APPENDIX G

Section 27

Outfall 009, February 13, 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 009

Sampled: 02/13/09
Received: 02/13/09
Issued: 03/16/09 15:41

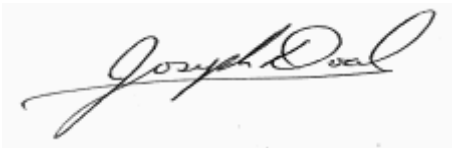
NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
ISB1695-01	Outfall 009	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
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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 009
Report Number: ISB1695

Sampled: 02/13/09
Received: 02/13/09

CORRECTIVE ACTION REPORT

Department: Metals
Method: EPA 200.8-Diss
QC Batch: 9B20106

Date: 03/13/2009
Matrix: Water

Identification and Definition of Problem:

The result for dissolved antimony was reported incorrectly for sample ISB1695-01.

Determination of the Cause of the Problem:

Due to an analyst transcription error, the result for total antimony was reported both for the total and the dissolved components.

Corrective Action Taken:

All other samples and total/dissolved pairs were reported correctly. Correct reporting procedures have been reviewed with applicable laboratory staff. The report has been reissued with the correct data for dissolved antimony in ISB1695-01.

Quality Assurance Approval:  Date: 03/13/2009 01:31 PM

Dave Dawes

TestAmerica Irvine

Joseph Doak
Project Manager

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HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1695-01 (Outfall 009 - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	9B23085	1.3	4.8	ND	1	02/23/09	02/24/09	

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Project Manager

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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1695-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	9B23088	0.20	2.0	**0.34**	1	02/23/09	02/24/09	J
Cadmium	EPA 200.8	9B23088	0.11	1.0	**0.17**	1	02/23/09	02/24/09	J
Copper	EPA 200.8	9B23088	0.75	2.0	**7.6**	1	02/23/09	02/24/09	
Lead	EPA 200.8	9B23088	0.30	1.0	**20**	1	02/23/09	02/24/09	
Thallium	EPA 200.8	9B23088	0.20	1.0	ND	1	02/23/09	02/24/09	C

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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: ISB1695-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	9B20106	0.20	2.0	ND	1	02/20/09	02/25/09	
Cadmium	EPA 200.8-Diss	9B20106	0.11	1.0	ND	1	02/20/09	02/23/09	C
Copper	EPA 200.8-Diss	9B20106	0.75	2.0	**1.4**	1	02/20/09	02/23/09	J
Lead	EPA 200.8-Diss	9B20106	0.30	1.0	**0.33**	1	02/20/09	02/23/09	J
Thallium	EPA 200.8-Diss	9B20106	0.20	1.0	ND	1	02/20/09	02/23/09	C

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1695-01 (Outfall 009 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	9B13065	0.25	0.50	**1.9**	1	02/13/09	02/13/09	
Nitrate/Nitrite-N	EPA 300.0	9B13065	0.15	0.26	**0.19**	1	02/13/09	02/13/09	J
Sulfate	EPA 300.0	9B13065	0.20	0.50	**3.4**	1	02/13/09	02/13/09	
Total Dissolved Solids	SM2540C	9B19050	10	10	**40**	1	02/19/09	02/19/09	

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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: ISB1695-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	9049249	0.027	0.2	ND	1	02/18/09	02/18/09	

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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: ISB1695-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1-DISS	9049255	0.027	0.2	ND	1	02/18/09	02/18/09	

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SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 009 (ISB1695-01) - Water					
EPA 300.0	2	02/13/2009 14:20	02/13/2009 20:10	02/13/2009 19:00	02/13/2009 21:53
Filtration	1	02/13/2009 14:20	02/13/2009 20:10	02/14/2009 12:53	02/14/2009 12:55

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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: 9B23085 Extracted: 02/23/09											
Blank Analyzed: 02/24/2009 (9B23085-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/24/2009 (9B23085-BS1)											**MNR1**
Hexane Extractable Material (Oil & Grease)	19.9	5.0	1.4	mg/l	20.0		100	78-114			
LCS Dup Analyzed: 02/24/2009 (9B23085-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.7	5.0	1.4	mg/l	20.0		98	78-114	1	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: 9B23088 Extracted: 02/23/09											
Blank Analyzed: 02/24/2009 (9B23088-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/24/2009 (9B23088-BS1)											
Antimony	81.2	2.0	0.20	ug/l	80.0		102	85-115			
Cadmium	79.6	1.0	0.11	ug/l	80.0		100	85-115			
Copper	80.0	2.0	0.75	ug/l	80.0		100	85-115			
Lead	83.7	1.0	0.30	ug/l	80.0		105	85-115			
Thallium	83.6	1.0	0.20	ug/l	80.0		104	85-115			
Matrix Spike Analyzed: 02/24/2009 (9B23088-MS1)						**Source: ISB1530-03**					
Antimony	85.5	2.0	0.20	ug/l	80.0	0.241	107	70-130			
Cadmium	84.1	1.0	0.11	ug/l	80.0	ND	105	70-130			
Copper	75.7	2.0	0.75	ug/l	80.0	1.56	93	70-130			
Lead	76.4	1.0	0.30	ug/l	80.0	ND	95	70-130			
Thallium	77.3	1.0	0.20	ug/l	80.0	ND	97	70-130			
Matrix Spike Analyzed: 02/24/2009 (9B23088-MS2)						**Source: ISB1780-01**					
Antimony	82.0	2.0	0.20	ug/l	80.0	ND	102	70-130			
Cadmium	79.0	1.0	0.11	ug/l	80.0	ND	99	70-130			
Copper	74.4	2.0	0.75	ug/l	80.0	1.17	92	70-130			
Lead	77.8	1.0	0.30	ug/l	80.0	0.676	96	70-130			
Thallium	77.9	1.0	0.20	ug/l	80.0	ND	97	70-130			
Matrix Spike Dup Analyzed: 02/24/2009 (9B23088-MSD1)						**Source: ISB1530-03**					
Antimony	85.0	2.0	0.20	ug/l	80.0	0.241	106	70-130	1	20	
Cadmium	81.7	1.0	0.11	ug/l	80.0	ND	102	70-130	3	20	
Copper	75.5	2.0	0.75	ug/l	80.0	1.56	92	70-130	0	20	
Lead	76.0	1.0	0.30	ug/l	80.0	ND	95	70-130	1	20	
Thallium	78.0	1.0	0.20	ug/l	80.0	ND	97	70-130	1	20	

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Joseph Doak
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MWH-Pasadena/Boeing
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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: 9B20106 Extracted: 02/20/09											
Blank Analyzed: 02/23/2009 (9B20106-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/23/2009 (9B20106-BS1)											
Antimony	85.1	2.0	0.20	ug/l	80.0		106	85-115			
Cadmium	83.3	1.0	0.11	ug/l	80.0		104	85-115			
Copper	78.1	2.0	0.75	ug/l	80.0		98	85-115			
Lead	83.7	1.0	0.30	ug/l	80.0		105	85-115			
Thallium	83.4	1.0	0.20	ug/l	80.0		104	85-115			
Matrix Spike Analyzed: 02/23/2009 (9B20106-MS1)						**Source: ISB1693-01**					
Antimony	85.2	2.0	0.20	ug/l	80.0	0.558	106	70-130			
Cadmium	82.0	1.0	0.11	ug/l	80.0	ND	103	70-130			
Copper	78.5	2.0	0.75	ug/l	80.0	1.32	97	70-130			
Lead	83.6	1.0	0.30	ug/l	80.0	ND	105	70-130			
Thallium	83.6	1.0	0.20	ug/l	80.0	ND	105	70-130			
Matrix Spike Analyzed: 02/23/2009 (9B20106-MS2)						**Source: ISB1694-01**					
Antimony	87.7	2.0	0.20	ug/l	80.0	0.567	109	70-130			
Cadmium	82.9	1.0	0.11	ug/l	80.0	ND	104	70-130			
Copper	76.3	2.0	0.75	ug/l	80.0	1.12	94	70-130			
Lead	81.7	1.0	0.30	ug/l	80.0	ND	102	70-130			
Thallium	81.6	1.0	0.20	ug/l	80.0	ND	102	70-130			
Matrix Spike Dup Analyzed: 02/23/2009 (9B20106-MSD1)						**Source: ISB1693-01**					
Antimony	88.4	2.0	0.20	ug/l	80.0	0.558	110	70-130	4	20	
Cadmium	84.3	1.0	0.11	ug/l	80.0	ND	105	70-130	3	20	
Copper	78.9	2.0	0.75	ug/l	80.0	1.32	97	70-130	0	20	
Lead	83.6	1.0	0.30	ug/l	80.0	ND	105	70-130	0	20	
Thallium	83.1	1.0	0.20	ug/l	80.0	ND	104	70-130	1	20	

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Joseph Doak
Project Manager

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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: 9B13065 Extracted: 02/13/09											
Blank Analyzed: 02/13/2009 (9B13065-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: 02/13/2009 (9B13065-BS1)											
Chloride	4.75	0.50	0.25	mg/l	5.00		95	90-110			
Sulfate	10.0	0.50	0.20	mg/l	10.0		100	90-110			
Matrix Spike Analyzed: 02/13/2009 (9B13065-MS1)						**Source: ISB1470-04**					
Chloride	309	10	5.0	mg/l	50.0	294	29	80-120			*MHA*
Sulfate	396	10	4.0	mg/l	100	331	65	80-120			*M2*
Matrix Spike Analyzed: 02/13/2009 (9B13065-MS2)						**Source: ISB1660-01**					
Chloride	131	2.5	1.2	mg/l	5.00	124	125	80-120			*MHA*
Sulfate	134	2.5	1.0	mg/l	10.0	119	151	80-120			*MHA*
Matrix Spike Dup Analyzed: 02/13/2009 (9B13065-MSD1)						**Source: ISB1470-04**					
Chloride	322	10	5.0	mg/l	50.0	294	54	80-120	4	20	*MHA*
Sulfate	409	10	4.0	mg/l	100	331	78	80-120	3	20	*M2*
Batch: 9B19050 Extracted: 02/19/09											
Blank Analyzed: 02/19/2009 (9B19050-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 02/19/2009 (9B19050-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: 9B19050 Extracted: 02/19/09											
Duplicate Analyzed: 02/19/2009 (9B19050-DUP1)						**Source: ISB2096-01**					
Total Dissolved Solids	181	10	10	mg/l		177			2	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: 9049249 Extracted: 02/18/09											
Matrix Spike Dup Analyzed: 02/18/2009 (D9B170143001D)						**Source: D9B170143001**					
Mercury	5.08	0.2	0.027	ug/L	5	ND	101	90-110	4	10	
Matrix Spike Analyzed: 02/18/2009 (D9B170143001S)						**Source: D9B170143001**					
Mercury	4.89	0.2	0.027	ug/L	5	ND	98	90-110	4	10	
Blank Analyzed: 02/18/2009 (D9B180000249B)						**Source:**					
Mercury	ND	0.2	0.027	ug/L				-			
LCS Analyzed: 02/18/2009 (D9B180000249C)						**Source:**					
Mercury	4.87	0.2	0.027	ug/L	5		97	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: 9049255 Extracted: 02/18/09											
Matrix Spike Dup Analyzed: 02/18/2009 (D9B170143001D)						**Source: D9B170143001**					
Mercury	4.92	0.2	0.027	ug/L	5	ND	98	90-110	1	10	
Matrix Spike Analyzed: 02/18/2009 (D9B170143001S)						**Source: D9B170143001**					
Mercury	4.98	0.2	0.027	ug/L	5	ND	100	90-110	1	10	
Blank Analyzed: 02/18/2009 (D9B180000255B)						**Source:**					
Mercury	ND	0.2	0.027	ug/L				-			
LCS Analyzed: 02/18/2009 (D9B180000255C)						**Source:**					
Mercury	4.64	0.2	0.027	ug/L	5		93	90-110			

