MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F8L170169 Date Sampled: 12/15/08
Matrix: WATER Date Received: 12/17/08

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	QC Sample ID %REC	QC Control Limits
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F8L170169-001**	
Gross Beta	67.8	73.4	6.2		4.10	0.95		102	(66 - 147)
	Batch #:	8353165		Analysis Date:		12/21/08			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F8L170169-001**	
Gross Alpha	49.4	50.2	5.9		2.3	1.1		97	(44 - 150)
	Batch #:	8353165		Analysis Date:		12/21/08			
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F8L170170-001**	
Tritium	4820	4220	480		10	190		87	(47 - 150)
	Batch #:	9012073		Analysis Date:		01/13/09			

NOTE(S)

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

1251

TestAmerica Irvine

IRL1710

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: IRL1710-01	**Water**		Sampled: **12/15/08 10:50**			**Instant Nofication**
Gamma Spec-O	mg/kg	12/22/08	12/15/09 10:50	$250.00	25%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	12/22/08	06/13/09 10:50	$100.00	100%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	12/22/08	06/13/09 10:50	$100.00	100%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	12/22/08	01/12/09 10:50	$0.00	25%	
Radium, Combined-O	pCi/L	12/22/08	12/15/09 10:50	$238.00	100%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	12/22/08	12/15/09 10:50	$155.00	100%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	12/22/08	12/15/09 10:50	$80.00	100%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	12/22/08	12/15/09 10:50	$120.00	25%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

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

Released By	12/16/08 17:00 Date/Time	Fedex Received By	12/16/08 17:00 Date/Time
Released By	Date/Time	Received By	12.17.08 0930 Date/Time

1252

TESTAMERICA
THE LEADER IN ENVIRONMENTAL TESTING

170
177
178

CONDITION UPON RECEIPT FORM

Client: TA Irvine
Quote No: 81594
COC/RFA No: below 341

Initiated By: CA Date: 12-17-08 Time: 0930

Shipping Information

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

Shipping # (s):*				Sample Temperature (s):**			
1.	797187504267	6.		1.	2	6.	
2.		7.		2.	2	7.	
3.		8.		3.		8.	
4.		9.		4.		9.	
5.		10.		5.		10.	

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes: IRL1709
1710
1711
1714

Corrective Action:
☐ Client Contact Name: _____ Informed by: _____
☐ Sample(s) processed "as is"
☐ Sample(s) on hold until: _____ If released, notify: _____
Project Management Review: K Cle Date: 12-18-08

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. 1253

Vista
Analytical Laboratory

December 19, 2008

Vista Project I.D.: 31264

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 December 17, 2008 under your Project Name "IRL1710". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

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

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

Sincerely,

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: **12/17/2008**

Vista Lab. ID	Client Sample ID
31264-001	IRL1710-01

SECTION II

Method Blank **EPA Method 1613**

Matrix: Aqueous | QC Batch No.: 1770 | Lab Sample: 0-MB001

Sample Size: 1.00 L | Date Extracted: 17-Dec-08 | Date Analyzed DB-5: 18-Dec-08 | Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000958		
1,2,3,7,8-PeCDD	ND	0.00000250		
1,2,3,4,7,8-HxCDD	ND	0.00000182		
1,2,3,6,7,8-HxCDD	ND	0.00000171		
1,2,3,7,8,9-HxCDD	ND	0.00000164		
1,2,3,4,6,7,8-HpCDD	ND	0.00000279		
OCDD	ND	0.00000430		
2,3,7,8-TCDF	ND	0.000000887		
1,2,3,7,8-PeCDF	ND	0.00000118		
2,3,4,7,8-PeCDF	ND	0.00000107		
1,2,3,4,7,8-HxCDF	ND	0.000000512		
1,2,3,6,7,8-HxCDF	ND	0.000000592		
2,3,4,6,7,8-HxCDF	ND	0.000000696		
1,2,3,7,8,9-HxCDF	ND	0.00000105		
1,2,3,4,6,7,8-HpCDF	ND	0.00000153		
1,2,3,4,7,8,9-HpCDF	ND	0.00000182		
OCDF	ND	0.00000159		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.0	25 - 164	
	13C-1,2,3,7,8-PeCDD	101	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	84.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	95.7	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	89.5	23 - 140	
	13C-OCDD	74.1	17 - 157	
	13C-2,3,7,8-TCDF	92.8	24 - 169	
	13C-1,2,3,7,8-PeCDF	90.1	24 - 185	
	13C-2,3,4,7,8-PeCDF	97.0	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	91.1	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	85.9	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	86.9	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	89.9	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	80.2	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	83.2	26 - 138	
	13C-OCDF	78.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	95.0	35 - 197	

