/09	02/01/09	
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch # 9041114		Yld %			F9B100000-114B
Tritium	-30	U	170	500	300		02/10/09	02/20/09	
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch # 9029073		Yld % 96			F9A290000-073B
Radium 228	-0.01	U	0.19	1.00	0.33		01/29/09	02/23/09	
Radium 226 by EPA 903.0 MOD			pCi/L	Batch # 9029072		Yld % 94			F9A290000-072B
Radium (226)	0.038	U	0.098	1.00	0.18		01/29/09	02/23/09	
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch # 9029361		Yld % 69			F9A290000-361B
Strontium 90	0.20	U	0.41	3.00	0.69		01/29/09	02/08/09	
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch # 9030092		Yld %			F9A300000-092B
Cesium 137	0.0	U	5.3	20.0	11		01/30/09	02/18/09	
Potassium 40	-100	U	720		260		01/30/09	02/18/09	
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch # 9030382		Yld %			F9A300000-382B
Total Uranium	-0.0238	U	0.0039	0.677	0.21		01/30/09	01/31/09	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only
Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F9A280105
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F9A260000-139C
Gross Beta	67.7	67.6	5.7	0.9		100	(73 - 122)
	Batch #:	9026139		Analysis Date:	02/01/09		
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F9A260000-139C
Gross Alpha	49.4	59.9	6.6	1.4		121	(73 - 136)
	Batch #:	9026139		Analysis Date:	02/01/09		
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	901.1 MOD			F9A300000-092C
Americium 241	141000	144000	12000	800		102	(90 - 110)
Cesium 137	53100	52400	3000	200		99	(90 - 110)
Cobalt 60	87900	83400	4700	200		95	(90 - 110)
	Batch #:	9030092		Analysis Date:	02/19/09		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			F9A300000-382C
Total Uranium	27.1	29.0	3.5	0.2		107	(90 - 118)
	Batch #:	9030382		Analysis Date:	01/31/09		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			F9A300000-382C
Total Uranium	5.42	5.86	0.60	0.21		108	(90 - 118)
	Batch #:	9030382		Analysis Date:	01/31/09		
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			F9B100000-114C
Tritium	4790	4100	440	290		86	(77 - 110)
	Batch #:	9041114		Analysis Date:	02/20/09		

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: F9A280105
Matrix: WATER

Parameter		Spike Amount	Result		Total Uncert. (2 σ+/-)	% Yld	% Rec	QC Control Limits	Precision	
Radium 228 by GFPC EPA 904 MOD				pCi/L	904 MOD				Lab Sample ID F9A290000-073C	
Radium 228		7.24	8.67		0.94	88	120	(64 - 140)		
	Spk 2	7.24	8.56		0.94	87	118	(64 - 140)	1	%RPD
		Batch #:	9029073			Analysis Date:		02/23/09		
Radium 226 by EPA 903.0 MOD				pCi/L	903.0 MOD				F9A290000-072C	
Radium (226)		11.3	9.7		1.0	97	86	(52 - 150)		
	Spk 2	11.3	10.2		1.1	103	91	(52 - 150)	6	%RPD
		Batch #:	9029072			Analysis Date:		02/23/09		
SR-90 BY GFPC EPA-905 MOD				pCi/L	905 MOD				F9A290000-361C	
Strontium 90		6.98	9.4		1.1	68	135	(78 - 146)		
	Spk 2	6.98	8.8		1.1	66	126	(78 - 146)	7	%RPD
		Batch #:	9029361			Analysis Date:		02/08/09		

NOTE(S)

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F9A280105
Matrix: WATER

Date Sampled: 01/14/09
Date Received: 01/23/09

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision	
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F9A230276-001**	
Gross Alpha	1.3	U	3.1		0.7	U	3.6		54	%RPD
Gross Beta	19.4		3.3		17.4		3.2		11	%RPD
	Batch #:		9026139	(Sample)	9026139		(Duplicate)			
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**				**F9A280105-001**	
Cesium 137	-1.2	U	7.4		-0.1	U	8.2		157	%RPD
Potassium 40	-90	U	620		-90	U	3700		2	%RPD
	Batch #:		9030092	(Sample)	9030092		(Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**				**F9A280105-001**	
Tritium	30	U	170		40	U	170		50	%RPD
	Batch #:		9041114	(Sample)	9041114		(Duplicate)			

