APPENDIX G

Section 8

Outfall 009, October 14, 2009

Test America Analytical Laboratory Reports

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: Semi-Annual Outfall 009

Sampled: 10/14/09
Received: 10/14/09
Issued: 11/30/09 12:28

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

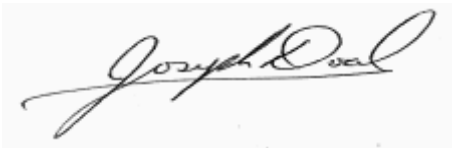
CASE NARRATIVE

SAMPLE RECEIPT:	Samples were received intact, at 4°C, on ice and with chain of custody documentation.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	Results that fall between the MDL and RL are 'J' flagged.
SUBCONTRACTED:	Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID	CLIENT ID	MATRIX
ISJ1373-01	Outfall 009	Water

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

Reviewed By:



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Attention: Bronwyn Kelly

Project ID: Semi-Annual Outfall 009
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Sampled: 10/14/09
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HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	9J19044	1.4	4.9	ND	1	DA	10/20/09	

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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	9J16097	0.30	2.0	**0.43**	1	NH	10/17/09	J
Cadmium	EPA 200.8	9J16097	0.10	1.0	ND	1	NH	10/17/09	
Copper	EPA 200.8	9J16097	0.50	2.0	**5.3**	1	NH	10/17/09	
Lead	EPA 200.8	9J16097	0.20	1.0	**2.2**	1	NH	10/17/09	
Thallium	EPA 200.8	9J16097	0.20	1.0	ND	1	NH	10/17/09	

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DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	9J20101	0.30	2.0	**0.71**	1	BR	10/20/09	J
Cadmium	EPA 200.8-Diss	9J20101	0.10	1.0	ND	1	BR	10/20/09	
Copper	EPA 200.8-Diss	9J20101	0.50	2.0	**5.6**	1	BR	10/20/09	B
Lead	EPA 200.8-Diss	9J20101	0.20	1.0	**0.78**	1	BR	10/20/09	J
Thallium	EPA 200.8-Diss	9J20101	0.20	1.0	ND	1	BR	10/20/09	

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	9J15061	0.25	0.50	**2.1**	1	MN	10/15/09	
Nitrate/Nitrite-N	EPA 300.0	9J15061	0.15	0.26	**0.67**	1	MN	10/15/09	
Sulfate	EPA 300.0	9J15061	0.20	0.50	**4.7**	1	MN	10/15/09	
Total Dissolved Solids	SM2540C	9J19008	1.0	10	**45**	1	MC	10/19/09	
Sample ID: ISJ1373-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	9J15069	0.90	4.0	ND	1	MN	10/15/09	

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DIOXIN (EPA 1613)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.								
Reporting Units: ug/L								
2,3,7,8-TCDD	1613-Dioxin-HR Alta	2469	0.00000496	ND	1	JMH	10/22/09	
1,2,3,7,8-PeCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000190**	1	JMH	10/22/09	Ja
1,2,3,4,7,8-HxCDD	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
1,2,3,6,7,8-HxCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000675**	1	JMH	10/22/09	Ja
1,2,3,7,8,9-HxCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000800**	1	JMH	10/22/09	Ja
1,2,3,4,6,7,8-HpCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.000146**	1	JMH	10/22/09	
OCDD	1613-Dioxin-HR Alta	2469	0.0000496	**0.00129**	1	JMH	10/22/09	
2,3,7,8-TCDF	1613-Dioxin-HR Alta	2469	0.00000496	ND	1	JMH	10/22/09	
1,2,3,7,8-PeCDF	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
2,3,4,7,8-PeCDF	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
1,2,3,4,7,8-HxCDF	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000153**	1	JMH	10/22/09	Ja
1,2,3,6,7,8-HxCDF	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
2,3,4,6,7,8-HxCDF	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000167**	1	JMH	10/22/09	Ja
1,2,3,7,8,9-HxCDF	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
1,2,3,4,6,7,8-HpCDF	1613-Dioxin-HR Alta	2469	0.0000248	**0.0000161**	1	JMH	10/22/09	Ja
1,2,3,4,7,8,9-HpCDF	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
OCDF	1613-Dioxin-HR Alta	2469	0.0000496	**0.0000663**	1	JMH	10/22/09	
Total TCDD	1613-Dioxin-HR Alta	2469	0.00000496	ND	1	JMH	10/22/09	
Total PeCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000190**	1	JMH	10/22/09	
Total HxCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.0000302**	1	JMH	10/22/09	
Total HpCDD	1613-Dioxin-HR Alta	2469	0.0000248	**0.000287**	1	JMH	10/22/09	
Total TCDF	1613-Dioxin-HR Alta	2469	0.00000496	ND	1	JMH	10/22/09	
Total PeCDF	1613-Dioxin-HR Alta	2469	0.0000248	ND	1	JMH	10/22/09	
Total HxCDF	1613-Dioxin-HR Alta	2469	0.0000248	**0.00000525**	1	JMH	10/22/09	
Total HpCDF	1613-Dioxin-HR Alta	2469	0.0000248	**0.0000388**	1	JMH	10/22/09	
Surrogate: 13C-2,3,7,8-TCDD (25-164%)				*81.2 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)				*77.5 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)				*70.2 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)				*61.2 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)				*72.4 %*				
Surrogate: 13C-OCDD (17-157%)				*62.5 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)				*73.4 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)				*71 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)				*71.7 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)				*72.5 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)				*66.2 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)				*69.8 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)				*73.5 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)				*72 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)				*71.9 %*				
Surrogate: 13C-OCDF (17-157%)				*64.4 %*				

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DIOXIN (EPA 1613)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.								
Reporting Units: ug/L								
Surrogate: 37Cl-2,3,7,8-TCDD (35-197%)				*104 %*				

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MCAWW 245.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	9293508	0.027	0.2	ND	1	CG	10/21/09	

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MCAWW 245.1-DISS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: ISJ1373-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1-DISS	9293522	0.027	0.2	ND	1	CG	10/21/09	

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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 (ISJ1373-01) - Water					
EPA 300.0	2	10/14/2009 08:10	10/14/2009 19:05	10/15/2009 13:30	10/15/2009 15:02
Filtration	1	10/14/2009 08:10	10/14/2009 19:05	10/15/2009 11:52	10/15/2009 11:53

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9J19044 Extracted: 10/19/09										
Blank Analyzed: 10/20/2009 (9J19044-BLK1)										
Hexane Extractable Material (Oil & Grease)	ND	5.0	mg/l							
LCS Analyzed: 10/20/2009 (9J19044-BS1)										**MNR1**
Hexane Extractable Material (Oil & Grease)	20.4	5.0	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 10/20/2009 (9J19044-BSD1)										
Hexane Extractable Material (Oil & Grease)	20.3	5.0	mg/l	20.0		102	78-114	1	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9J16097 Extracted: 10/16/09										
Blank Analyzed: 10/16/2009 (9J16097-BLK1)										
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.0	ug/l							
Lead	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 10/16/2009 (9J16097-BS1)										
Antimony	88.6	2.0	ug/l	80.0		111	85-115			
Cadmium	86.0	1.0	ug/l	80.0		107	85-115			
Copper	79.0	2.0	ug/l	80.0		99	85-115			
Lead	79.2	1.0	ug/l	80.0		99	85-115			
Thallium	76.8	1.0	ug/l	80.0		96	85-115			
Matrix Spike Analyzed: 10/17/2009 (9J16097-MS1)					**Source: ISJ1191-01**					
Antimony	87.4	2.0	ug/l	80.0	ND	109	70-130			
Cadmium	84.2	1.0	ug/l	80.0	ND	105	70-130			
Copper	94.5	2.0	ug/l	80.0	19.7	93	70-130			
Lead	77.5	1.0	ug/l	80.0	2.22	94	70-130			
Thallium	73.8	1.0	ug/l	80.0	ND	92	70-130			
Matrix Spike Analyzed: 10/17/2009 (9J16097-MS2)					**Source: ISJ1400-03**					
Antimony	91.0	2.0	ug/l	80.0	ND	114	70-130			
Cadmium	85.8	1.0	ug/l	80.0	ND	107	70-130			
Copper	73.1	2.0	ug/l	80.0	0.808	90	70-130			
Lead	75.4	1.0	ug/l	80.0	ND	94	70-130			
Thallium	74.4	1.0	ug/l	80.0	ND	93	70-130			
Matrix Spike Dup Analyzed: 10/17/2009 (9J16097-MSD1)					**Source: ISJ1191-01**					
Antimony	86.9	2.0	ug/l	80.0	ND	109	70-130	1	20	
Cadmium	84.1	1.0	ug/l	80.0	ND	105	70-130	0	20	
Copper	93.5	2.0	ug/l	80.0	19.7	92	70-130	1	20	
Lead	77.3	1.0	ug/l	80.0	2.22	94	70-130	0	20	
Thallium	73.4	1.0	ug/l	80.0	ND	92	70-130	1	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9J20101 Extracted: 10/20/09										
Blank Analyzed: 10/20/2009 (9J20101-BLK1)										
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	1.38	2.0	ug/l							*J*
Lead	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 10/20/2009 (9J20101-BS1)										
Antimony	85.5	2.0	ug/l	80.0		107	85-115			
Cadmium	84.7	1.0	ug/l	80.0		106	85-115			
Copper	79.4	2.0	ug/l	80.0		99	85-115			
Lead	80.6	1.0	ug/l	80.0		101	85-115			
Thallium	82.3	1.0	ug/l	80.0		103	85-115			
Matrix Spike Analyzed: 10/20/2009 (9J20101-MS1)					**Source: ISJ1373-01**					
Antimony	86.1	2.0	ug/l	80.0	0.709	107	70-130			
Cadmium	84.0	1.0	ug/l	80.0	ND	105	70-130			
Copper	84.7	2.0	ug/l	80.0	5.64	99	70-130			
Lead	79.6	1.0	ug/l	80.0	0.780	99	70-130			
Thallium	80.9	1.0	ug/l	80.0	ND	101	70-130			
Matrix Spike Analyzed: 10/20/2009 (9J20101-MS2)					**Source: ISJ1376-01**					
Antimony	84.4	2.0	ug/l	80.0	0.839	104	70-130			
Cadmium	81.8	1.0	ug/l	80.0	0.186	102	70-130			
Copper	80.5	2.0	ug/l	80.0	3.51	96	70-130			
Lead	77.5	1.0	ug/l	80.0	0.241	97	70-130			
Thallium	81.0	1.0	ug/l	80.0	ND	101	70-130			
Matrix Spike Dup Analyzed: 10/20/2009 (9J20101-MSD1)					**Source: ISJ1373-01**					
Antimony	87.2	2.0	ug/l	80.0	0.709	108	70-130	1	20	
Cadmium	83.8	1.0	ug/l	80.0	ND	105	70-130	0	20	
Copper	84.6	2.0	ug/l	80.0	5.64	99	70-130	0	20	
Lead	79.3	1.0	ug/l	80.0	0.780	98	70-130	0	20	
Thallium	81.2	1.0	ug/l	80.0	ND	101	70-130	0	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9J15061 Extracted: 10/15/09										
Blank Analyzed: 10/15/2009 (9J15061-BLK1)										
Chloride	ND	0.50	mg/l							
Nitrate/Nitrite-N	ND	0.26	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 10/15/2009 (9J15061-BS1)										
Chloride	5.13	0.50	mg/l	5.00		103	90-110			
Sulfate	10.2	0.50	mg/l	10.0		102	90-110			
Matrix Spike Analyzed: 10/15/2009 (9J15061-MS1)					**Source: ISJ1472-08**					
Chloride	7.13	0.50	mg/l	5.00	2.04	102	80-120			
Sulfate	13.1	0.50	mg/l	10.0	2.87	102	80-120			
Matrix Spike Analyzed: 10/15/2009 (9J15061-MS2)					**Source: ISJ1367-01**					
Chloride	39.2	2.5	mg/l	10.0	28.7	105	80-120			
Sulfate	47.6	2.5	mg/l	20.0	25.0	113	80-120			
Matrix Spike Dup Analyzed: 10/15/2009 (9J15061-MSD1)					**Source: ISJ1472-08**					
Chloride	7.08	0.50	mg/l	5.00	2.04	101	80-120	1	20	
Sulfate	13.1	0.50	mg/l	10.0	2.87	102	80-120	0	20	
Batch: 9J15069 Extracted: 10/15/09										
Blank Analyzed: 10/15/2009 (9J15069-BLK1)										
Perchlorate	ND	4.0	ug/l							
LCS Analyzed: 10/15/2009 (9J15069-BS1)										
Perchlorate	25.5	4.0	ug/l	25.0		102	85-115			

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Semi-Annual Outfall 009
Report Number: ISJ1373

Sampled: 10/14/09
Received: 10/14/09

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9J15069 Extracted: 10/15/09										
Matrix Spike Analyzed: 10/15/2009 (9J15069-MS1)					**Source: ISJ1179-03**					
Perchlorate	37.1	4.0	ug/l	25.0	12.1	100	80-120			
Matrix Spike Dup Analyzed: 10/15/2009 (9J15069-MSD1)					**Source: ISJ1179-03**					
Perchlorate	37.6	4.0	ug/l	25.0	12.1	102	80-120	1	20	
Batch: 9J19008 Extracted: 10/19/09										
Blank Analyzed: 10/19/2009 (9J19008-BLK1)										
Total Dissolved Solids	ND	10	mg/l							
LCS Analyzed: 10/19/2009 (9J19008-BS1)										
Total Dissolved Solids	1000	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 10/19/2009 (9J19008-DUP1)					**Source: ISJ1307-01**					
Total Dissolved Solids	1520	10	mg/l		1500			1	10	

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METHOD BLANK/QC DATA

DIOXIN (EPA 1613)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 2469 Extracted: 10/19/09										
Blank Analyzed: 10/22/2009 (MB001)					**Source:**					
2,3,7,8-TCDD	ND	0.00000500	ug/L				50-150		25	
1,2,3,7,8-PeCDD	ND	0.0000250	ug/L				50-150		25	
1,2,3,4,7,8-HxCDD	ND	0.0000250	ug/L				50-150		25	
1,2,3,6,7,8-HxCDD	ND	0.0000250	ug/L				50-150		25	
1,2,3,7,8,9-HxCDD	ND	0.0000250	ug/L				50-150		25	
1,2,3,4,6,7,8-HpCDD	ND	0.0000250	ug/L				50-150		25	
OCDD	ND	0.0000500	ug/L				50-150		25	
2,3,7,8-TCDF	ND	0.00000500	ug/L				50-150		25	
1,2,3,7,8-PeCDF	ND	0.0000250	ug/L				50-150		25	
2,3,4,7,8-PeCDF	ND	0.0000250	ug/L				50-150		25	
1,2,3,4,7,8-HxCDF	ND	0.0000250	ug/L				50-150		25	
1,2,3,6,7,8-HxCDF	ND	0.0000250	ug/L				50-150		25	
2,3,4,6,7,8-HxCDF	ND	0.0000250	ug/L				50-150		25	
1,2,3,7,8,9-HxCDF	ND	0.0000250	ug/L				50-150		25	
1,2,3,4,6,7,8-HpCDF	ND	0.0000250	ug/L				50-150		25	
1,2,3,4,7,8,9-HpCDF	ND	0.0000250	ug/L				50-150		25	
OCDF	ND	0.0000500	ug/L				50-150		25	
Total TCDD	ND	0.00000500	ug/L				50-150		25	
Total PeCDD	ND	0.0000250	ug/L				50-150		25	
Total HxCDD	ND	0.0000250	ug/L				50-150		25	
Total HpCDD	ND	0.0000250	ug/L				50-150		25	
Total TCDF	ND	0.00000500	ug/L				50-150		25	
Total PeCDF	ND	0.0000250	ug/L				50-150		25	
Total HxCDF	ND	0.0000250	ug/L				50-150		25	
Total HpCDF	ND	0.0000250	ug/L				50-150		25	
Surrogate: 13C-2,3,7,8-TCDD	*0.00188*		*ug/L*	*2000*		*94*	*50-150*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.00192*		*ug/L*	*2000*		*96*	*50-150*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00182*		*ug/L*	*2000*		*91*	*50-150*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00165*		*ug/L*	*2000*		*83*	*50-150*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00194*		*ug/L*	*2000*		*97*	*50-150*			
Surrogate: 13C-OCDD	*0.00333*		*ug/L*	*4000*		*83*	*50-150*			
Surrogate: 13C-2,3,7,8-TCDF	*0.00186*		*ug/L*	*2000*		*93*	*50-150*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00193*		*ug/L*	*2000*		*96*	*50-150*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.00193*		*ug/L*	*2000*		*97*	*50-150*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00185*		*ug/L*	*2000*		*92*	*50-150*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00175*		*ug/L*	*2000*		*87*	*50-150*			

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Semi-Annual Outfall 009

Report Number: ISJ1373

Sampled: 10/14/09
Received: 10/14/09

METHOD BLANK/QC DATA

DIOXIN (EPA 1613)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 2469 Extracted: 10/19/09										
Blank Analyzed: 10/22/2009 (MB001)					**Source:**					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00182*		*ug/L*	*2000*		*91*	*50-150*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00188*		*ug/L*	*2000*		*94*	*50-150*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00187*		*ug/L*	*2000*		*94*	*50-150*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00193*		*ug/L*	*2000*		*97*	*50-150*			
Surrogate: 13C-OCDF	*0.00348*		*ug/L*	*4000*		*87*	*50-150*			
Surrogate: 37Cl-2,3,7,8-TCDD	*0.000773*		*ug/L*	*800*		*97*	*50-150*			
LCS Analyzed: 10/22/2009 (OPR001)					**Source:**					
2,3,7,8-TCDD	8.78	5.00	ug/L	10		88	50-150		25	
1,2,3,7,8-PeCDD	45.4	25.0	ug/L	50		91	50-150		25	
1,2,3,4,7,8-HxCDD	47.1	25.0	ug/L	50		94	50-150		25	
1,2,3,6,7,8-HxCDD	48.1	25.0	ug/L	50		96	50-150		25	
1,2,3,7,8,9-HxCDD	48.2	25.0	ug/L	50		96	50-150		25	
1,2,3,4,6,7,8-HpCDD	47.4	25.0	ug/L	50		95	50-150		25	
OCDD	96.5	50.0	ug/L	100		97	50-150		25	
2,3,7,8-TCDF	8.55	5.00	ug/L	10		86	50-150		25	
1,2,3,7,8-PeCDF	46.3	25.0	ug/L	50		93	50-150		25	
2,3,4,7,8-PeCDF	46.5	25.0	ug/L	50		93	50-150		25	
1,2,3,4,7,8-HxCDF	49.4	25.0	ug/L	50		99	50-150		25	
1,2,3,6,7,8-HxCDF	48.8	25.0	ug/L	50		98	50-150		25	
2,3,4,6,7,8-HxCDF	47.2	25.0	ug/L	50		94	50-150		25	
1,2,3,7,8,9-HxCDF	48.4	25.0	ug/L	50		97	50-150		25	
1,2,3,4,6,7,8-HpCDF	48.0	25.0	ug/L	50		96	50-150		25	
1,2,3,4,7,8,9-HpCDF	46.8	25.0	ug/L	50		94	50-150		25	
OCDF	102	50.0	ug/L	100		102	50-150		25	
Surrogate: 13C-2,3,7,8-TCDD	*93.1*		*ug/L*	*100*		*93*	*50-150*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*84.1*		*ug/L*	*100*		*84*	*50-150*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*89.9*		*ug/L*	*100*		*90*	*50-150*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*82.6*		*ug/L*	*100*		*83*	*50-150*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*90.3*		*ug/L*	*100*		*90*	*50-150*			
Surrogate: 13C-OCDD	*158*		*ug/L*	*200*		*79*	*50-150*			
Surrogate: 13C-2,3,7,8-TCDF	*96.2*		*ug/L*	*100*		*96*	*50-150*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*90.0*		*ug/L*	*100*		*90*	*50-150*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*91.0*		*ug/L*	*100*		*91*	*50-150*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*87.1*		*ug/L*	*100*		*87*	*50-150*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*83.3*		*ug/L*	*100*		*83*	*50-150*			

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Attention: Bronwyn Kelly

Project ID: Semi-Annual Outfall 009
Report Number: ISJ1373

Sampled: 10/14/09
Received: 10/14/09

METHOD BLANK/QC DATA

DIOXIN (EPA 1613)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 2469 Extracted: 10/19/09										
LCS Analyzed: 10/22/2009 (OPR001)					**Source:**					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*88.8*		*ug/L*	*100*		*89*	*50-150*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*91.9*		*ug/L*	*100*		*92*	*50-150*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*88.6*		*ug/L*	*100*		*89*	*50-150*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*90.7*		*ug/L*	*100*		*91*	*50-150*			
Surrogate: 13C-OCDF	*159*		*ug/L*	*200*		*79*	*50-150*			
Surrogate: 37Cl-2,3,7,8-TCDD	*38.7*		*ug/L*	*40*		*97*	*50-150*			

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METHOD BLANK/QC DATA

MCAWW 245.1

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9293508 Extracted: 10/21/09										
Matrix Spike Dup Analyzed: 10/21/2009 (D9J160335001D)					**Source: D9J160335001**					
Mercury	2.04	0.2	ug/L	5	ND	40	90-110	25	10	*N, **
Matrix Spike Analyzed: 10/21/2009 (D9J160335001S)					**Source: D9J160335001**					
Mercury	1.59	0.2	ug/L	5	ND	31	90-110			*N*
Blank Analyzed: 10/21/2009 (D9J200000508B)					**Source:**					
Mercury	ND	0.2	ug/L				-			
LCS Analyzed: 10/21/2009 (D9J200000508C)					**Source:**					
Mercury	4.89	0.2	ug/L	5		98	90-110			

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METHOD BLANK/QC DATA

MCAWW 245.1-DISS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9293522 Extracted: 10/21/09										
Matrix Spike Dup Analyzed: 10/21/2009 (D9J160335001D)					**Source: D9J160335001**					
Mercury	2.97	0.2	ug/L	5	ND	59	90-110	5	10	*N*
Matrix Spike Analyzed: 10/21/2009 (D9J160335001S)					**Source: D9J160335001**					
Mercury	3.13	0.2	ug/L	5	ND	62	90-110			*N*
Blank Analyzed: 10/21/2009 (D9J200000522B)					**Source:**					
Mercury	ND	0.2	ug/L				-			
LCS Analyzed: 10/21/2009 (D9J200000522C)					**Source:**					
Mercury	5.17	0.2	ug/L	5		103	90-110			

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Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ISJ1373-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.29	4.9	15
ISJ1373-01	Antimony-200.8	Antimony	ug/l	0.43	2.0	6
ISJ1373-01	Cadmium-200.8	Cadmium	ug/l	0.066	1.0	4
ISJ1373-01	Chloride - 300.0	Chloride	mg/l	2.06	0.50	150
ISJ1373-01	Copper-200.8	Copper	ug/l	5.26	2.0	14
ISJ1373-01	Lead-200.8	Lead	ug/l	2.19	1.0	5.2
ISJ1373-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.67	0.26	10
ISJ1373-01	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
ISJ1373-01	Sulfate-300.0	Sulfate	mg/l	4.69	0.50	250
ISJ1373-01	TDS - SM2540C	Total Dissolved Solids	mg/l	45	10	850
ISJ1373-01	Thallium-200.8	Thallium	ug/l	0.022	1.0	2

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Report Number: ISJ1373

Sampled: 10/14/09
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DATA QUALIFIERS AND DEFINITIONS

*****	Relative percent difference (RPD) is outside stated control limits.
B	Analyte was detected in the associated Method Blank.
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.
Ja	The amount detected is below the Lower CalibrationLimit of the instrument
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
N	Spike sample recovery is outside control limits.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Sampled: 10/14/09
Received: 10/14/09

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
EPA 314.0	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

Alta Analytical Perspectives

2714 Exchange Drive - Wilmington, NC 28405

Method Performed: 1613-Dioxin-HR Alta
Samples: ISJ1373-01

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnic
Samples: ISJ1373-01

TestAmerica Denver

4955 Yarrow Street - Arvada, CO 80002

Method Performed: MCAWW 245.1
Samples: ISJ1373-01

Method Performed: MCAWW 245.1-DISS
Samples: ISJ1373-01

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Report Number: ISJ1373

Sampled: 10/14/09
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TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Analysis Performed: Gamma Spec
Samples: ISJ1373-01

Analysis Performed: Gross Alpha
Samples: ISJ1373-01

Analysis Performed: Gross Beta
Samples: ISJ1373-01

Analysis Performed: Radium, Combined
Samples: ISJ1373-01

Analysis Performed: Strontium 90
Samples: ISJ1373-01

Analysis Performed: Tritium
Samples: ISJ1373-01

Analysis Performed: Uranium, Combined
Samples: ISJ1373-01

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: ISJ1373-01

TestAmerica Irvine

Joseph Doak
Project Manager

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

~~ESJ13~~ ISJ1373
~~ISSB29~~ 10/14/09

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	Comments
Outfall 009	W	1L Amber	2	10/14/09 0810	HCl	1A, 1B	X	

ANALYSIS REQUIRED

Field readings:

Temp °C = 60°F

pH = 6.7

Time of readings = 0815

50 10/14/09

These Samples are the Grab Portion of Outfall 009 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09/14:22		10-14-09/14:22
Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09 19:05		10/14/09 1905
Relinquished By	Date/Time:	Received By	Date/Time:

Turn-around time: (Check)

24 Hour: _____ 72 Hour: _____ 10 Day: _____

48 Hour: _____ 5 Day: _____ Normal: X

Sample Integrity: (Check) 4°C

Intact: _____ On Ice: _____

Data Requirements: (Check)

No Level IV: _____ All Level IV: _____ NPDES Level IV: X

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Semi-Annual Outfall 009**<br~~COMPOSITE~~ GRAB Stormwater at WS-13
Project Manager: Bronwyn Kelly Sampler: S Dawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Cl⁻, SO_4, NO_3+NO_2-N, Perchlorate	TDS	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	**Chronic Toxicity**	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl							**Comments**
Outfall 009	W	1L Poly	1	10/14/09 0510	HNO_3	2A	X													
Outfall 009 Dup	W	1L Poly	1	10/14/09 0510	HNO_3	2B	X													
Outfall 009	W	1L Amber	2		None	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	1		None	6A					X									Unfiltered and unpreserved analysis
		500 ml Amber	1		None	6B														
Outfall 009	W	1 Gal Poly	1		None	7						X								**Only test if first or second rain events of the year**
Outfall 009	W	1L Poly	1		None	8							X							Filter w/in 24hrs of receipt at lab

SD 10/14/09

COC Page 2 of 2 are the ~~COMPOSITE~~ samples for Outfall 009 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 009 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09 / 14:42		10-14-09 / 14:42
Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09 19:05		
Relinquished By	Date/Time:	Received By	Date/Time:

Turn-around time: (Check)

24 Hour: _____ 72 Hour: _____ 10 Day: _____

48 Hour: _____ 5 Day: _____ Normal: X

Sample Integrity: (Check)

Intact: _____ On Ice: _____

Data Requirements: (Check)

No Level IV: _____ All Level IV: _____ NPDES Level IV: X

LABORATORY REPORT

Aquatic Testing Laboratories

"dedicated to providing quality aquatic toxicity testing"

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

Date: October 22, 2009

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

Laboratory No.: A-09101505-001
Sample I.D.: ISJ1373-01 (Outfall 009)

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

Date Sampled:	10/14/09
Date Received:	10/15/09
Temp. Received:	3.9°C
Chlorine (TRC):	0.0 mg/l
Date Tested:	10/15/09 to 10/22/09

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

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

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

Result Summary:

	NOEC	TUc
Ceriodaphnia Survival:	100%	1.0
Ceriodaphnia Reproduction:	100%	1.0

Quality Control: Reviewed and approved by:

Joseph A. LeMay
Laboratory Director

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0

Aquatic Testing Laboratories

Lab No.: A-09101505-001
Client/ID: Test America – ISJ1373-01 (Outfall 009)

Date Tested: 10/15/09 to 10/22/09

TEST SUMMARY

Test type: Daily static-renewal.
Species: *Ceriodaphnia dubia*.
Age: < 24 hrs; all released within 8 hrs.
Test vessel size: 30 ml.
Number of test organisms per vessel: 1.
Temperature: 25 +/- 1°C.
Dilution water: Mod. hard reconstituted (MHRW).
QA/QC Batch No.: RT-091006.

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

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	26.1
100% Sample	100%	31.2
* Sample not statistically significantly less than Control.		

CHRONIC TOXICITY

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

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (26.1 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 10.8%)
Statistically significantly different concentrations relative difference >13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	10/15/2009 14:00	Test ID:	9101505c	Sample ID:	Outfall 009
End Date:	10/22/2009 13:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	SRW2-Industrial stormwater
Sample Date:	10/14/2009 08:10	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

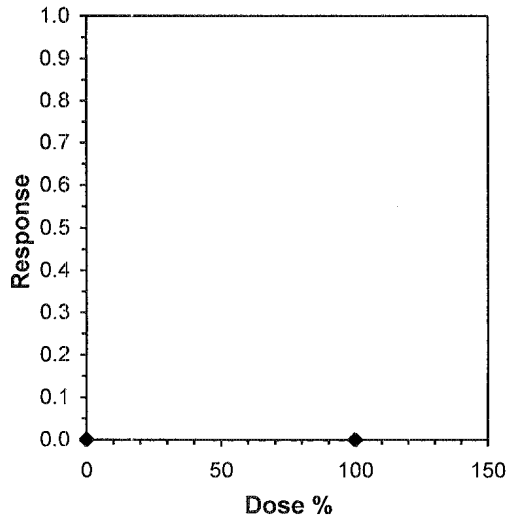
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1
Treatments vs D-Control				

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	10/15/2009 14:00	Test ID:	9101505c	Sample ID:	Outfall 009
End Date:	10/22/2009 13:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	SRW2-Industrial stormwater
Sample Date:	10/14/2009 08:10	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

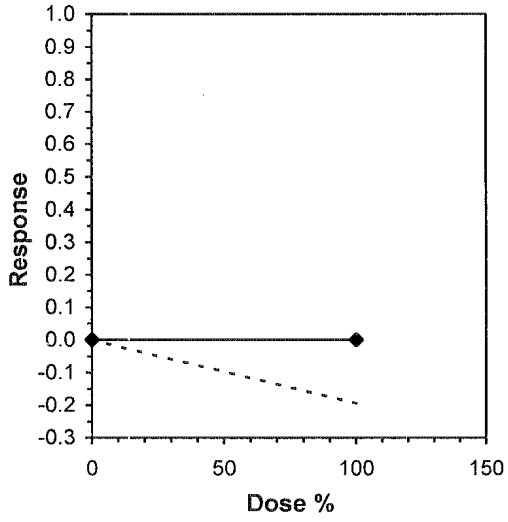
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	27.000	25.000	23.000	23.000	24.000	31.000	25.000	28.000	26.000	29.000
100	38.000	37.000	33.000	29.000	24.000	31.000	31.000	34.000	27.000	28.000

			Transform: Untransformed						1-Tailed		Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	26.100	1.0000	26.100	23.000	31.000	10.129	10				28.650	1.0000
100	31.200	1.1954	31.200	24.000	38.000	14.157	10	-3.133	1.734	2.823	28.650	1.0000

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.98002		0.905		0.16395	-0.1757
F-Test indicates equal variances (p = 0.14)	2.79173		6.54109			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	2.82285	0.10816	130.05	13.25	0.00575	1, 18
Treatments vs D-Control						

Linear Interpolation (200 Resamples)

Point	%	SD	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



CERIODAPHNIA DUBIA CHRONIC BIOASSAY
EPA METHOD 1002.0 Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-09101505-001
Client ID: TestAmerica - ISJ1373-01Outfall 009 Start Date: 10/15/2009

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:															
Time of Readings:		1400	1500	1520	1330	1330	1400	1400	1430	1430	1430	1430	1430	1430	1300
Control	DO	8.3	8.6	8.2	8.4	8.2	8.1	8.0	8.1	8.0	7.9	8.1	7.8	8.8	8.2
	pH	7.8	7.9	7.8	7.7	7.8	7.7	7.7	7.7	7.8	7.7	7.7	7.7	7.7	7.6
	Temp	24.8	24.2	24.4	24.4	25.0	24.2	24.1	24.2	24.5	24.3	24.4	24.9	25.3	24.1
100%	DO	11.1	8.2	9.2	6.9	10.8	6.7	9.9	8.0	8.5	7.8	10.5	8.3	11.1	8.2
	pH	6.9	6.9	6.7	6.9	6.4	7.2	6.2	7.1	6.5	7.0	6.2	7.1	6.3	7.0
	Temp	25.2	24.5	24.2	24.5	24.8	25.0	24.9	24.2	24.3	24.4	24.6	25.1	24.7	24.2

Additional Parameters	Control	100% Sample
Conductivity (umohms)	300	74
Alkalinity (mg/l $CaCO_3$)	65	14
Hardness (mg/l $CaCO_3$)	97	22
Ammonia (mg/l NH_3-N)	<0.2	0.6

Source of Neonates

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

Sample	Day	Number of Young Produced A	B	C	D	E	F	G	H	I	J	Total Live Young	No. Live Adults	Analyst Initials
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	3	0	5	0	0	0	0	8	10	
	4	21	3	2	0	3	0	4	3	4	4	27	10	
	5	9	7	7	7	6	8	8	8	8	12	80	10	
	6	0	0	14	0	15	18	13	0	14	0	74	10	
	7	14	15	0	13	0	0	0	17	0	13	72	10	
	Total	27	25	23	23	24	31	25	28	26	29	261	10	
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	4	0	0	0	0	4	0	0	8	10	
	4	4	4	0	4	3	5	4	0	5	4	33	10	
	5	13	14	12	13	6	9	11	13	9	12	112	10	
	6	0	0	17	0	0	17	16	17	13	12	92	10	
	7	21	19	(18)	12	15	0	0	0	0	0	67	10	
	Total	38	37	33	29	24	31	31	34	27	28	312	10	

Circled fourth brood not used in statistical analysis.
7th day only used if <60% of the surviving control females have produced their third brood.

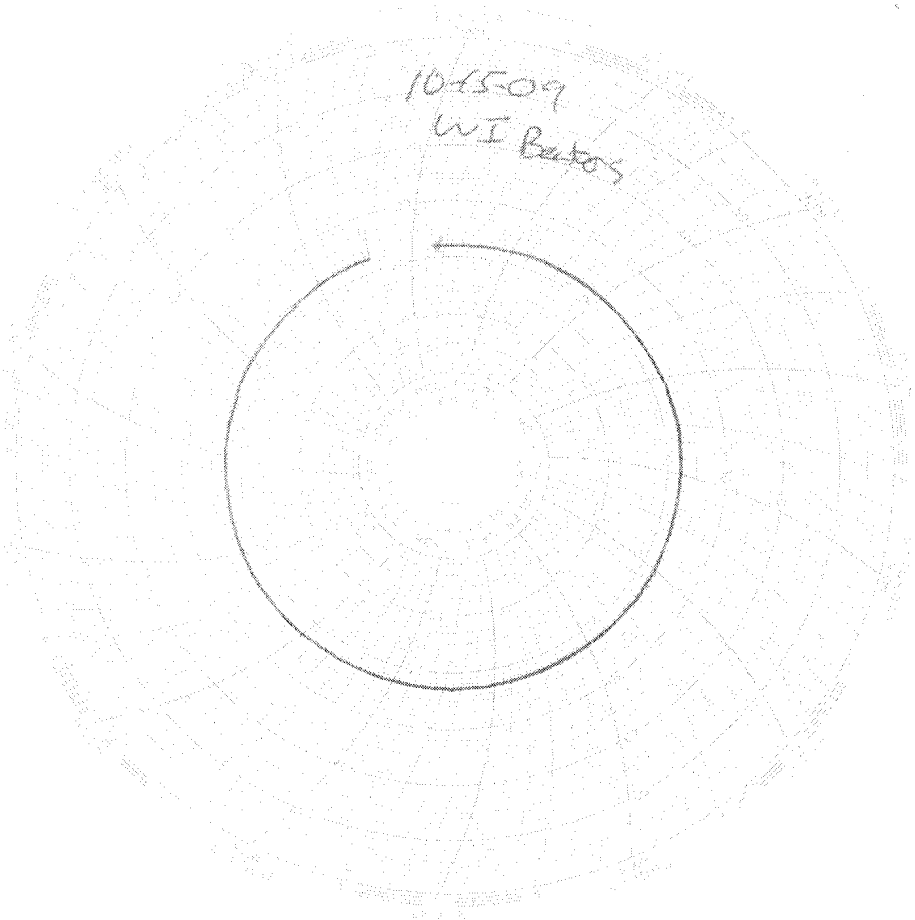
Aquatic Testing Laboratories

Test Temperature Chart

Test No: A-091015

Date Tested: 10/15/09 to 10/22/09

Acceptable Range: 25+/- 1°C



SUBCONTRACT ORDER

TestAmerica Irvine

ISJ1373

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB
4350 Transport Street, Unit 107
Ventura, CA 93003
Phone :(805) 650-0546
Fax: (805) 650-0756
Project Location: CA - CALIFORNIA
Receipt Temperature: 3.9 °C Ice: (Y) / N

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

Analysis	Units	Expires	Comments
Sample ID: ISJ1373-01	**Water**	Sampled: **10/14/09 08:10**	
Bioassay-7 dy Chrnic	N/A	10/15/09 20:10	Cerio, EPA/821-R02-013, Sub to Aquatic testing
Containers Supplied:			
1 gal Poly (L)	Out to 11 ACG		

Released By 10/15/09 715 Date/Time

Released By 10-15-09 1022 Date/Time

Received By 10/15/09 715 Date/Time

Received By ATL 10:22 10-15-09 Date/Time

Aquatic
Testing
Laboratories

REFERENCE TOXICANT DATA

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0
REFERENCE TOXICANT - NaCl

Aquatic Testing Laboratories

QA/QC Batch No.: RT-091006

Date Tested: 10/06/09 to 10/13/09

TEST SUMMARY

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

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

RESULTS SUMMARY

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	90%		24.2	
0.25 g/l	90%		24.7	
0.5 g/l	100%		24.2	
1.0 g/l	100%		17.5	*
2.0 g/l	80%		4.5	*
4.0 g/l	0%	*	0	**

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

CHRONIC TOXICITY

Survival LC50	2.5 g/l
Reproduction IC25	0.94 g/l

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (90% Survival)
≥15 young per surviving control female	Pass (25.6 young)
≥60% surviving controls had 3 broods	Pass (90% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 18.2%)
Stat. sig. diff. conc. relative difference >13%	Pass (Stat. sig. diff. conc. Relative difference= 27.7%)
Concentration response relationship acceptable	Pass (Response curve normal)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	10/6/2009 14:00	Test ID:	RT-091006c	Sample ID:	REF-Ref Toxicant
End Date:	10/13/2009 13:30	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	NACL-Sodium chloride
Sample Date:	10/6/2009	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia

Comments:

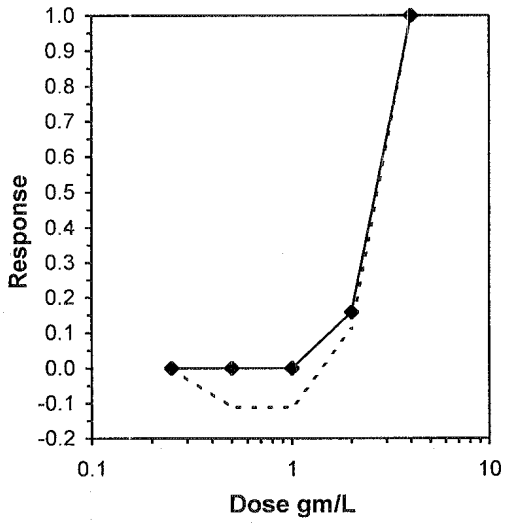
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	0.9000	1.0000	1	9	10	10			1	10
0.25	0.9000	1.0000	1	9	10	10	0.7632	0.0500	1	10
0.5	1.0000	1.1111	0	10	10	10	0.5000	0.0500	0	10
1	1.0000	1.1111	0	10	10	10	0.5000	0.0500	0	10
2	0.8000	0.8889	2	8	10	10	0.5000	0.0500	2	10
4	0.0000	0.0000	10	0	10	10			10	10

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

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	2.5352	2.1607	2.9747
5.0%	2.5900	2.1500	3.1201
10.0%	2.6307	2.0726	3.3393
20.0%	2.6505	2.3680	2.9667
Auto-0.0%	2.5352	2.1607	2.9747

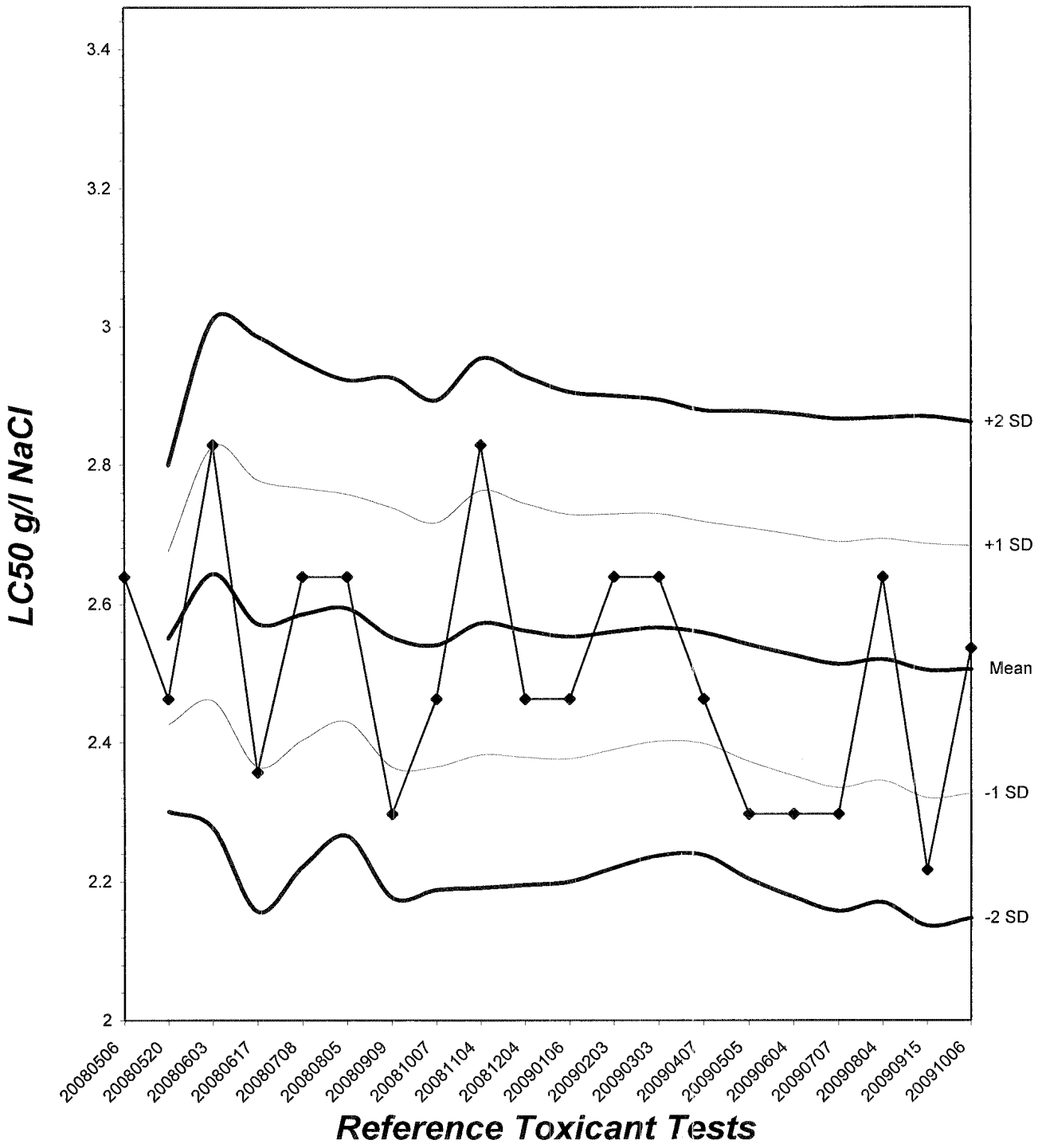


ToxCalc v5.0.23

Reviewed by:

Ceriodaphnia Chronic Survival Laboatory Control Chart

CV% = 7.12



Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	10/6/2009 14:00	Test ID:	RT-091006c	Sample ID:	REF-Ref Toxicant
End Date:	10/13/2009 13:30	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	NACL-Sodium chloride
Sample Date:	10/6/2009	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	21.000	28.000	28.000	27.000	25.000	22.000	12.000	31.000	27.000	21.000
0.25	23.000	29.000	25.000	24.000	21.000	27.000	27.000	27.000	14.000	30.000
0.5	28.000	26.000	26.000	25.000	23.000	27.000	23.000	27.000	14.000	23.000
1	19.000	19.000	18.000	10.000	10.000	23.000	22.000	17.000	18.000	19.000
2	2.000	2.000	3.000	2.000	9.000	11.000	7.000	5.000	2.000	2.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

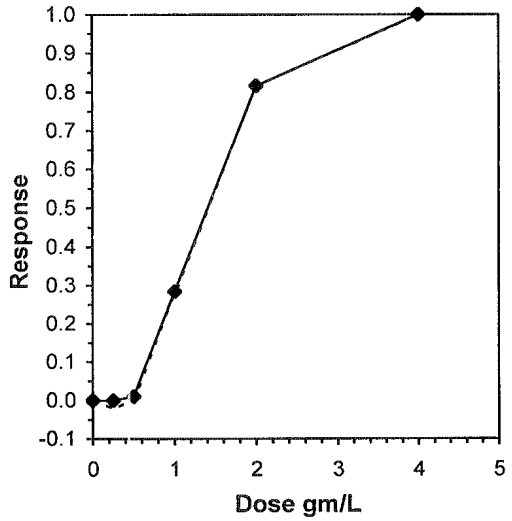
			Transform: Untransformed					Rank	1-Tailed	Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
D-Control	24.200	1.0000	24.200	12.000	31.000	22.448	10			24.450	1.0000
0.25	24.700	1.0207	24.700	14.000	30.000	18.802	10	106.50	76.00	24.450	1.0000
0.5	24.200	1.0000	24.200	14.000	28.000	16.620	10	102.50	76.00	24.200	0.9898
*1	17.500	0.7231	17.500	10.000	23.000	24.872	10	68.50	76.00	17.500	0.7157
*2	4.500	0.1860	4.500	2.000	11.000	74.994	10	55.00	76.00	4.500	0.1840
4	0.000	0.0000	0.000	0.000	0.000	0.000	10			0.000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.92101	0.947	-1.0283	1.17755
Bartlett's Test indicates equal variances (p = 0.72)	2.09329	13.2767		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	0.5	1	0.70711	
Treatments vs D-Control				

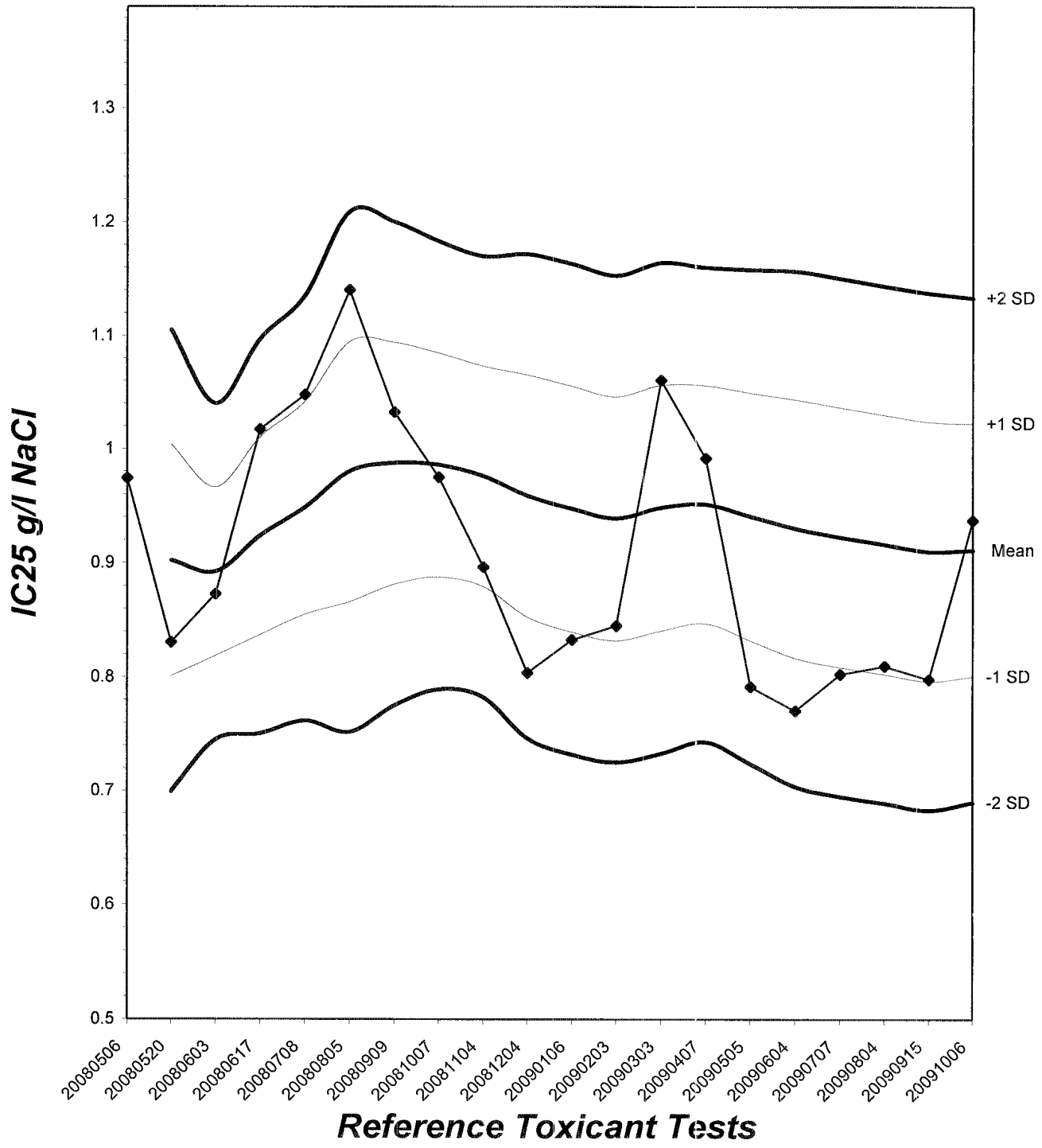
Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	0.5726	0.1620	0.1227	0.6251	-0.9888
IC10	0.6638	0.1169	0.2454	0.7571	-1.4866
IC15	0.7550	0.1041	0.4830	0.9101	-0.4781
IC20	0.8463	0.1061	0.6256	1.0370	0.2415
IC25	0.9375	0.1056	0.7388	1.1163	0.1779
IC40	1.2177	0.1042	0.9509	1.3494	-0.3527
IC50	1.4058	0.0896	1.1682	1.5195	-0.4498



Ceriodaphnia Chronic Reproduction Laboatory Control Chart

CV% = 12.2



CERIODAPHNIA DUBIA CHRONIC BIOASSAY
Reference Toxicant - NaCl
Reproduction and Survival Raw Data Sheet

Aquatic Testing Laboratories

QA/QC No.: RT-091006

Start Date:10/06/2009

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	5	3	5	4	0	4	0	0	0	0	21	10	
	4	0	0	0	0	5	0	3	3	4	3	18	10	
	5	6	9	9	10	0	8	0	0	9	7	58	10	
	6	0	0	0	0	8	0	9	10	14	0	41	10	
	7	10	16	14	13	12	10	X	15	0	11	104	9	
	Total	21	28	28	27	25	22	12	31	27	21	242	9	
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	4	5	4	0	3	0	0	0	4	0	20	10	
	4	0	0	0	4	0	4	3	4	0	4	19	10	
	5	9	10	9	0	8	0	0	9	10	0	55	10	
	6	0	0	0	9	10	7	9	0	0	10	45	10	
	7	10	14	12	11	0	16	15	14	X	16	108	9	
	Total	23	29	25	24	21	27	27	27	14	30	247	9	
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	5	4	4	0	0	0	0	0	0	0	13	10	
	4	0	0	0	4	3	4	3	3	5	4	26	10	
	5	7	10	8	0	0	0	0	0	0	0	25	10	
	6	0	0	0	9	7	8	8	10	9	9	60	10	
	7	16	12	14	12	13	15	12	14	0	10	118	10	
	Total	28	26	26	25	23	27	23	27	14	23	242	10	

Circled fourth brood not used in statistical analysis.
7th day only used if <60% of the surviving control females have produced their third brood.

CERIODAPHNIA DUBIA CHRONIC BIOASSAY
Reference Toxicant - NaCl
Reproduction and Survival Raw Data Sheet

Aquatic Testing Laboratories

QA/QC No.: RT-091006

Start Date:10/06/2009

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	4	4	2	0	0	0	0	2	0	0	12	10	
	4	0	0	0	2	3	3	4	0	3	3	18	10	
	5	7	6	7	0	0	0	0	5	6	6	37	10	
	6	0	0	0	8	7	6	6	0	0	0	27	10	
	7	8	9	9	0	0	14	12	10	9	10	81	10	
	Total	19	19	18	10	10	23	22	17	18	19	175	10	
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	2	0	0	2	10	
	4	2	2	0	0	3	2	0	0	0	2	11	10	
	5	0	0	0	2	0	0	3	0	2	0	7	10	
	6	X	0	3	0	0	4	0	3	0	0	10	9	
	7	-	0	0	0	6	5	4	X	0	0	15	8	
	Total	2	2	3	2	9	11	7	5	2	2	45	8	
4.0 g/l	1	X	X	X	X	X	X	X	X	X	X	0	0	
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	0	0	0	0	0	0	0	0	0	0	0	0	

Circled fourth brood not used in statistical analysis.
7th day only used if <60% of the surviving control females have produced their third brood.

CERIODAPHNIA DUBIA CHRONIC BIOASSAY
Reference Toxicant - NaCl
Water Chemistries Raw Data Sheet

Aquatic Testing Laboratories

QA/QC No.: RT-091006

Start Date:10/06/2009

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst Initials:															
Time of Readings:		1400	1500	1500	1430	1430	1430	1430	1500	1500	1400	1400	1330	1330	1330
Control	DO	8.9	8.3	8.5	8.4	9.1	8.0	8.4	7.9	8.3	8.1	8.4	8.0	8.2	7.9
	pH	7.7	7.9	7.7	7.8	7.8	7.9	7.7	7.8	7.7	7.8	7.5	7.8	7.8	7.8
	Temp	25.0	24.5	24.6	24.4	24.5	24.8	25.2	24.1	24.5	24.6	25.2	24.0	25.5	24.1
0.25 g/l	DO	8.9	8.4	8.5	8.3	9.0	8.0	8.3	7.9	8.3	8.0	8.3	8.0	8.4	7.9
	pH	7.7	7.9	7.7	7.8	7.8	7.9	7.8	7.8	7.7	7.8	7.8	7.8	7.8	7.8
	Temp	25.0	24.6	24.6	24.6	24.5	24.9	25.1	24.2	24.6	24.5	25.3	24.6	25.	24.4
0.5 g/l	DO	8.9	8.4	8.5	8.3	9.0	7.9	8.3	8.0	8.3	8.0	8.3	8.1	8.4	8.0
	pH	7.7	7.9	7.7	7.8	7.9	7.9	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
	Temp	24.9	24.6	24.7	24.7	24.6	25.0	25.1	24.3	24.6	24.2	25.3	25.0	25.3	24.2
1.0 g/l	DO	8.9	8.3	8.5	8.2	8.9	7.9	8.3	8.0	8.4	7.9	8.2	7.9	8.4	8.2
	pH	7.8	7.9	7.7	7.9	7.9	7.9	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.9
	Temp	24.8	24.6	24.8	24.7	24.8	25.0	25.0	24.3	24.7	24.3	25.3	24.4	25.3	24.1
2.0 g/l	DO	9.0	8.3	8.4	8.4	8.8	7.8	8.3	8.2	8.5	7.9	8.1	7.9	8.2	8.2
	pH	7.8	7.8	7.8	7.9	8.0	7.9	7.9	7.8	7.8	7.8	7.9	7.8	7.9	7.8
	Temp	24.6	24.5	25.0	24.6	25.0	24.9	24.8	24.1	24.8	24.4	25.1	24.5	25.4	24.3
4.0 g/l	DO	9.0	8.4	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.9	7.8	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	24.2	24.5	—	—	—	—	—	—	—	—	—	—	—	—

Dissolved Oxygen (DO) readings are in mg/l O_2; Temperature (Temp) readings are in °C.

Additional Parameters	Control			High Concentration		
	Day 1	Day 3	Day 5	Day 1	Day 3	Day 5
Conductivity (µS)	296	300	302	6560	3360	3400
Alkalinity (mg/l $CaCO_3$)	62	65	65	63	64	64
Hardness (mg/l $CaCO_3$)	94	97	98	95	96	96

Source of Neonates

Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	6B	4C	6C	4E	4F	5F	6F	4H	5G	6J

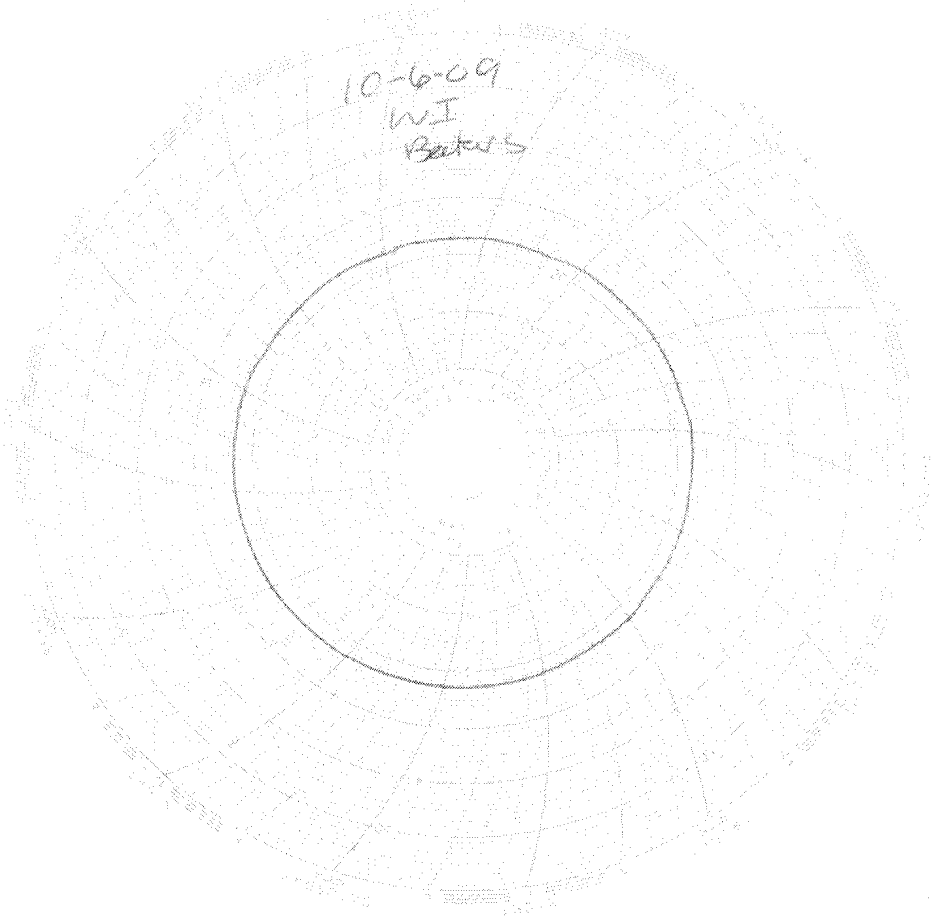
Aquatic Testing Laboratories

Test Temperature Chart

Test No: RT-091006

Date Tested: 10/06/09 to 10/13/09

Acceptable Range: 25+/- 1°C



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. BOEING NPDES

SSFL MWH-Pasadena/Boeing

Lot #: F9J160241

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Kay Clay
Project Manager

November 12, 2009

Case Narrative
LOT NUMBER: F9J160241

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on October 16, 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. **TestAmerica St. Louis' Florida certification number is E87689.** The case narrative is an integral part of this report.

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

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

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

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

METHODS SUMMARY

F9J160241

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

F9J160241

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LMP7C	001	ISJ1373-01	10/14/09	08:10

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: ISJ1373-01

Radiochemistry

Lab Sample ID: F9J160241-001
Work Order: LMP7C
Matrix: WATER

Date Collected: 10/14/09 0810
Date Received: 10/16/09 0920

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 # 9293262**		**Yld %**
Cesium 137	0.0	U	8.9	20.0	16	10/20/09	10/20/09
Potassium 40	-100	U	9500		200	10/20/09	10/20/09
Gross Alpha/Beta EPA 900				**pCi/L**	**Batch # 9293164**		**Yld %**
Gross Alpha	**1.01**	**J**	**0.61**	3.00	**0.75**	**10/20/09**	**10/23/09**
Gross Beta	**2.4**	**J**	**1.1**	4.0	**1.6**	**10/20/09**	**10/23/09**
Radium 226 by EPA 903.0 MOD				**pCi/L**	**Batch # 9290118**		**Yld % 93**
Radium (226)	0.046	U	0.081	1.00	0.14	10/17/09	11/10/09
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**Batch # 9290119**		**Yld % 96**
Radium 228	0.1	U	0.23	1.00	0.39	10/17/09	11/10/09
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**Batch # 9292238**		**Yld %**
Tritium	-113	U	85	500	190	10/19/09	10/20/09
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**Batch # 9290126**		**Yld % 57**
Strontium 90	-0.003	U	0.28	3.00	0.50	10/17/09	10/27/09
Total Uranium by KPA ASTM 5174-91				**pCi/L**	**Batch # 9292099**		**Yld %**
Total Uranium	**0.412**	**J**	**0.049**	0.677	**0.21**	**10/19/09**	**10/21/09**

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: F9J160241
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Radium 226 by EPA 903.0 MOD			**pCi/L**	**Batch # 9290118**		**Yld % 102**	**F9J170000-118B**
Radium (226)	0.010	U	0.073	1.00	0.14	10/17/09	11/10/09
Radium 228 by GFPC EPA 904 MOD			**pCi/L**	**Batch # 9290119**		**Yld % 107**	**F9J170000-119B**
Radium 228	0.07	U	0.21	1.00	0.36	10/17/09	11/10/09
SR-90 BY GFPC EPA-905 MOD			**pCi/L**	**Batch # 9290126**		**Yld % 81**	**F9J170000-126B**
Strontium 90	**0.47**	**J**	**0.23**	3.00	**0.33**	**10/17/09**	**10/27/09**
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**	**Batch # 9292238**		**Yld %**	**F9J190000-238B**
Tritium	20	U	110	500	190	10/19/09	10/20/09
Total Uranium by KPA ASTM 5174-91			**pCi/L**	**Batch # 9292099**		**Yld %**	**F9J190000-099B**
Total Uranium	0.159	U	0.018	0.677	0.21	10/19/09	10/21/09
Gross Alpha/Beta EPA 900			**pCi/L**	**Batch # 9293164**		**Yld %**	**F9J200000-164B**
Gross Alpha	0.28	U	0.42	3.00	0.71	10/20/09	10/23/09
Gross Beta	0.22	U	0.91	4.00	1.5	10/20/09	10/23/09
Gamma Cs-137 & Hits by EPA 901.1 MOD			**pCi/L**	**Batch # 9293262**		**Yld %**	**F9J200000-262B**
Cesium 137	5.4	U	4.9	20.0	6.8	10/20/09	10/20/09
Potassium 40	-100	U	8900		200	10/20/09	10/20/09

NOTE(S)

Data are incomplete without the case narrative.

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

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

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F9J160241
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ+/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Total Uranium by KPA ASTM 5174-91		**pCi/L**		**5174-91**			**F9J190000-099C**
Total Uranium	27.1	29.0	3.5	0.2		107	(90 - 118)
	Batch #:	9292099		**Analysis Date:**	10/21/09		
Total Uranium by KPA ASTM 5174-91		**pCi/L**		**5174-91**			**F9J190000-099C**
Total Uranium	5.42	5.98	0.62	0.21		110	(90 - 118)
	Batch #:	9292099		**Analysis Date:**	10/21/09		
TRITIUM (Distill) by EPA 906.0 MOD		**pCi/L**		**906.0 MOD**			**F9J190000-238C**
Tritium	4610	4580	480	190		99	(72 - 107)
	Batch #:	9292238		**Analysis Date:**	10/20/09		
Gross Alpha/Beta EPA 900		**pCi/L**		**900.0 MOD**			**F9J200000-164C**
Gross Beta	68.6	70.4	6.0	1.8		103	(77 - 123)
	Batch #:	9293164		**Analysis Date:**	10/23/09		
Gross Alpha/Beta EPA 900		**pCi/L**		**900.0 MOD**			**F9J200000-164C**
Gross Alpha	49.4	47.8	5.2	1		97	(80 - 140)
	Batch #:	9293164		**Analysis Date:**	10/23/09		
Gamma Cs-137 & Hits by EPA 901.1 MOD		**pCi/L**		**901.1 MOD**			**F9J200000-262C**
Americium 241	141000	142000	11000	600		100	(90 - 110)
Cesium 137	53100	52200	3000	200		98	(90 - 110)
Cobalt 60	87900	85200	4800	200		97	(90 - 110)
	Batch #:	9293262		**Analysis Date:**	10/20/09		

NOTE(S)

MDC is determined by instrument performance only

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F9J160241
Matrix: WATER

Parameter		Spike Amount	Result	Total Uncert. (2 σ+/-)	% Yld	% Rec	QC Control Limits	Lab Sample ID Precision	
Radium 226 by EPA 903.0 MOD			**pCi/L**	**903.0 MOD**				**F9J170000-118C**	
Radium (226)		11.3	11.5	1.1	103	102	(45 - 150)		
	Spk 2	11.3	11.7	1.1	105	104	(45 - 150)	2	%RPD
		Batch #:	9290118		**Analysis Date:**		11/10/09		
Radium 228 by GFPC EPA 904 MOD			**pCi/L**	**904 MOD**				**F9J170000-119C**	
Radium 228		6.65	5.24	0.62	108	79	(64 - 150)		
	Spk 2	6.65	5.44	0.64	109	82	(64 - 150)	4	%RPD
		Batch #:	9290119		**Analysis Date:**		11/10/09		
SR-90 BY GFPC EPA-905 MOD			**pCi/L**	**905 MOD**				**F9J170000-126C**	
Strontium 90		6.85	7.21	0.80	81	105	(90 - 143)		
	Spk 2	6.85	6.76	0.75	86	99	(90 - 143)	6	%RPD
		Batch #:	9290126		**Analysis Date:**		10/27/09		

NOTE(S)

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F9J160241
Matrix: WATER

Date Sampled: 10/14/09
Date Received: 10/16/09

Parameter	SAMPLE Result		Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ+/-)	% Yld	QC Sample ID Precision	
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**				**F9J160241-001**	
Tritium	-113	U	85		**-34**	U	**95**		107	%RPD
	Batch #:		9292238	(Sample)	9292238		(Duplicate)			
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**				**F9J160241-001**	
Cesium 137	0.0	U	8.9		**-2.0**	U	**9.3**		200	%RPD
Potassium 40	-100	U	9500		-100	U	4000		5	%RPD
	Batch #:		9293262	(Sample)	9293262		(Duplicate)			
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F9J160150-001**	
Gross Alpha	**-43**	U	**68**		14	U	99		392	%RPD
Gross Beta	**310**		**110**		**360**		**130**		16	%RPD
	Batch #:		9293164	(Sample)	9293164		(Duplicate)			

NOTE(S)

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

U Result is less than the sample detection limit.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F9J160241
Matrix: WATER

Date Sampled: 10/14/09 0810
Date Received: 10/16/09 0920

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**				**F9J160241-001**	
Total Uranium		27.1	28.8	3.5		0.412	J	0.049		105	(57 - 150)
	Spk2	27.1	28.5	3.4		0.412	J	0.049		104	(57 - 150)
									Precision:	1	%RPD

Batch #: 9292099 **Analysis date:** 10/21/09

NOTE(S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F9J160247
Matrix: WATER

Date Sampled: 10/14/09
Date Received: 10/16/09

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**			**F9J160247-001**	
Tritium	4610	4460	480		70	120		95	(33 - 150)
	Batch #:	9292238		Analysis Date:		10/20/09			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F9J160150-001**	
Gross Beta	6860	7170	610		310	110		100	(71 - 146)
	Batch #:	9293164		Analysis Date:		10/23/09			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F9J160150-001**	
Gross Alpha	4940	5490	710		-43	68		112	(33 - 150)
	Batch #:	9293164		Analysis Date:		10/23/09			

NOTE(S)

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

SUBCONTRACT ORDER

TestAmerica Irvine

ISJ1373

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: ISJ1373-01	**Water**		Sampled: **10/14/09 08:10**			
Gamma Spec-O	mg/kg	10/23/09	10/14/10 08:10	$250.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	10/23/09	04/12/10 08:10	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	10/23/09	04/12/10 08:10	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	10/23/09	11/11/09 08:10	$0.00	0%	
Radium, Combined-O	pCi/L	10/23/09	10/14/10 08:10	$238.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	10/23/09	10/14/10 08:10	$155.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	10/23/09	10/14/10 08:10	$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	10/23/09	10/14/10 08:10	$120.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:
2.5 gal Poly (J) 500 mL Amber (K)

Released By 10/15/09 17:00 Date/Time — Received By FedEx — 10/15/09 17:00 Date/Time

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

ISSB29

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	Field readings / Comments
Outfall 009	W	1L Amber	2	10/14/09 0815	HCl	1A, 1B	X	Temp °C = 60°F pH = 6.7 Time of readings = 0815

ANALYSIS REQUIRED

50 10/14/09

These Samples are the Grab Portion of Outfall 009 for this storm event. Composite Samples will follow and should be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09/14:22		10-14-09/14:22
	10-14-09 19:05		10/14/09 1905

Turn-around time: (Check)
24 Hour: _____ 72 Hour: _____ 10 Day: _____
48 Hour: _____ 5 Day: _____ Normal: X

Sample Integrity: (Check) 4°C
Intact: _____ On Ice: _____

Data Requirements: (Check)
No Level IV: _____ All Level IV: _____ NPDES Level IV: X

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

ISSB29

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)
Outfall 009	W	1L Amber	2	10/14/09 0810	HCl	1A, 1B	X

ANALYSIS REQUIRED

Field readings:

Temp °C = 60°F

pH = 6.7

Time of readings = 0815

Comments

50 10/14/09

These samples are the Grab Portion of Outfall 009 for this storm event. Composite samples will follow when received to the work order.

Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09/14:22		10-14-09/14:22
Relinquished By	Date/Time:	Received By	Date/Time:
	10-14-09 19:05		10/14/09 1905
Relinquished By	Date/Time:	Received By	Date/Time:

Turn-around time: (Check)

24 Hour: _____ 72 Hour: _____ 10 Day: _____

48 Hour: _____ 5 Day: _____ Normal: X

Sample Integrity: (Check) 4C

Intact: _____ On Ice: _____

Data Requirements: (Check)

No Level IV: _____ All Level IV: _____ NPDES Level IV: X

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F9J160241 247 251 279 283 285 289 292 294 298

CONDITION UPON RECEIPT FORM

Client: TA Irvine
Quote No: 61594, 77635
COC/RFA No: see below
Initiated By: BD Date: 10/16/09 211 Time: 0920

Shipping Information

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

Shipping # (s):*

1. 7970 2441 9226
2. 2448 0133
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Sample Temperature (s):**

1. ambient
2. √
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes: ISJ 1386, 1373
1388
1328
1380
1383
1382
1400
1367
1376

Corrective Action:
☐ Client Contact Name: _____ Informed by: _____
☐ Sample(s) processed "as is"
☐ Sample(s) on hold until: _____ If released, notify: _____
Project Management Review: K. C Date: 10-20-09

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.
ADMIN-0004, REVISED 10/21/08 \\Slsvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc

Lot # D9J160338

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

MWH – Pasadena/Boeing

Lot D9J160338

Project ISJ1373

Joseph Doak
17461 Derian Avenue
Suite 100
Irvine, CA 92614

TestAmerica Laboratories, Inc.

DiLea Griego
Project Manager

October 26, 2009

Case Narrative

Enclosed is the report for one sample received at the TestAmerica Laboratory in Denver on October 16, 2009. The results included in this report relate only to the samples in this report and have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

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

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

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

Quality Control Summary for Lot D9J160338

Sample Receiving

The cooler temperature upon receipt at the laboratory was acceptable at 0.3°C.

Total Metals- Method 245.1

The MS/MSD analyses associated with batch 9293508 exhibited spike compound recoveries and RPD values outside the QC control limits for mercury. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were observed.

Dissolved Metals- Method 245.1

The MS/MSD analyses associated with batch 9293522 exhibited spike compound recoveries outside the QC control limits for mercury. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were observed.

Quality Control Definitions of Qualifiers

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

EXECUTIVE SUMMARY - Detection Highlights

D9J160338

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
NO DETECTABLE PARAMETERS				

METHODS SUMMARY

D9J160338

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

D9J160338

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

D9J160338

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LMQ3G	001	ISJ1373-01	10/14/09	08:10

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

D9J160338

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 245.1		9293508	9293301
	WATER	MCAWW 245.1		9293522	9293314

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Total Metals

CLP-Like Forms

Lot ID: D9J160338

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: -001

Batch: 9293508

Total Metals Analysis
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9J160338

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

SOW No.: _____

Sample ID.	Lab Sample No.
ISJ1373-01	D9J160338-001

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: 10/23/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	ISJ1373-01
Lot/SDG Number:	D9J160338	**Lab Sample ID:**	D9J160338-001
Matrix:	WATER	**Lab WorkOrder:**	LMQ3G
% Moisture:	N/A	**Date/Time Collected:**	10/14/09 08:10
Basis:	Wet	**Date/Time Received:**	10/16/09 09:00
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293508	**Date/Time Analyzed:**	10/21/09 11:20
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

Total Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Mercury	7.000	6.648	95.0	5.000	5.179	103.6	5.335	106.7	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.: D9J160338

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	0.18500	92.5					

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J160338	**Lab Sample ID:**	D9J200000-508B
Matrix:	WATER	**Lab WorkOrder:**	LMXVC
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293508	**Date/Time Analyzed:**	10/21/09 11:04
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.: D9J160338

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	-0.028	B			0.027	U	CV

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J160338	**MS Lab Sample ID:**	D9J160335-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LMQ24
% Moisture:	N/A	**Date/Time Collected:**	10/14/09 08:00
Basis:	Wet	**Date/Time Received:**	10/16/09 09:00
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293508	**Date/Time Analyzed:**	10/21/09 11:11
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	1.59		31	N	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:	D9J160338	**MSD Lab Sample ID:**	D9J160335-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LMQ24
% Moisture:	N/A	**Date/Time Collected:**	10/14/09 08:00
Basis:	Wet	**Date/Time Received:**	10/16/09 09:00
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293508	**Date/Time Analyzed:**	10/21/09 11:13
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	2.04		40	N	25	*	90 - 110	10

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Total Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J160338	**Lab Sample ID:**	D9J200000-508C
Matrix:	WATER	**Lab WorkOrder:**	LMXVC
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293508	**Date/Time Analyzed:**	10/21/09 11:06
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	4.89	98		90 - 110

Total Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

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

Flame AA ID Number: Cetac M7500 Hg

Furnace AA ID Number:

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

Comments: _____

Total Metals Analysis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	10/21/2009	10.0	10.0
LAB MS/MSD MS	10/21/2009	10.0	10.0
LAB MS/MSD MSD	10/21/2009	10.0	10.0
ISJ1373-01	10/21/2009	10.0	10.0
MB9293508	10/21/2009	10.0	10.0
Check Sample	10/21/2009	10.0	10.0

Comments:

Total Metals Analysis

-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J160338

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 10/21/2009 End Date: 10/21/2009

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	10:37																X									
Std1	1.00	10:39																X									
Std2	1.00	10:41																X									
Std3	1.00	10:43																X									
Std4	1.00	10:46																X									
Std5	1.00	10:48																X									
Std6	1.00	10:50																X									
ICB	1.00	10:53																X									
ICV	1.00	10:55																X									
RL	1.00	10:58																X									
CCV	1.00	11:00																X									
CCB	1.00	11:02																X									
MB9293508	1.00	11:04																X									
Check Sample	1.00	11:06																X									
INTRA-LAB QC	1.00	11:09																X									
LAB MS/MSD MS	1.00	11:11																X									
LAB MS/MSD MSD	1.00	11:13																X									
ISJ1373-01	1.00	11:20																X									
CCV	1.00	11:26																X									
CCB	1.00	11:29																X									

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Dissolved Metals

CLP-Like Forms

Lot ID: D9J160338

Client: TestAmerica-Irvine

Method: 245.1

Associated Samples: -001

Batch: 9293522

Dissolved Metals Analysis

COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9J160338

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

SOW No.: _____

Sample ID.	Lab Sample No.
ISJ1373-01	D9J160338-001

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: 10/23/09 Title: Metals Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	ISJ1373-01
Lot/SDG Number:	D9J160338	**Lab Sample ID:**	D9J160338-001
Matrix:	WATER	**Lab WorkOrder:**	LMQ3G
% Moisture:	N/A	**Date/Time Collected:**	10/14/09 08:10
Basis:	Wet	**Date/Time Received:**	10/16/09 09:00
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293522	**Date/Time Analyzed:**	10/21/09 12:51
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

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

Dissolved Metals Analysis

-2A-

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Mercury	7.000	6.648	95.0	5.000	5.179	103.6	5.166	103.3	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.: D9J160338

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	5.463	109.3			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.: D9J160338

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	0.18500	92.5					

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	
Lot/SDG Number:	D9J160338	**Lab Sample ID:**	D9J200000-522B
Matrix:	WATER	**Lab WorkOrder:**	LMXWE
% Moisture:		**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293522	**Date/Time Analyzed:**	10/21/09 12:33
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

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

Dissolved Metals Analysis

-3-

BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

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:

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:	D9J160338	**MS Lab Sample ID:**	D9J160335-001S
Matrix:	WATER	**MS Lab WorkOrder:**	LMQ24
% Moisture:	N/A	**Date/Time Collected:**	10/14/09 08:00
Basis:	Wet	**Date/Time Received:**	10/16/09 09:00
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293522	**Date/Time Analyzed:**	10/21/09 12:46
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	3.13		62	N	90 - 110

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine

Dissolved Metals Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	LAB MS/MSD
Lot/SDG Number:	D9J160338	**MSD Lab Sample ID:**	D9J160335-001D
Matrix:	WATER	**MSD Lab WorkOrder:**	LMQ24
% Moisture:	N/A	**Date/Time Collected:**	10/14/09 08:00
Basis:	Wet	**Date/Time Received:**	10/16/09 09:00
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293522	**Date/Time Analyzed:**	10/21/09 12:48
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	2.97		59	N	5.3		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:	D9J160338	**Lab Sample ID:**	D9J200000-522C
Matrix:	WATER	**Lab WorkOrder:**	LMXWE
% Moisture:	N/A	**Date/Time Collected:**	
Basis:	Wet	**Date/Time Received:**	
Analysis Method:	245.1	**Date Leached:**	
Unit:	ug/L	**Date/Time Extracted:**	10/21/09 08:30
QC Batch ID:	9293522	**Date/Time Analyzed:**	10/21/09 12:35
Sample Aliquot:	10 mL	**Instrument ID:**	023
Dilution Factor:	1		

Analyte	True	Found	%Rec	Q	Limits
Mercury	5.00	5.17	103		90 - 110

Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

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

Flame AA ID Number: Cetac M7500 Hg

Furnace AA ID Number:

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

Comments: _____

Dissolved Metals Analysis

-13-

PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9J160338

Method: CV Prep Method: _____

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
INTRA-LAB QC	10/21/2009	10.0	10.0
LAB MS/MSD MS	10/21/2009	10.0	10.0
LAB MS/MSD MSD	10/21/2009	10.0	10.0
ISJ1373-01	10/21/2009	10.0	10.0
MB9293522	10/21/2009	10.0	10.0
Check Sample	10/21/2009	10.0	10.0

Comments:

Dissolved Metals Analysis
-14-

ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9J160338

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 10/21/2009 End Date: 10/21/2009

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	10:37																X									
Std1	1.00	10:39																X									
Std2	1.00	10:41																X									
Std3	1.00	10:43																X									
Std4	1.00	10:46																X									
Std5	1.00	10:48																X									
Std6	1.00	10:50																X									
ICB	1.00	10:53																X									
ICV	1.00	10:55																X									
RL	1.00	10:58																X									
CCV	1.00	11:00																X									
CCB	1.00	11:02																X									
CCV	1.00	12:29																X									
CCB	1.00	12:31																X									
MB9293522	1.00	12:33																X									
Check Sample	1.00	12:35																X									
INTRA-LAB QC	1.00	12:37																X									
LAB MS/MSD MS	1.00	12:46																X									
LAB MS/MSD MSD	1.00	12:48																X									
ISJ1373-01	1.00	12:51																X									
CCV	1.00	12:57																X									
CCB	1.00	13:00																X									

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

TestAmerica Denver

Sample Receiving Checklist

Lot #: D95160338 Date/Time Received: 10.16.09 0900

Company Name & Sampling Site: TA IRVINE - BOEING - 1SJ1373

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

Quote #: 72743

Special Instructions:
- Log total & Diss. as appropriate.
- normal tat

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

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 0.3

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 # D95160335

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? ✓	
☑	☐	☐	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).

SUBCONTRACT ORDER 0.3°

TestAmerica Irvine

ISJ1373

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: ISJ1373-01	**Water**		Sampled: **10/14/09 08:10**			
Level 4 + EDD-OUT	N/A	10/23/09	11/11/09 08:10	$0.00	0%	Sub to Denver, transfer file EDD
Mercury - 245.1, Diss -OUT	ug/l	10/23/09	11/11/09 08:10	$36.00	0%	Denver, Boeing, J flags
Mercury - 245.1-OUT	ug/l	10/23/09	11/11/09 08:10	$36.00	0%	Denver, Boeing, permit, J flags,
Containers Supplied:						
1 L Poly w/HNO3 (B)	125 mL Poly w/HNO3 (Dissolved) (N)					

Released By	Date/Time	Received By	Date/Time
	10/15/09 17:00	FedEx	10/15/09 17:00
Released By	Date/Time	Received By	Date/Time
			10.16.09 0900

Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9J160338

Client: TA-Irvine

Batch(es) #: 9293508 & 9293522

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: 10/21/09

Metals Raw Data RoadMap

LotID		*Metal*	*WorkOrder*	*Anal Date*	*TestDesc*	*Batch*	*File Id*	*Instr*
D9J160338	1	HG	LMQ3G1A	20091021	M2451DS	9293522	091021AA	023
D9J160338	1	HG	LMQ3G1A	20091021	M2451_L	9293508	091021AA	023

METALS
PREPARATION LOGS
ICP

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 #: 9293508

Prep Date: 10/21/09	Prep By: CGG	Analysis Date:10/21/09	Analyst: CGG
Balance ID: H53865		***Thermometer ID:*** MT 4025	

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	8:30	95	10:30	95

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:

Reagents Used

Reagent	Manufacturer	Lot #	Standards Log #	Vol (mL)
HNO_3	JT Baker	H12022		0.25
H_2SO_4	Fisher	G30047		0.5
HCl	JT Baker	H19031		used by instrument
10% $SnCl_2$	Fisher	G45629	STD-6425-09	added by instrument
NaCl / NH_2OH	Fisher	G28621	STD-6077-09	0.6
	Fisher	G42610		
$KMnO_4$	Fisher	G45641	STD-6424-09	1.5
$K_2S_2O_8$	Fisher	G45629	STD-5798-09	0.8

Parent Calibration Stock Standards

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

Standards Preparation **Final digestate volume = 10 mls**

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

Second Source ICV Intermediate Stock Standard Prep **Standards Log #:** STD-6414-09

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 Dindale ***Date:*** 10/21/09

REVIEWED BY: [signature] **Date:** 10/21/09

Batch Number: **9293508**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: US

Prep Date: ~~10/20/09~~ US 10/21/09
Due Date: 10/26/09

Lot	Work Order			Initial Weight/Volume
D9J200000 Water	**LMXVC**	B 1	Due Date: SDG:	10 mL
D9J200000 Water	**LMXVC**	C 2	Due Date: SDG:	10 mL
D9J160335 Water	**LMQ24** Total	3	Due Date: 10/26/09 SDG:	10 mL
D9J160335 Water	**LMQ24** Total	S 4	Due Date: 10/26/09 SDG:	10 mL
D9J160335 Water	**LMQ24** Total	D 5	Due Date: 10/26/09 SDG:	10 mL
D9J160338 Water	**LMQ3G** Total	6	Due Date: 10/26/09 SDG:	10 mL
D9J160339 Water	**LMQ3R** Total	7	Due Date: 10/26/09 SDG:	10 mL
D9J160341 Water	**LMQ30** Total	8	Due Date: 10/26/09 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

US 10/21/09

Start 8:30	95°C
End 10:30	95°

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 #: 9293522

Prep Date: 10/21/09	Prep By: CGG	Analysis Date:10/21/09	Analyst: CGG
Balance ID: H53865		***Thermometer ID:*** MT 4025	

Digestion Cycles	Start Time	Temp °C	End Time	Temp °C
	8:30	95	10:30	95

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	H12022		0.25
H_2SO_4	Fisher	G30047		0.5
HCl	JT Baker	H19031		used by instrument
10% $SnCl_2$	Fisher	G45629	STD-6425-09	added by instrument
NaCl / NH_2OH	Fisher	G28621	STD-6077-09	0.6
	Fisher	G42610		
$KMnO_4$	Fisher	G45641	STD-6424-09	1.5
$K_2S_2O_8$	Fisher	G45629	STD-5798-09	0.8

Parent Calibration Stock Standards

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

Standards Preparation **Final digestate volume = 10 mls**

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

Second Source ICV Intermediate Stock Standard Prep **Standards Log #:** STD-6414-09

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

Comments Dissolved - Boeing

I certify that all information above is correct and complete.

Signature: Chris Grisdale ***Date:*** 10/21/09

REVIEWED BY: [illegible] **Date:** 10/21/09

Batch Number: **9293522**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: CD

Prep Date: ~~10/20/09~~ CD 10/21/09
Due Date: 10/26/09

Lot	Work Order			Initial Weight/Volume
D9J200000 Water	**LMXWE**	B 1	Due Date: SDG:	10 mL
D9J200000 Water	**LMXWE**	C 2	Due Date: SDG:	10 mL
D9J160335 Water	**LMQ24** Dissolved	3	Due Date: 10/26/09 SDG:	10 mL
D9J160335 Water	**LMQ24** Dissolved	S 4	Due Date: 10/26/09 SDG:	10 mL
D9J160335 Water	**LMQ24** Dissolved	D 5	Due Date: 10/26/09 SDG:	10 mL
D9J160338 Water	**LMQ3G** Dissolved	6	Due Date: 10/26/09 SDG:	10 mL
D9J160339 Water	**LMQ3R** Dissolved	7	Due Date: 10/26/09 SDG:	10 mL
D9J160341 Water	**LMQ30** Dissolved	8	Due Date: 10/26/09 SDG:	10 mL

Comments:

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

METALS
SAMPLE DATA
CVAA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Denver

Standards Preparation Logbook Record

Oct-21-2009

Logbook: \\Densvr06\StdsLog\metals.std

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

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

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

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

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

Component	Initial Conc (%)	Final Conc (%)
HG	100.00	100.00

STD6413-09, 10 mg/L Hg Calibration Std Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-20-2009
Date Expires(1): 11-20-2009 (1 Month)
Date Expires(2): 04-02-2010 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

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

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

STD6414-09, Hg Inorganic Ventures ICV 700ppb

Analyst: grisdalec

Solvent: 1% HNO3 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-20-2009
Date Expires(1): 11-03-2009 (2 Weeks)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

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

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

STD6415-09, 100 ppb Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-21-2009
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6413-09, 10 mg/L Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 11-20-2009 Parent Date Expires(2): 04-02-2010

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

STD6416-09, Blank Daily Hg Calibration Std

Analyst: grisdalec

Vendor: Baker Lot No.: H12022
Solvent: 1% HN03
Date Prep./Opened: 10-21-2009
Date Expires(1): 04-21-2010 (6 Months)
Date Expires(2): 10-21-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

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

STD6418-09, 0.5 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-21-2009
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6415-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 10-22-2009 Parent Date Expires(2): 04-02-2010

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

STD6419-09, 1.0 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-21-2009
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6415-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 10-22-2009 Parent Date Expires(2): 04-02-2010

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

STD6420-09, 2.0 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-21-2009
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6415-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 2.0000
Parent Date Expires(1): 10-22-2009 Parent Date Expires(2): 04-02-2010

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

STD6421-09, 5.0 ppb Daily Hg Calibration Std

Analyst: grisdalec

Solvent: 1% HN03 Lot No.: H12022 Volume (ml): 100.00
Date Prep./Opened: 10-21-2009
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6415-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 10-22-2009 Parent Date Expires(2): 04-02-2010

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

STD6422-09, 10.0 ppb Daily Hg Calibration Std — Analyst: grisdalec

Solvent: 1% HN03 — Lot No.: H12022 — Volume (ml): 100.00
Date Prep./Opened: 10-21-2009 — Date Consumed: 12-06-2006
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6415-09, 100 ppb Hg Calibration Std — Aliquot Amount (ml): 10.000
Parent Date Expires(1): 10-22-2009 Parent Date Expires(2): 04-02-2010

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

STD6423-09, Hg Daily ICV 7ppb Calibration Std — Analyst: grisdalec

Solvent: 1% HNO3 — Lot No.: H12022 — Volume (ml): 100.00
Date Prep./Opened: 10-21-2009
Date Expires(1): 10-22-2009 (1 Day)
Date Expires(2): 04-02-2010 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD6414-09, Hg Inorganic Ventures ICV 700ppb — Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 11-03-2009 Parent Date Expires(2): 04-02-2010

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

Reviewed By: Christopher Grisdale 10/21/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 10/21/09 15:58:20

Sequence: 091021AA **Date:** 10/21/09 10:37 **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		10/21/09 10:37		☐
2	Std1	= 0.200			0.20	1.0	0.20	ppb	100.0%	10/21/09 10:39		☐
3	Std2	= 0.500			0.50	1.0	0.50	ppb	100.0%	10/21/09 10:41		☐
4	Std3	= 1.00			1.00	1.0	1.00	ppb	100.0%	10/21/09 10:43		☐
5	Std4	= 2.00			2.00	1.0	2.00	ppb	100.0%	10/21/09 10:46		☐
6	Std5	= 5.00			5.00	1.0	5.00	ppb	100.0%	10/21/09 10:48		☐
7	Std6	= 10.0			10.00	1.0	10.00	ppb	100.0%	10/21/09 10:50		☐
8	ICB				-0.02	1.0	-0.02	ppb		10/21/09 10:53		☐
9	ICV	= 7.00			6.65	1.0	6.65	ppb	95.0%	10/21/09 10:55		☐
10	RL	= 0.200			0.19	1.0	0.19	ppb		10/21/09 10:58		☐
11	CCV	= 5.00			5.18	1.0	5.18	ppb	103.6%	10/21/09 11:00		☐
12	CCB				-0.02	1.0	-0.02	ppb		10/21/09 11:02		☐
13	LMXVCB	D9J200000	9293508		-0.01	1.0	-0.01	ppb		10/21/09 11:04		☐
14	LMXVCC	D9J200000 = 5.00	9293508		4.89	1.0	4.89	ppb	97.7%	10/21/09 11:06		☐
15	LMQ24	D9J160335-1	9293508	AQUEOUS	0.02	1.0	0.02	ppb		10/21/09 11:09		☐
16	LMQ24S	D9J160335-1 = 5.00	9293508	AQUEOUS	1.59	1.0	1.59	ppb		10/21/09 11:11		☐
17	LMQ24D	D9J160335-1 = 5.00	9293508	AQUEOUS	2.04	1.0	2.04	ppb		10/21/09 11:13		☐
~~18~~	~~LMQ24S~~	~~D9J160335-1 = 5.00~~	~~9293508~~	~~AQUEOUS~~	~~1.71~~	~~1.0~~	~~1.71~~	~~ppb~~		~~10/21/09 11:15~~	NA confirms above.	☐
~~19~~	~~LMQ24D~~	~~D9J160335-1 = 5.00~~	~~9293508~~	~~AQUEOUS~~	~~2.19~~	~~1.0~~	~~2.19~~	~~ppb~~		~~10/21/09 11:17~~	CJ 10/21/09	☐
20	LMQ3G	D9J160338-1	9293508	AQUEOUS	-0.06	1.0	-0.06	ppb		10/21/09 11:20		☐
21	LMQ3R	D9J160339-1	9293508	AQUEOUS	-0.02	1.0	-0.02	ppb		10/21/09 11:22		☐
22	LMQ30	D9J160341-1	9293508	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 11:24		☐
23	CCV	= 5.00			5.34	1.0	5.34	ppb	106.7%	10/21/09 11:26		☐
24	CCB				-0.03	1.0	-0.03	ppb		10/21/09 11:29		☐
25	LMTKEBT	D9J180000	9293533		-0.02	1.0	-0.02	ppb		10/21/09 11:31		☐
26	LMX0CCT	D9J200000 = 5.00	9293533		5.12	1.0	5.12	ppb	102.4%	10/21/09 11:33		☐
27	LMNGVT	D9J150315-2	9293533	LEACHATE	-0.02	1.0	-0.02	ppb		10/21/09 11:35		☐
28	LMNGVST	D9J150315-2 = 5.00	9293533	LEACHATE	5.45	1.0	5.45	ppb		10/21/09 11:38		☐
29	LMNGVDT	D9J150315-2 = 5.00	9293533	LEACHATE	5.54	1.0	5.54	ppb		10/21/09 11:40		☐
~~30~~	~~LMNGVST~~	~~D9J150315-2 = 5.00~~	~~9293533~~	~~LEACHATE~~	~~5.38~~	~~1.0~~	~~5.38~~	~~ppb~~		~~10/21/09 11:42~~	NA confirms above	☐
~~31~~	~~LMNGVDT~~	~~D9J150315-2 = 5.00~~	~~9293533~~	~~LEACHATE~~	~~5.45~~	~~1.0~~	~~5.45~~	~~ppb~~		~~10/21/09 11:44~~	CJ 10/21/09	☐
32	LMNHAT	D9J150315-5	9293533	LEACHATE	-0.02	1.0	-0.02	ppb		10/21/09 11:46		☐
33	LMNHET	D9J150315-6	9293533	LEACHATE	-0.02	1.0	-0.02	ppb		10/21/09 11:49		☐
34	LMNHJT	D9J150315-7	9293533	LEACHATE	-0.01	1.0	-0.01	ppb		10/21/09 11:51		☐

/CJ 10/21/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 10/21/09 15:58:20

Sequence: 091021AA **Date:** 10/21/09 10:37 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
35	CCV	= 5.00			5.64	1.0	5.64	ppb	112.9%	10/21/09 11:53		☐
36	CCB				-0.03	1.0	-0.03	ppb		10/21/09 11:55		☐
37	LMXWPBF	D9J200000	9293528		-0.02	1.0	-0.02	ppb		10/21/09 11:58		☐
38	LMXWPCF	D9J200000 = 5.00	9293528		5.02	1.0	5.02	ppb	100.4%	10/21/09 12:00		☐
39	LMXE1F	D9J200249-1	9293528	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 12:02		☐
40	LMXE1SF			UNKNOWN	5.09	1.0	5.09	ppb		10/21/09 12:04		☐
41	LMXE1DF			UNKNOWN	5.36	1.0	5.36	ppb		10/21/09 12:06		☐
42	LMXE5F	D9J200249-3	9293528	AQUEOUS	-0.00	1.0	-0.00	ppb		10/21/09 12:09		☐
43	LMXE9F	D9J200249-5	9293528	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 12:11		☐
44	LMXECF	D9J200246-1	9293528	AQUEOUS	9.96	1.0	9.96	ppb		10/21/09 12:13		☐
45	LMXE6F	D9J200246-5	9293528	AQUEOUS	8.79	1.0	8.79	ppb		10/21/09 12:17		☐
46	CCV	= 5.00			5.60	1.0	5.60	ppb	111.9%	10/21/09 12:21		☐
47	CCB				-0.02	1.0	-0.02	ppb		10/21/09 12:23		☐
48	CCV	= 5.00			5.17	1.0	5.17	ppb	103.3%	10/21/09 12:29		☐
49	CCB				-0.02	1.0	-0.02	ppb		10/21/09 12:31		☐
50	LMXWEBF	D9J200000	9293522		-0.01	1.0	-0.01	ppb		10/21/09 12:33		☐
51	LMXWECF	D9J200000 = 5.00	9293522		5.17	1.0	5.17	ppb	103.5%	10/21/09 12:35		☐
52	LMQ24F	D9J160335-1	9293522	AQUEOUS	0.01	1.0	0.01	ppb		10/21/09 12:37		☐
~~53~~	~~LMQ24SF~~	~~D9J160335-1 = 5.00~~	~~9293522~~	~~AQUEOUS~~	~~3.48~~	~~1.0~~	~~3.48~~	~~ppb~~		~~10/21/09 12:42~~	NA use below.	☐
~~54~~	~~LMQ24DF~~	~~D9J160335-1 = 5.00~~	~~9293522~~	~~AQUEOUS~~	~~5.43~~	~~1.0~~	~~5.43~~	~~ppb~~		~~10/21/09 12:44~~	CD 10/21/09	☐
55	LMQ24SF	D9J160335-1 = 5.00	9293522	AQUEOUS	3.13	1.0	3.13	ppb		10/21/09 12:46		☐
56	LMQ24DF	D9J160335-1 = 5.00	9293522	AQUEOUS	2.97	1.0	2.97	ppb		10/21/09 12:48		☐
57	LMQ3GF	D9J160338-1	9293522	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 12:51		☐
58	LMQ3RF	D9J160339-1	9293522	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 12:53		☐
59	LMQ30F	D9J160341-1	9293522	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 12:55		☐
60	CCV	= 5.00			5.46	1.0	5.46	ppb	109.3%	10/21/09 12:57		☐
61	CCB				-0.02	1.0	-0.02	ppb		10/21/09 13:00		☐
62	LMXV3B	D9J200000	9293520		-0.02	1.0	-0.02	ppb		10/21/09 13:02		☐
63	LMXV3C	D9J200000 = 5.00	9293520		5.15	1.0	5.15	ppb	103.0%	10/21/09 13:04		☐
64	LMXE3	D9J200249-2	9293520	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 13:06		☐
65	LMXE3S			UNKNOWN	4.86	1.0	4.86	ppb		10/21/09 13:08		☐
66	LMXE3D			UNKNOWN	4.91	1.0	4.91	ppb		10/21/09 13:11		☐
67	LMXE7	D9J200249-4	9293520	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 13:13		☐
68	LMXFA	D9J200249-6	9293520	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 13:15		☐

CD 10/21/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 10/21/09 15:58:20

Sequence: 091021AA **Date:** 10/21/09 10:37 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
69	~~LMXEC~~	~~D0J200246-1~~	~~9293520~~	~~AQUEOUS~~	~~10.93~~	~~1.0~~	~~10.93~~	ppb		10/21/09 13:17		☐
70	LMXEC 10X	D9J200246-1	9293520	AQUEOUS	0.95	10.0	9.53	ppb		10/21/09 13:23		☐
71	~~LMXE0~~	~~D9J200246-3~~	~~9293520~~	~~AQUEOUS~~	~~10.71~~	~~1.0~~	~~10.71~~	ppb		~~10/21/09 13:25~~		☐
72	LMXE0 10X	D9J200246-3	9293520	AQUEOUS	1.10	10.0	10.95	ppb		10/21/09 13:30		☐
73	~~LMXE6~~	~~D9J200246-5~~	~~9293520~~	~~AQUEOUS~~	~~10.37~~	~~1.0~~	~~10.37~~	ppb		~~10/21/09 13:32~~		☐
74	LMXE6 10X	D9J200246-5	9293520	AQUEOUS	1.08	10.0	10.82	ppb		10/21/09 13:37		☐
75	CCV	= 5.00			5.22	1.0	5.22	ppb	104.4%	10/21/09 13:39	Samples > LR, see appropriate dilutions for each. CD 10/21/09	☐
76	CCB				0.01	1.0	0.01	ppb		10/21/09 13:42		☐
77	LML8NB	D9J150000	9288328		-0.02	1.0	-0.02	ppb		10/21/09 13:44		☐
78	LML8NC	D9J150000 = 5.00	9288328		5.16	1.0	5.16	ppb	103.2%	10/21/09 13:46		☐
79	LME16	D9J120128-1	9288328	AQUEOUS	0.27	1.0	0.27	ppb		10/21/09 13:48		☐
80	LME2L	D9J120128-2	9288328	AQUEOUS	0.51	1.0	0.52	ppb		10/21/09 13:50		☐
81	LME2M	D9J120128-3	9288328	AQUEOUS	1.77	1.0	1.77	ppb		10/21/09 13:53		☐
82	CCV	= 5.00			5.22	1.0	5.22	ppb	104.5%	10/21/09 13:55		☐
83	CCB				-0.08	1.0	-0.08	ppb		10/21/09 13:57		☐
84	LME2P	D9J120128-4	9288328	AQUEOUS	1.72	1.0	1.72	ppb		10/21/09 13:59		☐
85	~~LME2T~~	~~D9J120128-5~~	~~9288328~~	~~AQUEOUS~~	~~61.70~~	~~1.0~~	~~61.70~~	ppb		~~10/21/09 14:02~~		☐
86	LME2T 10X	D9J120128-5	9288328	AQUEOUS	8.42	10.0	84.24	ppb		10/21/09 14:07		☐
87	~~LME2W~~	~~D9J120128-6~~	~~9288328~~	~~AQUEOUS~~	~~72.17~~	~~1.0~~	~~72.17~~	ppb		~~10/21/09 14:09~~		☐
88	~~LME2W 10X~~	~~D9J120128-6~~	~~9288328~~	~~AQUEOUS~~	~~24.74~~	~~10.0~~	~~247.39~~	ppb		~~10/21/09 14:15~~		☐
89	LME2W 100X	D9J120128-6	9288328	AQUEOUS	3.53	100	353.00	ppb		10/21/09 14:20		☐
90	LME2X	D9J120128-7	9288328	AQUEOUS	0.56	1.0	0.56	ppb		10/21/09 14:22		☐
91	CCV	= 5.00			5.51	1.0	5.51	ppb	110.3%	10/21/09 14:24		☐
92	CCB				-0.04	1.0	-0.04	ppb		10/21/09 14:34		☐
93	LME24	D9J120128-8	9288328	AQUEOUS	3.18	1.0	3.18	ppb		10/21/09 14:36		☐
94	LME26	D9J120128-9	9288328	AQUEOUS	0.68	1.0	0.68	ppb		10/21/09 14:39		☐
95	~~LMGLV~~	~~D9J130167-1~~	~~9288328~~	~~AQUEOUS~~	~~1.58~~	~~1.0~~	~~-1.58~~	ppb		~~10/21/09 14:41~~	NA see rerun below CD 10/21/09	☐
96	LMGLV	D9J130167-1	9288328	AQUEOUS	-0.14	1.0	-0.14	ppb		10/21/09 14:45		☐
97	LMGLVS	D9J130167-1 = 5.00	9288328	AQUEOUS	5.20	1.0	5.20	ppb		10/21/09 14:47		☐
98	LMGLVD	D9J130167-1 = 5.00	9288328	AQUEOUS	5.16	1.0	5.16	ppb		10/21/09 14:49		☐
99	CCV	= 5.00			4.23	1.0	4.23	ppb	84.6%	10/21/09 14:52		☐
100	CCB				0.00	1.0	0.00	ppb		10/21/09 14:54		☐
101	LMGL0	D9J130167-2	9288328	AQUEOUS	-0.02	1.0	-0.02	ppb		10/21/09 14:56		☐
102	LMGL2	D9J130167-3	9288328	AQUEOUS	0.01	1.0	0.02	ppb		10/21/09 14:58		☐

CD 10/21/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 10/21/09 15:58:20

Sequence: 091021AA **Date:** 10/21/09 10:37 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

#	Sample ID	Lot No.	Batch	Matrix	Raw	DF	Result	Units	%R	Analyzed Date	Comment	Q
103	LMGL5	D9J130167-4	9288328	AQUEOUS	-0.04	1.0	-0.04	ppb		10/21/09 15:01		☐
104	LMGL6	D9J130167-5	9288328	AQUEOUS	-0.01	1.0	-0.01	ppb		10/21/09 15:03		☐
105	LMGL8	D9J130167-6	9288328	AQUEOUS	-0.05	1.0	-0.05	ppb		10/21/09 15:05		☐
106	LMGDE	D9J130135-1	9288328	AQUEOUS	-0.06	1.0	-0.06	ppb		10/21/09 15:07		☐
107	LMJF2	D9J140137-1	9288328	AQUEOUS	4.27	1.0	4.27	ppb		10/21/09 15:10		☐
108	CCV	= 5.00			5.41	1.0	5.41	ppb	108.1%	10/21/09 15:12		☐
109	CCB				0.00	1.0	0.00	ppb		10/21/09 15:14		☐

10/21/09

Report Generated By CETAC QuickTrace
Analyst: grisdalec
Worksheet file: C:\Program Files\QuickTrace\Worksheets\091021AA.wsz
Date Started: 10/21/2009 9:53:06 AM
Comment:

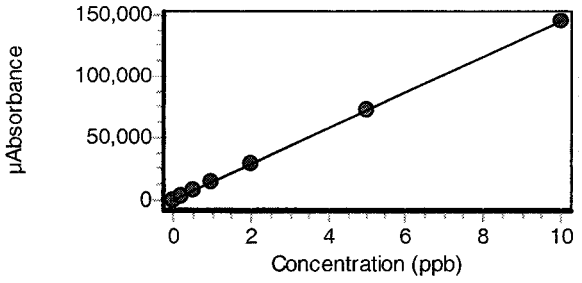
Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
Cal Blank	STD	10/21/09 10:37:13 am	0.000	16	19.07		1.00	1.00	1.00
Std1	STD	10/21/09 10:39:26 am	0.200	3027	0.19		1.00	1.00	1.00
Std2	STD	10/21/09 10:41:39 am	0.500	7416	0.23		1.00	1.00	1.00
Std3	STD	10/21/09 10:43:53 am	1.000	15047	0.24		1.00	1.00	1.00
Std4	STD	10/21/09 10:46:08 am	2.000	29584	0.27		1.00	1.00	1.00
Std5	STD	10/21/09 10:48:24 am	5.000	72999	0.32		1.00	1.00	1.00
Std6	STD	10/21/09 10:50:40 am	10.000	145092	0.40		1.00	1.00	1.00

Calibration

Equation: A = 296.279 + 14497.680C
R2: 0.99998
SEE: 264.9720
Flags:

10/21/09



ICB		ICB	10/21/09 10:53:33 am	-0.023	-40	3.59	1.00	1.00	1.00
ICV		ICV	10/21/09 10:55:49 am	6.648	96677	0.47	1.00	1.00	1.00
% Recovery	94.97								
RL		CRDL	10/21/09 10:58:01 am	0.185	2979	0.21	1.00	1.00	1.00
% Recovery	92.51								

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
CCV	CCV	10/21/09 11:00:17 am	5.179	75382	0.30		1.00	1.00
% Recovery 103.58							1.00	
CCB	CCB	10/21/09 11:02:29 am	-0.022	-29	11.08		1.00	1.00
							1.00	
LMXVCB	UNK	10/21/09 11:04:41 am	-0.012	119	2.19		1.00	1.00
							1.00	
LMXVCC	UNK	10/21/09 11:06:54 am	4.886	71134	0.27		1.00	1.00
							1.00	
LMQ24	UNK	10/21/09 11:09:07 am	0.019	570	0.77		1.00	1.00
							1.00	
LMQ24S	UNK	10/21/09 11:11:19 am	1.588	23322	0.22		1.00	1.00
							1.00	
LMQ24D	UNK	10/21/09 11:13:33 am	2.044	29923	0.17		1.00	1.00
							1.00	
~~LMQ24S~~	UNK	10/21/09 11:15:46 am	1.710	25087	0.73		1.00	1.00
							1.00	
NA Confirms above CJ 10/21/09								
~~LMQ24D~~	UNK	~~10/21/09 11:17:59 am~~	~~2.189~~	~~32027~~	~~0.12~~		1.00	1.00
							1.00	
LMQ3G	UNK	10/21/09 11:20:13 am	-0.058	-546	2.01		1.00	1.00
							1.00	
LMQ3R	UNK	10/21/09 11:22:26 am	-0.019	19	29.84		1.00	1.00
							1.00	
LMQ30	UNK	10/21/09 11:24:41 am	-0.011	139	2.46		1.00	1.00
							1.00	
CCV	CCV	10/21/09 11:26:56 am	5.335	77648	0.37		1.00	1.00
% Recovery 106.71							1.00	
CCB	CCB	10/21/09 11:29:08 am	-0.028	-114	1.50		1.00	1.00
							1.00	
LMTKEB	UNK	10/21/09 11:31:22 am	-0.018	41	1.90		1.00	1.00
							1.00	
LMX0CC	UNK	10/21/09 11:33:37 am	5.120	74520	0.52		1.00	1.00
							1.00	
LMNGV	UNK	10/21/09 11:35:52 am	-0.017	50	5.37		1.00	1.00
							1.00	

CJ 10/21/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LMNGVS	UNK	10/21/09 11:38:07 am	5.446	79251	0.40		1.00	1.00 1.00
LMNGVD	UNK	10/21/09 11:40:19 am	5.539	80596	0.08		1.00	1.00 1.00
~~LMNGVS~~	~~UNK~~	~~10/21/09 11:42:34 am~~	5.383	78330	0.27		1.00	1.00 1.00
MA, verifies above. CJ 10/21/09								
~~LMNGVD~~	~~UNK~~	~~10/21/09 11:44:46 am~~	5.447	79258	0.24		1.00	1.00 1.00
LMNHA	UNK	10/21/09 11:46:58 am	-0.017	46	13.65		1.00	1.00 1.00
LMNHE	UNK	10/21/09 11:49:11 am	-0.016	65	5.01		1.00	1.00 1.00
LMNHJ	UNK	10/21/09 11:51:23 am	-0.012	124	2.67		1.00	1.00 1.00
CCV	CCV	10/21/09 11:53:39 am	5.643	82110	0.11		1.00	1.00 1.00
% Recovery 112.86								
CCB	CCB	10/21/09 11:55:51 am	-0.028	-111	1.34		1.00	1.00 1.00
LMXWPB	UNK	10/21/09 11:58:04 am	-0.017	55	3.49		1.00	1.00 1.00
LMXWPC	UNK	10/21/09 12:00:17 pm	5.019	73058	0.22		1.00	1.00 1.00
LMXE1	UNK	10/21/09 12:02:30 pm	-0.014	92	2.00		1.00	1.00 1.00
LMXE1S	UNK	10/21/09 12:04:44 pm	5.093	74130	0.03		1.00	1.00 1.00
LMXE1D	UNK	10/21/09 12:06:58 pm	5.360	78004	0.17		1.00	1.00 1.00
LMXE5	UNK	10/21/09 12:09:13 pm	-0.005	230	1.18		1.00	1.00 1.00
LMXE9	UNK	10/21/09 12:11:27 pm	-0.012	123	0.81		1.00	1.00 1.00
LMXEC	UNK	10/21/09 12:13:42 pm	9.964	144756	1.18		1.00	1.00 1.00

CJS 10/21/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LMXE6	UNK	10/21/09 12:17:32 pm	8.794	127786	0.28		1.00	1.00 1.00
CCV	CCV	10/21/09 12:21:38 pm	5.596	81426	0.03		1.00	1.00 1.00
% Recovery 111.92								
CCB	CCB	10/21/09 12:23:50 pm	-0.024	-48	5.54		1.00	1.00 1.00
CCV	CCV	10/21/09 12:29:09 pm	5.166	75196	0.41		1.00	1.00 1.00
% Recovery 103.33								
CCB	CCB	10/21/09 12:31:21 pm	-0.024	-59	2.16		1.00	1.00 1.00
LMXWEB	UNK	10/21/09 12:33:33 pm	-0.013	104	2.91		1.00	1.00 1.00
LMXWEC	UNK	10/21/09 12:35:46 pm	5.174	75314	0.02		1.00	1.00 1.00
LMQ24	UNK	10/21/09 12:37:58 pm	0.007	394	6.34	s	1.00	1.00 1.00
~~LMQ24S~~	UNK	10/21/09 12:42:13 pm	3.477	50698	1.16		1.00	1.00 1.00
NA use rerun results								
~~LMQ24D~~	UNK	10/21/09 12:44:26 pm	5.435	79096	0.07		1.00	1.00 1.00
LMQ24S	UNK	10/21/09 12:46:39 pm	3.131	45693	1.16		1.00	1.00 1.00
CJ 10/21/09								
LMQ24D	UNK	10/21/09 12:48:52 pm	2.970	43349	1.06		1.00	1.00 1.00
LMQ3G	UNK	10/21/09 12:51:06 pm	-0.008	181	0.48		1.00	1.00 1.00
LMQ3R	UNK	10/21/09 12:53:20 pm	-0.015	86	3.68		1.00	1.00 1.00
LMQ30	UNK	10/21/09 12:55:34 pm	-0.008	180	1.29		1.00	1.00 1.00
CCV	CCV	10/21/09 12:57:49 pm	5.463	79503	0.25		1.00	1.00 1.00
% Recovery 109.27								
CCB	CCB	10/21/09 01:00:02 pm	-0.024	-54	8.11		1.00	1.00 1.00

CJ 10/21/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LMXV3B	UNK	10/21/09 01:02:16 pm	-0.016	65	6.58		1.00	1.00 1.00
LMXV3C	UNK	10/21/09 01:04:31 pm	5.149	74940	0.21		1.00	1.00 1.00
LMXE3	UNK	10/21/09 01:06:46 pm	-0.013	106	2.91		1.00	1.00 1.00
LMXE3S	UNK	10/21/09 01:08:58 pm	4.857	70710	0.21		1.00	1.00 1.00
LMXE3D	UNK	10/21/09 01:11:10 pm	4.912	71513	0.19		1.00	1.00 1.00
LMXE7	UNK	10/21/09 01:13:22 pm	-0.010	156	4.37		1.00	1.00 1.00
LMXFA	UNK	10/21/09 01:15:35 pm	-0.015	78	1.73		1.00	1.00 1.00
NA samples > LR see 10x dil. for all.								
~~LMXEC~~	~~UNK~~	~~10/21/09 01:17:48 pm~~	~~10.926~~	~~158701~~	~~0.18~~	~~O~~	~~1.00~~	~~1.00~~ 1.00
LMXEC* 10x dil.	UNK	10/21/09 01:23:04 pm	0.953	14120	6.57	s	1.00	1.00 10.00
CJ 10/4/09								
~~LMXE0~~	~~UNK~~	~~10/21/09 01:25:18 pm~~	~~10.713~~	~~155607~~	~~0.09~~	~~O~~	~~1.00~~	~~1.00~~ 1.00
LMXE0* 10x dil.	UNK	10/21/09 01:30:19 pm	1.095	16168	0.33		1.00	1.00 10.00
~~LMXE6~~	~~UNK~~	~~10/21/09 01:32:33 pm~~	~~10.366~~	~~150586~~	~~0.35~~	~~O~~	~~1.00~~	~~1.00~~ 1.00
LMXE6* 10x dil.	UNK	10/21/09 01:37:34 pm	1.082	15986	0.68		1.00	1.00 10.00
CCV	CCV	10/21/09 01:39:50 pm	5.221	75987	0.93		1.00	1.00 1.00
% Recovery 104.42								
CCB	CCB	10/21/09 01:42:02 pm	0.011	451	27.21	s	1.00	1.00 1.00
LML8NB	UNK	10/21/09 01:44:16 pm	-0.020	7	171.04		1.00	1.00 1.00
LML8NC	UNK	10/21/09 01:46:30 pm	5.161	75118	0.33		1.00	1.00 1.00

CJ 10/21/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LME16	UNK	10/21/09 01:48:44 pm	0.266	4147	3.82		1.00	1.00 1.00
LME2L	UNK	10/21/09 01:50:59 pm	0.515	7767	0.30		1.00	1.00 1.00
LME2M	UNK	10/21/09 01:53:14 pm	1.768	25932	0.68		1.00	1.00 1.00
CCV % Recovery 104.49 ✓	CCV	10/21/09 01:55:29 pm	5.224 ✓	76036	0.62		1.00	1.00 1.00
CCB	CCB	10/21/09 01:57:41 pm	-0.077	-815	32.76		1.00	1.00 1.00
LME2P	UNK	10/21/09 01:59:54 pm	1.723	25274	0.89		1.00	1.00 1.00
~~LME2T~~ NA, samples > LR	UNK	10/21/09 02:02:06 pm	61.697	894766	1.26	S	1.00	1.00 1.00
LME2T* (10 x dil.) CJ 10/21/09	UNK	10/21/09 02:07:08 pm	8.424	122425	1.61		1.00	1.00 10.00
~~LME2W~~	UNK	10/21/09 02:09:55 pm	72.173	1046643	0.00	S	1.00	1.00 1.00
~~LME2W*~~	UNK	10/21/09 02:15:00 pm	24.739	358949	1.61	Q	1.00	1.00 10.00
LME2W** (100 x dil.)	UNK	10/21/09 02:20:06 pm	3.530	51469	3.91		1.00	1.00 100.00
LME2X	UNK	10/21/09 02:22:19 pm	0.557	8377	7.03	s	1.00	1.00 1.00
CCV % Recovery 110.31 ✓	CCV	10/21/09 02:24:35 pm	5.515 ✓	80255	0.43		1.00	1.00 1.00
CCB	CCB	10/21/09 02:34:39 pm	-0.037 ✓	-240	2.07		1.00	1.00 1.00
LME24	UNK	10/21/09 02:36:52 pm	3.179	46386	1.37		1.00	1.00 1.00
LME26	UNK	10/21/09 02:39:05 pm	0.679	10147	2.43		1.00	1.00 1.00
~~LMCLV~~ NA, see rerun CJ 10/21/09	UNK	10/21/09 02:41:18 pm	1.582	22643	0.47		1.00	1.00 1.00

✓ CJ 10/21/09

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
LMGLV	UNK	10/21/09 02:45:29 pm	-0.139	-1719	1.67		1.00	1.00 1.00
LMGLVS	UNK	10/21/09 02:47:43 pm	5.198	75656	0.09		1.00	1.00 1.00
LMGLVD	UNK	10/21/09 02:49:57 pm	5.163	75142	0.40		1.00	1.00 1.00
CCV	CCV	10/21/09 02:52:13 pm	4.232	61647	10.83	s	1.00	1.00 1.00
% Recovery 84.64								
CCB	CCB	10/21/09 02:54:25 pm	0.000	295	137.12	s	1.00	1.00 1.00
LMGL0	UNK	10/21/09 02:56:39 pm	-0.021	-8	175.22		1.00	1.00 1.00
LMGL2	UNK	10/21/09 02:58:54 pm	0.015	516	3.92		1.00	1.00 1.00
LMGL5	UNK	10/21/09 03:01:09 pm	-0.037	-247	3.01		1.00	1.00 1.00
LMGL6	UNK	10/21/09 03:03:22 pm	-0.009	160	13.07	s	1.00	1.00 1.00
LMGL8	UNK	10/21/09 03:05:35 pm	-0.045	-351	2.59		1.00	1.00 1.00
LMGDE	UNK	10/21/09 03:07:48 pm	-0.064	-625	0.57		1.00	1.00 1.00
LMJF2	UNK	10/21/09 03:10:01 pm	4.273	62239	0.44		1.00	1.00 1.00
CCV	CCV	10/21/09 03:12:16 pm	5.407	78684	1.16		1.00	1.00 1.00
% Recovery 108.14								
CCB	CCB	10/21/09 03:14:28 pm	0.004	353	21.85	s	1.00	1.00 1.00

JCS 10/21/09

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	35.00	90.00	66.00	4	1.50	50	253.65

Instrumental Zero

Zero before first sample: No

Zero periodically: No

Baseline Correction

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

Standby Mode

Enabled: Yes

Standby Options: pump slow

Autodilution

Enabled: 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

10/24/09

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

10/21/09

Vista
Analytical Laboratory

October 27, 2009

Vista Project I.D.: 32139

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 October 16, 2009 under your Project Name "ISJ1373". 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: **10/16/2009**

Vista Lab. ID	Client Sample ID
32139-001	ISJ1373-01

SECTION II

Method Blank **EPA Method 1613**

Matrix: Aqueous | QC Batch No.: 2469 | Lab Sample: 0-MB001

Sample Size: 1.00 L | Date Extracted: 19-Oct-09 | Date Analyzed DB-5: 22-Oct-09 | Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000514		
1,2,3,7,8-PeCDD	ND	0.00000109		
1,2,3,4,7,8-HxCDD	ND	0.000000974		
1,2,3,6,7,8-HxCDD	ND	0.00000104		
1,2,3,7,8,9-HxCDD	ND	0.000000950		
1,2,3,4,6,7,8-HpCDD	ND	0.000000565		
OCDD	ND	0.00000249		
2,3,7,8-TCDF	ND	0.000000382		
1,2,3,7,8-PeCDF	ND	0.000000739		
2,3,4,7,8-PeCDF	ND	0.000000741		
1,2,3,4,7,8-HxCDF	ND	0.000000210		
1,2,3,6,7,8-HxCDF	ND	0.000000213		
2,3,4,6,7,8-HxCDF	ND	0.000000239		
1,2,3,7,8,9-HxCDF	ND	0.000000291		
1,2,3,4,6,7,8-HpCDF	ND	0.000000518		
1,2,3,4,7,8,9-HpCDF	ND	0.000000626		
OCDF	ND	0.00000165		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.1	25 - 164	
	13C-1,2,3,7,8-PeCDD	95.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	90.9	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	82.6	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	97.0	23 - 140	
	13C-OCDD	83.3	17 - 157	
	13C-2,3,7,8-TCDF	92.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	96.3	24 - 185	
	13C-2,3,4,7,8-PeCDF	96.6	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	92.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	87.4	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	90.9	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	93.8	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	93.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	96.7	26 - 138	
	13C-OCDF	87.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	96.6	35 - 197	

Totals

Total TCDD	ND	0.000000514	
Total PeCDD	ND	0.00000109	
Total HxCDD	ND	0.000000988	
Total HpCDD	ND		0.000000786
Total TCDF	ND	0.000000382	
Total PeCDF	ND	0.000000740	
Total HxCDF	ND	0.000000237	
Total HpCDF	ND	0.000000569	

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: Martha M. Maier 27-Oct-2009 11:07

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	2469	Lab Sample:	0-OPR001
Sample Size:	1.00 L	Date Extracted:	19-Oct-09	Date Analyzed DB-5:	22-Oct-09
				Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	8.78	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	93.1	25 - 164	
1,2,3,7,8-PeCDD	50.0	45.4	35 - 71		13C-1,2,3,7,8-PeCDD	84.1	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	47.1	35 - 82		13C-1,2,3,4,7,8-HxCDD	89.9	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	48.1	38 - 67		13C-1,2,3,6,7,8-HxCDD	82.6	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	48.2	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	90.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	47.4	35 - 70		13C-OCDD	78.8	17 - 157	
OCDD	100	96.5	78 - 144		13C-2,3,7,8-TCDF	96.2	24 - 169	
2,3,7,8-TCDF	10.0	8.55	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	90.0	24 - 185	
1,2,3,7,8-PeCDF	50.0	46.3	40 - 67		13C-2,3,4,7,8-PeCDF	91.0	21 - 178	
2,3,4,7,8-PeCDF	50.0	46.5	34 - 80		13C-1,2,3,4,7,8-HxCDF	87.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	49.4	36 - 67		13C-1,2,3,6,7,8-HxCDF	83.3	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	48.8	42 - 65		13C-2,3,4,6,7,8-HxCDF	88.8	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	47.2	35 - 78		13C-1,2,3,7,8,9-HxCDF	91.9	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	48.4	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	88.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	48.0	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	90.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	46.8	39 - 69		13C-OCDF	79.4	17 - 157	
OCDF	100	102	63 - 170	CRS	37Cl-2,3,7,8-TCDD	96.7	35 - 197	

Analyst: JMH

Approved By: Martha M. Maier 27-Oct-2009 11:07

Sample ID: **ISJ1373-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	32139-001	Date Received:	16-Oct-09
Project:	ISJ1373	Sample Size:	1.01 L	QC Batch No.:	2469	Date Extracted:	19-Oct-09
Date Collected:	14-Oct-09			Date Analyzed DB-5:	22-Oct-09	Date Analyzed DB-225:	NA
Time Collected:	0810						

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000895		
1,2,3,7,8-PeCDD	0.00000190			J
1,2,3,4,7,8-HxCDD	ND		0.00000303	
1,2,3,6,7,8-HxCDD	0.00000675			J
1,2,3,7,8,9-HxCDD	0.00000800			J
1,2,3,4,6,7,8-HpCDD	0.000146			
OCDD	0.00129			
2,3,7,8-TCDF	ND	0.000000402		
1,2,3,7,8-PeCDF	ND	0.000000816		
2,3,4,7,8-PeCDF	ND	0.000000821		
1,2,3,4,7,8-HxCDF	0.00000153			J
1,2,3,6,7,8-HxCDF	ND		0.00000128	
2,3,4,6,7,8-HxCDF	0.00000167			J
1,2,3,7,8,9-HxCDF	ND	0.000000593		
1,2,3,4,6,7,8-HpCDF	0.0000161			J
1,2,3,4,7,8,9-HpCDF	ND		0.00000310	
OCDF	0.0000663			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	81.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	77.5	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	70.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	61.2	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	72.4	23 - 140	
	13C-OCDD	62.5	17 - 157	
	13C-2,3,7,8-TCDF	73.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	71.0	24 - 185	
	13C-2,3,4,7,8-PeCDF	71.7	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	72.5	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	66.2	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	69.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	73.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	72.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	71.9	26 - 138	
	13C-OCDF	64.4	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	104	35 - 197	

Totals

Total TCDD	ND	0.000000895	
Total PeCDD	0.00000190		
Total HxCDD	0.0000302		0.0000409
Total HpCDD	0.000287		
Total TCDF	ND	0.000000402	
Total PeCDF	ND		0.00000123
Total HxCDF	0.00000525		0.0000149
Total HpCDF	0.0000388		0.0000419

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: Martha M. Maier 27-Oct-2009 11:07

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

ISJ1373

32139 1.3°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

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

Analysis	Units	Expires	Comments
Sample ID: ISJ1373-01	**Water**	Sampled: **10/14/09 08:10**	
1613-Dioxin-HR-Alta	ug/l	10/21/09 08:10	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Level 4 Data Package	N/A	11/11/09 08:10	
Containers Supplied:			
1 L Amber (C)	1 L Amber (D)		

Released By	Date/Time	Received By	Date/Time
	10/15/09 17:00	FedEx	10/15/09 17:00
Released By	Date/Time	Received By	Date/Time
		Bonda Burrell	10/16/09 1028

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 32139 **TAT** Standard

Samples Arrival:	**Date/Time** 10/16/09 0907	**Initials:** RSB	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** RB 1100	**Initials:** RB	**Location:** WR-3 **Shelf/Rack:** B-2

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	
Temp °C 1.3°C	**Time:** 0925			**Thermometer ID:** IR-2		

	YES	NO	NA
Adequate Sample Volume Received? A & B Bottle	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7970 2452 9090	✓		
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:

LABORATORY REPORT

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

Project: Northern Drainage-DTSC Requirement
Surface Water Sampling
Sampled: 10/14/09
Received: 10/14/09
Issued: 10/23/09 17:34

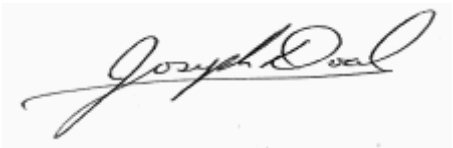
NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
ISJ1389-01	Outfall 009	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

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

Project ID: Northern Drainage-DTSC Requirement
Surface Water Sampling
Report Number: ISJ1389

Sampled: 10/14/09
Received: 10/14/09

DATA QUALIFIERS AND DEFINITIONS

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

RPD Relative Percent Difference

TestAmerica Irvine

Joseph Doak
Project Manager

Test America CAO No. R4-2007-0054 CHAIN OF CUSTODY FORM

1353189

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL Northern Drainage **Surface Water Sampling – DTSC Requirement** Outfall 009
Project Manager: Bronwyn Kelly Sampler: S Dawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	ANALYSIS REQUIRED: Asbestos (EPA 100.2)	Field readings / Comments
Outfall 009	W	1 L Poly	1	10/14/09 0950	None	1	X	Field readings: Temp = 57.2°F; pH = 6.68; Time of readings = 0955; Comments: SD (DTSC)

Relinquished By	Date/Time:	Received By	Date/Time:
S Dawson	10-14-09/14:22	[illegible]	10-14-09/14:28
Matt Cruz	10-14-09 19:05	[illegible]	10/14/09 1905

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

Sample Integrity: (check)
Intact Y On Ice: Y

SUBCONTRACT ORDER

132965

TestAmerica Irvine

ISJ1389

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

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

Analysis	Units	Expires	Comments
Sample ID: ISJ1389-01	**Water**	Sampled: **10/14/09 08:50**	
Asbestos-TEM (100.2 - DW)	Present/Not Pr	10/16/09 08:50	Boeing, permit, J flags Out to EMS
Level 4 Data Package - Out	N/A	11/11/09 08:50	Boeing, permit, J flags
Containers Supplied:			
1 L Poly (A)			

Released By _____ Date/Time 10-15-09/8:00

Received By _____ Date/Time 10-15-09/8:00

Released By _____ Date/Time 10-15-09/10:55

Received By _____ Date/Time 10-15-09 11:00

DATE: October 22 , 2009

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

ATTENTION: Debby Wilson

REFERENCE: ISJ1389

REPORT NO: 132965

SUBJECT: ANALYSIS OF WATER SAMPLES FOR ASBESTOS BY TEM

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

The date and times of collection, receipt, filtration, and analysis are as follows:

SAMPLE NO.: ISJ1389-01

COLLECTED: 10/14/09 at 0850

RECEIVED: 10/15/09 at 1100

FILTERED: 10/15/09 at 1203

ANALYZED: 10/22/09

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

No asbestos structures >10 μm in length were detected. The analytical sensitivity of 0.2 MFL was not reached due to the turbidity.

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

Respectfully submitted,

EMS LABORATORIES, INC.

R Singh

B. M. Kolk
Laboratory Director
BMK/ah

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

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

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

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

ANALYSIS OF WATER BY TEM (EPA-600 R 94 134) EPA 100.2

LAB NO: 132965
CLIENT: Test America
10/22/2009

Laboratory I.D.	Client I.D.	FILTER MEDIA DATA			No. of G.O.	Analyzed Area, mm^2	Sample Volume (ml)
		Type	Diameter mm	Effective Area mm^2			
132965-1	ISJ1389-01*	PC	47	1017	10	0.094	1

* FOR FIBERS > 10um ONLY

ANALYTICAL RESULTS

Laboratory I.D.	Client I.D.	No. of Asbestos Str.			Detection Limit (MFL)	CONCENTRATION (MFL)		
		All Sizes	5-9.9um	>10um		All Sizes	5-9.9um	>10um
132965-1	ISJ1389-01*	-	-	N.D.	11.0	-	-	< 11

* FOR FIBERS > 10um ONLY

The analysis was carried out to the approved TEM method. This laboratory is in compliance with the quality specified by the method.

Authorized Signature

PC - Polycarbonate
MCE - Mixed cellulose ester
G.O. - Grid Openings
Str - Structures
MFL - Millions of fibers per liter

TEM-7A (2009Rev.)

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

EMS No.	132965	**Client**	Test America
Sample No.	ISJ1389-01	**Date Analyzed**	10/22/2009

Fibers > 10 µm in length (chrysotile)	BDL*	MFL
Mass (chrysotile)	0	ug/L
More/Less than 5 Fibers in Sample (chrysotile)	LESS	
Poisson 95% Confidence Interval	0 to 40	MFL
Detection Limit	11	MFL

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

Particle Size Distribution (Chrysotile)

Particle Length - Microns

O -0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 - 4.99	5.00 - 9.99	10 & UP
0	0	0	0	0	0	0	0

Particle Width - Microns

O - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 - .49	.50 - .99	1 & UP
0	0	0	0	0	0	0	0

Aspect Ratio L/W

0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 - 99	100 - 199	200 & UP
0	0	0	0	0	0	0	0

TEM 7B (1994)

Analysis of Water by Transmission Electron Microscopy
(EPA-600/4-83-043)

EMS No.	132965	**Date Analyzed**	10/22/2009
Client	Test America		
Sample No.	EMS BLANK		

Fibers (chrysotile)	ND	MFL
> 5 Micron length (chrysotile)	ND	MFL
Mass (chrysotile)	0	ug/L
More/Less than 5 Fibers in Sample (chrysotile)	LESS	
Sensitivity Level	0.01	MFL

Particle Size Distribution (Chrysotile)

Particle Length - Microns

O -0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 & UP
0	0	0	0	0	0

Particle Width - Microns

O - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 & UP
0	0	0	0	0	0

Aspect Ratio L/W

0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 & UP
0	0	0	0	0	0

APPENDIX G

Section 9

Outfall 009, December 7, 2009

MEC^X Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISL0771

Prepared by

MEC^X, LP
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ISL0771
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 009	ISL0771-02	G9I100517-001, F9J100528-001, D9L100591-001	Water	12/7/2009 11:12:00 AM	1613, 200.8, 245.1, 900, 901.1, 903.0, 904, 905, 906.0, EMLA-01-R, ASTM 5174-91

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample for the Method 1613 analysis was received below the temperature limits at TestAmerica-West Sacramento; however, the sample was not noted to be frozen or damaged. The sample receipt temperature was not noted by TestAmerica-St. Louis; however, due to the nonvolatile nature of the analytes, no qualifications were required. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were transported by courier to TestAmerica-Irvine, custody seals were not required. Custody seals were not present upon receipt at TestAmerica-West Sacramento. Custody seals were present and intact at TestAmerica-Denver and TestAmerica-St. Louis.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin
Date Reviewed: 01/17/09

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (9/05).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.

- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance:

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

    - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.

- Calibration: Calibration criteria were met.

    - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.

    - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.

- Blanks: The method blank had detects between the EDL and the RL for all compounds except 2,3,7,8-TCDF. Any sample detects for individual target compound isomers present at concentrations less than five times the method blank concentrations were qualified as nondetected, “U,” at the RL. Results for totals were qualified as nondetected, “U,” if all peaks comprising the total were present in the method blank at less than five times the

blank concentrations. In some instances, one or more peaks in the method blank did not meet ratio criteria; however, due to the extent of contamination present in the method blank, it was the reviewer's professional opinion that the sample total be qualified as nondetected due to method blank contamination if all peaks in the sample total were also present in the method blank.

Results for total HxCDD and total HxCDF in the sample included peaks meeting ratio criteria that were not present in the method blank; therefore, results for both totals were qualified as estimated, "J," as only a portion of the total was considered method blank contamination. The concentration for one peak in total HpCDD was significantly greater than five times the concentration of the same peak in the method blank; therefore, the sample result for total HpCDD was qualified as estimated, "J." The sample concentration for OCDD exceeded five times the blank concentration and required no qualification.

- Blank Spikes and Laboratory Control Samples: OPR recoveries were within the acceptance criteria listed in Table 6 of Method 1613.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any reportable sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Several results for individual isomers were reported as EMPCs by the laboratory; however, the results were previously qualified as nondetects for method blank contamination and were not further qualified as EMPCs. Any reported totals not qualified as nondetects for method blank contamination that included EMPCs were qualified as estimated, "J." Any detects between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

B. EPA METHODs 200.8 and 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: January 14, 2009

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 200.8 and 245.1*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The analytical holding times, 180 days for the ICP-MS metals and 28 days for mercury, were met.

- Tuning: Not applicable to this analysis.

- Calibration: Calibration criteria were met. The mercury initial calibration r^2 value was ≥0.995 and all initial and continuing calibration recoveries were within 85-115%. Copper was recovered in the CRI associated with the dissolved ICP-MS metals at 174%; therefore, dissolved copper detected in the sample was qualified as estimated, "J." The remaining CRI and CRA recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no applicable detects.

- Interference Check Samples: Lead, cadmium, and copper were detected in the ICSA, but the reviewer was not able to determine if the detects were due to matrix interference. The ICSA and ICSAB recoveries were within the method-established control limits of 80-120%.

- Blank Spikes and Laboratory Control Samples: Recoveries were within method-established QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on total mercury and dissolved ICP-MS metals. The mercury recoveries were below the control limit and the RPD exceeded the control limit; therefore, total mercury in the sample was qualified as estimated, "J." The remaining recoveries and RPDs were within the method-established control limits of 75-125% and ≤20%, respectively.

- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.

- Internal Standards Performance: All sample internal standard intensities were within 60-120% of the internal standard intensities measured in the initial calibration. Copper was not bracketed by a lower mass internal standard. As CCV, CRI and LCS recoveries were acceptable, total and dissolved copper in the sample was qualified as estimated, "J," rather than rejected.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: January 14, 2008

The sample listed in Table 1 for these analyses were validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, 906.0, and ASTM Method D-5174,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: The tritium sample was analyzed within 180 days of collection. Aliquots for radium-226, radium-228, and strontium-90 were prepared within the five-day holding time for unpreserved aqueous samples. The aliquot for gamma spectroscopy was prepared beyond the five-day analytical holding time for unpreserved samples; therefore, the nondetected results were qualified as estimated, "UJ." Aliquots for gross alpha and gross beta, and total uranium were prepared more than 3× beyond the five-day analytical holding time for unpreserved samples; therefore, these results were qualified as estimated, "J," for detects and rejected, "R," for nondetects.

- Calibration: The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability.

  The gross alpha and radium-226 detector efficiencies were less than 20%; therefore, gross alpha detected in the sample was qualified as estimated, "J," and nondetected radium-226 was qualified as estimated, "UJ." The remaining detector efficiencies were greater than 20%.

  The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The strontium, radium-226, and radium-228 chemical yields were at least 65% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. The opening KPA Low-

CCV was recovered at 124%; however, as total uranium was not detected in the sample (see Blanks section), no qualification was required. All remaining KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: Total uranium was detected in the method blank at 0.496 pCi/L; therefore, total uranium detected in the sample was qualified as nondetected, "U." There were no other analytes detected in the method blanks.

- Blank Spikes and Laboratory Control Samples: The recoveries and isotopic uranium, strontium, radium-226, and radium-228 RPDs were within laboratory-established control limits.

- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for gross alpha and gross beta. The RPDs were either within the laboratory-established control limit or within the measurement error.

- Matrix Spike/Matrix Spike Duplicate: Matrix spike analyses were performed on the sample in this SDG for tritium and gross alpha and gross beta. MS/MSD analyses were performed on the sample in this SDG for total uranium. All recoveries and the isotopic uranium RPD were within the laboratory-established control limits. Please note that the tritium matrix spike was reported in the summary by the laboratory as having been performed on another sample.

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ" in order to comply with the NPDES permit. Reported nondetects are valid to the MDA.

  The laboratory originally analyzed for isotopic uranium instead of total uranium as required by the NPDES permit. The isotopic uranium results were, therefore, rejected, "R," in favor of the total uranium result.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

  - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms: ISL0771

Analysis Method ASTM 5174-91

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	0.443	0.677	0.21	pCi/L	Jc	R	H,B

Analysis Method EPA 200.8

Sample Name Outfall 009 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	0.95	2.0	0.30	ug/l	J	J	DNQ
Cadmium	7440-43-9	0.11	1.0	0.10	ug/l	J	J	DNQ
Copper	7440-50-8	5.7	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	5.7	1.0	0.20	ug/l			
Thallium	7440-28-0	ND	1.0	0.20	ug/l		U	

Analysis Method EPA 200.8-Diss

Sample Name Outfall 009 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony, dissolved	7440-36-0	0.51	2.0	0.30	ug/l	J	J	DNQ
Cadmium, dissolved	7440-43-9	ND	1.0	0.10	ug/l		U	
Copper, dissolved	7440-50-8	3.1	2.0	0.50	ug/l		J	R,*III
Lead, dissolved	7439-92-1	0.91	1.0	0.20	ug/l	J	J	DNQ
Thallium, dissolved	7440-28-0	0.24	1.0	0.20	ug/l	J	J	DNQ

Analysis Method EPA 900.0 MOD

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	2.22	3	0.99	pCi/L	Jc	J	H,C,DNQ
Gross Beta	12587-47-2	1.78	4	1	pCi/L	Jc	J	H, DNQ

Analysis Method EPA 901.1 MOD

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	3.6	20	16	pCi/L	U	UJ	H
Potassium 40	13966-00-2	-40	0	300	pCi/L	U	UJ	H

Analysis Method EPA 903.0 MOD

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.096	1	0.15	pCi/L	U	UJ	C

Analysis Method EPA 904 MOD

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.11	1	1.1	pCi/L	U	U	

Analysis Method EPA 905 MOD

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	-0.05	3	0.58	pCi/L	U	U	

Analysis Method EPA 906.0 MOD

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	-6	500	160	pCi/L	U	U	

Analysis Method EPA-5 1613B

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02RE1 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00007	0.00000071	ug/L	B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.000048	0.00000083	ug/L	J, B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000048	0.0000012	ug/L	J, Q, B	U	B
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000048	0.00000064	ug/L	J, Q, B	U	B
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.000048	0.00000066	ug/L	J, Q, B	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.000048	0.00000058	ug/L	J, B	U	B
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000048	0.00000061	ug/L	J, B	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000048	0.00000055	ug/L	J, B	U	B
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000048	0.0000007	ug/L	J, B	U	B
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000048	0.0000011	ug/L	J, Q, B	U	B
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000048	0.000001	ug/L	J, Q, B	U	B
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000048	0.00000056	ug/L	J, B	U	B
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000048	0.0000011	ug/L	J, Q, B	U	B
2,3,7,8-TCDD	1746-01-6	ND	0.0000096	0.00000056	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.0000096	0.0000029	ug/L	CON	U	
OCDD	3268-87-9	0.0011	0.000096	0.0000011	ug/L	B		
OCDF	39001-02-0	ND	0.000096	0.00000062	ug/L	J, B	U	B
Total HpCDD	37871-00-4	0.00019	0.000048	0.00000071	ug/L	B	J	B
Total HpCDF	38998-75-3	ND	0.000048	0.00000083	ug/L	J, Q, B	U	B
Total HxCDD	34465-46-8	0.000031	0.000048	0.00000055	ug/L	J, Q, B	J	B,*III,DNQ
Total HxCDF	55684-94-1	0.000036	0.000048	0.00000056	ug/L	J, Q, B	J	B,*III,DNQ
Total PeCDD	36088-22-9	ND	0.000048	0.0000011	ug/L	J, Q, B	U	B
Total PeCDF	30402-15-4	ND	0.000048	0.000001	ug/L	J, Q, B	U	B
Total TCDD	41903-57-5	ND	0.0000096	0.00000056	ug/L		U	
Total TCDF	55722-27-5	ND	0.0000096	0.00000064	ug/L	J, Q, B	U	B

Analysis Method MCAWW 245.1

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	0.027	0.2	0.027	ug/L	J	J	Q,*III, DNQ

Analysis Method MCAWW 245.1-DISS

Sample Name Outfall 009 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ISL0771-02 **Sample Date:** 12/7/2009 11:12:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury, dissolved	7439-97-6	ND	0.2	0.027	ug/L		U	