Totals

Total TCDD	ND	0.000000958
Total PeCDD	ND	0.00000250
Total HxCDD	ND	0.00000172
Total HpCDD	ND	0.00000279
Total TCDF	ND	0.000000887
Total PeCDF	ND	0.00000218
Total HxCDF	ND	0.000000692
Total HpCDF	ND	0.00000166

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

1257

Analyst: MAS

Approved By: William J. Luksemburg 19-Dec-2008 11:18

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	1770	Lab Sample:	0-OPR001
Sample Size:	1.00 L	Date Extracted:	17-Dec-08	Date Analyzed DB-5:	18-Dec-08
				Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	8.63	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	89.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	47.8	35 - 71		13C-1,2,3,7,8-PeCDD	96.7	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	46.8	35 - 82		13C-1,2,3,4,7,8-HxCDD	77.1	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	46.3	38 - 67		13C-1,2,3,6,7,8-HxCDD	91.1	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	45.7	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	84.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	46.3	35 - 70		13C-OCDD	67.9	17 - 157	
OCDD	100	95.6	78 - 144		13C-2,3,7,8-TCDF	88.6	24 - 169	
2,3,7,8-TCDF	10.0	8.58	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	88.4	24 - 185	
1,2,3,7,8-PeCDF	50.0	46.7	40 - 67		13C-2,3,4,7,8-PeCDF	91.1	21 - 178	
2,3,4,7,8-PeCDF	50.0	48.7	34 - 80		13C-1,2,3,4,7,8-HxCDF	88.6	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	45.2	36 - 67		13C-1,2,3,6,7,8-HxCDF	81.1	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	47.5	42 - 65		13C-2,3,4,6,7,8-HxCDF	81.0	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	45.7	35 - 78		13C-1,2,3,7,8,9-HxCDF	83.5	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	46.6	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	74.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	45.0	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	79.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	44.9	39 - 69		13C-OCDF	73.1	17 - 157	
OCDF	100	89.5	63 - 170	CRS	37Cl-2,3,7,8-TCDD	84.0	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 19-Dec-2008 11:18

1258

Sample ID: **IRL1710-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	31264-001	Date Received:	17-Dec-08
Project:	IRL1710	Sample Size:	1.02 L	QC Batch No.:	1770	Date Extracted:	17-Dec-08
Date Collected:	15-Dec-08			Date Analyzed DB-5:	18-Dec-08	Date Analyzed DB-225:	NA
Time Collected:	1050						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000544		
1,2,3,7,8-PeCDD	ND	0.00000167		
1,2,3,4,7,8-HxCDD	ND	0.00000288		
1,2,3,6,7,8-HxCDD	ND	0.00000257		
1,2,3,7,8,9-HxCDD	ND	0.00000252		
1,2,3,4,6,7,8-HpCDD	ND	0.0000123		
OCDD	0.0000601			
2,3,7,8-TCDF	ND	0.000000540		
1,2,3,7,8-PeCDF	ND	0.00000112		
2,3,4,7,8-PeCDF	ND	0.00000117		
1,2,3,4,7,8-HxCDF	ND	0.000000771		
1,2,3,6,7,8-HxCDF	ND	0.000000898		
2,3,4,6,7,8-HxCDF	ND	0.00000110		
1,2,3,7,8,9-HxCDF	ND	0.00000167		
1,2,3,4,6,7,8-HpCDF	ND	0.00000269		
1,2,3,4,7,8,9-HpCDF	ND	0.00000330		
OCDF	ND	0.0000127		

Totals				
Total TCDD	ND	0.000000544		
Total PeCDD	ND	0.00000167		
Total HxCDD	ND	0.00000265		
Total HpCDD	0.00000814			
Total TCDF	ND	0.000000540		
Total PeCDF	ND	0.00000252		
Total HxCDF	ND	0.00000107		
Total HpCDF	ND		0.00000427	