NOTE(S)

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

U Result is less than the sample detection limit.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F9A280105
Matrix: WATER

Date Sampled: 01/24/09 1020
Date Received: 01/27/09 0945

Parameter		Spike Amount	SPIKE Result	Total Uncert. (2 σ+/-)	Spike Yld	SAMPLE Result		Total Uncert. (2σ +/-)	QC Sample ID % Yld	%Rec	QC Control Limits
Total Uranium by KPA ASTM 5				pCi/L		5174-91				F9A280105-001	
Total Uranium		27.1	28.5	3.4		0.176	U	0.021		104	(90 - 121)
	Spk2	27.1	29.8	3.5		0.176	U	0.021		109	(90 - 121)
									Precision:	4	%RPD

Batch #: 9030382 Analysis date: 01/31/09

NOTE(S)

Data are incomplete without the case narrative.

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

U Result is less than the sample detection limit.

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F9A230276
Matrix: WATER

Date Sampled: 01/14/09
Date Received: 01/23/09

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	QC Sample ID %REC	QC Control Limits
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F9A230276-001**	
Gross Alpha	130	101	16		1.3	3.1		77	(44 - 150)
	Batch #:	9026139		Analysis Date:		02/01/09			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F9A230276-001**	
Gross Beta	178	201	17		19.4	3.3		102	(66 - 147)
	Batch #:	9026139		Analysis Date:		02/01/09			
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F9A280106-001**	
Tritium	4790	4450	470		30	170		92	(47 - 150)
	Batch #:	9041114		Analysis Date:		02/20/09			

NOTE(S)

Data are incomplete without the case narrative.

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

SUBCONTRACT ORDER

TestAmerica Irvine

ISA2190

SENDING LABORATORY:	RECEIVING LABORATORY:
TestAmerica Irvine	TestAmerica St. Louis
17461 Derian Avenue. Suite 100	13715 Rider Trail North
Irvine, CA 92614	Earth City, MO 63045
Phone: (949) 261-1022	Phone :(314) 298-8566
Fax: (949) 260-3297	Fax: (314) 298-8757
Project Manager: Joseph Doak	Project Location: CA - CALIFORNIA
Client: MWH-Pasadena/Boeing	Receipt Temperature:_______°C Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ISA2190-01	**Water**		**Sampled: 01/24/09 10:20**			**Instant Nofication**
Gamma Spec-O		02/04/09	01/24/10 10:20	$0.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O		02/04/09	07/23/09 10:20	$0.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O		02/04/09	07/23/09 10:20	$0.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out		02/04/09	02/21/09 10:20	$0.00	0%	
Radium, Combined-O		02/04/09	01/24/10 10:20	$0.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O		02/04/09	01/24/10 10:20	$0.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O		02/04/09	01/24/10 10:20	$0.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O		02/04/09	01/24/10 10:20	$0.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (J) 500 mL Amber (K)

Released By	Date/Time	Received By	Date/Time
[signature]	1/26/09 1700	[signature]	1/27/09 9:45

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F9A280104 (105) 106

TestAmerica St. Louis

- 371 -

CONDITION UPON RECEIPT FORM

Client: TA- Irvine

Quote No: 77635/81594

COC/RFA No: ISA2190/2144/2191

Initiated By: AB Date: 1-27-09 Time: 9:45

Shipping Information

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

Shipping # (s):*

1. _____
2. Emplf 217247 [illegible]
3. TRK# 7972 8341 6552 F[illegible]
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Sample Temperature (s):**

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

[1] 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: Sheryl A Aston Date: 2-2-09

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.