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Received: 02/13/09

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ISB1695-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.38	4.8	15
ISB1695-01	Antimony-200.8	Antimony	ug/l	0.34	2.0	6
ISB1695-01	Cadmium-200.8	Cadmium	ug/l	0.17	1.0	4
ISB1695-01	Chloride - 300.0	Chloride	mg/l	1.88	0.50	150
ISB1695-01	Copper-200.8	Copper	ug/l	7.61	2.0	14
ISB1695-01	**Lead-200.8**	**Lead**	**ug/l**	**20**	**1.0**	**5.2**
ISB1695-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.19	0.26	10
ISB1695-01	Sulfate-300.0	Sulfate	mg/l	3.40	0.50	250
ISB1695-01	TDS - SM2540C	Total Dissolved Solids	mg/l	40	10	850
ISB1695-01	Thallium-200.8	Thallium	ug/l	0.068	1.0	2

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 009
Report Number: ISB1695

Sampled: 02/13/09
Received: 02/13/09

DATA QUALIFIERS AND DEFINITIONS

C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
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).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Sampled: 02/13/09
Received: 02/13/09

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: ISB1695-01

Method Performed: MCAWW 245.1-DISS
Samples: ISB1695-01

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 009
Report Number: ISB1695

Sampled: 02/13/09
Received: 02/13/09

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Analysis Performed: Gamma Spec
Samples: ISB1695-01

Analysis Performed: Gross Alpha
Samples: ISB1695-01

Analysis Performed: Gross Beta
Samples: ISB1695-01

Analysis Performed: Radium, Combined
Samples: ISB1695-01

Analysis Performed: Strontium 90
Samples: ISB1695-01

Analysis Performed: Tritium
Samples: ISB1695-01

Analysis Performed: Uranium, Combined
Samples: ISB1695-01

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: ISB1695-01

TestAmerica Irvine

Joseph Doak
Project Manager

ISB1695

Test America Version 12/20/07 CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 009** Stormwater at WS-13
Project Manager: Bronwyn Kelly Sampler: BARNEA	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

ANALYSIS REQUIRED

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)	Chromium VI	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl	Comments
Outfall 009	W	1L Poly	1	2-13-09 14:20	HNO_3	1A	X								
Outfall 009-Dup	W	1L Poly	1		HNO_3	1B	X								
Outfall 009	W	1L Amber	2		None	2A, 2B		X							
Outfall 009	W	1L Amber	2		HCl	3A, 3B			X						
Outfall 009	W	500 ml Poly	2		None	4A, 4B				X					
Outfall 009	W	500 ml Poly	1		None	5					X				
Outfall 009	W	2.5 Gal Cube 500 ml Amber	1 1		None None	6A 6B						X			Unfiltered and unpreserved analysis
~~Outfall 009~~	~~W~~	~~1 Gal Poly~~	~~1~~		~~None~~	~~7~~									**Test first and second rain event of the season**
Outfall 009	W	1L Poly	1		None	8								X	Filter w/in 24hrs of receipt at lab

Field readings:
Temp = 45.4
pH = 6.70
Time of readings = 14:20

Relinquished By	Date/Time:	Received By	Date/Time:
[signature] 2-13-09	1600	[signature] TAZ	2/13/09 1600
Relinquished By	Date/Time:	Received By	Date/Time:
[signature] TAZ	2/13/09 2000	[signature]	2/13/09 2010
Relinquished By	Date/Time:	Received By	Date/Time:

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

Sample Integrity: (check)
Intact X On Ice: X 3.5°C

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

TN 2/13/09 2410

NPDES - 2062

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

MWH-Pasadena / Boeing

Lot D9B170148

Project ISB1695

Joseph Doak
17461 Derian Avenue
Suite 100
Irvine, CA 92614

TestAmerica Laboratories, Inc.

for DiLea Griego
Project Manager

February 24, 2009

Table of Contents

Standard Deliverables with Supporting Documentation

Report Contents	Number of Pages

Standard Deliverables

*(The **Cover Letter** and the **Report Cover** page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.)*

Supporting Documentation

(Note: A one-page "Description of Supporting Documentation" is provided at the beginning of this section.).

	Check below when supporting documentation is present.
• Volatile GC/MS	
• Semivolatile GC/MS	
• Volatile GC	
• Semivolatile GC	
• LC/MS or HPLC	
• Metals	X
• General Chemistry	
• Subcontracted Data	

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.

Case Narrative

Enclosed is the report for one sample received at TestAmerica Laboratories, Inc. – Denver laboratory on February 17, 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 D9B170148

Sample Receiving
The cooler temperature upon receipt at the laboratory was acceptable at 1.2°C.

Total Mercury –Method 245.1
No anomalies were observed.

Dissolved Mercury –Method 245.1
No anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

D9B170148

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
NO DETECTABLE PARAMETERS				

METHODS SUMMARY

D9B170148

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

D9B170148

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 245.1	Christopher Grisdale	9582

References:

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

SAMPLE SUMMARY

D9B170148

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K697Q	001	ISB1695-01	02/13/09	14:20

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

D9B170148

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 245.1		9049249	9049147
	WATER	MCAWW 245.1		9049255	9049154

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Total Metals

CLP-Like Forms

Lot ID: D9B170148

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: -001

Batch: 9049249

Total Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9B170148

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

SOW No.: _____

Sample ID.	Lab Sample No.
ISB1695-01	D9B170148-001

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: 2/23/09 Title: Metals Analyst

COVER PAGE - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	ISB1695-01
Lot/SDG Number:	D9B170148	**Lab Sample ID:**	D9B170148-001
Matrix:	WATER	**Lab WorkOrder:**	K697Q
% Moisture:	N/A	**Date/Time Collected:**	02/13/09 14:20
Basis:	Wet	**Date/Time Received:**	02/17/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049249	**Date/Time Analyzed:**	02/18/09 17:50
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

Form 1 Analysis Data Sheet Equivalent

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

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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	6.913	98.8	5.000	5.051	101.0	5.095	101.9	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.: D9B170148

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				5.000	5.028	100.6			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.: D9B170148

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	0.19500	97.5					

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9B170148	**Lab Sample ID:**	D9B180000-249B
Matrix:	WATER	**Lab WorkOrder:**	K7C0J
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049249	**Date/Time Analyzed:**	02/18/09 17:27
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

Form 3 Prep Blank Equivalent

Total Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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:

Form III - IN

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:	D9B170148	**MS Lab Sample ID:**	D9B170143-001S
Matrix:	WATER	**MS Lab WorkOrder:**	K695D
% Moisture:	N/A	**Date/Time Collected:**	02/13/09 11:50
Basis:	Wet	**Date/Time Received:**	02/17/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049249	**Date/Time Analyzed:**	02/18/09 17:38
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	4.89		98		90 - 110

Form 5A MS Analysis Data Sheet Equivalent

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:	D9B170148	**MSD Lab Sample ID:**	D9B170143-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	K695D
% Moisture:	N/A	**Date/Time Collected:**	02/13/09 11:50
Basis:	Wet	**Date/Time Received:**	02/17/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049249	**Date/Time Analyzed:**	02/18/09 17:40
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	5.08		101		3.8		90 - 110	10

Form 5A MSD Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9B170148	**Lab Sample ID:**	D9B180000-249C
Matrix:	WATER	**Lab WorkOrder:**	K7C0J
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049249	**Date/Time Analyzed:**	02/18/09 17:29
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	4.87	97		90 - 110

Form 7 LCS Analysis Data Sheet Equivalent

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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: _____

Form X - IN

Total Metals Analysis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	2/18/2009	10.0	10.0
LAB MS/MSD MS	2/18/2009	10.0	10.0
LAB MS/MSD MSD	2/18/2009	10.0	10.0
ISB1695-01	2/18/2009	10.0	10.0
MB9049249	2/18/2009	10.0	10.0
Check Sample	2/18/2009	10.0	10.0

Comments:

Form XIII - IN

Total Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9B170148

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 2/18/2009 End Date: 2/18/2009

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	16:45																X									
Std1	1.00	16:47																X									
Std2	1.00	16:50																X									
Std3	1.00	16:52																X									
Std4	1.00	16:54																X									
Std5	1.00	16:56																X									
Std6	1.00	16:59																X									
ICB	1.00	17:01																X									
ICV	1.00	17:03																X									
RL	1.00	17:06																X									
CCV	1.00	17:08																X									
CCB	1.00	17:10																X									
MB9049249	1.00	17:27																X									
Check Sample	1.00	17:29																X									
INTRA-LAB QC	1.00	17:31																X									
CCV	1.00	17:33																X									
CCB	1.00	17:36																X									
LAB MS/MSD MS	1.00	17:38																X									
LAB MS/MSD MSD	1.00	17:40																X									
ISB1695-01	1.00	17:50																X									
CCV	1.00	17:59																X									
CCB	1.00	18:01																X									

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

Form XIV - IN

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Dissolved Metals

CLP-Like Forms

Lot ID: D9B170148

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: -001

Batch: 9049255

Dissolved Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9B170148

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

SOW No.: _____

Sample ID.	Lab Sample No.
ISB1695-01	D9B170148-001

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: 2/23/09 Title: Metals Analyst

COVER PAGE - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	ISB1695-01
Lot/SDG Number:	D9B170148	**Lab Sample ID:**	D9B170148-001
Matrix:	WATER	**Lab WorkOrder:**	K697Q
% Moisture:	N/A	**Date/Time Collected:**	02/13/09 14:20
Basis:	Wet	**Date/Time Received:**	02/17/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049255	**Date/Time Analyzed:**	02/18/09 18:20
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

Form 1 Analysis Data Sheet Equivalent

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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	6.913	98.8	5.000	5.051	101.0	5.095	101.9	CV

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

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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				5.000	5.028	100.6	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.: D9B170148

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	0.19500	97.5					

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9B170148	**Lab Sample ID:**	D9B180000-255B
Matrix:	WATER	**Lab WorkOrder:**	K7C08
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049255	**Date/Time Analyzed:**	02/18/09 17:57
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

Form 3 Prep Blank Equivalent

Dissolved Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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:

Form III - IN

Dissolved Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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							CV

Comments:

Form III - IN

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:	D9B170148	**MS Lab Sample ID:**	D9B170143-001S
Matrix:	WATER	**MS Lab WorkOrder:**	K695D
% Moisture:	N/A	**Date/Time Collected:**	02/13/09 11:50
Basis:	Wet	**Date/Time Received:**	02/17/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049255	**Date/Time Analyzed:**	02/18/09 18:08
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	4.98		100		90 - 110

Form 5A MS Analysis Data Sheet Equivalent

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:	D9B170148	**MSD Lab Sample ID:**	D9B170143-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	K695D
% Moisture:	N/A	**Date/Time Collected:**	02/13/09 11:50
Basis:	Wet	**Date/Time Received:**	02/17/09 09:30
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049255	**Date/Time Analyzed:**	02/18/09 18:10
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	4.92		98		1.3		90 - 110	10

Form 5A MSD Analysis Data Sheet Equivalent

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9B170148	**Lab Sample ID:**	D9B180000-255C
Matrix:	WATER	**Lab WorkOrder:**	K7C08
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	02/18/09 14:15
QC Batch ID:	9049255	**Date/Time Analyzed:**	02/18/09 18:03
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	4.64	93		90 - 110

Form 7 LCS Analysis Data Sheet Equivalent

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

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: _____

Form X - IN

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B170148

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	2/18/2009	10.0	10.0
LAB MS/MSD MS	2/18/2009	10.0	10.0
LAB MS/MSD MSD	2/18/2009	10.0	10.0
ISB1695-01	2/18/2009	10.0	10.0
MB9049255	2/18/2009	10.0	10.0
Check Sample	2/18/2009	10.0	10.0

Comments:

Form XIII - IN

Dissolved Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9B170148

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 2/18/2009 End Date: 2/18/2009

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	16:45																X												
Std1	1.00	16:47																X												
Std2	1.00	16:50																X												
Std3	1.00	16:52																X												
Std4	1.00	16:54																X												
Std5	1.00	16:56																X												
Std6	1.00	16:59																X												
ICB	1.00	17:01																X												
ICV	1.00	17:03																X												
RL	1.00	17:06																X												
CCV	1.00	17:08																X												
CCB	1.00	17:10																X												
CCV	1.00	17:33																X												
CCB	1.00	17:36																X												
MB9049255	1.00	17:57																X												
CCV	1.00	17:59																X												
CCB	1.00	18:01																X												
Check Sample	1.00	18:03																X												
INTRA-LAB QC	1.00	18:06																X												
LAB MS/MSD MS	1.00	18:08																X												
LAB MS/MSD MSD	1.00	18:10																X												
ISB1695-01	1.00	18:20																X												
CCV	1.00	18:24																X												
CCB	1.00	18:27																X												

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

Form XIV - IN

TestAmerica Denver

Sample Receiving Checklist

Lot #: D9B170148 Date/Time Received: 2/17/9 0930

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): 1.2

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 # D9B170148

Login Checks:

Initials

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

☑	☐	☐	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).

IR2
1.2
AG
2/17/9

SUBCONTRACT ORDER

TestAmerica Irvine

ISB1695

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: ISB1695-01	**Water**		Sampled: **02/13/09 14:20**			
Level 4 + EDD-OUT	N/A	02/25/09	03/13/09 14:20	$0.00	0%	Sub to Denver, transfer file EDD
Mercury - 245.1, Diss -OUT	ug/l	02/25/09	03/13/09 14:20	$36.00	0%	Denver, Boeing, J flags
Mercury - 245.1-OUT	ug/l	02/25/09	03/13/09 14:20	$36.00	0%	Denver, Boeing, permit, J flags,

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

Van Bank 2/16/09 17:00
Released By Date/Time

FedEx 2/16/09 17:00
Received By Date/Time

_____ _____
Released By Date/Time

[signature] 2/17/9 0930
Received By Date/Time

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9B170148

Client: TA-Irvine Boeing

Batch(es) #: 9049249 + 9049255

Associated Samples: 1

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

Signature/Date: Christopher Grisdale 2/19/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9B170148	1	HG	K697Q1AC	20090218	M2451DS	9049255	090218AA	023
D9B170148	1	HG	K697Q1AA	20090218	M2451_L	9049249	090218AA	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 QC Batch #: 9049249

Prep Date: 02/18/09	Prep By: CGG	Analysis Date: 02/18/09	Analyst: CGG
Balance ID: H53865		***Thermometer ID:*** MT 4025	

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	14:15	93	16:15	93

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 [X] No

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

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

Analyst(s) Initials: CG

Reagents Used

Reagent	Manufacturer	Lot #	Standards Log #	Vol (mL)
HNO_3	JT Baker	G25032		0.25
H_2SO_4	Fisher	E49F06		0.5
HCl	JT Baker	G36024		used by instrument
10% $SnCl_2$	Fisher	G20637	STD-0921-09	added by instrument
NaCl / NH_2OH	Fisher	G28617	STD-0688-09	0.6
	Fisher	G06476		
$KMnO_4$	Fisher	G10662	STD-0920-09	1.5
$K_2S_2O_8$	Fisher	083661	STD-0351-09	0.8

Parent Calibration Stock Standards

	Lot #	Verification #	Exp. Date
Second Source	A2-HG02056	STD-2364-08	06/01/09
Primary Calibration	H00091	STD-1683-08	05/01/09

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-0993-09

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

Comments Total - 245.1 - Boeing

I certify that all information above is correct and complete.

Signature: Chris Endale ***Date:*** 2/19/09

REVIEWED BY: L **Date:** 2/19/09

Batch Number: **9049249**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: CS

Prep Date: 02/18/09 CS
Due Date: 02/23/09

Lot	Work Order			Initial Weight/Volume
D9B180000 Water	**K7C0J**	B 1	Due Date: SDG:	10 mL
D9B180000 Water	**K7C0J**	C 2	Due Date: SDG:	10 mL
D9B170143 Water	**K695D** Total	3	Due Date: 02/23/09 SDG:	10 mL
D9B170143 Water	**K695D** Total	S 4	Due Date: 02/23/09 SDG:	10 mL
D9B170143 Water	**K695D** Total	D 5	Due Date: 02/23/09 SDG:	10 mL
D9B170145 Water	**K696G** Total	6	Due Date: 02/23/09 SDG:	10 mL
D9B170148 Water	**K697Q** Total	7	Due Date: 02/23/09 SDG:	10 mL
D9B170149 Water	**K6973** Total	8	Due Date: 02/23/09 SDG:	10 mL
D9B170154 Water	**K698T** Total	9	Due Date: 02/23/09 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

✓

2/19/09

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 QC Batch #: 9049255

Prep Date: 02/18/09	Prep By: CGG	Analysis Date: 02/18/09	Analyst: CGG
Balance ID: H53865		***Thermometer ID:*** MT 4025	

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	14:15	93	16:15	93

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 [X] No

One or more samples were filtered prior to analysis at the instrument. [ ] Yes [X] 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	G36024		used by instrument
10% $SnCl_2$	Fisher	G20637	STD-0921-09	added by instrument
NaCl / NH_2OH	Fisher	G28617	STD-0688-09	0.6
	Fisher	G06476		
$KMnO_4$	Fisher	G10662	STD-0920-09	1.5
$K_2S_2O_8$	Fisher	083661	STD-0351-09	0.8

Parent Calibration Stock Standards

	Lot #	Verification #	Exp. Date
Second Source	A2-HG02056	STD-2364-08	06/01/09
Primary Calibration	H00091	STD-1683-08	05/01/09

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-0993-09

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

Comments Dissolved - 245.1 - Boeing

I certify that all information above is correct and complete.

Signature: Chris Grisdale ***Date:*** 2/19/09

REVIEWED BY: [signature] **Date:** 2/19/09

Batch Number: **9049255**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: DS

Prep Date: 02/18/09 DS
Due Date: 02/23/09

Lot	Work Order			Initial Weight/Volume
D9B180000 Water	**K7C08**	B1	Due Date: SDG:	10 mL
D9B180000 Water	**K7C08**	C 2	Due Date: SDG:	10 mL
D9B170143 Water	**K695D** Dissolved	3	Due Date: 02/23/09 SDG:	10 mL
D9B170143 Water	**K695D** Dissolved	S 4	Due Date: 02/23/09 SDG:	10 mL
D9B170143 Water	**K695D** Dissolved	D 5	Due Date: 02/23/09 SDG:	10 mL
D9B170145 Water	**K696G** Dissolved	6	Due Date: 02/23/09 SDG:	10 mL
D9B170148 Water	**K697Q** Dissolved	7	Due Date: 02/23/09 SDG:	10 mL
D9B170149 Water	**K6973** Dissolved	8	Due Date: 02/23/09 SDG:	10 mL
D9B170154 Water	**K698T** Dissolved	9	Due Date: 02/23/09 SDG:	10 mL

Comments:

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

✓

L

2/19/09

METALS
SAMPLE DATA
CVAA

TestAmerica Denver

Standards Preparation Logbook Record

Feb-19-2009

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: -)

Component	Initial Conc (%)	Final Conc (%)
Mercuric Nitrate	100.00	100.00

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: -)

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Hg	100.00	100.00

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

Component	Initial Conc (%)	Final Conc (mg/L)
Mercuric Nitrate	100.00	10,000

STD0984-09, 100 ppb Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (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

Component	Initial Conc (mg/L)	Final Conc (ug/ml)
Mercuric Nitrate	10,000	100.00

STD0985-09, Blank Daily Hg Calibration Std

Analyst: GRISDALEC

Vendor: Baker Lot No.: G17027
Solvent: 1% HN03
Date Prep./Opened: 02-18-2009
Date Expires(1): 08-18-2009 (6 Months)
Date Expires(2): 02-18-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

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

STD0986-09, 0.2 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0984-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.2000
Parent Date Expires(1): 02-19-2009 Parent Date Expires(2): 05-01-2009

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

STD0987-09, 0.5 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0984-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 02-19-2009 Parent Date Expires(2): 05-01-2009

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

STD0988-09, 1.0 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0984-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 02-19-2009 Parent Date Expires(2): 05-01-2009

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

STD0989-09, 2.0 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0984-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 2.0000
Parent Date Expires(1): 02-19-2009 Parent Date Expires(2): 05-01-2009

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

STD0990-09, 5.0 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0984-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-19-2009 Parent Date Expires(2): 05-01-2009

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

STD0991-09, 10.0 ppb Daily Hg Calibration Std — Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009 Date Consumed: 12-06-2006
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0984-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 10.000
Parent Date Expires(1): 02-19-2009 Parent Date Expires(2): 05-01-2009

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

STD0993-09, Hg Inorganic Ventures ICV 700ppb — Analyst: GRISDALEC

Solvent: 1% HNO3 Lot No.: G02058 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 03-04-2009 (2 Weeks)
Date Expires(2): 06-01-2009 (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

Component	Initial Conc (mg/L)	Final Conc (ug/L)
Hg	100.00	700.00

STD0994-09, Hg Daily ICV 7ppb Calibration Std — Analyst: GRISDALEC

Solvent: 1% HNO3 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-18-2009
Date Expires(1): 02-19-2009 (1 Day)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0993-09, Hg Inorganic Ventures ICV 700ppb Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 03-04-2009 Parent Date Expires(2): 06-01-2009

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

Reviewed By: Christopher Grisdale 2/19/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/19/09 08:50:34

Sequence: 090218AA **Date:** 02/18/09 16:45 **Analyst:** CGG **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		02/18/09 16:45		☐
2	Std1	= 0.200			0.20	1.0	0.20	ppb	100.0%	02/18/09 16:47		☐
3	Std2	= 0.500			0.50	1.0	0.50	ppb	100.0%	02/18/09 16:50		☐
4	Std3	= 1.00			1.00	1.0	1.00	ppb	100.0%	02/18/09 16:52		☐
5	Std4	= 2.00			2.00	1.0	2.00	ppb	100.0%	02/18/09 16:54		☐
6	Std5	= 5.00			5.00	1.0	5.00	ppb	100.0%	02/18/09 16:56		☐
7	Std6	= 10.0			10.00	1.0	10.00	ppb	100.0%	02/18/09 16:59		☐
8	ICB				0.00	1.0	0.00	ppb		02/18/09 17:01		☐
9	ICV	= 7.00			6.91	1.0	6.91	ppb	98.8%	02/18/09 17:03		☐
10	RL	= 0.200			0.19	1.0	0.19	ppb		02/18/09 17:06		☐
11	CCV	= 5.00			5.05	1.0	5.05	ppb	101.0%	02/18/09 17:08		☐
12	CCB				0.00	1.0	0.00	ppb		02/18/09 17:10		☐
13	K7CXWB	D9B180000	9049246		0.00	1.0	0.00	ppb		02/18/09 17:13		☐
14	K7CXWC	D9B180000 = 5.00	9049246		4.67	1.0	4.67	ppb	93.3%	02/18/09 17:15		☐
15	K7AXL	D9B170237-2	9049246	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 17:17		☐
16	K7AXLS	D9B170237-2 = 5.00	9049246	AQUEOUS	4.94	1.0	4.94	ppb		02/18/09 17:20		☐
17	K7AXLD	D9B170237-2 = 5.00	9049246	AQUEOUS	4.82	1.0	4.82	ppb		02/18/09 17:22		☐
18	K7AXQ	D9B170237-4	9049246	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 17:24		☐
19	K7C0JB	D9B180000	9049249		0.00	1.0	0.00	ppb		02/18/09 17:27		☐
20	K7C0JC	D9B180000 = 5.00	9049249		4.87	1.0	4.87	ppb	97.4%	02/18/09 17:29		☐
21	K695D	D9B170143-1	9049249	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 17:31		☐
22	CCV	= 5.00			5.09	1.0	5.09	ppb	101.9%	02/18/09 17:33		☐
23	CCB				0.00	1.0	0.00	ppb		02/18/09 17:36		☐
24	K695DS	D9B170143-1 = 5.00	9049249	AQUEOUS	4.89	1.0	4.89	ppb		02/18/09 17:38		☐
25	K695DD	D9B170143-1 = 5.00	9049249	AQUEOUS	5.08	1.0	5.08	ppb		02/18/09 17:40		☐
~~26~~	~~K695DS~~	~~D9B170143-1 = 5.00~~	~~9049249~~	~~AQUEOUS~~	~~5.03~~	~~1.0~~	~~5.03~~	ppb		~~02/18/09 17:43~~	NA, verifies above	☐
~~27~~	~~K695DD~~	~~D9B170143-1 = 5.00~~	~~9049249~~	~~AQUEOUS~~	~~5.03~~	~~1.0~~	~~5.03~~	ppb		~~02/18/09 17:45~~	CCB 2/19/09	☐
28	K696G	D9B170145-1	9049249	AQUEOUS	0.03	1.0	0.03	ppb		02/18/09 17:47		☐
29	K697Q	D9B170148-1	9049249	AQUEOUS	0.02	1.0	0.02	ppb		02/18/09 17:50		☐
30	K6973	D9B170149-1	9049249	AQUEOUS	0.02	1.0	0.02	ppb		02/18/09 17:52		☐
31	K698T	D9B170154-1	9049249	AQUEOUS	0.02	1.0	0.02	ppb		02/18/09 17:54		☐
32	K7C08BF	D9B180000	9049255		0.00	1.0	0.00	ppb		02/18/09 17:57		☐
33	CCV	= 5.00			5.03	1.0	5.03	ppb	100.6%	02/18/09 17:59		☐
34	CCB				0.00	1.0	0.00	ppb		02/18/09 18:01		☐

JCS 2/19/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/19/09 08:50:34

Sequence: 090218AA **Date:** 02/18/09 16:45 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
35	K7C08CF	D9B180000 = 5.00	9049255		4.64	1.0	4.64	ppb	92.7%	02/18/09 18:03		☐
36	K695DF	D9B170143-1	9049255	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 18:06		☐
37	K695DSF	D9B170143-1 = 5.00	9049255	AQUEOUS	4.99	1.0	4.99	ppb		02/18/09 18:08		☐
38	K695DDF	D9B170143-1 = 5.00	9049255	AQUEOUS	4.92	1.0	4.92	ppb		02/18/09 18:10		☐
~~39~~	~~K695DSF~~	~~D9B170143-1 = 5.00~~	~~9049255~~	~~AQUEOUS~~	~~5.10~~	~~1.0~~	~~5.10~~	~~ppb~~		~~02/18/09 18:13~~	NA, verifies above cs 2/19/09	☐
~~40~~	~~K695DDF~~	~~D9B170143-1 = 5.00~~	~~9049255~~	~~AQUEOUS~~	~~4.86~~	~~1.0~~	~~4.86~~	~~ppb~~		~~02/18/09 18:15~~		☐
41	K696GF	D9B170145-1	9049255	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 18:17		☐
42	K697QF	D9B170148-1	9049255	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 18:20		☐
43	K6973F	D9B170149-1	9049255	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 18:22		☐
44	CCV	= 5.00			5.03	1.0	5.03	ppb	100.6%	02/18/09 18:24		☐
45	CCB				0.01	1.0	0.01	ppb		02/18/09 18:27		☐
46	K698TF	D9B170154-1	9049255	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 18:29		☐
47	K7C1HBF	D9B180000	9049258		0.00	1.0	0.00	ppb		02/18/09 18:31		☐
48	K7C1HCF	D9B180000 = 5.00	9049258		5.07	1.0	5.08	ppb	101.5%	02/18/09 18:33		☐
49	K7AJCF	D9B170176-3	9049258	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 18:36		☐
50	K7AJCSF	D9B170176-3 = 5.00	9049258	AQUEOUS	4.99	1.0	4.99	ppb		02/18/09 18:38		☐
51	K7AJCDF	D9B170176-3 = 5.00	9049258	AQUEOUS	5.02	1.0	5.02	ppb		02/18/09 18:40		☐
~~52~~	~~K7AJCSF~~	~~D9B170176-3 = 5.00~~	~~9049258~~	~~AQUEOUS~~	~~5.10~~	~~1.0~~	~~5.10~~	~~ppb~~		~~02/18/09 18:43~~	NA, verifies above cs 2/19/09	☐
~~53~~	~~K7AJCDF~~	~~D9B170176-3 = 5.00~~	~~9049258~~	~~AQUEOUS~~	~~4.96~~	~~1.0~~	~~4.96~~	~~ppb~~		~~02/18/09 18:45~~		☐
54	K7C1PBF	D9B180000	9049259		0.00	1.0	0.00	ppb		02/18/09 18:47		☐
55	CCV	= 5.00			5.16	1.0	5.16	ppb	103.1%	02/18/09 18:50		☐
56	CCB				0.00	1.0	0.00	ppb		02/18/09 18:52		☐
57	K7C1PCF	D9B180000 = 5.00	9049259		5.02	1.0	5.02	ppb	100.4%	02/18/09 18:54		☐
58	K7A63F	D9B170255-13	9049259	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 18:56		☐
59	K7A63SF	D9B170255-13 = 5.00	9049259	AQUEOUS	4.88	1.0	4.88	ppb		02/18/09 18:59		☐
60	K7A63DF	D9B170255-13 = 5.00	9049259	AQUEOUS	4.95	1.0	4.95	ppb		02/18/09 19:01		☐
61	K7A65F	D9B170255-15	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:03		☐
62	K7A68F	D9B170255-17	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:06		☐
63	K7A7AF	D9B170255-19	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:08		☐
64	K7A7DF	D9B170255-21	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:10		☐
65	K7A7FF	D9B170255-23	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:13		☐
66	CCV	= 5.00			5.03	1.0	5.03	ppb	100.7%	02/18/09 19:15		☐
67	CCB				0.00	1.0	0.00	ppb		02/18/09 19:17		☐
68	K7A7HF	D9B170255-25	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:20		☐

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/19/09 08:50:34

Sequence: 090218AA **Date:** 02/18/09 16:45 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
69	K7A7KF	D9B170255-27	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:22		☐
70	K7A7MF	D9B170255-29	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:24		☐
71	K7A7PF	D9B170255-31	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:26		☐
72	K7A7RF	D9B170255-33	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:29		☐
73	K7A7VF	D9B170255-35	9049259	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 19:31		☐
74	K7CDJBT	D9B180000	9049262		0.01	1.0	0.01	ppb		02/18/09 19:33		☐
75	K7C12CT	D9B180000 = 5.00	9049262		4.93	1.0	4.93	ppb	98.7%	02/18/09 19:36		☐
76	K6X6QT	D9B090170-2	9049262	LEACHATE	0.00	1.0	0.00	ppb		02/18/09 19:38		☐
77	CCV	= 5.00			5.10	1.0	5.10	ppb	102.0%	02/18/09 19:40		☐
78	CCB				0.00	1.0	0.00	ppb		02/18/09 19:43		☐
79	K6X6QP5T	D9B090170	9049262	LEACHATE	0.01	5.0	0.01	ppb		02/18/09 19:45		☐
80	K69WLBT	D9B170000	9049283		0.01	1.0	0.01	ppb		02/18/09 19:47		☐
81	K7C3VCT	D9B180000 = 5.00	9049283		5.00	1.0	5.00	ppb	100.0%	02/18/09 19:50		☐
82	K660WT	D9B130200-1	9049283	LEACHATE	0.01	1.0	0.01	ppb		02/18/09 19:52		☐
83	K660WST	D9B130200-1 = 5.00	9049283	LEACHATE	5.03	1.0	5.03	ppb		02/18/09 19:54		☐
84	K660WDT	D9B130200-1 = 5.00	9049283	LEACHATE	5.20	1.0	5.20	ppb		02/18/09 19:56		☐
85	K7C30BT	D9B180000	9049287		0.00	1.0	0.00	ppb		02/18/09 19:59		☐
86	K7C30CT	D9B180000 = 5.00	9049287		5.24	1.0	5.24	ppb	104.7%	02/18/09 20:01		☐
87	~~K67HMT~~	~~D9B130290-1~~	~~9049287~~	~~LEACHATE~~	~~5.46~~	~~1.0~~	~~5.46~~	~~ppb~~		~~02/18/09 20:03~~		☐
88	CCV	= 5.00			5.18	1.0	5.18	ppb	103.7%	02/18/09 20:06	sample MS > LR so all associated samples rerun at 2x d.f. CJ 2/19/09	☐
89	CCB				0.00	1.0	0.00	ppb		02/18/09 20:08		☐
90	~~K67HMST~~	~~D9B130290-1 = 5.00~~	~~9049287~~	~~LEACHATE~~	~~10.61~~	~~1.0~~	~~10.61~~	~~ppb~~		~~02/18/09 20:10~~		☐
91	~~K67HMSTR 10~~	~~D9B130290-1 = 5.00~~	~~9049287~~	~~LEACHATE~~	~~0.99~~	~~10.0~~	~~9.93~~	~~ppb~~		~~02/18/09 20:15~~		☐
92	~~K67HMXT~~	~~D9B130290-1 = 5.00~~	~~9049287~~	~~LEACHATE~~	~~5.64~~	~~1.0~~	~~5.64~~	~~ppb~~		~~02/18/09 20:17~~		☐
93	K67HWT	D9B130290-2	9049287	LEACHATE	0.02	1.0	0.02	ppb		02/18/09 20:20		☐
94	K67HXT	D9B130290-3	9049287	LEACHATE	0.01	1.0	0.01	ppb		02/18/09 20:22		☐
95	K69WJBT	D9B170000	9049297		0.00	1.0	0.01	ppb		02/18/09 20:24		☐
96	K7C40CT	D9B180000 = 5.00	9049297		5.33	1.0	5.33	ppb	106.6%	02/18/09 20:26		☐
97	K67RJT	D9B130339-1	9049297	LEACHATE	0.03	1.0	0.03	ppb		02/18/09 20:29		☐
98	K67RJP5T	D9B130339	9049297	LEACHATE	0.01	5.0	0.01	ppb		02/18/09 20:31		☐
99	K67R7T	D9B130339-2	9049297	LEACHATE	0.00	1.0	0.00	ppb		02/18/09 20:33		☐
100	CCV	= 5.00			5.34	1.0	5.34	ppb	106.8%	02/18/09 20:36		☐
101	CCB				0.00	1.0	0.00	ppb		02/18/09 20:38		☐
102	K67HMT 2X	D9B130290-1	9049287	LEACHATE	2.61	2.0	5.23	ppb		02/18/09 20:43		☐

CJ 2/19/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/19/09 08:50:34

Sequence: 090218AA **Date:** 02/18/09 16:45 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
103	K67HMST 2X	D9B130290-1 = 5.00	9049287	LEACHATE	4.84	2.0	9.68	ppb		02/18/09 20:45		☐
104	K67HMXT 2X	D9B130290-1 = 5.00	9049287	LEACHATE	2.60	2.0	5.20	ppb		02/18/09 20:48		☐
105	CCV	= 5.00			5.32	1.0	5.32	ppb	106.3%	02/18/09 20:50		☐
106	CCB				0.00	1.0	0.00	ppb		02/18/09 20:52		☐
107	K67TET	D9B130339-3	9049297	LEACHATE	0.00	1.0	0.00	ppb		02/18/09 20:55		☐
108	K67TLT	D9B130339-4	9049297	LEACHATE	0.00	1.0	0.01	ppb		02/18/09 20:57		☐
109	K67TTT	D9B130339-5	9049297	LEACHATE	0.01	1.0	0.01	ppb		02/18/09 20:59		☐
110	K67T3T	D9B130339-6	9049297	LEACHATE	0.01	1.0	0.01	ppb		02/18/09 21:02		☐
111	K67T5T	D9B130339-7	9049297	LEACHATE	0.03	1.0	0.03	ppb		02/18/09 21:04		☐
112	K7C04B	D9B180000	9049253		0.00	1.0	0.00	ppb		02/18/09 21:06		☐
113	K7C04C	D9B180000 = 5.00	9049253		5.37	1.0	5.37	ppb	107.5%	02/18/09 21:09		☐
114	K7AFD	D9B170169-1	9049253	AQUEOUS	0.07	1.0	0.07	ppb		02/18/09 21:11		☐
115	K7AFDP5	D9B170169	9049253	AQUEOUS	0.02	5.0	0.02	ppb		02/18/09 21:13		☐
116	CCV	= 5.00			5.38	1.0	5.38	ppb	107.5%	02/18/09 21:16		☐
117	CCB				0.00	1.0	0.00	ppb		02/18/09 21:18		☐
118	K7AFDS	D9B170169-1 = 5.00	9049253	AQUEOUS	4.92	1.0	4.92	ppb		02/18/09 21:20		☐
119	K7AFDD	D9B170169-1 = 5.00	9049253	AQUEOUS	5.07	1.0	5.07	ppb		02/18/09 21:22		☐
120	K7AFE	D9B170169-2	9049253	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 21:25		☐
121	K7C0XB	D9B180000	9049252		-0.00	1.0	-0.00	ppb		02/18/09 21:27		☐
122	K7C0XC	D9B180000 = 5.00	9049252		5.37	1.0	5.37	ppb	107.5%	02/18/09 21:29		☐
123	K7A61	D9B170255-12	9049252	AQUEOUS	0.04	1.0	0.04	ppb		02/18/09 21:32		☐
124	K7A61S	D9B170255-12 = 5.00	9049252	AQUEOUS	5.10	1.0	5.10	ppb		02/18/09 21:34		☐
125	K7A61D	D9B170255-12 = 5.00	9049252	AQUEOUS	5.00	1.0	5.00	ppb		02/18/09 21:36		☐
126	K7A64	D9B170255-14	9049252	AQUEOUS	0.19	1.0	0.19	ppb		02/18/09 21:39		☐
127	CCV	= 5.00			5.29	1.0	5.29	ppb	105.8%	02/18/09 21:41		☐
128	CCB				0.00	1.0	0.00	ppb		02/18/09 21:43		☐
129	K7A66	D9B170255-16	9049252	AQUEOUS	0.02	1.0	0.02	ppb		02/18/09 21:46		☐
130	K7A69	D9B170255-18	9049252	AQUEOUS	0.05	1.0	0.05	ppb		02/18/09 21:48		☐
131	K7A7C	D9B170255-20	9049252	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 21:50		☐
132	K7A7E	D9B170255-22	9049252	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 21:53		☐
133	K7A7G	D9B170255-24	9049252	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 21:55		☐
134	K7A7J	D9B170255-26	9049252	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 21:57		☐
135	K7A7L	D9B170255-28	9049252	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 21:59		☐
136	K7A7N	D9B170255-30	9049252	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 22:02		☐

JCS 2/19/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/19/09 08:50:34

Sequence: 090218AA **Date:** 02/18/09 16:45 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
137	K7A7Q	D9B170255-32	9049252	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 22:04		☐
138	CCV	= 5.00			5.39	1.0	5.39	ppb	107.8%	02/18/09 22:06		☐
139	CCB				0.01	1.0	0.01	ppb		02/18/09 22:09		☐
140	K7A7T	D9B170255-34	9049252	AQUEOUS	0.01	1.0	0.01	ppb		02/18/09 22:11		☐
141	K7C0PB	D9B180000	9049251		0.00	1.0	0.00	ppb		02/18/09 22:13		☐
142	K7C0PC	D9B180000 = 5.00	9049251		5.26	1.0	5.26	ppb	105.1%	02/18/09 22:16		☐
143	K69E5	D9B160158-1	9049251	AQUEOUS	0.05	1.0	0.05	ppb		02/18/09 22:18		☐
~~144~~	~~K69E5S~~			~~AQUEOUS~~	~~0.52~~	~~1.0~~	~~0.52~~	~~ppb~~		~~02/18/09 22:20~~	NA os 2/19/09	☐
~~145~~	~~K69E5D~~			~~AQUEOUS~~	~~0.36~~	~~1.0~~	~~0.36~~	~~ppb~~		~~02/18/09 22:23~~		☐
146	K7APM	D9B170218-1	9049251	AQUEOUS	-0.01	1.0	-0.01	ppb		02/18/09 22:25		☐
147	CCV	= 5.00			5.11	1.0	5.11	ppb	102.2%	02/18/09 22:27		☐
148	CCB				0.00	1.0	0.00	ppb		02/18/09 22:30		☐
149	K7APMS	D9B170218-1 = 5.00	9049251	AQUEOUS	5.13	1.0	5.13	ppb		02/18/09 22:32		☐
150	K7APMD	D9B170218-1 = 5.00	9049251	AQUEOUS	5.05	1.0	5.05	ppb		02/18/09 22:34		☐
151	K7APT	D9B170218-2	9049251	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 22:36		☐
152	K7APV	D9B170218-3	9049251	AQUEOUS	0.04	1.0	0.04	ppb		02/18/09 22:39		☐
153	K7AAP	D9B170163-1	9049251	AQUEOUS	-0.00	1.0	-0.00	ppb		02/18/09 22:41		☐
154	K7ACH	D9B170163-4	9049251	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 22:43		☐
155	K7ACX	D9B170163-6	9049251	AQUEOUS	0.00	1.0	0.00	ppb		02/18/09 22:46		☐
156	CCV	= 5.00			5.18	1.0	5.18	ppb	103.5%	02/18/09 22:48		☐
157	CCB				0.00	1.0	0.00	ppb		02/18/09 22:50		☐

os 2/19/09

CETAC Hg Analysis Report

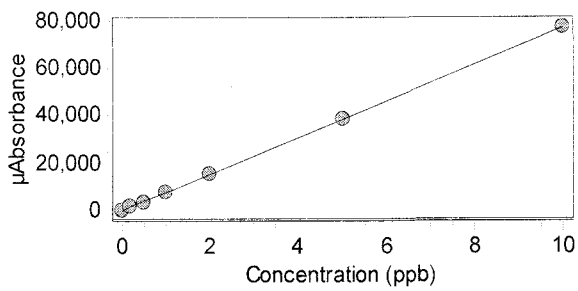
Analyst: grisdalec
Worksheet file: C:\Program Files\QuickTrace\Worksheets\090218AA.wsz
Date Started: 2/18/2009 2:33:41 PM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
Cal Blank	STD	02/18/09 04:45:25 pm	0.000	28	18.71		1.00	1.00	1.00
Std1	STD	02/18/09 04:47:43 pm	0.200	1542	0.37		1.00	1.00	1.00
Std2	STD	02/18/09 04:50:01 pm	0.500	3838	0.23		1.00	1.00	1.00
Std3	STD	02/18/09 04:52:20 pm	1.000	7753	0.45		1.00	1.00	1.00
Std4	STD	02/18/09 04:54:40 pm	2.000	15358	0.60		1.00	1.00	1.00
Std5	STD	02/18/09 04:56:59 pm	5.000	39014	0.77		1.00	1.00	1.00
Std6	STD	02/18/09 04:59:20 pm	10.000	77017	0.62		1.00	1.00	1.00

Calibration

Equation: A = 39.467 + 7715.083C
R2: 0.99996
SEE: 203.3353
Flags:



ICB	ICB	02/18/09 05:01:38 pm	0.001	45	17.39		1.00	1.00	1.00
ICV	ICV	02/18/09 05:03:59 pm	6.913	53377	0.84		1.00	1.00	1.00
% Recovery 98.76									
RL	CRDL	02/18/09 05:06:17 pm	0.195	1546	0.10		1.00	1.00	1.00
% Recovery 97.62									

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CCV	CCV	02/18/09 05:08:37 pm	5.051 ✓	39005	0.76		1.00	1.00
% Recovery 101.01 ✓							1.00	
CCB	CCB	02/18/09 05:10:54 pm	0.003 ✓	63	2.14		1.00	1.00
							1.00	
K7CXWB	UNK	02/18/09 05:13:11 pm	0.003 ✓	61	3.76		1.00	1.00
							1.00	
K7CXWC	UNK	02/18/09 05:15:28 pm	4.667 ✓	36044	0.59		1.00	1.00
							1.00	
K7AXL	UNK	02/18/09 05:17:46 pm	0.000	36	5.77		1.00	1.00
							1.00	
K7AXLS	UNK	02/18/09 05:20:04 pm	4.943 ✓	38178	0.58		1.00	1.00
							1.00	
K7AXLD	UNK	02/18/09 05:22:23 pm	4.825 ✓	37268	0.65		1.00	1.00
							1.00	
K7AXQ	UNK	02/18/09 05:24:41 pm	0.007	91	5.72		1.00	1.00
							1.00	
K7C0JB	UNK	02/18/09 05:27:00 pm	0.000 ✓	42	6.72		1.00	1.00
							1.00	
K7C0JC	UNK	02/18/09 05:29:19 pm	4.870 ✓	37609	0.69		1.00	1.00
							1.00	
K695D	UNK	02/18/09 05:31:38 pm	0.015	159	3.15		1.00	1.00
							1.00	
CCV	CCV	02/18/09 05:33:58 pm	5.095 ✓	39349	0.97		1.00	1.00
% Recovery 101.90 ✓							1.00	
CCB	CCB	02/18/09 05:36:15 pm	0.004 ✓	69	3.57		1.00	1.00
							1.00	
K695DS	UNK	02/18/09 05:38:35 pm	4.890 ✓	37764	0.49		1.00	1.00
							1.00	
K695DD	UNK	02/18/09 05:40:55 pm	5.078 ✓	39218	0.90		1.00	1.00
							1.00	
~~K695DS~~	~~UNK~~	~~02/18/09 05:43:14 pm~~	~~5.032~~	~~38858~~	~~0.99~~		~~1.00~~	~~1.00~~
							1.00	
~~K695DD~~	~~UNK~~	~~02/18/09 05:45:34 pm~~	~~5.032~~	~~38861~~	~~1.15~~		~~1.00~~	~~1.00~~
							1.00	

NA, Verifies above results cs 2/19/09

NPDES - 2122

cs 2/19/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K696G	UNK	02/18/09 05:47:55 pm	0.027	245	0.95		1.00	1.00
							1.00	
K697Q	UNK	02/18/09 05:50:11 pm	0.017	171	1.33		1.00	1.00
							1.00	
K6973	UNK	02/18/09 05:52:28 pm	0.017	171	3.57		1.00	1.00
							1.00	
K698T	UNK	02/18/09 05:54:45 pm	0.022	207	1.11		1.00	1.00
							1.00	
K7C08B	UNK	02/18/09 05:57:03 pm	0.001 ✓	51	2.53		1.00	1.00
							1.00	
CCV	CCV	02/18/09 05:59:23 pm	5.028 ✓	38828	1.60		1.00	1.00
% Recovery 100.55 ✓							1.00	
CCB	CCB	02/18/09 06:01:40 pm	0.005 ✓	78	4.76		1.00	1.00
							1.00	
K7C08C	UNK	02/18/09 06:03:58 pm	4.635 ✓	35802	0.11		1.00	1.00
							1.00	
K695D	UNK	02/18/09 06:06:16 pm	0.007	93	6.45		1.00	1.00
							1.00	
K695DS	UNK	02/18/09 06:08:34 pm	4.985 ✓	38498	0.65		1.00	1.00
							1.00	
K695DD	UNK	02/18/09 06:10:53 pm	4.921 ✓	38008	0.93		1.00	1.00
							1.00	
~~K695DS~~	~~UNK~~	~~02/18/09 06:13:12 pm~~	~~5.098~~	~~39374~~	~~0.57~~		~~1.00~~	~~1.00~~
							1.00	
~~K695DD~~	~~UNK~~	~~02/18/09 06:15:30 pm~~	~~4.865~~	~~37572~~	~~0.15~~		~~1.00~~	~~1.00~~
							1.00	
K696G	UNK	02/18/09 06:17:49 pm	0.009	106	5.70	s	1.00	1.00
							1.00	
K697Q	UNK	02/18/09 06:20:08 pm	0.002	58	5.91		1.00	1.00
							1.00	
K6973	UNK	02/18/09 06:22:28 pm	0.005	81	4.54		1.00	1.00
							1.00	
CCV	CCV	02/18/09 06:24:48 pm	5.030 ✓	38848	1.23		1.00	1.00
% Recovery 100.60 ✓							1.00	

NA verifies sample results above. cm 2/19/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CCB	CCB	02/18/09 06:27:05 pm	0.006 ✓	89	3.14		1.00	1.00 1.00
K698T	UNK	02/18/09 06:29:25 pm	0.007	93	1.23		1.00	1.00 1.00
K7C1HB	UNK	02/18/09 06:31:42 pm	0.000 ✓	37	6.75		1.00	1.00 1.00
K7C1HC	UNK	02/18/09 06:33:59 pm	5.075 ✓	39192	0.88		1.00	1.00 1.00
K7AJC	UNK	02/18/09 06:36:16 pm	0.003	62	3.25		1.00	1.00 1.00
K7AJCS	UNK	02/18/09 06:38:34 pm	4.992 ✓	38556	0.13		1.00	1.00 1.00
K7AJCD	UNK	02/18/09 06:40:52 pm	5.020 ✓	38767	0.76		1.00	1.00 1.00
~~K7AJCS~~	~~UNK~~	~~02/18/09 06:43:09 pm~~	~~5.097~~	~~39367~~	~~0.92~~		~~1.00~~	~~1.00~~ 1.00
NA, verifies sample results above. cg 2/19/09								
~~K7AJCD~~	~~UNK~~	~~02/18/09 06:45:27 pm~~	~~4.960~~	~~38304~~	~~0.58~~		~~1.00~~	~~1.00~~ 1.00
K7C1PB	UNK	02/18/09 06:47:45 pm	0.002 ✓	51	7.29		1.00	1.00 1.00
CCV	CCV	02/18/09 06:50:05 pm	5.155 ✓	39815	1.31		1.00	1.00 1.00
% Recovery 103.11 ✓								
CCB	CCB	02/18/09 06:52:22 pm	0.005 ✓	76	3.28		1.00	1.00 1.00
K7C1PC	UNK	02/18/09 06:54:41 pm	5.022 ✓	38781	1.05		1.00	1.00 1.00
K7A63	UNK	02/18/09 06:56:59 pm	0.009	109	2.17		1.00	1.00 1.00
K7A63S	UNK	02/18/09 06:59:18 pm	4.876 ✓	37656	0.69		1.00	1.00 1.00
K7A63D	UNK	02/18/09 07:01:37 pm	4.948 ✓	38210	1.01		1.00	1.00 1.00
K7A65	UNK	02/18/09 07:03:57 pm	0.003	65	3.25		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K7A68	UNK	02/18/09 07:06:17 pm	0.004	73	3.70		1.00	1.00 1.00
K7A7A	UNK	02/18/09 07:08:34 pm	0.003	62	7.33		1.00	1.00 1.00
K7A7D	UNK	02/18/09 07:10:51 pm	0.005	80	5.45		1.00	1.00 1.00
K7A7F	UNK	02/18/09 07:13:09 pm	0.003	64	5.59		1.00	1.00 1.00
CCV	CCV	02/18/09 07:15:29 pm	5.033	38867	0.30		1.00	1.00 1.00
% Recovery 100.65								
CCB	CCB	02/18/09 07:17:46 pm	0.005	79	3.23		1.00	1.00 1.00
K7A7H	UNK	02/18/09 07:20:03 pm	0.003	64	3.54		1.00	1.00 1.00
K7A7K	UNK	02/18/09 07:22:21 pm	0.003	61	2.89		1.00	1.00 1.00
K7A7M	UNK	02/18/09 07:24:39 pm	0.001	50	0.78		1.00	1.00 1.00
K7A7P	UNK	02/18/09 07:26:58 pm	0.002	57	5.63		1.00	1.00 1.00
K7A7R	UNK	02/18/09 07:29:16 pm	0.003	61	6.67		1.00	1.00 1.00
K7A7V	UNK	02/18/09 07:31:35 pm	0.001	46	13.89		1.00	1.00 1.00
K7CDJB	UNK	02/18/09 07:33:55 pm	0.011	126	0.77		1.00	1.00 1.00
K7C12C	UNK	02/18/09 07:36:14 pm	4.934	38107	0.78		1.00	1.00 1.00
K6X6Q	UNK	02/18/09 07:38:34 pm	0.003	63	3.83		1.00	1.00 1.00
CCV	CCV	02/18/09 07:40:54 pm	5.099	39378	1.25		1.00	1.00 1.00
% Recovery 101.98								
CCB	CCB	02/18/09 07:43:11 pm	0.005	76	2.70		1.00	1.00 1.00

NPDES - 2125

2/19/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K6X6QP5	UNK	02/18/09 07:45:29 pm	0.010	113	4.36		1.00	1.00 1.00
K69WLB	UNK	02/18/09 07:47:46 pm	0.006 ✓	85	5.97		1.00	1.00 1.00
K7C3VC	UNK	02/18/09 07:50:04 pm	4.999 ✓	38606	0.67		1.00	1.00 1.00
K660W	UNK	02/18/09 07:52:21 pm	0.006	85	0.96		1.00	1.00 1.00
K660WS	UNK	02/18/09 07:54:39 pm	5.030 ✓	38846	1.26		1.00	1.00 1.00
K660WD	UNK	02/18/09 07:56:57 pm	5.204 ✓	40189	1.24		1.00	1.00 1.00
K7C30B	UNK	02/18/09 07:59:16 pm	0.004 ✓	68	3.69		1.00	1.00 1.00
K7C30C	UNK	02/18/09 08:01:34 pm	5.236 ✓	40436	1.24		1.00	1.00 1.00
~~K67HM~~	UNK	02/18/09 08:03:53 pm	~~5.464~~	~~42194~~	~~2.34~~		1.00	1.00 1.00
CCV % Recovery 103.66 ✓	CCV	02/18/09 08:06:13 pm	5.183 ✓	40026	0.89		1.00	1.00 1.00
CCB	CCB	02/18/09 08:08:31 pm	0.005 ✓	79	2.47		1.00	1.00 1.00
~~K67HMS~~	UNK	~~02/18/09 08:10:50 pm~~	~~10.612~~	~~81915~~	~~0.90~~	~~O~~	1.00	1.00 1.00
K67HMS*	UNK	02/18/09 08:15:22 pm	0.993	7704	1.37		1.00	1.00 10.00
~~K67HMX~~	UNK	~~02/18/09 08:17:41 pm~~	~~5.638~~	~~43538~~	~~1.45~~		1.00	1.00 1.00
K67HW	UNK	02/18/09 08:20:01 pm	0.018	182	2.43		1.00	1.00 1.00
K67HX	UNK	02/18/09 08:22:19 pm	0.007	96	1.75		1.00	1.00 1.00
K69WJB	UNK	02/18/09 08:24:37 pm	0.005 ✓	80	4.00		1.00	1.00 1.00

NA, sample MS > LR so all associated samples diluted 2x. CJ 2/19/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K7C40C	UNK	02/18/09 08:26:55 pm	5.328	41145	1.13		1.00	1.00 1.00
K67RJ	UNK	02/18/09 08:29:13 pm	0.031	276	1.04		1.00	1.00 1.00
K67RJP5	UNK	02/18/09 08:31:31 pm	0.011	122	1.32		1.00	1.00 1.00
K67R7	UNK	02/18/09 08:33:49 pm	0.001	47	6.54		1.00	1.00 1.00
CCV % Recovery 106.77	CCV	02/18/09 08:36:09 pm	5.338	41226	2.27		1.00	1.00 1.00
CCB	CCB	02/18/09 08:38:26 pm	0.005	77	2.93		1.00	1.00 1.00
K67HM 2X	UNK	02/18/09 08:43:36 pm	2.613	20201	1.10		1.00	1.00 1.00
K67HMS 2X	UNK	02/18/09 08:45:55 pm	4.839	37374	1.09		1.00	1.00 1.00
K67HMX 2X	UNK	02/18/09 08:48:15 pm	2.600	20097	1.11		1.00	1.00 1.00
CCV % Recovery 106.34	CCV	02/18/09 08:50:35 pm	5.317	41061	1.29		1.00	1.00 1.00
CCB	CCB	02/18/09 08:52:52 pm	0.005	80	3.99		1.00	1.00 1.00
K67TE	UNK	02/18/09 08:55:10 pm	0.001	45	6.22		1.00	1.00 1.00
K67TL	UNK	02/18/09 08:57:29 pm	0.005	81	3.20		1.00	1.00 1.00
K67TT	UNK	02/18/09 08:59:48 pm	0.009	107	1.88		1.00	1.00 1.00
K67T3	UNK	02/18/09 09:02:07 pm	0.006	84	3.73		1.00	1.00 1.00
K67T5	UNK	02/18/09 09:04:27 pm	0.029	263	1.10		1.00	1.00 1.00
K7C04B	UNK	02/18/09 09:06:47 pm	0.000	36	11.41		1.00	1.00 1.00

NPDES - 2127

2/19/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K7C04C	UNK	02/18/09 09:09:05 pm	5.374	41504	1.37		1.00	1.00 1.00
K7AFD	UNK	02/18/09 09:11:23 pm	0.073	603	0.51		1.00	1.00 1.00
K7AFDP5	UNK	02/18/09 09:13:41 pm	0.016	165	1.02		1.00	1.00 1.00
CCV	CCV	02/18/09 09:16:02 pm	5.375	41509	1.16		1.00	1.00 1.00
% Recovery 107.50								
CCB	CCB	02/18/09 09:18:19 pm	0.005	80	2.95		1.00	1.00 1.00
K7AFDS	UNK	02/18/09 09:20:37 pm	4.919	37992	1.24		1.00	1.00 1.00
K7AFDD	UNK	02/18/09 09:22:55 pm	5.070	39153	0.99		1.00	1.00 1.00
K7AFE	UNK	02/18/09 09:25:14 pm	0.001	49	1.86		1.00	1.00 1.00
K7C0XB	UNK	02/18/09 09:27:32 pm	-0.001	32	6.11		1.00	1.00 1.00
K7C0XC	UNK	02/18/09 09:29:51 pm	5.374	41502	1.13		1.00	1.00 1.00
K7A61	UNK	02/18/09 09:32:10 pm	0.038	335	0.67		1.00	1.00 1.00
K7A61S	UNK	02/18/09 09:34:29 pm	5.101	39391	1.22		1.00	1.00 1.00
K7A61D	UNK	02/18/09 09:36:49 pm	5.002	38629	1.36		1.00	1.00 1.00
K7A64	UNK	02/18/09 09:39:09 pm	0.186	1474	0.86		1.00	1.00 1.00
CCV	CCV	02/18/09 09:41:29 pm	5.288	40839	0.95		1.00	1.00 1.00
% Recovery 105.77								
CCB	CCB	02/18/09 09:43:46 pm	0.005	76	5.94		1.00	1.00 1.00
K7A66	UNK	02/18/09 09:46:04 pm	0.019	187	0.92		1.00	1.00 1.00

NPDES - 2128

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
K7A69	UNK	02/18/09 09:48:23 pm	0.047	403	0.76		1.00	1.00 1.00
K7A7C	UNK	02/18/09 09:50:41 pm	0.010	116	1.27		1.00	1.00 1.00
K7A7E	UNK	02/18/09 09:53:00 pm	0.001	48	4.47		1.00	1.00 1.00
K7A7G	UNK	02/18/09 09:55:18 pm	0.001	50	4.41		1.00	1.00 1.00
K7A7J	UNK	02/18/09 09:57:37 pm	0.010	120	3.20		1.00	1.00 1.00
K7A7L	UNK	02/18/09 09:59:56 pm	0.007	94	3.12		1.00	1.00 1.00
K7A7N	UNK	02/18/09 10:02:14 pm	0.001	46	4.68		1.00	1.00 1.00
K7A7Q	UNK	02/18/09 10:04:33 pm	0.001	49	4.52		1.00	1.00 1.00
CCV % Recovery 107.76 ✓	CCV	02/18/09 10:06:53 pm	5.388 ✓	41608	1.20		1.00	1.00 1.00
CCB	CCB	02/18/09 10:09:10 pm	0.006 ✓	85	3.49		1.00	1.00 1.00
K7A7T	UNK	02/18/09 10:11:29 pm	0.012	136	2.75		1.00	1.00 1.00
K7C0PB	UNK	02/18/09 10:13:49 pm	0.000 ✓	38	1.81		1.00	1.00 1.00
K7C0PC	UNK	02/18/09 10:16:09 pm	5.257 ✓	40595	1.27		1.00	1.00 1.00
K69E5	UNK	02/18/09 10:18:28 pm	0.050	428	2.64		1.00	1.00 1.00
~~K69E5S~~	~~UNK~~	~~02/18/09 10:20:47 pm~~	~~0.520~~ ✓	~~4052~~	~~0.78~~		~~1.00~~	~~1.00~~ 1.00
NA cs 2/19/09								
~~K69E5D~~	~~UNK~~	~~02/18/09 10:23:05 pm~~	~~0.362~~	~~2835~~	~~2.09~~		~~1.00~~	~~1.00~~ 1.00
K7APM	UNK	02/18/09 10:25:24 pm	-0.007	-12	78.02		1.00	1.00 1.00

NPDES - 2129

✓ cs 2/19/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CCV	CCV	02/18/09 10:27:44 pm	5.110	39460	1.79		1.00	1.00
% Recovery 102.19							1.00	
CCB	CCB	02/18/09 10:30:01 pm	0.000	36	16.86		1.00	1.00
							1.00	
K7APMS	UNK	02/18/09 10:32:20 pm	5.129	39613	0.76		1.00	1.00
							1.00	
K7APMD	UNK	02/18/09 10:34:39 pm	5.054	39028	0.48		1.00	1.00
							1.00	
K7APT	UNK	02/18/09 10:36:58 pm	0.000	36	23.41		1.00	1.00
							1.00	
K7APV	UNK	02/18/09 10:39:17 pm	0.044	375	0.61		1.00	1.00
							1.00	
K7AAP	UNK	02/18/09 10:41:36 pm	-0.001	32	19.61		1.00	1.00
							1.00	
K7ACH	UNK	02/18/09 10:43:55 pm	0.001	51	5.65		1.00	1.00
							1.00	
K7ACX	UNK	02/18/09 10:46:14 pm	0.002	54	9.64		1.00	1.00
							1.00	
CCV	CCV	02/18/09 10:48:34 pm	5.174	39961	0.81		1.00	1.00
% Recovery 103.49							1.00	
CCB	CCB	02/18/09 10:50:51 pm	0.004	72	4.24		1.00	1.00
							1.00	

NPDES - 2130

2/19/09 67

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: Yes

Condition: Saturate

Tube # range: 4:1 - 4:60

If no autodilution tubes remaining continue undiluted

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

ANALYTICAL REPORT

PROJECT NO. BOEING NPDES

SSFL MWH-Pasadena/Boeing

Lot #: F9B170212

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

for: Sherryl Adam
Project Manager

March 16, 2009

NPDES - 2133

Case Narrative
LOT NUMBER: F9B170212

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on February 17, 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.

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.

There are no observations or nonconformances associated with the analysis in this lot.

METHODS SUMMARY

F9B170212

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

F9B170212

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K7AN6	001	ISB1695-01	02/13/09	14:20

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: ISB1695-01

Radiochemistry

Lab Sample ID: F9B170212-001
Work Order: K7AN6
Matrix: WATER

Date Collected: 02/13/09 1420
Date Received: 02/17/09 0900

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 # 9058211		Yld %
Cesium 137	0.6	U	7.2	20.0	14	02/27/09	03/13/09
Potassium 40	0.1	U	96		220	02/27/09	03/13/09
Gross Alpha/Beta EPA 900				pCi/L	Batch # 9050133		Yld %
Gross Alpha	4.6		1.3	3.0	1	02/24/09	03/03/09
Gross Beta	3.35	J	0.91	4.00	1.0	02/24/09	03/03/09
Radium 226 by EPA 903.0 MOD				pCi/L	Batch # 9048417		Yld % 87
Radium (226)	0.28	J	0.16	1.00	0.21	02/17/09	03/12/09
Radium 228 by GFPC EPA 904 MOD				pCi/L	Batch # 9048418		Yld % 78
Radium 228	0.24	U	0.25	1.00	0.40	02/17/09	03/12/09
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	Batch # 9064253		Yld %
Tritium	-80	U	170	500	310	03/05/09	03/11/09
SR-90 BY GFPC EPA-905 MOD				pCi/L	Batch # 9048419		Yld % 53
Strontium 90	-0.20	U	0.47	3.00	0.83	02/17/09	02/28/09
Total Uranium by KPA ASTM 5174-91				pCi/L	Batch # 9050413		Yld %
Total Uranium	0.319	J	0.037	0.677	0.21	02/19/09	03/08/09

NOTE(S)

Data are incomplete without the case narrative.

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

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

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F9B170212
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC	Prep Date	Analysis Date	Lab Sample ID
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	**Batch # 9064253**		**Yld %**		**F9C050000-253B**
Tritium	-20	U	180	500	320	03/05/09	03/11/09	
Radium 226 by EPA 903.0 MOD			pCi/L	**Batch # 9048417**		**Yld % 90**		**F9B170000-417B**
Radium (226)	0.055	U	0.092	1.00	0.16	02/17/09	03/12/09	
Radium 228 by GFPC EPA 904 MOD			pCi/L	**Batch # 9048418**		**Yld % 85**		**F9B170000-418B**
Radium 228	0.09	U	0.24	1.00	0.41	02/17/09	03/12/09	
SR-90 BY GFPC EPA-905 MOD			pCi/L	**Batch # 9048419**		**Yld % 70**		**F9B170000-419B**
Strontium 90	-0.14	U	0.20	3.00	0.38	02/17/09	02/28/09	
Total Uranium by KPA ASTM 5174-91			pCi/L	**Batch # 9050413**		**Yld %**		**F9B190000-413B**
Total Uranium	0.124	U	0.015	0.677	0.21	02/19/09	03/08/09	
Gross Alpha/Beta EPA 900			pCi/L	**Batch # 9050133**		**Yld %**		**F9B190000-133B**
Gross Alpha	-0.13	U	0.47	3.00	0.99	02/24/09	03/04/09	
Gross Beta	-0.71	U	0.61	4.00	1.2	02/24/09	03/04/09	
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	**Batch # 9058211**		**Yld %**		**F9B270000-211B**
Cesium 137	4.7	U	9.8	20.0	17	02/27/09	03/13/09	
Potassium 40	-1	U	150		280	02/27/09	03/13/09	

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: F9B170212
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			F9B190000-133C
Gross Beta	67.6	56.3	4.9	1		83	(73 - 122)
	Batch #:	9050133		Analysis Date:	03/04/09		
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F9B190000-133C
Gross Alpha	49.4	53.2	6.0	1.6		108	(73 - 136)
	Batch #:	9050133		Analysis Date:	03/04/09		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			F9B190000-413C
Total Uranium	27.1	29.7	3.5	0.2		110	(90 - 118)
	Batch #:	9050413		Analysis Date:	03/08/09		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			F9B190000-413C
Total Uranium	5.42	5.86	0.61	0.21		108	(90 - 118)
	Batch #:	9050413		Analysis Date:	03/08/09		
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	901.1 MOD			F9B270000-211C
Americium 241	141000	137000	11000	500		97	(90 - 110)
Cesium 137	53100	51600	3000	200		97	(90 - 110)
Cobalt 60	87900	85500	4800	200		97	(90 - 110)
	Batch #:	9058211		Analysis Date:	03/13/09		
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			F9C050000-253C
Tritium	4780	4230	480	310		88	(77 - 110)
	Batch #:	9064253		Analysis Date:	03/11/09		

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: F9B170212
Matrix: WATER

Parameter		Spike Amount	Result		Total Uncert. (2 σ +/-)	% Yld	% Rec	QC Control Limits	Precision	
								Lab Sample ID		
Radium 226 by EPA 903.0 MOD				pCi/L	903.0 MOD			F9B170000-417C		
Radium (226)		11.3	10.9		1.1	94	97	(52 - 150)		
	Spk 2	11.3	11.5		1.2	96	102	(52 - 150)	6	%RPD
		Batch #:	9048417			Analysis Date:		03/12/09		
Radium 228 by GFPC EPA 904 MOD				pCi/L	904 MOD			F9B170000-418C		
Radium 228		7.20	8.34		0.95	78	116	(64 - 140)		
	Spk 2	7.20	8.44		0.95	82	117	(64 - 140)	1	%RPD
		Batch #:	9048418			Analysis Date:		03/12/09		
SR-90 BY GFPC EPA-905 MOD				pCi/L	905 MOD			F9B170000-419C		
Strontium 90		6.97	7.65		0.92	67	110	(78 - 146)		
	Spk 2	6.97	8.80		1.00	69	126	(78 - 146)	14	%RPD
		Batch #:	9048419			Analysis Date:		02/28/09		

NOTE(S)

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F9B170212
Matrix: WATER

Date Sampled: 02/13/09
Date Received: 02/17/09

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision	
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD				F9B170209-001	
Cesium 137	-0.9	U	7.9		-3.1	U	9.9		112	%RPD
Potassium 40	-60	U	680		-90	U	3500		35	%RPD
	Batch #:		9058211	(Sample)	9058211		(Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD				F9B170209-001	
Tritium	220	U	200		60	U	180		113	%RPD
	Batch #:		9064253	(Sample)	9064253		(Duplicate)			
Gross Alpha/Beta EPA 900				pCi/L	900.0 MOD				F9B200166-001	
Gross Alpha	1.86	J	0.97		1.9	J	1.0		4	%RPD
Gross Beta	4.2		1.2		4.1		1.2		3	%RPD
	Batch #:		9050133	(Sample)	9050133		(Duplicate)			

NOTE(S)

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

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F9B170209 Date Sampled: 02/13/09 1525
Matrix: WATER Date Received: 02/17/09 0900

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				F9B170209-001	
Total Uranium		27.1	30.1	3.6		0.435	J	0.051		110	(90 - 121)
	Spk2	27.1	29.8	3.6		0.435	J	0.051		108	(90 - 121)
									Precision:	1	%RPD

Batch #: 9050413 Analysis date: 03/08/09

NOTE(S)

Data are incomplete without the case narrative.

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

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F9B170212
Matrix: WATER

Date Sampled: 02/13/09
Date Received: 02/17/09

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
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F9B170212-001**	
Tritium	4780	4340	480		-80	170		93	(47 - 150)
	Batch #:	9064253		Analysis Date:		03/11/09			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F9B200166-001**	
Gross Beta	67.5	73.3	6.2		4.2	1.2		102	(66 - 147)
	Batch #:	9050133		Analysis Date:		03/04/09			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F9B200166-001**	
Gross Alpha	49.4	39.8	5.0		1.86	0.97		77	(44 - 150)
	Batch #:	9050133		Analysis Date:		03/04/09			

NOTE(S)

Data are incomplete without the case narrative.

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

CLR 398

SUBCONTRACT ORDER

TestAmerica Irvine

ISB1695

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 St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone :(314) 298-8566
Fax: (314) 298-8757
Project Location: CA - CALIFORNIA
Receipt Temperature: _____°C Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ISB1695-01	**Water**		Sampled: 02/13/09 14:20			
Gamma Spec-O	mg/kg	02/25/09	02/13/10 14:20	$250.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	02/25/09	08/12/09 14:20	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	02/25/09	08/12/09 14:20	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	02/25/09	03/13/09 14:20	$0.00	0%	
Radium, Combined-O	pCi/L	02/25/09	02/13/10 14:20	$238.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/25/09	02/13/10 14:20	$155.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/25/09	02/13/10 14:20	$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/25/09	02/13/10 14:20	$120.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

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

Released By	2/16/09 Date/Time	Fed-Ex Received By	2/16/09 1700 Date/Time
Released By	Date/Time	Received By	2-17-09 0900 Date/Time

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F9B170209
212
213
- 398 - 215
217

CONDITION UPON RECEIPT FORM

Client: TA Irvine
Quote No: 81594
COC/RFA No: Below

Initiated By: _____ Date: 2-17-09 Time: 0900

Shipping Information

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

Shipping # (s):*		Sample Temperature (s):**	
1. 796345773611	6.	1. 4	6.
2. 7973 4211 8807	7.	2. 4	7.
3. 796345773552	8.	3. 3	8.
4.	9.	4.	9.
5.	10.	5.	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: ISB1693
ISB1695
ISB1694
ISB1699
ISB1703

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 Allen Date: 2-19-09

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

February 25, 2009

Vista Project I.D.: 31430

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

Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on February 17, 2009 under your Project Name "ISB1695". This work was authorized under your Purchase Order No. 2293726. 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: **2/17/2009**

Vista Lab. ID	Client Sample ID
31430-001	ISB1695-01

SECTION II

Method Blank **EPA Method 1613**

Matrix: Aqueous | QC Batch No.: 1900 | Lab Sample: 0-MB001

Sample Size: 1.00 L | Date Extracted: 19-Feb-09 | Date Analyzed DB-5: 24-Feb-09 | Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.00000106		
1,2,3,7,8-PeCDD	ND	0.000000999		
1,2,3,4,7,8-HxCDD	ND	0.00000203		
1,2,3,6,7,8-HxCDD	ND	0.00000190		
1,2,3,7,8,9-HxCDD	ND	0.00000189		
1,2,3,4,6,7,8-HpCDD	ND	0.00000348		
OCDD	ND	0.00000285		
2,3,7,8-TCDF	ND	0.00000100		
1,2,3,7,8-PeCDF	ND	0.00000108		
2,3,4,7,8-PeCDF	ND	0.00000107		
1,2,3,4,7,8-HxCDF	ND	0.00000138		
1,2,3,6,7,8-HxCDF	ND	0.00000140		
2,3,4,6,7,8-HxCDF	ND	0.00000156		
1,2,3,7,8,9-HxCDF	ND	0.00000216		
1,2,3,4,6,7,8-HpCDF	ND	0.00000328		
1,2,3,4,7,8,9-HpCDF	ND	0.00000421		
OCDF	ND	0.00000285		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	79.1	25 - 164	
	13C-1,2,3,7,8-PeCDD	68.5	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	78.7	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	77.3	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	79.3	23 - 140	
	13C-OCDD	72.6	17 - 157	
	13C-2,3,7,8-TCDF	77.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	67.3	24 - 185	
	13C-2,3,4,7,8-PeCDF	66.1	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	76.0	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	76.7	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	75.7	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	77.1	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	76.5	26 - 138	
	13C-OCDF	67.9	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	86.7	35 - 197	

Totals

Total TCDD	ND	0.00000106
Total PeCDD	ND	0.000000999
Total HxCDD	ND	0.00000194
Total HpCDD	ND	0.00000348
Total TCDF	ND	0.00000100
Total PeCDF	ND	0.00000108
Total HxCDF	ND	0.00000162
Total HpCDF	ND	0.00000374

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 25-Feb-2009 13:44

NPDES - 2149

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	1900	Lab Sample:	0-OPR001
Sample Size:	1.00 L	Date Extracted:	19-Feb-09	Date Analyzed DB-5:	23-Feb-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	9.54	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	78.8	25 - 164	
1,2,3,7,8-PeCDD	50.0	49.2	35 - 71		13C-1,2,3,7,8-PeCDD	67.9	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	49.3	35 - 82		13C-1,2,3,4,7,8-HxCDD	73.1	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	48.5	38 - 67		13C-1,2,3,6,7,8-HxCDD	72.0	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	48.5	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	68.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	49.9	35 - 70		13C-OCDD	59.5	17 - 157	
OCDD	100	99.5	78 - 144		13C-2,3,7,8-TCDF	78.2	24 - 169	
2,3,7,8-TCDF	10.0	10.2	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	73.2	24 - 185	
1,2,3,7,8-PeCDF	50.0	50.7	40 - 67		13C-2,3,4,7,8-PeCDF	70.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	50.1	34 - 80		13C-1,2,3,4,7,8-HxCDF	72.8	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	49.0	36 - 67		13C-1,2,3,6,7,8-HxCDF	69.9	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	50.0	42 - 65		13C-2,3,4,6,7,8-HxCDF	74.1	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	49.6	35 - 78		13C-1,2,3,7,8,9-HxCDF	72.1	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	50.5	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	65.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	50.9	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	64.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	53.1	39 - 69		13C-OCDF	58.1	17 - 157	
OCDF	100	104	63 - 170	CRS	37Cl-2,3,7,8-TCDD	83.5	35 - 197	

Analyst: JMH

Approved By: William J. Luksemburg 25-Feb-2009 13:44

NPDES - 2150

Sample ID: **ISB1695-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	31430-001	Date Received:	17-Feb-09
Project:	ISB1695	Sample Size:	0.987 L	QC Batch No.:	1900	Date Extracted:	19-Feb-09
Date Collected:	13-Feb-09			Date Analyzed DB-5:	21-Feb-09	Date Analyzed DB-225:	NA
Time Collected:	1420						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.00000136			J
1,2,3,7,8-PeCDD	ND		0.00000549	
1,2,3,4,7,8-HxCDD	ND		0.0000113	
1,2,3,6,7,8-HxCDD	0.0000280			
1,2,3,7,8,9-HxCDD	0.0000229			J
1,2,3,4,6,7,8-HpCDD	0.000704			
OCDD	0.0112			
2,3,7,8-TCDF	ND	0.00000106		
1,2,3,7,8-PeCDF	ND	0.00000242		
2,3,4,7,8-PeCDF	ND	0.00000224		
1,2,3,4,7,8-HxCDF	0.00000411			J
1,2,3,6,7,8-HxCDF	0.00000445			J
2,3,4,6,7,8-HxCDF	0.00000508			J
1,2,3,7,8,9-HxCDF	ND	0.00000220		
1,2,3,4,6,7,8-HpCDF	0.000122			
1,2,3,4,7,8,9-HpCDF	ND		0.00000888	
OCDF	0.000660			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.1	25 - 164	
	13C-1,2,3,7,8-PeCDD	89.9	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	79.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	81.1	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	78.6	23 - 140	
	13C-OCDD	67.6	17 - 157	
	13C-2,3,7,8-TCDF	91.1	24 - 169	
	13C-1,2,3,7,8-PeCDF	90.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	89.1	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	76.9	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	71.4	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	77.2	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	85.6	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	75.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	78.5	26 - 138	
	13C-OCDF	67.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	83.8	35 - 197	

Totals		
Total TCDD	0.00000136	
Total PeCDD	0.0000114	0.0000182
Total HxCDD	0.000156	0.000167
Total HpCDD	0.00166	
Total TCDF	ND	0.00000209
Total PeCDF	0.0000244	
Total HxCDF	0.000100	
Total HpCDF	0.000362	0.000371

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg 25-Feb-2009 13:44

NPDES - 2151

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

ISB1695 31430 -0.9°C

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:_____°C Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: ISB1695-01	**Water**		Sampled: **02/13/09 14:20**	
1613-Dioxin-HR-Alta	ug/l	02/25/09	02/20/09 14:20	J flags,17 congeners,no TEQ,ug/L,sub=Vista
EDD + Level 4	N/A	02/25/09	03/13/09 14:20	Excel EDD email to pm,Include Std logs for Lvl IV

Containers Supplied:

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

VanBaule 2/16/09 17:00 — FedEx 2/16/09 17:00
Released By / Date/Time — Received By / Date/Time

FedEx 2/17/09 0848 — Bethany L Benedict 2/17/09 1550
Released By / Date/Time — Received By / Date/Time

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31430 TAT Unspecified

Samples Arrival:	**Date/Time** 2/17/09 0842	**Initials:** BLB	**Location:** WR-7 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 2/17/09 1550	**Initials:** BLB	**Location:** WR-2 **Shelf/Rack:** D-5

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	
Temp °C -0.9°	**Time:** 0845			**Thermometer ID:** IR-1		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7963 4645 7290	✓		
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:

ISB1695-01 A & B bottle