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.8	25 - 164	
	13C-1,2,3,7,8-PeCDD	105	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	84.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	94.0	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	86.9	23 - 140	
	13C-OCDD	71.2	17 - 157	
	13C-2,3,7,8-TCDF	95.3	24 - 169	
	13C-1,2,3,7,8-PeCDF	95.9	24 - 185	
	13C-2,3,4,7,8-PeCDF	97.1	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	91.9	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	85.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	84.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	89.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	84.6	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	83.9	26 - 138	
	13C-OCDF	73.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	90.6	35 - 197	

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

1259

Analyst: MAS

Approved By: William J. Luksemburg 19-Dec-2008 11:18

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

IRL1710

31264

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: 2.6 °C Ice: (Y) N

Analysis	Units	Due	Expires	Comments
Sample ID: IRL1710-01	**Water**		Sampled: **12/15/08 10:50**	**Instant Nofication**
1613-Dioxin-HR-Alta	ug/l	12/22/08	12/22/08 10:50	J flags,17 congeners,no TEQ,ug/L,sub=Vista
EDD + Level 4	N/A	12/22/08	01/12/09 10:50	Boeing EDD, email to pm w/ PDF report
Containers Supplied:				
1 L Amber (C)	1 L Amber (D)			

31264

Released By	Date/Time	Received By	Date/Time
	12/16/08 17:00	FedEx	12/16/08 17:00
			1263
Released By	Date/Time	Received By	12/17/08 0950 Date/Time

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 3126A **TAT** 5 days

Samples Arrival:	**Date/Time** 12/17/08 0918	**Initials:** CV	**Location:** LR2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 12/17/08 0935	**Initials:** CV	**Location:** LR-2 **Shelf/Rack:** C-3

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		
Temp °C 2.6°	**Time:** 0924	**Thermometer ID:** IR-2				

	YES	NO	NA
Adequate Sample Volume Received? (A & B bottles)	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7961 9164 2911	✓		
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:

IRL1710-01 A & B bottles

APPENDIX G

Section 19

Outfall 010 - BMP Effectiveness, December 15, 2008

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: BMP Effectiveness
Monitoring Program

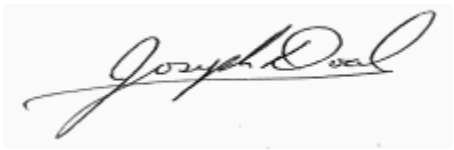
Sampled: 12/15/08
Received: 12/16/08
Issued: 12/29/08 15:05

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

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IRL1910-01	010 EFF-1	Water
IRL1910-02	010 EFF-2	Water
IRL1910-03	010 EFF-3	Water
IRL1910-04	010 EFF-4	Water
IRL1910-05	010 EFF-5	Water
IRL1910-06	010 EFF-6	Water
IRL1910-07	010 EFF-7	Water
IRL1910-08	010 EFF-8	Water
IRL1910-09	010 EFF-9	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRL1910

Sampled: 12/15/08
Received: 12/16/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1910-01 (010 EFF-1 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.99**	1	12/27/08	12/27/08	
Sample ID: IRL1910-02 (010 EFF-2 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.98**	1	12/27/08	12/27/08	
Sample ID: IRL1910-03 (010 EFF-3 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.98**	1	12/27/08	12/27/08	
Sample ID: IRL1910-04 (010 EFF-4 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.98**	1	12/27/08	12/27/08	
Sample ID: IRL1910-05 (010 EFF-5 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.99**	1	12/27/08	12/27/08	
Sample ID: IRL1910-06 (010 EFF-6 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.98**	1	12/27/08	12/27/08	
Sample ID: IRL1910-07 (010 EFF-7 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.99**	1	12/27/08	12/27/08	
Sample ID: IRL1910-08 (010 EFF-8 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.98**	1	12/27/08	12/27/08	
Sample ID: IRL1910-09 (010 EFF-9 - Water)									
Reporting Units: g/cc									
Density	Displacement	8L27049	N/A	NA	**0.97**	1	12/27/08	12/27/08	
Sample ID: IRL1910-01 (010 EFF-1 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRL1910