Vista
Analytical Laboratory

NPDES - 2284

February 07, 2009

Vista Project I.D.: 31361

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

Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on January 27, 2009 under your Project Name "ISA2190". This work was authorized under your Purchase Order No. 2286422. This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

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

Section I: Sample Inventory Report

Date Received: **1/27/2009**

Vista Lab. ID	Client Sample ID
31361-001	ISA2190-01

SECTION II

Method Blank — **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	1848	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	30-Jan-09	Date Analyzed DB-5:	1-Feb-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000269		
1,2,3,7,8-PeCDD	ND	0.000000327		
1,2,3,4,7,8-HxCDD	ND	0.000000423		
1,2,3,6,7,8-HxCDD	ND	0.000000419		
1,2,3,7,8,9-HxCDD	ND	0.000000393		
1,2,3,4,6,7,8-HpCDD	ND	0.000000884		
OCDD	0.00000436			J
2,3,7,8-TCDF	ND	0.000000235		
1,2,3,7,8-PeCDF	ND	0.000000305		
2,3,4,7,8-PeCDF	ND	0.000000303		
1,2,3,4,7,8-HxCDF	ND	0.000000295		
1,2,3,6,7,8-HxCDF	ND	0.000000286		
2,3,4,6,7,8-HxCDF	ND	0.000000321		
1,2,3,7,8,9-HxCDF	ND	0.000000403		
1,2,3,4,6,7,8-HpCDF	ND	0.000000353		
1,2,3,4,7,8,9-HpCDF	ND	0.000000354		
OCDF	0.00000189			J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	86.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	81.2	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	88.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	81.5	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	89.2	23 - 140	
	13C-OCDD	78.8	17 - 157	
	13C-2,3,7,8-TCDF	88.2	24 - 169	
	13C-1,2,3,7,8-PeCDF	89.1	24 - 185	
	13C-2,3,4,7,8-PeCDF	89.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	87.0	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	86.3	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	86.2	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	88.2	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	90.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	92.6	26 - 138	
	13C-OCDF	78.7	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	86.7	35 - 197	

Totals

Total TCDD	ND	0.000000269
Total PeCDD	ND	0.000000327
Total HxCDD	ND	0.000000412
Total HpCDD	ND	0.000000884
Total TCDF	ND	0.000000235
Total PeCDF	ND	0.000000304
Total HxCDF	ND	0.000000326
Total HpCDF	ND	0.000000354

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: William J. Luksemburg 07-Feb-2009 09:35

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	1848	Lab Sample:	0-OPR001
Sample Size:	1.00 L	Date Extracted:	30-Jan-09	Date Analyzed DB-5:	31-Jan-09
				Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	8.59	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	84.8	25 - 164	
1,2,3,7,8-PeCDD	50.0	48.2	35 - 71		13C-1,2,3,7,8-PeCDD	78.5	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	49.2	35 - 82		13C-1,2,3,4,7,8-HxCDD	81.6	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	49.9	38 - 67		13C-1,2,3,6,7,8-HxCDD	77.8	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	49.0	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	83.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	50.9	35 - 70		13C-OCDD	71.1	17 - 157	
OCDD	100	98.7	78 - 144		13C-2,3,7,8-TCDF	86.8	24 - 169	
2,3,7,8-TCDF	10.0	9.95	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	85.9	24 - 185	
1,2,3,7,8-PeCDF	50.0	52.1	40 - 67		13C-2,3,4,7,8-PeCDF	86.9	21 - 178	
2,3,4,7,8-PeCDF	50.0	52.2	34 - 80		13C-1,2,3,4,7,8-HxCDF	83.0	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	53.9	36 - 67		13C-1,2,3,6,7,8-HxCDF	79.7	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	53.5	42 - 65		13C-2,3,4,6,7,8-HxCDF	81.2	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	53.6	35 - 78		13C-1,2,3,7,8,9-HxCDF	80.3	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	54.5	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	84.3	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	54.4	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	84.3	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	54.1	39 - 69		13C-OCDF	71.2	17 - 157	
OCDF	100	100	63 - 170	CRS	37Cl-2,3,7,8-TCDD	88.5	35 - 197	