Sampled: 12/15/08
Received: 12/16/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1910-02 (010 EFF-2 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	
Sample ID: IRL1910-03 (010 EFF-3 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	
Sample ID: IRL1910-04 (010 EFF-4 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	**10**	1	12/29/08	12/29/08	
Sample ID: IRL1910-05 (010 EFF-5 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	
Sample ID: IRL1910-06 (010 EFF-6 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	
Sample ID: IRL1910-07 (010 EFF-7 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	
Sample ID: IRL1910-08 (010 EFF-8 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	
Sample ID: IRL1910-09 (010 EFF-9 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	8L29069	10	10	ND	1	12/29/08	12/29/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRL1910

Sampled: 12/15/08
Received: 12/16/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8L27049 Extracted: 12/27/08											
Duplicate Analyzed: 12/27/2008 (8L27049-DUP1)						**Source: IRL1910-02**					
Density	0.981	NA	N/A	g/cc		0.981			0	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

MWH-Pasadena/Boeing	Project ID: BMP Effectiveness Monitoring Program	Sampled: 12/15/08
618 Michillinda Avenue, Suite 200	Report Number: IRL1910	Received: 12/16/08
Arcadia, CA 91007		
Attention: Bronwyn Kelly		

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRL1910

Sampled: 12/15/08
Received: 12/16/08

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

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

TestAmerica Irvine

Joseph Doak
Project Manager

IRL1910

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

Client Name/Address: MWH-Arcadia, 618 Michillinda Avenue, Suite 200, Arcadia, CA 91007	Project: **Boeing BMP Effectiveness Monitoring Program**
Test America Contact: Joseph Doak	
Project Manager: Bronwyn Kelly	Phone Number: (626) 568-6691
Sampler: R Banaga	Fax Number: (626) 568-6515

ANALYSIS REQUIRED

Field readings:

Temp = NA

pH = NA

Time of readings = NA

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Suspended Sediment Concentration (SSC, ASTM-D3977-1997)	Comments
010 EFF-1	W	500 mL Poly	1	12/15/08-0730	None	1	X	
010 EFF-2	W	500 mL Poly	1	12/15/08-0830	None	2	X	
010 EFF-3	W	500 mL Poly	1	12/15/08-0930	None	3	X	
010 EFF-4	W	500 mL Poly	1	12/15/08-1030	None	4	X	
010 EFF-5	W	500 mL Poly	1	12/15/08-1130	None	5	X	
010 EFF-6	W	500 mL Poly	1	12/15/08-1230	None	6	X	
010 EFF-7	W	500 mL Poly	1	12/15/08-1330	None	7	X	
010 EFF-8	W	500 mL Poly	1	12/15/08-1430	None	8	X	
010 EFF-9	W	500 mL Poly	1	12/15/08-1530	None	9	X	

Relinquished By	Date/Time	Received By	Date/Time
[signature]	12-16-08 1355	[signature]	12/16/08 1350
[signature]	12/16/08 1800	[signature]	12/16/08 1800

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

Sample Integrity: (check)
Intact ✓ On Ice: ✓ 1.4 / 1.5

12/17 7:50 g

1272

#005

APPENDIX G

Section 20

Outfall 013, December 15, 2008

MEC^X Data Validation Reports

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRL1721

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:	IRL1721
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 013	IRL1721-01	D8L170200-001, 31269-001	Water	12/15/08 1058	180.1, 245.1, 245.1 (Diss.), 1613B, SM5210B

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at TestAmerica-Irvine and Vista within the temperature limit of 4 ±2°C and received at TestAmerica-Denver below the control limit; however, the samples were not noted to be damaged or frozen. According to the case narrative for this SDG, the samples were received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, custody seals were not required. Custody seals were intact upon arrival at TestAmerica-Denver and Vista. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: S. Dellamia
Date Reviewed: January 21, 2009

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

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

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

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had no target compound detects above the EDL.

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

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

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

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

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

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

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. OCDD and total HpCDD detected in sample Outfall013 below the laboratory lower calibration level were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the estimated detection limit (EDL).

B. EPA METHOD 245.1—Mercury

Reviewed By: P. Meeks
Date Reviewed: January 6, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Method 245.1,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: The analytical holding time, 28 days for mercury, was met.

- Tuning: Not applicable to this method.

- Calibration: Calibration criteria were met. The mercury initial calibration r^2 value was $\geq$0.995 and all initial and continuing calibration recoveries were within 85-115%. The CRA and check standard was recovered within the control limit of 70-130%.

- Blanks: There were no applicable detects in the method blanks or CCBs.

- Interference Check Samples: Not applicable to this method.

- Blank Spikes and Laboratory Control Samples: The recovery was within the laboratory-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 the sample in this SDG. The total mercury MS and the dissolved mercury MSD were below the control limit; therefore, nondetected dissolved and total mercury was qualified as estimated, "UJ."

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

- Internal Standards Performance: Not applicable to this method.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summaries were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

C. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: January 13, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 180.1, SM5210B,* and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: The analytical holding times, 48 hours for BOD and turbidity, were met.

- Calibration: The turbidity check standard recoveries were acceptable.

- Blanks: Turbidity was detected in the method blank but not at a concentration sufficient to qualify the site sample. BOD was not detected in the method blank.

- Blank Spikes and Laboratory Control Samples: The BOD LCS/LCSD recoveries and RPD were within the laboratory-established control limit. The LCS is not applicable to turbidity.

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

- Matrix Spike/Matrix Spike Duplicate: Not applicable to these analyses.

- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the reporting limit. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

Sample ID:	IRL1721-01 Outfall 013				EPA Method 1613
Client Data		**Sample Data**		**Laboratory Data**	
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	31269-001
Project:	IRL1721	Sample Size:	1.04 L	QC Batch No.:	1770
Date Collected:	15-Dec-08			Date Analyzed DB-5:	18-Dec-08
Time Collected:	1058				

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000837		
1,2,3,7,8-PeCDD	ND	0.00000249		
1,2,3,4,7,8-HxCDD	ND	0.00000404		
1,2,3,6,7,8-HxCDD	ND	0.00000391		
1,2,3,7,8,9-HxCDD	ND	0.00000370		
1,2,3,4,6,7,8-HpCDD	ND	0.00000706		
OCDD	0.0000314 J/DNQ			J
2,3,7,8-TCDF	ND U	0.000000735		
1,2,3,7,8-PeCDF	ND	0.00000204		
2,3,4,7,8-PeCDF	ND	0.00000223		
1,2,3,4,7,8-HxCDF	ND	0.00000138		
1,2,3,6,7,8-HxCDF	ND	0.00000142		
2,3,4,6,7,8-HxCDF	ND	0.00000174		
1,2,3,7,8,9-HxCDF	ND	0.00000269		
1,2,3,4,6,7,8-HpCDF	ND	0.00000204		
1,2,3,4,7,8,9-HpCDF	ND	0.00000283		
OCDF	ND	0.00000749		

Totals				
Total TCDD	ND U	0.000000837		
Total PeCDD	ND	0.00000406		
Total HxCDD	ND	0.00000389		
Total HpCDD	0.00000847 J/DNQ			
Total TCDF	ND U	0.00000111		
Total PeCDF	ND	0.00000299		
Total HxCDF	ND	0.00000176		
Total HpCDF	ND	0.00000238		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.8	25 - 164	
	13C-1,2,3,7,8-PeCDD	96.9	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	96.6	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	83.5	23 - 140	
	13C-OCDD	71.2	17 - 157	
	13C-2,3,7,8-TCDF	93.7	24 - 169	
	13C-1,2,3,7,8-PeCDF	92.4	24 - 185	
	13C-2,3,4,7,8-PeCDF	90.9	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	85.0	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	81.6	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	82.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	86.2	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	82.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	77.7	26 - 138	
	13C-OCDF	71.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	92.5	35 - 197	

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg 19-Dec-2008 11:12

LEVEL IV

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

MCAWW 245.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/L									
Mercury UJ/Q	MCAWW 245.1	8353495	0.027	0.2	ND	1	12/18/08	12/18/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

MCAWW 245.1-Diss

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/L									
Mercury-diss UJ/Q	MCAWW 245.1-Diss	8353517	0.027	0.2	ND	1	12/18/08	12/18/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease) *	EPA 1664A	8L19123	1.3	4.7	**3.3**	1	12/19/08	12/19/08	B, J
Ammonia-N (Distilled) *	SM4500NH3-C	8L16135	0.50	0.50	**1.4**	1	12/16/08	12/16/08	
Biochemical Oxygen Demand	SM5210B	8L16072	0.50	2.0	**3.0**	1	12/16/08	12/21/08	
Chloride *	EPA 300.0	8L15075	0.25	0.50	**16**	1	12/15/08	12/16/08	
Fluoride *	SM 4500-F-C	8L16102	0.020	0.10	**0.17**	1	12/16/08	12/16/08	B
Nitrate-N *	EPA 300.0	8L16086	0.060	0.11	**2.1**	1	12/16/08	12/16/08	
Nitrite-N *	EPA 300.0	8L15075	0.090	0.15	ND	1	12/15/08	12/16/08	
Nitrate/Nitrite-N *	EPA 300.0	8L16086	0.15	0.26	**2.1**	1	12/16/08	12/16/08	
Sulfate *	EPA 300.0	8L15075	0.20	0.50	**8.4**	1	12/15/08	12/16/08	
Total Dissolved Solids *	SM2540C	8L16052	10	10	**91**	1	12/16/08	12/17/08	
Total Suspended Solids *	SM 2540D	8L18110	1.0	10	**1.0**	1	12/18/08	12/18/08	J
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ml/l									
Total Settleable Solids *	SM2540F	8L16155	0.10	0.10	**0.10**	1	12/16/08	12/16/08	pH
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: NTU									
Turbidity J/DNQ	EPA 180.1	8L16147	0.040	1.0	**0.67**	1	12/16/08	12/16/08	B, J
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ug/l									
Perchlorate *	EPA 314.0	8L18054	0.90	4.0	ND	1	12/18/08	12/18/08	

*Analysis not validated

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

APPENDIX G

Section 21

Outfall 013, December 15, 2008

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Routine Outfall 013

Sampled: 12/15/08
Received: 12/15/08
Issued: 12/23/08 14:37

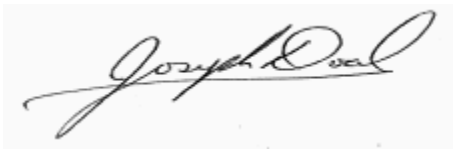
NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
IRL1721-01	Outfall 013	Water
IRL1721-02	Trip Blanks	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: mg/l									
DRO (C13 - C28)	EPA 8015B	8L18053	0.047	0.094	**0.055**	0.943	12/18/08	12/18/08	J
Surrogate: n-Octacosane (40-125%)					*70 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

VOLATILE FUEL HYDROCARBONS (EPA 5030/8015)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015B	8L18037	0.030	0.050	ND	1	12/18/08	12/18/08	
Surrogate: 4-BFB (FID) (65-140%)					*92 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	8L18001	0.40	0.50	ND	1	12/18/08	12/18/08	
1,2,3-Trichloropropane	EPA 624	8L18001	0.40	1.0	ND	1	12/18/08	12/18/08	
Di-isopropyl Ether (DIPE)	EPA 624	8L18001	0.25	0.50	ND	1	12/18/08	12/18/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8L18001	0.32	0.50	ND	1	12/18/08	12/18/08	
tert-Butanol (TBA)	EPA 624	8L18001	6.5	10	ND	1	12/18/08	12/18/08	
Surrogate: 4-Bromofluorobenzene (80-120%)					*91 %*				
Surrogate: Dibromofluoromethane (80-120%)					*86 %*				
Surrogate: Toluene-d8 (80-120%)					*97 %*				
Sample ID: IRL1721-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	8L17008	0.40	0.50	ND	1	12/17/08	12/17/08	
1,2,3-Trichloropropane	EPA 624	8L17008	0.40	1.0	ND	1	12/17/08	12/17/08	
Di-isopropyl Ether (DIPE)	EPA 624	8L17008	0.25	0.50	ND	1	12/17/08	12/17/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8L17008	0.32	0.50	ND	1	12/17/08	12/17/08	
tert-Butanol (TBA)	EPA 624	8L17008	6.5	10	ND	1	12/17/08	12/17/08	
Surrogate: 4-Bromofluorobenzene (80-120%)					*94 %*				
Surrogate: Dibromofluoromethane (80-120%)					*95 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

1,4-DIOXANE BY DIRECT INJECTION GCMS - SINGLE ION MONITORING (SIM)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B-SIM	8L16019	1.0	2.0	ND	1	12/16/08	12/16/08	
Surrogate: Dibromofluoromethane (80-120%)					*108 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/l									
Naphthalene	EPA 625	8L18083	2.9	9.7	ND	0.971	12/18/08	12/20/08	
N-Nitrosodimethylamine	EPA 625	8L18083	2.4	19	ND	0.971	12/18/08	12/20/08	
Surrogate: 2,4,6-Tribromophenol (40-120%)					*79 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*67 %*				
Surrogate: 2-Fluorophenol (30-120%)					*53 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*66 %*				
Surrogate: Phenol-d6 (35-120%)					*58 %*				
Surrogate: Terphenyl-d14 (50-125%)					*82 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	8L16094	0.020	0.050	ND	1	12/16/08	12/18/08	
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8L16092	0.11	1.0	**2.5**	1	12/16/08	12/17/08	
Copper	EPA 200.8	8L16092	0.75	2.0	**4.9**	1	12/16/08	12/17/08	
Lead	EPA 200.8	8L16092	0.30	1.0	**2.2**	1	12/16/08	12/17/08	
Selenium	EPA 200.8	8L16092	0.30	2.0	ND	1	12/16/08	12/17/08	
Zinc	EPA 200.8	8L16092	2.5	20	**79**	1	12/16/08	12/17/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7-Diss	8L18090	0.020	0.050	ND	1	12/18/08	12/18/08	
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8-Diss	8L17121	0.11	1.0	ND	1	12/17/08	12/18/08	
Copper	EPA 200.8-Diss	8L17121	0.75	2.0	**1.3**	1	12/17/08	12/18/08	B, J
Lead	EPA 200.8-Diss	8L17121	0.30	1.0	ND	1	12/17/08	12/18/08	
Selenium	EPA 200.8-Diss	8L17121	0.30	2.0	ND	1	12/17/08	12/18/08	
Zinc	EPA 200.8-Diss	8L17121	2.5	20	**3.8**	1	12/17/08	12/18/08	B, J

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8L19123	1.3	4.7	**3.3**	1	12/19/08	12/19/08	B, J
Ammonia-N (Distilled)	SM4500NH3-C	8L16135	0.50	0.50	**1.4**	1	12/16/08	12/16/08	
Biochemical Oxygen Demand	SM5210B	8L16072	0.50	2.0	**3.0**	1	12/16/08	12/21/08	
Chloride	EPA 300.0	8L15075	0.25	0.50	**16**	1	12/15/08	12/16/08	
Fluoride	SM 4500-F-C	8L16102	0.020	0.10	**0.17**	1	12/16/08	12/16/08	B
Nitrate-N	EPA 300.0	8L16086	0.060	0.11	**2.1**	1	12/16/08	12/16/08	
Nitrite-N	EPA 300.0	8L15075	0.090	0.15	ND	1	12/15/08	12/16/08	
Nitrate/Nitrite-N	EPA 300.0	8L16086	0.15	0.26	**2.1**	1	12/16/08	12/16/08	
Sulfate	EPA 300.0	8L15075	0.20	0.50	**8.4**	1	12/15/08	12/16/08	
Total Dissolved Solids	SM2540C	8L16052	10	10	**91**	1	12/16/08	12/17/08	
Total Suspended Solids	SM 2540D	8L18110	1.0	10	**1.0**	1	12/18/08	12/18/08	J
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	8L16155	0.10	0.10	**0.10**	1	12/16/08	12/16/08	pH
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	8L16147	0.040	1.0	**0.67**	1	12/16/08	12/16/08	B, J
Sample ID: IRL1721-01 (Outfall 013 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	8L18054	0.90	4.0	ND	1	12/18/08	12/18/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

DIOXIN (EPA 1613)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/L									
2,3,7,8-TCDD	1613-Dioxin-HR Alta	1770	).000000830	0.00000482	ND	1	12/17/08	12/18/08	
1,2,3,7,8-PeCDD	1613-Dioxin-HR Alta	1770	0.00000249	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,4,7,8-HxCDD	1613-Dioxin-HR Alta	1770	0.00000404	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,6,7,8-HxCDD	1613-Dioxin-HR Alta	1770	0.00000391	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,7,8,9-HxCDD	1613-Dioxin-HR Alta	1770	0.0000037	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,4,6,7,8-HpCDD	1613-Dioxin-HR Alta	1770	0.00000706	0.0000241	ND	1	12/17/08	12/18/08	
OCDD	1613-Dioxin-HR Alta	1770	0.00000245	0.0000482	**0.0000314**	1	12/17/08	12/18/08	Ja
2,3,7,8-TCDF	1613-Dioxin-HR Alta	1770	).000000730	0.00000482	ND	1	12/17/08	12/18/08	
1,2,3,7,8-PeCDF	1613-Dioxin-HR Alta	1770	0.00000204	0.0000241	ND	1	12/17/08	12/18/08	
2,3,4,7,8-PeCDF	1613-Dioxin-HR Alta	1770	0.00000223	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,4,7,8-HxCDF	1613-Dioxin-HR Alta	1770	0.00000138	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,6,7,8-HxCDF	1613-Dioxin-HR Alta	1770	0.00000142	0.0000241	ND	1	12/17/08	12/18/08	
2,3,4,6,7,8-HxCDF	1613-Dioxin-HR Alta	1770	0.00000174	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,7,8,9-HxCDF	1613-Dioxin-HR Alta	1770	0.00000269	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,4,6,7,8-HpCDF	1613-Dioxin-HR Alta	1770	0.00000204	0.0000241	ND	1	12/17/08	12/18/08	
1,2,3,4,7,8,9-HpCDF	1613-Dioxin-HR Alta	1770	0.00000283	0.0000241	ND	1	12/17/08	12/18/08	
OCDF	1613-Dioxin-HR Alta	1770	0.00000749	0.0000482	ND	1	12/17/08	12/18/08	
Total TCDD	1613-Dioxin-HR Alta	1770	.000000837	0.00000482	ND	1	12/17/08	12/18/08	
Total PeCDD	1613-Dioxin-HR Alta	1770	.00000249	0.0000241	ND	1	12/17/08	12/18/08	
Total HxCDD	1613-Dioxin-HR Alta	1770	.0000037	0.0000241	ND	1	12/17/08	12/18/08	
Total HpCDD	1613-Dioxin-HR Alta	1770	.00000706	0.0000241	**0.00000847**	1	12/17/08	12/18/08	
Total TCDF	1613-Dioxin-HR Alta	1770	.000000735	0.00000482	ND	1	12/17/08	12/18/08	
Total PeCDF	1613-Dioxin-HR Alta	1770	.00000204	0.0000241	ND	1	12/17/08	12/18/08	
Total HxCDF	1613-Dioxin-HR Alta	1770	.00000138	0.0000241	ND	1	12/17/08	12/18/08	
Total HpCDF	1613-Dioxin-HR Alta	1770	.00000204	0.0000241	ND	1	12/17/08	12/18/08	
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*94.8 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*96.9 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*80.4 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*96.6 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*83.5 %*				
Surrogate: 13C-OCDD (17-157%)					*71.2 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*93.7 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*92.4 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*90.9 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*85 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*81.6 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*82.3 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*86.2 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*82.5 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*77.7 %*				
Surrogate: 13C-OCDF (17-157%)					*71.6 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

DIOXIN (EPA 1613)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/L									
Surrogate: 37Cl-2,3,7,8-TCDD (35-197%)					*92.5 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

MCAWW 245.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	8353495	0.027	0.2	ND	1	12/18/08	12/18/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 013
Report Number: IRL1721

Sampled: 12/15/08
Received: 12/15/08

MCAWW 245.1-Diss

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRL1721-01 (Outfall 013 - Water) - cont.									
Reporting Units: ug/L									
Mercury-diss	MCAWW 245.1-Diss	8353517	0.027	0.2	ND	1	12/18/08	12/18/08	

TestAmerica Irvine

Joseph Doak
Project Manager