Analyst: JMH

Approved By: William J. Luksemburg 07-Feb-2009 09:35

Sample ID: **ISA2190-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	31361-001	Date Received:	27-Jan-09
Project:	ISA2190	Sample Size:	1.03 L	QC Batch No.:	1848	Date Extracted:	30-Jan-09
Date Collected:	24-Jan-09			Date Analyzed DB-5:	1-Feb-09	Date Analyzed DB-225:	NA
Time Collected:	1020						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000299		
1,2,3,7,8-PeCDD	ND	0.000000378		
1,2,3,4,7,8-HxCDD	ND	0.000000572		
1,2,3,6,7,8-HxCDD	ND	0.000000576		
1,2,3,7,8,9-HxCDD	ND	0.000000536		
1,2,3,4,6,7,8-HpCDD	0.00000827			J
OCDD	0.0000909			B
2,3,7,8-TCDF	ND	0.000000294		
1,2,3,7,8-PeCDF	ND	0.000000340		
2,3,4,7,8-PeCDF	ND	0.000000370		
1,2,3,4,7,8-HxCDF	ND	0.000000343		
1,2,3,6,7,8-HxCDF	ND	0.000000343		
2,3,4,6,7,8-HxCDF	ND	0.000000372		
1,2,3,7,8,9-HxCDF	ND	0.000000479		
1,2,3,4,6,7,8-HpCDF	0.00000167			J
1,2,3,4,7,8,9-HpCDF	ND	0.000000393		
OCDF	0.00000848			J,B

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	86.9	25 - 164	
	13C-1,2,3,7,8-PeCDD	77.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	83.5	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	81.2	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	84.7	23 - 140	
	13C-OCDD	73.3	17 - 157	
	13C-2,3,7,8-TCDF	90.3	24 - 169	
	13C-1,2,3,7,8-PeCDF	93.2	24 - 185	
	13C-2,3,4,7,8-PeCDF	88.6	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	85.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	80.4	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	82.4	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	82.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	82.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	87.0	26 - 138	
	13C-OCDF	73.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	88.4	35 - 197	

Totals		
Total TCDD	ND	0.000000299
Total PeCDD	ND	0.000000378
Total HxCDD	ND	0.000000561
Total HpCDD	0.0000212	
Total TCDF	ND	0.000000294
Total PeCDF	ND	0.000000355
Total HxCDF	ND	0.000000384
Total HpCDF	0.00000506	

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: William J. Luksemburg 07-Feb-2009 09:35

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

SUBCONTRACT ORDER

TestAmerica Irvine

ISA2190

31361

NPDES - 2293

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Vista Analytical Laboratory- SUB
1104 Windfield Way
El Dorado Hills, CA 95762
Phone :(916) 673-1520
Fax: (916) 673-0106
Project Location: CA - CALIFORNIA
Receipt Temperature: 1.3 °C Ice: (Y) N

Analysis	Units	Due	Expires	Comments
Sample ID: ISA2190-01	**Water**		Sampled: **01/24/09 10:20**	**Instant Nofication**
1613-Dioxin-HR-Alta		02/04/09	01/31/09 10:20	J flags,17 congeners,no TEQ,ug/L,sub=Vista
EDD + Level 4		02/04/09	02/21/09 10:20	Boeing EDD, email to pm w/ PDF report
Containers Supplied:				
1 L Amber (C)	1 L Amber (D)			

Released By — Date/Time 1/26/09 1700

Received By — Date/Time 1/27/09 1012

Released By — Date/Time

Received By — Date/Time

NPDES - 2294

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31361 **TAT** unspecified

Samples Arrival:	**Date/Time** 1/27/09 0857	**Initials:** CV	**Location:** LR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 1/27/09 1012	**Initials:** CV	**Location:** LR-2 **Shelf/Rack:** B-2

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	
Temp °C 1.3°	**Time:** 0908			**Thermometer ID:** IR-1		

	YES	NO	NA
Adequate Sample Volume Received? (A + B bottles)	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill Trk # 7962 8632 6715	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)		
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments: