

APPENDIX G

Section 30

Outfall 008 – February 5 & 6, 2010

Test America Analytical Laboratory Report

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LABORATORY REPORT

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

Project: Annual Outfall 008

Sampled: 02/05/10-02/06/10
Received: 02/06/10
Revised: 04/05/10 15:50

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

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals

Sample: 1

Some analytes are reported at a concentration below the estimated detection limit (EDL). The data is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.

Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

Final revised report to provide corrected units, .pdf file for Radchem and PP metals omitted from original issue of this report. Copper in 3 sig figs.

LABORATORY ID

ITB0892-01

ITB0892-02

ITB0892-03

CLIENT ID

Outfall 008 (Grab)

Trip Blank

Outfall 008 (Composite)

MATRIX

Water

Water

Water

Reviewed By:



TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

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: ITB0892-01 (Outfall 008 (Grab) - Water)					Sampled: 02/06/10				
Reporting Units: ug/l									
Benzene	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/08/10	
Bromodichloromethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
Bromoform	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
Bromomethane	EPA 624	10B0840	0.42	1.0	ND	1	02/08/10	02/08/10	
Carbon tetrachloride	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/08/10	
Chlorobenzene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/08/10	
Chloroethane	EPA 624	10B0840	0.40	1.0	ND	1	02/08/10	02/08/10	
Chloroform	EPA 624	10B0840	0.33	0.50	ND	1	02/08/10	02/08/10	
Chloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
Dibromochloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
1,2-Dichlorobenzene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
1,3-Dichlorobenzene	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/08/10	
1,4-Dichlorobenzene	EPA 624	10B0840	0.37	0.50	ND	1	02/08/10	02/08/10	
1,1-Dichloroethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
1,2-Dichloroethane	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/08/10	
1,1-Dichloroethene	EPA 624	10B0840	0.42	0.50	ND	1	02/08/10	02/08/10	
cis-1,2-Dichloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
trans-1,2-Dichloroethene	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
1,2-Dichloropropane	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/08/10	
cis-1,3-Dichloropropene	EPA 624	10B0840	0.22	0.50	ND	1	02/08/10	02/08/10	
trans-1,3-Dichloropropene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
Ethylbenzene	EPA 624	10B0840	0.25	0.50	ND	1	02/08/10	02/08/10	
Methylene chloride	EPA 624	10B0840	0.95	1.0	ND	1	02/08/10	02/08/10	
1,1,2,2-Tetrachloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
Tetrachloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
Toluene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/08/10	
1,1,1-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
1,1,2-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
Trichloroethene	EPA 624	10B0840	0.26	0.50	ND	1	02/08/10	02/08/10	
Trichlorofluoromethane	EPA 624	10B0840	0.34	0.50	ND	1	02/08/10	02/08/10	
Trichlorotrifluoroethane (Freon 113)	EPA 624	10B0840	0.50	5.0	ND	1	02/08/10	02/08/10	
Vinyl chloride	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
Xylenes, Total	EPA 624	10B0840	0.90	1.5	ND	1	02/08/10	02/08/10	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					95 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					104 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					106 %				

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

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: ITB0892-02 (Trip Blank - Water)					Sampled: 02/06/10				
Reporting Units: ug/l									
Benzene	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/08/10	
Bromodichloromethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
Bromoform	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
Bromomethane	EPA 624	10B0840	0.42	1.0	ND	1	02/08/10	02/08/10	
Carbon tetrachloride	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/08/10	
Chlorobenzene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/08/10	
Chloroethane	EPA 624	10B0840	0.40	1.0	ND	1	02/08/10	02/08/10	
Chloroform	EPA 624	10B0840	0.33	0.50	ND	1	02/08/10	02/08/10	
Chloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
Dibromochloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
1,2-Dichlorobenzene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
1,3-Dichlorobenzene	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/08/10	
1,4-Dichlorobenzene	EPA 624	10B0840	0.37	0.50	ND	1	02/08/10	02/08/10	
1,1-Dichloroethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
1,2-Dichloroethane	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/08/10	
1,1-Dichloroethene	EPA 624	10B0840	0.42	0.50	ND	1	02/08/10	02/08/10	
cis-1,2-Dichloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
trans-1,2-Dichloroethene	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
1,2-Dichloropropane	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/08/10	
cis-1,3-Dichloropropene	EPA 624	10B0840	0.22	0.50	ND	1	02/08/10	02/08/10	
trans-1,3-Dichloropropene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
Ethylbenzene	EPA 624	10B0840	0.25	0.50	ND	1	02/08/10	02/08/10	
Methylene chloride	EPA 624	10B0840	0.95	1.0	ND	1	02/08/10	02/08/10	
1,1,2,2-Tetrachloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
Tetrachloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/08/10	
Toluene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/08/10	
1,1,1-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
1,1,2-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/08/10	
Trichloroethene	EPA 624	10B0840	0.26	0.50	ND	1	02/08/10	02/08/10	
Trichlorofluoromethane	EPA 624	10B0840	0.34	0.50	ND	1	02/08/10	02/08/10	
Trichlorotrifluoroethane (Freon 113)	EPA 624	10B0840	0.50	5.0	ND	1	02/08/10	02/08/10	
Vinyl chloride	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/08/10	
Xylenes, Total	EPA 624	10B0840	0.90	1.5	ND	1	02/08/10	02/08/10	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					101 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					108 %				

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
 Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-01 (Outfall 008 (Grab) - Water)					Sampled: 02/06/10				
Reporting Units: ug/l									
Acrolein	EPA 624	10B0840	4.0	5.0	ND	1	02/08/10	02/08/10	
Acrylonitrile	EPA 624	10B0840	1.2	2.0	ND	1	02/08/10	02/08/10	
2-Chloroethyl vinyl ether	EPA 624	10B0840	1.8	5.0	ND	1	02/08/10	02/08/10	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					95 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					104 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					106 %				
Sample ID: ITB0892-02 (Trip Blank - Water)					Sampled: 02/06/10				
Reporting Units: ug/l									
Acrolein	EPA 624	10B0840	4.0	5.0	ND	1	02/08/10	02/08/10	
Acrylonitrile	EPA 624	10B0840	1.2	2.0	ND	1	02/08/10	02/08/10	
2-Chloroethyl vinyl ether	EPA 624	10B0840	1.8	5.0	ND	1	02/08/10	02/08/10	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					101 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					108 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

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: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/l									
Acenaphthene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Acenaphthylene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Aniline	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
Anthracene	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
Benzidine	EPA 625	10B1058	9.4	19	ND	0.943	02/09/10	02/11/10	C
Benzo(a)anthracene	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
Benzo(a)pyrene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Benzo(b)fluoranthene	EPA 625	10B1058	1.9	9.4	ND	0.943	02/09/10	02/11/10	
Benzo(g,h,i)perylene	EPA 625	10B1058	3.8	9.4	ND	0.943	02/09/10	02/11/10	
Benzo(k)fluoranthene	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
Benzoic acid	EPA 625	10B1058	9.4	19	ND	0.943	02/09/10	02/11/10	
Benzyl alcohol	EPA 625	10B1058	3.3	19	ND	0.943	02/09/10	02/11/10	
4-Bromophenyl phenyl ether	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Butyl benzyl phthalate	EPA 625	10B1058	3.8	19	ND	0.943	02/09/10	02/11/10	
4-Chloro-3-methylphenol	EPA 625	10B1058	2.4	19	ND	0.943	02/09/10	02/11/10	
4-Chloroaniline	EPA 625	10B1058	1.9	9.4	ND	0.943	02/09/10	02/11/10	
Bis(2-chloroethoxy)methane	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Bis(2-chloroethyl)ether	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Bis(2-chloroisopropyl)ether	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
Bis(2-ethylhexyl)phthalate	EPA 625	10B1058	3.8	47	ND	0.943	02/09/10	02/11/10	
2-Chloronaphthalene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
2-Chlorophenol	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
4-Chlorophenyl phenyl ether	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
Chrysene	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
Dibenz(a,h)anthracene	EPA 625	10B1058	2.8	19	ND	0.943	02/09/10	02/11/10	
Dibenzofuran	EPA 625	10B1058	3.8	9.4	ND	0.943	02/09/10	02/11/10	
Di-n-butyl phthalate	EPA 625	10B1058	2.8	19	ND	0.943	02/09/10	02/11/10	
1,2-Dichlorobenzene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
1,3-Dichlorobenzene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
1,4-Dichlorobenzene	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
3,3'-Dichlorobenzidine	EPA 625	10B1058	7.1	19	ND	0.943	02/09/10	02/11/10	
2,4-Dichlorophenol	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
Diethyl phthalate	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
2,4-Dimethylphenol	EPA 625	10B1058	3.3	19	ND	0.943	02/09/10	02/11/10	
Dimethyl phthalate	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
4,6-Dinitro-2-methylphenol	EPA 625	10B1058	3.8	19	ND	0.943	02/09/10	02/11/10	
2,4-Dinitrophenol	EPA 625	10B1058	7.5	19	ND	0.943	02/09/10	02/11/10	
2,4-Dinitrotoluene	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
2,6-Dinitrotoluene	EPA 625	10B1058	1.9	9.4	ND	0.943	02/09/10	02/11/10	
Di-n-octyl phthalate	EPA 625	10B1058	3.3	19	ND	0.943	02/09/10	02/11/10	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	10B1058	2.4	19	ND	0.943	02/09/10	02/11/10	

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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 618 Michillinda Avenue, Suite 200
 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

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: ITB0892-03 (Outfall 008 (Composite) - Water) - cont.					Sampled: 02/05/10				
Reporting Units: ug/l									
Fluoranthene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Fluorene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Hexachlorobenzene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Hexachlorobutadiene	EPA 625	10B1058	3.8	9.4	ND	0.943	02/09/10	02/11/10	
Hexachlorocyclopentadiene	EPA 625	10B1058	4.7	19	ND	0.943	02/09/10	02/11/10	L
Hexachloroethane	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
Indeno(1,2,3-cd)pyrene	EPA 625	10B1058	3.3	19	ND	0.943	02/09/10	02/11/10	
Isophorone	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
2-Methylnaphthalene	EPA 625	10B1058	1.9	9.4	ND	0.943	02/09/10	02/11/10	
2-Methylphenol	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
4-Methylphenol	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
Naphthalene	EPA 625	10B1058	2.8	9.4	ND	0.943	02/09/10	02/11/10	
2-Nitroaniline	EPA 625	10B1058	1.9	19	ND	0.943	02/09/10	02/11/10	
3-Nitroaniline	EPA 625	10B1058	2.8	19	ND	0.943	02/09/10	02/11/10	
4-Nitroaniline	EPA 625	10B1058	3.8	19	ND	0.943	02/09/10	02/11/10	
Nitrobenzene	EPA 625	10B1058	2.8	19	ND	0.943	02/09/10	02/11/10	
2-Nitrophenol	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
4-Nitrophenol	EPA 625	10B1058	5.2	19	ND	0.943	02/09/10	02/11/10	
N-Nitroso-di-n-propylamine	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
N-Nitrosodimethylamine	EPA 625	10B1058	2.4	19	ND	0.943	02/09/10	02/11/10	
N-Nitrosodiphenylamine	EPA 625	10B1058	1.9	9.4	ND	0.943	02/09/10	02/11/10	
Pentachlorophenol	EPA 625	10B1058	3.3	19	ND	0.943	02/09/10	02/11/10	
Phenanthrene	EPA 625	10B1058	3.3	9.4	ND	0.943	02/09/10	02/11/10	
Phenol	EPA 625	10B1058	1.9	9.4	ND	0.943	02/09/10	02/11/10	
Pyrene	EPA 625	10B1058	3.8	9.4	ND	0.943	02/09/10	02/11/10	
1,2,4-Trichlorobenzene	EPA 625	10B1058	2.4	9.4	ND	0.943	02/09/10	02/11/10	
2,4,5-Trichlorophenol	EPA 625	10B1058	2.8	19	ND	0.943	02/09/10	02/11/10	
2,4,6-Trichlorophenol	EPA 625	10B1058	4.2	19	ND	0.943	02/09/10	02/11/10	
Surrogate: 2,4,6-Tribromophenol (40-120%)					89 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					72 %				
Surrogate: 2-Fluorophenol (30-120%)					60 %				
Surrogate: Nitrobenzene-d5 (45-120%)					74 %				
Surrogate: Phenol-d6 (35-120%)					70 %				
Surrogate: Terphenyl-d14 (50-125%)					85 %				

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/l									
Chlorpyrifos	EPA 525.2	10B0759	N/A	1.0	ND	1	02/06/10	02/09/10	
Diazinon	EPA 525.2	10B0759	N/A	0.25	ND	1	02/06/10	02/09/10	
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					94 %				
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					94 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					106 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					106 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					105 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					105 %				

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/l									
4,4'-DDD	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	
4,4'-DDE	EPA 608	10B1291	0.0028	0.0047	ND	0.943	02/11/10	02/13/10	
4,4'-DDT	EPA 608	10B1291	0.0038	0.0094	ND	0.943	02/11/10	02/13/10	
Aldrin	EPA 608	10B1291	0.0014	0.0047	ND	0.943	02/11/10	02/13/10	
alpha-BHC	EPA 608	10B1291	0.0024	0.0047	ND	0.943	02/11/10	02/13/10	
beta-BHC	EPA 608	10B1291	0.0038	0.0094	ND	0.943	02/11/10	02/13/10	
delta-BHC	EPA 608	10B1291	0.0033	0.0047	ND	0.943	02/11/10	02/13/10	
Dieldrin	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	
Endosulfan I	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	
Endosulfan II	EPA 608	10B1291	0.0028	0.0047	ND	0.943	02/11/10	02/13/10	
Endosulfan sulfate	EPA 608	10B1291	0.0028	0.0094	ND	0.943	02/11/10	02/13/10	
Endrin	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	C
Endrin aldehyde	EPA 608	10B1291	0.0019	0.0094	ND	0.943	02/11/10	02/13/10	
Endrin ketone	EPA 608	10B1291	0.0028	0.0094	ND	0.943	02/11/10	02/13/10	
gamma-BHC (Lindane)	EPA 608	10B1291	0.0028	0.019	ND	0.943	02/11/10	02/13/10	
Heptachlor	EPA 608	10B1291	0.0028	0.0094	ND	0.943	02/11/10	02/13/10	C
Heptachlor epoxide	EPA 608	10B1291	0.0024	0.0047	ND	0.943	02/11/10	02/13/10	
Methoxychlor	EPA 608	10B1291	0.0033	0.0047	ND	0.943	02/11/10	02/13/10	
Chlordane	EPA 608	10B1291	0.038	0.094	ND	0.943	02/11/10	02/13/10	
Toxaphene	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/13/10	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					61 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					49 %				

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TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water) - cont.					Sampled: 02/05/10				
Reporting Units: ug/l									
Aroclor 1016	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1221	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1232	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1242	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1248	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1254	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1260	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					67 %				

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Sampled: 02/05/10-02/06/10
Received: 02/06/10

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-01 (Outfall 008 (Grab) - Water)					Sampled: 02/06/10				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10B1991	1.3	4.7	ND	1	02/17/10	02/17/10	

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Sampled: 02/05/10-02/06/10
Received: 02/06/10

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	98	1	02/16/10	02/17/10	
Aluminum	EPA 200.7	10B1911	0.040	0.050	12	1	02/16/10	02/17/10	
Boron	EPA 200.7	10B1911	0.020	0.050	0.062	1	02/16/10	02/17/10	B
Calcium	EPA 200.7	10B1911	0.050	0.10	28	1	02/16/10	02/17/10	
Iron	EPA 200.7	10B1911	0.015	0.040	14	1	02/16/10	02/17/10	
Magnesium	EPA 200.7	10B1911	0.012	0.020	6.8	1	02/16/10	02/17/10	

Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/l									
Mercury	EPA 245.1	10B1942	0.10	0.20	ND	1	02/16/10	02/16/10	
Arsenic	EPA 200.7	10B1911	7.0	10	ND	1	02/16/10	02/17/10	
Antimony	EPA 200.8	10B1598	0.30	2.0	ND	1	02/12/10	02/15/10	
Beryllium	EPA 200.7	10B1911	0.90	2.0	ND	1	02/16/10	02/17/10	
Chromium	EPA 200.7	10B1911	2.0	5.0	16	1	02/16/10	02/17/10	
Nickel	EPA 200.7	10B1911	2.0	10	7.2	1	02/16/10	02/17/10	Ja
Silver	EPA 200.7	10B1911	6.0	10	ND	1	02/16/10	02/17/10	
Cadmium	EPA 200.8	10B1598	0.10	1.0	ND	1	02/12/10	02/15/10	
Vanadium	EPA 200.7	10B1911	3.0	10	26	1	02/16/10	02/17/10	
Zinc	EPA 200.7	10B1911	6.0	20	49	1	02/16/10	02/17/10	
Copper	EPA 200.8	10B1598	0.500	2.00	13.9	1	02/12/10	02/15/10	
Lead	EPA 200.8	10B1598	0.20	1.0	10	1	02/12/10	02/15/10	
Selenium	EPA 200.8	10B1598	0.50	2.0	0.62	1	02/12/10	02/15/10	Ja
Thallium	EPA 200.8	10B1598	0.20	1.0	ND	1	02/12/10	02/15/10	C

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Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]	N/A	0.33	69	1	02/15/10	02/16/10	
Aluminum	EPA 200.7-Diss	10B1846	0.040	0.050	0.27	1	02/15/10	02/16/10	
Boron	EPA 200.7-Diss	10B1846	0.020	0.050	0.12	1	02/15/10	02/16/10	B
Calcium	EPA 200.7-Diss	10B1846	0.050	0.10	21	1	02/15/10	02/16/10	
Iron	EPA 200.7-Diss	10B1846	0.015	0.040	0.29	1	02/15/10	02/16/10	
Magnesium	EPA 200.7-Diss	10B1846	0.012	0.020	3.7	1	02/15/10	02/16/10	

Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10B1953	0.10	0.20	ND	1	02/16/10	02/16/10	
Arsenic	EPA 200.7-Diss	10B1846	7.0	10	ND	1	02/15/10	02/16/10	
Antimony	EPA 200.8-Diss	10B1845	0.30	2.0	0.36	1	02/15/10	02/17/10	Ja
Beryllium	EPA 200.7-Diss	10B1846	0.90	2.0	ND	1	02/15/10	02/16/10	
Chromium	EPA 200.7-Diss	10B1846	2.0	5.0	12	1	02/15/10	02/16/10	
Nickel	EPA 200.7-Diss	10B1846	2.0	10	5.3	1	02/15/10	02/16/10	Ja
Silver	EPA 200.7-Diss	10B1846	6.0	10	ND	1	02/15/10	02/16/10	
Cadmium	EPA 200.8-Diss	10B1845	0.10	1.0	ND	1	02/15/10	02/17/10	
Vanadium	EPA 200.7-Diss	10B1846	3.0	10	ND	1	02/15/10	02/16/10	
Zinc	EPA 200.7-Diss	10B1846	6.0	20	49	1	02/15/10	02/16/10	
Copper	EPA 200.8-Diss	10B2106	0.500	2.00	3.55	1	02/17/10	02/18/10	
Lead	EPA 200.8-Diss	10B1845	0.20	1.0	ND	1	02/15/10	02/17/10	
Selenium	EPA 200.8-Diss	10B1845	0.50	2.0	ND	1	02/15/10	02/17/10	
Thallium	EPA 200.8-Diss	10B1845	0.20	1.0	ND	1	02/15/10	02/17/10	

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Received: 02/06/10

DISSOLVED INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-01 (Outfall 008 (Grab) - Water)					Sampled: 02/06/10				
Reporting Units: ug/l									
Chromium VI	EPA 218.6	10B0756	0.25	1.0	ND	1	02/06/10	02/06/10	

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	10B1575	0.50	0.50	ND	1	02/12/10	02/12/10	
Chloride	EPA 300.0	10B0807	0.25	0.50	15	1	02/07/10	02/07/10	
Fluoride	SM 4500-F-C	10B1111	0.020	0.10	0.26	1	02/10/10	02/10/10	B
Nitrate-N	EPA 300.0	10B0807	0.060	0.11	0.67	1	02/07/10	02/07/10	
Nitrite-N	EPA 300.0	10B0807	0.090	0.15	ND	1	02/07/10	02/07/10	
Nitrate/Nitrite-N	EPA 300.0	10B0807	0.15	0.26	0.67	1	02/07/10	02/07/10	
Sulfate	EPA 300.0	10B0807	0.20	0.50	13	1	02/07/10	02/07/10	
Total Dissolved Solids	SM2540C	10B1300	1.0	10	200	1	02/11/10	02/11/10	
Total Suspended Solids	SM 2540D	10B1450	2.0	20	250	1	02/11/10	02/11/10	
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10B1658	0.90	4.0	ND	1	02/13/10	02/13/10	
Total Cyanide	SM4500CN-E	10B1250	2.2	5.0	ND	1	02/10/10	02/10/10	

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Received: 02/06/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	53280	0.21	0.693	0.811	1	02/23/10	02/26/10	

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EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	43108	2.2	3	20.5	1	02/10/10	02/18/10	
Gross Beta	EPA 900.0 MOD	43108	1.2	4	10.8	1	02/10/10	02/18/10	

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Received: 02/06/10

EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	42136	16	20	-1.6	1	02/11/10	02/19/10	U
Potassium 40	EPA 901.1 MOD	42136	200	NA	-100	1	02/11/10	02/19/10	U

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EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	41160	0.21	1	0.34	1	02/10/10	02/26/10	Jb

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Received: 02/06/10

EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03RE1 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	60257	0.32	1	-0.03	1	03/01/10	03/05/10	U

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EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	41162	1.4	3	0.85	1	02/10/10	02/19/10	U

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Received: 02/06/10

EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	49035	95	500	99	1	02/18/10	02/18/10	Jb

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Received: 02/06/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)					Sampled: 02/05/10				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	48124	0.0000087	0.00005	0.000012	1	02/17/10	02/19/10	J, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	48124	0.0000075	0.00005	0.000052	1	02/17/10	02/19/10	J, Q, Ba
2,3,7,8-TCDF	EPA-5 1613B	48124	0.0000045	0.00001	0.000014	1	02/17/10	02/19/10	J
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	48124	0.0000012	0.00005	0.0000077	1	02/17/10	02/19/10	J, Q
1,2,3,4,7,8-HxCDD	EPA-5 1613B	48124	0.0000007	0.00005	0.0000064	1	02/17/10	02/19/10	J, Q
1,2,3,4,7,8-HxCDF	EPA-5 1613B	48124	0.0000072	0.00005	0.000013	1	02/17/10	02/19/10	J, Q
1,2,3,6,7,8-HxCDD	EPA-5 1613B	48124	0.0000056	0.00005	0.000011	1	02/17/10	02/19/10	J, Q
1,2,3,6,7,8-HxCDF	EPA-5 1613B	48124	0.0000006	0.00005	0.0000087	1	02/17/10	02/19/10	J, Q
1,2,3,7,8,9-HxCDD	EPA-5 1613B	48124	0.0000052	0.00005	0.000014	1	02/17/10	02/19/10	J, Q
1,2,3,7,8,9-HxCDF	EPA-5 1613B	48124	0.0000079	0.00005	ND	1	02/17/10	02/19/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	48124	0.0000088	0.00005	ND	1	02/17/10	02/19/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	48124	0.0000005	0.00005	ND	1	02/17/10	02/19/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	48124	0.0000062	0.00005	0.0000045	1	02/17/10	02/19/10	J, Q
2,3,4,7,8-PeCDF	EPA-5 1613B	48124	0.0000062	0.00005	ND	1	02/17/10	02/19/10	
2,3,7,8-TCDD	EPA-5 1613B	48124	0.0000067	0.00001	ND	1	02/17/10	02/19/10	
OCDD	EPA-5 1613B	48124	0.0000013	0.0001	0.00012	1	02/17/10	02/19/10	Ba
OCDF	EPA-5 1613B	48124	0.0000098	0.0001	0.000073	1	02/17/10	02/19/10	J, Ba
Total HpCDD	EPA-5 1613B	48124	0.0000087	0.00005	0.000034	1	02/17/10	02/19/10	J, Ba
Total HpCDF	EPA-5 1613B	48124	0.0000075	0.00005	0.000096	1	02/17/10	02/19/10	J, Q, Ba
Total HxCDD	EPA-5 1613B	48124	0.0000052	0.00005	0.000044	1	02/17/10	02/19/10	J, Q
Total HxCDF	EPA-5 1613B	48124	0.0000006	0.00005	0.000044	1	02/17/10	02/19/10	J, Q
Total PeCDD	EPA-5 1613B	48124	0.0000088	0.00005	ND	1	02/17/10	02/19/10	
Total PeCDF	EPA-5 1613B	48124	0.0000005	0.00005	ND	1	02/17/10	02/19/10	
Total TCDD	EPA-5 1613B	48124	0.0000067	0.00001	ND	1	02/17/10	02/19/10	
Total TCDF	EPA-5 1613B	48124	0.0000045	0.00001	0.000014	1	02/17/10	02/19/10	J

Surrogate: 13C-2,3,7,8-TCDF (24-169%)	53 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	94 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	69 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	63 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	63 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	65 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	67 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	66 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	67 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	64 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	69 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	64 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	72 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	62 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	58 %
Surrogate: 13C-OCDD (17-157%)	68 %

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Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03RE1 (Outfall 008 (Composite) - Water) - cont.					Sampled: 02/05/10				
Reporting Units: ug/L									
2,3,7,8-TCDF	EPA-5 1613B	48124	0.0000028	0.00001	ND	1	02/17/10	02/19/10	
<i>Surrogate: 13C-2,3,7,8-TCDF (24-169%)</i>					67 %				
<i>Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)</i>					94 %				

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Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 008 (Grab) (ITB0892-01) - Water					
EPA 218.6	1	02/06/2010 08:15	02/06/2010 17:00	02/06/2010 19:20	02/06/2010 19:54
EPA 624	3	02/06/2010 08:15	02/06/2010 17:00	02/08/2010 00:00	02/08/2010 20:49
Sample ID: Trip Blank (ITB0892-02) - Water					
EPA 624	3	02/06/2010 07:00	02/06/2010 17:00	02/08/2010 00:00	02/08/2010 22:18
Sample ID: Outfall 008 (Composite) (ITB0892-03) - Water					
EPA 300.0	2	02/05/2010 21:02	02/06/2010 17:00	02/07/2010 18:15	02/07/2010 18:56
EPA 525.2	1	02/05/2010 21:02	02/06/2010 17:00	02/06/2010 18:55	02/09/2010 18:12
Filtration	1	02/05/2010 21:02	02/06/2010 17:00	02/07/2010 19:33	02/07/2010 19:35

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD RPD	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/10										
Blank Analyzed: 02/08/2010 (10B0840-BLK1)										
Bromodichloromethane	ND	0.50	0.30	ug/l						
Bromoform	ND	0.50	0.40	ug/l						
Bromomethane	ND	1.0	0.42	ug/l						
Chlorobenzene	ND	0.50	0.36	ug/l						
Chloroethane	ND	1.0	0.40	ug/l						
Chloromethane	ND	0.50	0.40	ug/l						
Dibromochloromethane	ND	0.50	0.40	ug/l						
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l						
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l						
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l						
cis-1,2-Dichloroethene	ND	0.50	0.32	ug/l						
trans-1,2-Dichloroethene	ND	0.50	0.30	ug/l						
1,2-Dichloropropane	ND	0.50	0.35	ug/l						
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l						
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l						
Methylene chloride	ND	1.0	0.95	ug/l						
1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l						
Surrogate: 4-Bromofluorobenzene	23.4			ug/l	25.0		94		80-120	
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102		80-120	
Surrogate: Toluene-d8	27.0			ug/l	25.0		108		80-120	
LCS Analyzed: 02/08/2010 (10B0840-BS1)										
Bromodichloromethane	24.0	0.50	0.30	ug/l	25.0		96		70-135	
Bromoform	20.1	0.50	0.40	ug/l	25.0		81		55-130	
Bromomethane	28.6	1.0	0.42	ug/l	25.0		115		65-140	
Chlorobenzene	24.7	0.50	0.36	ug/l	25.0		99		75-120	
Chloroethane	26.6	1.0	0.40	ug/l	25.0		107		60-140	
Chloromethane	28.4	0.50	0.40	ug/l	25.0		114		50-140	
Dibromochloromethane	22.3	0.50	0.40	ug/l	25.0		89		70-140	
1,2-Dichlorobenzene	24.5	0.50	0.32	ug/l	25.0		98		75-120	
1,3-Dichlorobenzene	25.1	0.50	0.35	ug/l	25.0		100		75-120	
1,4-Dichlorobenzene	24.6	0.50	0.37	ug/l	25.0		99		75-120	
cis-1,2-Dichloroethene	26.5	0.50	0.32	ug/l	25.0		106		70-125	
trans-1,2-Dichloroethene	25.9	0.50	0.30	ug/l	25.0		104		70-125	
1,2-Dichloropropane	21.7	0.50	0.35	ug/l	25.0		87		70-125	
cis-1,3-Dichloropropene	25.8	0.50	0.22	ug/l	25.0		103		75-125	

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Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/10											
LCS Analyzed: 02/08/2010 (10B0840-BS1)											
trans-1,3-Dichloropropene	19.9	0.50	0.32	ug/l	25.0		80	70-125			
Methylene chloride	24.0	1.0	0.95	ug/l	25.0		96	55-130			
1,1,2,2-Tetrachloroethane	25.5	0.50	0.30	ug/l	25.0		102	55-130			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		105	80-120			
Matrix Spike Analyzed: 02/08/2010 (10B0840-MS1)											
Source: ITB0892-01											
Bromodichloromethane	27.4	0.50	0.30	ug/l	25.0	ND	109	70-135			
Bromoform	22.2	0.50	0.40	ug/l	25.0	ND	89	55-135			
Bromomethane	30.0	1.0	0.42	ug/l	25.0	ND	120	55-145			
Chlorobenzene	26.9	0.50	0.36	ug/l	25.0	ND	108	75-125			
Chloroethane	28.3	1.0	0.40	ug/l	25.0	ND	113	55-140			
Chloromethane	29.6	0.50	0.40	ug/l	25.0	ND	118	45-145			
Dibromochloromethane	25.1	0.50	0.40	ug/l	25.0	ND	100	65-140			
1,2-Dichlorobenzene	26.3	0.50	0.32	ug/l	25.0	ND	105	75-125			
1,3-Dichlorobenzene	27.5	0.50	0.35	ug/l	25.0	ND	110	75-125			
1,4-Dichlorobenzene	27.0	0.50	0.37	ug/l	25.0	ND	108	75-125			
cis-1,2-Dichloroethene	29.2	0.50	0.32	ug/l	25.0	ND	117	65-130			
trans-1,2-Dichloroethene	27.6	0.50	0.30	ug/l	25.0	ND	111	65-130			
1,2-Dichloropropane	24.3	0.50	0.35	ug/l	25.0	ND	97	65-130			
cis-1,3-Dichloropropene	29.5	0.50	0.22	ug/l	25.0	ND	118	70-130			
trans-1,3-Dichloropropene	22.6	0.50	0.32	ug/l	25.0	ND	90	65-135			
Methylene chloride	26.0	1.0	0.95	ug/l	25.0	ND	104	50-135			
1,1,2,2-Tetrachloroethane	26.1	0.50	0.30	ug/l	25.0	ND	104	55-135			
Surrogate: 4-Bromofluorobenzene	26.5			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.7			ug/l	25.0		107	80-120			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/10											
Matrix Spike Dup Analyzed: 02/08/2010 (10B0840-MSD1)						Source: ITB0892-01					
Bromodichloromethane	25.6	0.50	0.30	ug/l	25.0	ND	102	70-135	7	20	
Bromoform	21.2	0.50	0.40	ug/l	25.0	ND	85	55-135	5	25	
Bromomethane	29.2	1.0	0.42	ug/l	25.0	ND	117	55-145	3	25	
Chlorobenzene	26.0	0.50	0.36	ug/l	25.0	ND	104	75-125	3	20	
Chloroethane	26.8	1.0	0.40	ug/l	25.0	ND	107	55-140	5	25	
Chloromethane	28.7	0.50	0.40	ug/l	25.0	ND	115	45-145	3	25	
Dibromochloromethane	23.7	0.50	0.40	ug/l	25.0	ND	95	65-140	6	25	
1,2-Dichlorobenzene	25.2	0.50	0.32	ug/l	25.0	ND	101	75-125	4	20	
1,3-Dichlorobenzene	26.2	0.50	0.35	ug/l	25.0	ND	105	75-125	5	20	
1,4-Dichlorobenzene	25.9	0.50	0.37	ug/l	25.0	ND	103	75-125	4	20	
cis-1,2-Dichloroethene	27.3	0.50	0.32	ug/l	25.0	ND	109	65-130	7	20	
trans-1,2-Dichloroethene	26.2	0.50	0.30	ug/l	25.0	ND	105	65-130	6	20	
1,2-Dichloropropane	23.2	0.50	0.35	ug/l	25.0	ND	93	65-130	5	20	
cis-1,3-Dichloropropene	28.0	0.50	0.22	ug/l	25.0	ND	112	70-130	5	20	
trans-1,3-Dichloropropene	20.9	0.50	0.32	ug/l	25.0	ND	84	65-135	8	25	
Methylene chloride	25.0	1.0	0.95	ug/l	25.0	ND	100	50-135	4	20	
1,1,2,2-Tetrachloroethane	24.5	0.50	0.30	ug/l	25.0	ND	98	55-135	6	30	
Surrogate: 4-Bromofluorobenzene	25.8			ug/l	25.0		103	80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			

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 Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/10											
Blank Analyzed: 02/08/2010 (10B0840-BLK1)											
Acrolein	ND	5.0	4.0	ug/l							
Acrylonitrile	ND	2.0	1.2	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: 4-Bromofluorobenzene	23.4			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
LCS Analyzed: 02/08/2010 (10B0840-BS1)											
2-Chloroethyl vinyl ether	13.8	5.0	1.8	ug/l	25.0		55	25-170			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		105	80-120			
Matrix Spike Analyzed: 02/08/2010 (10B0840-MS1) Source: ITB0892-01											
2-Chloroethyl vinyl ether	13.8	5.0	1.8	ug/l	25.0	ND	55	25-170			
Surrogate: 4-Bromofluorobenzene	26.5			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.7			ug/l	25.0		107	80-120			
Matrix Spike Dup Analyzed: 02/08/2010 (10B0840-MSD1) Source: ITB0892-01											
2-Chloroethyl vinyl ether	12.8	5.0	1.8	ug/l	25.0	ND	51	25-170	7	25	
Surrogate: 4-Bromofluorobenzene	25.8			ug/l	25.0		103	80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
Blank Analyzed: 02/11/2010 (10B1058-BLK1)											
Acenaphthene	ND	10	3.0	ug/l							
Acenaphthylene	ND	10	3.0	ug/l							
Aniline	ND	10	3.5	ug/l							
Anthracene	ND	10	2.5	ug/l							
Benzidine	ND	20	10	ug/l							
Benzo(a)anthracene	ND	10	2.5	ug/l							
Benzo(a)pyrene	ND	10	3.0	ug/l							
Benzo(b)fluoranthene	ND	10	2.0	ug/l							
Benzo(g,h,i)perylene	ND	10	4.0	ug/l							
Benzo(k)fluoranthene	ND	10	2.5	ug/l							
Benzoic acid	ND	20	10	ug/l							
Benzyl alcohol	ND	20	3.5	ug/l							
4-Bromophenyl phenyl ether	ND	10	3.0	ug/l							
Butyl benzyl phthalate	ND	20	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	2.5	ug/l							
4-Chloroaniline	ND	10	2.0	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.0	ug/l							
Bis(2-chloroethyl)ether	ND	10	3.0	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	2.5	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	4.0	ug/l							
2-Chloronaphthalene	ND	10	3.0	ug/l							
2-Chlorophenol	ND	10	3.0	ug/l							
4-Chlorophenyl phenyl ether	ND	10	2.5	ug/l							
Chrysene	ND	10	2.5	ug/l							
Dibenz(a,h)anthracene	ND	20	3.0	ug/l							
Dibenzofuran	ND	10	4.0	ug/l							
Di-n-butyl phthalate	ND	20	3.0	ug/l							
3,3'-Dichlorobenzidine	ND	20	7.5	ug/l							
2,4-Dichlorophenol	ND	10	3.5	ug/l							
Diethyl phthalate	ND	10	3.5	ug/l							
2,4-Dimethylphenol	ND	20	3.5	ug/l							
Dimethyl phthalate	ND	10	2.5	ug/l							
4,6-Dinitro-2-methylphenol	ND	20	4.0	ug/l							
2,4-Dinitrophenol	ND	20	8.0	ug/l							
2,4-Dinitrotoluene	ND	10	3.5	ug/l							

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Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
Blank Analyzed: 02/11/2010 (10B1058-BLK1)											
2,6-Dinitrotoluene	ND	10	2.0	ug/l							
Di-n-octyl phthalate	ND	20	3.5	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	2.5	ug/l							
Fluoranthene	ND	10	3.0	ug/l							
Fluorene	ND	10	3.0	ug/l							
Hexachlorobenzene	ND	10	3.0	ug/l							
Hexachlorobutadiene	ND	10	4.0	ug/l							
Hexachlorocyclopentadiene	ND	20	5.0	ug/l							
Hexachloroethane	ND	10	3.5	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	3.5	ug/l							
Isophorone	ND	10	3.0	ug/l							
2-Methylnaphthalene	ND	10	2.0	ug/l							
2-Methylphenol	ND	10	3.0	ug/l							
4-Methylphenol	ND	10	3.0	ug/l							
Naphthalene	ND	10	3.0	ug/l							
2-Nitroaniline	ND	20	2.0	ug/l							
3-Nitroaniline	ND	20	3.0	ug/l							
4-Nitroaniline	ND	20	4.0	ug/l							
Nitrobenzene	ND	20	3.0	ug/l							
2-Nitrophenol	ND	10	3.5	ug/l							
4-Nitrophenol	ND	20	5.5	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.5	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
N-Nitrosodiphenylamine	ND	10	2.0	ug/l							
Pentachlorophenol	ND	20	3.5	ug/l							
Phenanthrene	ND	10	3.5	ug/l							
Phenol	ND	10	2.0	ug/l							
Pyrene	ND	10	4.0	ug/l							
1,2,4-Trichlorobenzene	ND	10	2.5	ug/l							
2,4,5-Trichlorophenol	ND	20	3.0	ug/l							
2,4,6-Trichlorophenol	ND	20	4.5	ug/l							
Surrogate: 2,4,6-Tribromophenol	198			ug/l	200		99	40-120			
Surrogate: 2-Fluorobiphenyl	97.6			ug/l	100		98	50-120			
Surrogate: 2-Fluorophenol	155			ug/l	200		78	30-120			
Surrogate: Nitrobenzene-d5	97.6			ug/l	100		98	45-120			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
Blank Analyzed: 02/11/2010 (10B1058-BLK1)											
Surrogate: Phenol-d6	172			ug/l	200		86	35-120			
Surrogate: Terphenyl-d14	101			ug/l	100		101	50-125			
LCS Analyzed: 02/11/2010 (10B1058-BS1)											
Acenaphthene	83.7	10	3.0	ug/l	100		84	60-120			MNR1
Acenaphthylene	85.2	10	3.0	ug/l	100		85	60-120			
Aniline	66.2	10	3.5	ug/l	100		66	35-120			
Anthracene	87.5	10	2.5	ug/l	100		88	65-120			
Benzidine	125	20	10	ug/l	100		125	30-160			
Benzo(a)anthracene	87.8	10	2.5	ug/l	100		88	65-120			
Benzo(a)pyrene	92.0	10	3.0	ug/l	100		92	55-130			
Benzo(b)fluoranthene	91.3	10	2.0	ug/l	100		91	55-125			
Benzo(g,h,i)perylene	97.7	10	4.0	ug/l	100		98	45-135			
Benzo(k)fluoranthene	88.1	10	2.5	ug/l	100		88	50-125			
Benzoic acid	60.2	20	10	ug/l	100		60	25-120			
Benzyl alcohol	103	20	3.5	ug/l	100		103	50-120			
4-Bromophenyl phenyl ether	84.4	10	3.0	ug/l	100		84	60-120			
Butyl benzyl phthalate	95.7	20	4.0	ug/l	100		96	55-130			
4-Chloro-3-methylphenol	79.3	20	2.5	ug/l	100		79	60-120			
4-Chloroaniline	78.9	10	2.0	ug/l	100		79	55-120			
Bis(2-chloroethoxy)methane	82.8	10	3.0	ug/l	100		83	55-120			
Bis(2-chloroethyl)ether	75.1	10	3.0	ug/l	100		75	50-120			
Bis(2-chloroisopropyl)ether	86.2	10	2.5	ug/l	100		86	45-120			
Bis(2-ethylhexyl)phthalate	101	50	4.0	ug/l	100		101	65-130			
2-Chloronaphthalene	82.1	10	3.0	ug/l	100		82	60-120			
2-Chlorophenol	69.1	10	3.0	ug/l	100		69	45-120			
4-Chlorophenyl phenyl ether	82.4	10	2.5	ug/l	100		82	65-120			
Chrysene	91.9	10	2.5	ug/l	100		92	65-120			
Dibenz(a,h)anthracene	99.4	20	3.0	ug/l	100		99	50-135			
Dibenzofuran	84.0	10	4.0	ug/l	100		84	65-120			
Di-n-butyl phthalate	90.5	20	3.0	ug/l	100		90	60-125			
3,3'-Dichlorobenzidine	77.2	20	7.5	ug/l	100		77	45-135			
2,4-Dichlorophenol	76.6	10	3.5	ug/l	100		77	55-120			
Diethyl phthalate	82.1	10	3.5	ug/l	100		82	55-120			
2,4-Dimethylphenol	73.4	20	3.5	ug/l	100		73	40-120			
Dimethyl phthalate	83.2	10	2.5	ug/l	100		83	30-120			

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Kathleen A. Robb For Heather Clark
Project Manager

MWH-Pasadena/Boeing
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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
LCS Analyzed: 02/11/2010 (10B1058-BS1)											
4,6-Dinitro-2-methylphenol	100	20	4.0	ug/l	100		100	45-120			MNR1
2,4-Dinitrophenol	88.4	20	8.0	ug/l	100		88	40-120			
2,4-Dinitrotoluene	86.2	10	3.5	ug/l	100		86	65-120			
2,6-Dinitrotoluene	85.8	10	2.0	ug/l	100		86	65-120			
Di-n-octyl phthalate	102	20	3.5	ug/l	100		102	65-135			
1,2-Diphenylhydrazine/Azobenzene	84.4	20	2.5	ug/l	100		84	60-120			
Fluoranthene	87.7	10	3.0	ug/l	100		88	60-120			
Fluorene	82.6	10	3.0	ug/l	100		83	65-120			
Hexachlorobenzene	82.1	10	3.0	ug/l	100		82	60-120			
Hexachlorobutadiene	61.7	10	4.0	ug/l	100		62	40-120			
Hexachlorocyclopentadiene	136	20	5.0	ug/l	100		136	25-120			L
Hexachloroethane	57.0	10	3.5	ug/l	100		57	35-120			
Indeno(1,2,3-cd)pyrene	92.7	20	3.5	ug/l	100		93	45-135			
Isophorone	88.0	10	3.0	ug/l	100		88	50-120			
2-Methylnaphthalene	77.6	10	2.0	ug/l	100		78	55-120			
2-Methylphenol	72.8	10	3.0	ug/l	100		73	50-120			
4-Methylphenol	76.5	10	3.0	ug/l	100		76	50-120			
Naphthalene	76.2	10	3.0	ug/l	100		76	55-120			
2-Nitroaniline	90.4	20	2.0	ug/l	100		90	65-120			
3-Nitroaniline	87.8	20	3.0	ug/l	100		88	60-120			
4-Nitroaniline	88.7	20	4.0	ug/l	100		89	55-125			
Nitrobenzene	80.0	20	3.0	ug/l	100		80	55-120			
2-Nitrophenol	77.3	10	3.5	ug/l	100		77	50-120			
4-Nitrophenol	74.4	20	5.5	ug/l	100		74	45-120			
N-Nitroso-di-n-propylamine	86.4	10	3.5	ug/l	100		86	45-120			
N-Nitrosodimethylamine	71.5	20	2.5	ug/l	100		72	45-120			
N-Nitrosodiphenylamine	92.9	10	2.0	ug/l	100		93	60-120			
Pentachlorophenol	76.6	20	3.5	ug/l	100		77	50-120			
Phenanthrene	86.5	10	3.5	ug/l	100		86	65-120			
Phenol	74.1	10	2.0	ug/l	100		74	40-120			
Pyrene	88.8	10	4.0	ug/l	100		89	55-125			
1,2,4-Trichlorobenzene	69.0	10	2.5	ug/l	100		69	45-120			
2,4,5-Trichlorophenol	81.7	20	3.0	ug/l	100		82	55-120			
2,4,6-Trichlorophenol	82.2	20	4.5	ug/l	100		82	55-120			
Surrogate: 2,4,6-Tribromophenol	172			ug/l	200		86	40-120			

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Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
LCS Analyzed: 02/11/2010 (10B1058-BS1)											
Surrogate: 2-Fluorobiphenyl	84.2			ug/l	100		84	50-120			MNR1
Surrogate: 2-Fluorophenol	115			ug/l	200		58	30-120			
Surrogate: Nitrobenzene-d5	79.7			ug/l	100		80	45-120			
Surrogate: Phenol-d6	133			ug/l	200		66	35-120			
Surrogate: Terphenyl-d14	89.4			ug/l	100		89	50-125			
LCS Dup Analyzed: 02/11/2010 (10B1058-BSD1)											
Acenaphthene	81.4	10	3.0	ug/l	100		81	60-120	3	20	
Acenaphthylene	82.9	10	3.0	ug/l	100		83	60-120	3	20	
Aniline	79.3	10	3.5	ug/l	100		79	35-120	18	30	
Anthracene	83.9	10	2.5	ug/l	100		84	65-120	4	20	
Benzidine	120	20	10	ug/l	100		120	30-160	4	35	
Benzo(a)anthracene	84.7	10	2.5	ug/l	100		85	65-120	4	20	
Benzo(a)pyrene	89.5	10	3.0	ug/l	100		90	55-130	3	25	
Benzo(b)fluoranthene	89.4	10	2.0	ug/l	100		89	55-125	2	25	
Benzo(g,h,i)perylene	92.3	10	4.0	ug/l	100		92	45-135	6	25	
Benzo(k)fluoranthene	88.9	10	2.5	ug/l	100		89	50-125	0.9	20	
Benzoic acid	57.0	20	10	ug/l	100		57	25-120	5	30	
Benzyl alcohol	103	20	3.5	ug/l	100		103	50-120	0.5	20	
4-Bromophenyl phenyl ether	79.9	10	3.0	ug/l	100		80	60-120	6	25	
Butyl benzyl phthalate	90.8	20	4.0	ug/l	100		91	55-130	5	20	
4-Chloro-3-methylphenol	80.0	20	2.5	ug/l	100		80	60-120	0.9	25	
4-Chloroaniline	82.4	10	2.0	ug/l	100		82	55-120	4	25	
Bis(2-chloroethoxy)methane	82.8	10	3.0	ug/l	100		83	55-120	0.07	20	
Bis(2-chloroethyl)ether	74.4	10	3.0	ug/l	100		74	50-120	1	20	
Bis(2-chloroisopropyl)ether	86.0	10	2.5	ug/l	100		86	45-120	0.3	20	
Bis(2-ethylhexyl)phthalate	95.8	50	4.0	ug/l	100		96	65-130	5	20	
2-Chloronaphthalene	79.6	10	3.0	ug/l	100		80	60-120	3	20	
2-Chlorophenol	65.6	10	3.0	ug/l	100		66	45-120	5	25	
4-Chlorophenyl phenyl ether	79.6	10	2.5	ug/l	100		80	65-120	3	20	
Chrysene	88.2	10	2.5	ug/l	100		88	65-120	4	20	
Dibenz(a,h)anthracene	95.5	20	3.0	ug/l	100		96	50-135	4	25	
Dibenzofuran	82.1	10	4.0	ug/l	100		82	65-120	2	20	
Di-n-butyl phthalate	87.3	20	3.0	ug/l	100		87	60-125	4	20	
3,3'-Dichlorobenzidine	76.5	20	7.5	ug/l	100		76	45-135	1	25	
2,4-Dichlorophenol	74.0	10	3.5	ug/l	100		74	55-120	3	20	

TestAmerica Irvine

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Project Manager

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Report Number: ITB0892

Sampled: 02/05/10-02/06/10
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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
LCS Dup Analyzed: 02/11/2010 (10B1058-BSD1)											
Diethyl phthalate	79.9	10	3.5	ug/l	100	80	55-120	3	30		
2,4-Dimethylphenol	70.8	20	3.5	ug/l	100	71	40-120	3	25		
Dimethyl phthalate	80.7	10	2.5	ug/l	100	81	30-120	3	30		
4,6-Dinitro-2-methylphenol	97.0	20	4.0	ug/l	100	97	45-120	3	25		
2,4-Dinitrophenol	88.5	20	8.0	ug/l	100	88	40-120	0.09	25		
2,4-Dinitrotoluene	85.8	10	3.5	ug/l	100	86	65-120	0.5	20		
2,6-Dinitrotoluene	83.2	10	2.0	ug/l	100	83	65-120	3	20		
Di-n-octyl phthalate	97.6	20	3.5	ug/l	100	98	65-135	4	20		
1,2-Diphenylhydrazine/Azobenzene	82.4	20	2.5	ug/l	100	82	60-120	2	25		
Fluoranthene	86.7	10	3.0	ug/l	100	87	60-120	1	20		
Fluorene	81.7	10	3.0	ug/l	100	82	65-120	1	20		
Hexachlorobenzene	79.1	10	3.0	ug/l	100	79	60-120	4	20		
Hexachlorobutadiene	62.4	10	4.0	ug/l	100	62	40-120	1	25		
Hexachlorocyclopentadiene	131	20	5.0	ug/l	100	131	25-120	4	30		L
Hexachloroethane	55.3	10	3.5	ug/l	100	55	35-120	3	25		
Indeno(1,2,3-cd)pyrene	89.4	20	3.5	ug/l	100	89	45-135	4	25		
Isophorone	87.0	10	3.0	ug/l	100	87	50-120	1	20		
2-Methylnaphthalene	77.6	10	2.0	ug/l	100	78	55-120	0.08	20		
2-Methylphenol	71.3	10	3.0	ug/l	100	71	50-120	2	20		
4-Methylphenol	75.8	10	3.0	ug/l	100	76	50-120	0.9	20		
Naphthalene	75.0	10	3.0	ug/l	100	75	55-120	2	20		
2-Nitroaniline	88.8	20	2.0	ug/l	100	89	65-120	2	20		
3-Nitroaniline	88.1	20	3.0	ug/l	100	88	60-120	0.3	25		
4-Nitroaniline	90.5	20	4.0	ug/l	100	90	55-125	2	20		
Nitrobenzene	79.9	20	3.0	ug/l	100	80	55-120	0.2	25		
2-Nitrophenol	75.4	10	3.5	ug/l	100	75	50-120	3	25		
4-Nitrophenol	71.8	20	5.5	ug/l	100	72	45-120	4	30		
N-Nitroso-di-n-propylamine	86.1	10	3.5	ug/l	100	86	45-120	0.4	20		
N-Nitrosodimethylamine	71.6	20	2.5	ug/l	100	72	45-120	0.08	20		
N-Nitrosodiphenylamine	88.1	10	2.0	ug/l	100	88	60-120	5	20		
Pentachlorophenol	75.1	20	3.5	ug/l	100	75	50-120	2	25		
Phenanthrene	82.8	10	3.5	ug/l	100	83	65-120	4	20		
Phenol	69.3	10	2.0	ug/l	100	69	40-120	7	25		
Pyrene	83.4	10	4.0	ug/l	100	83	55-125	6	25		
1,2,4-Trichlorobenzene	67.7	10	2.5	ug/l	100	68	45-120	2	20		

TestAmerica Irvine

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Project Manager

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10											
LCS Dup Analyzed: 02/11/2010 (10B1058-BSD1)											
2,4,5-Trichlorophenol	78.3	20	3.0	ug/l	100		78	55-120	4	30	
2,4,6-Trichlorophenol	78.1	20	4.5	ug/l	100		78	55-120	5	30	
Surrogate: 2,4,6-Tribromophenol	160			ug/l	200		80	40-120			
Surrogate: 2-Fluorobiphenyl	81.4			ug/l	100		81	50-120			
Surrogate: 2-Fluorophenol	98.8			ug/l	200		49	30-120			
Surrogate: Nitrobenzene-d5	79.3			ug/l	100		79	45-120			
Surrogate: Phenol-d6	120			ug/l	200		60	35-120			
Surrogate: Terphenyl-d14	85.0			ug/l	100		85	50-125			

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METHOD BLANK/QC DATA

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0759 Extracted: 02/06/10											
Blank Analyzed: 02/09/2010 (10B0759-BLK1)											
Chlorpyrifos	ND	1.0	N/A	ug/l							
Diazinon	ND	0.25	0.10	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.24			ug/l	5.00		105	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.24			ug/l	5.00		105	70-130			
Surrogate: Triphenylphosphate	5.34			ug/l	5.00		107	70-130			
Surrogate: Triphenylphosphate	5.34			ug/l	5.00		107	70-130			
Surrogate: Perylene-d12	4.61			ug/l	5.00		92	70-130			
Surrogate: Perylene-d12	4.61			ug/l	5.00		92	70-130			
LCS Analyzed: 02/09/2010 (10B0759-BS1)											
Chlorpyrifos	5.29	1.0	0.010	ug/l	5.00		106	70-130			
Diazinon	4.98	0.25	0.10	ug/l	5.00		100	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.21			ug/l	5.00		84	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.21			ug/l	5.00		84	70-130			
Surrogate: Triphenylphosphate	5.22			ug/l	5.00		104	70-130			
Surrogate: Triphenylphosphate	5.22			ug/l	5.00		104	70-130			
Surrogate: Perylene-d12	5.26			ug/l	5.00		105	70-130			
Surrogate: Perylene-d12	5.26			ug/l	5.00		105	70-130			
LCS Dup Analyzed: 02/09/2010 (10B0759-BSD1)											
Chlorpyrifos	5.08	1.0	0.010	ug/l	5.00		102	70-130	4	30	
Diazinon	4.81	0.25	0.10	ug/l	5.00		96	70-130	3	30	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.90			ug/l	5.00		98	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.90			ug/l	5.00		98	70-130			
Surrogate: Triphenylphosphate	4.87			ug/l	5.00		97	70-130			
Surrogate: Triphenylphosphate	4.87			ug/l	5.00		97	70-130			
Surrogate: Perylene-d12	4.89			ug/l	5.00		98	70-130			
Surrogate: Perylene-d12	4.89			ug/l	5.00		98	70-130			

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Kathleen A. Robb For Heather Clark
Project Manager

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

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Report Number: ITB0892

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Received: 02/06/10

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1291 Extracted: 02/11/10											
Blank Analyzed: 02/12/2010 (10B1291-BLK1)											
4,4'-DDD	ND	0.0050	0.0020	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
Endrin ketone	ND	0.010	0.0030	ug/l							
gamma-BHC (Lindane)	ND	0.020	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Methoxychlor	ND	0.0050	0.0035	ug/l							
Chlordane	ND	0.10	0.040	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.387			ug/l	0.500		77	45-120			
Surrogate: Tetrachloro-m-xylene	0.240			ug/l	0.500		48	35-115			

LCS Analyzed: 02/12/2010 (10B1291-BS1)

4,4'-DDD	0.464	0.0050	0.0020	ug/l	0.500		93	55-120			
4,4'-DDE	0.418	0.0050	0.0030	ug/l	0.500		84	50-120			
4,4'-DDT	0.450	0.010	0.0040	ug/l	0.500		90	55-120			
Aldrin	0.374	0.0050	0.0015	ug/l	0.500		75	40-115			
alpha-BHC	0.369	0.0050	0.0025	ug/l	0.500		74	45-115			
beta-BHC	0.361	0.010	0.0040	ug/l	0.500		72	55-115			
delta-BHC	0.404	0.0050	0.0035	ug/l	0.500		81	55-115			
Dieldrin	0.434	0.0050	0.0020	ug/l	0.500		87	55-115			
Endosulfan I	0.423	0.0050	0.0020	ug/l	0.500		85	55-115			
Endosulfan II	0.464	0.0050	0.0030	ug/l	0.500		93	55-120			
Endosulfan sulfate	0.431	0.010	0.0030	ug/l	0.500		86	60-120			
Endrin	0.477	0.0050	0.0020	ug/l	0.500		95	55-115			

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1291 Extracted: 02/11/10											
LCS Analyzed: 02/12/2010 (10B1291-BS1)											
Endrin aldehyde	0.393	0.010	0.0020	ug/l	0.500		79	50-120			
Endrin ketone	0.454	0.010	0.0030	ug/l	0.500		91	55-120			
gamma-BHC (Lindane)	0.381	0.020	0.0030	ug/l	0.500		76	45-115			
Heptachlor	0.415	0.010	0.0030	ug/l	0.500		83	45-115			
Heptachlor epoxide	0.407	0.0050	0.0025	ug/l	0.500		81	55-115			
Methoxychlor	0.485	0.0050	0.0035	ug/l	0.500		97	60-120			
Surrogate: Decachlorobiphenyl	0.394			ug/l	0.500		79	45-120			
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			
Matrix Spike Analyzed: 02/12/2010 (10B1291-MS1)											
Source: ITB0602-01											
4,4'-DDD	0.362	0.019	0.0075	ug/l	0.472	ND	77	50-125			
4,4'-DDE	0.530	0.019	0.011	ug/l	0.472	ND	112	45-125			
4,4'-DDT	0.402	0.038	0.015	ug/l	0.472	ND	85	50-125			
Aldrin	0.386	0.019	0.0057	ug/l	0.472	ND	82	35-120			
alpha-BHC	0.372	0.019	0.0094	ug/l	0.472	ND	79	40-120			
beta-BHC	0.186	0.038	0.015	ug/l	0.472	ND	39	50-120			M2
delta-BHC	0.314	0.019	0.013	ug/l	0.472	ND	67	50-120			
Dieldrin	0.390	0.019	0.0075	ug/l	0.472	ND	83	50-120			
Endosulfan I	0.475	0.019	0.0075	ug/l	0.472	ND	101	50-120			
Endosulfan II	0.390	0.019	0.011	ug/l	0.472	ND	83	50-125			
Endosulfan sulfate	0.333	0.038	0.011	ug/l	0.472	ND	71	55-125			
Endrin	0.413	0.019	0.0075	ug/l	0.472	ND	88	50-120			
Endrin aldehyde	0.190	0.038	0.0075	ug/l	0.472	ND	40	45-125			M2
Endrin ketone	0.342	0.038	0.011	ug/l	0.472	ND	72	50-125			
gamma-BHC (Lindane)	0.371	0.075	0.011	ug/l	0.472	ND	79	40-120			
Heptachlor	0.452	0.038	0.011	ug/l	0.472	ND	96	40-120			
Heptachlor epoxide	0.450	0.019	0.0094	ug/l	0.472	ND	95	50-120			
Methoxychlor	0.447	0.019	0.013	ug/l	0.472	ND	95	55-125			
Surrogate: Decachlorobiphenyl	0.418			ug/l	0.472		89	45-120			
Surrogate: Tetrachloro-m-xylene	0.220			ug/l	0.472		47	35-115			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1291 Extracted: 02/11/10											
Matrix Spike Dup Analyzed: 02/12/2010 (10B1291-MSD1)					Source: ITB0602-01						
4,4'-DDD	0.364	0.019	0.0075	ug/l	0.472	ND	77	50-125	0.5	30	
4,4'-DDE	0.527	0.019	0.011	ug/l	0.472	ND	112	45-125	0.7	30	
4,4'-DDT	0.396	0.038	0.015	ug/l	0.472	ND	84	50-125	1	30	
Aldrin	0.384	0.019	0.0057	ug/l	0.472	ND	81	35-120	0.6	30	
alpha-BHC	0.367	0.019	0.0094	ug/l	0.472	ND	78	40-120	1	30	
beta-BHC	0.196	0.038	0.015	ug/l	0.472	ND	42	50-120	5	30	M2
delta-BHC	0.313	0.019	0.013	ug/l	0.472	ND	66	50-120	0.2	30	
Dieldrin	0.387	0.019	0.0075	ug/l	0.472	ND	82	50-120	0.7	30	
Endosulfan I	0.471	0.019	0.0075	ug/l	0.472	ND	100	50-120	1	30	
Endosulfan II	0.393	0.019	0.011	ug/l	0.472	ND	83	50-125	0.7	30	
Endosulfan sulfate	0.346	0.038	0.011	ug/l	0.472	ND	73	55-125	4	30	
Endrin	0.409	0.019	0.0075	ug/l	0.472	ND	87	50-120	1	30	
Endrin aldehyde	0.197	0.038	0.0075	ug/l	0.472	ND	42	45-125	4	30	M2
Endrin ketone	0.338	0.038	0.011	ug/l	0.472	ND	72	50-125	1	30	
gamma-BHC (Lindane)	0.368	0.075	0.011	ug/l	0.472	ND	78	40-120	0.6	30	
Heptachlor	0.441	0.038	0.011	ug/l	0.472	ND	93	40-120	3	30	
Heptachlor epoxide	0.447	0.019	0.0094	ug/l	0.472	ND	95	50-120	0.7	30	
Methoxychlor	0.442	0.019	0.013	ug/l	0.472	ND	94	55-125	1	30	
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.472		86	45-120			
Surrogate: Tetrachloro-m-xylene	0.264			ug/l	0.472		56	35-115			

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 Project Manager

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METHOD BLANK/QC DATA

TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1291 Extracted: 02/11/10											
Blank Analyzed: 02/11/2010 (10B1291-BLK1)											
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.422			ug/l	0.500		84	45-120			
LCS Analyzed: 02/11/2010 (10B1291-BS2)											
Aroclor 1016	2.94	0.50	0.25	ug/l	4.00		74	50-115			
Aroclor 1260	3.60	0.50	0.25	ug/l	4.00		90	60-120			
Surrogate: Decachlorobiphenyl	0.432			ug/l	0.500		86	45-120			
Matrix Spike Analyzed: 02/11/2010 (10B1291-MS2) Source: ITB0602-01											
Aroclor 1016	4.30	0.47	0.24	ug/l	3.77	ND	114	45-120			
Aroclor 1260	3.32	0.47	0.24	ug/l	3.77	ND	88	55-125			
Surrogate: Decachlorobiphenyl	0.388			ug/l	0.472		82	45-120			
Matrix Spike Dup Analyzed: 02/11/2010 (10B1291-MSD2) Source: ITB0602-01											
Aroclor 1016	4.36	0.47	0.24	ug/l	3.77	ND	116	45-120	1	30	
Aroclor 1260	3.32	0.47	0.24	ug/l	3.77	ND	88	55-125	0.2	25	
Surrogate: Decachlorobiphenyl	0.383			ug/l	0.472		81	45-120			

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Project Manager

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1991 Extracted: 02/17/10											
Blank Analyzed: 02/17/2010 (10B1991-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/17/2010 (10B1991-BS1)											
Hexane Extractable Material (Oil & Grease)	20.5	5.0	1.4	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 02/17/2010 (10B1991-BSD1)											
Hexane Extractable Material (Oil & Grease)	20.2	5.0	1.4	mg/l	20.0		101	78-114	1	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1598 Extracted: 02/12/10											
Blank Analyzed: 02/15/2010 (10B1598-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/15/2010 (10B1598-BS1)											
Antimony	82.5	2.0	0.30	ug/l	80.0		103	85-115			
Cadmium	82.4	1.0	0.10	ug/l	80.0		103	85-115			
Copper	81.0	2.00	0.500	ug/l	80.0		101	85-115			
Lead	84.3	1.0	0.20	ug/l	80.0		105	85-115			
Selenium	81.2	2.0	0.50	ug/l	80.0		101	85-115			
Thallium	81.6	1.0	0.20	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 02/15/2010 (10B1598-MS1) Source: ITB0888-01											
Antimony	83.1	2.0	0.30	ug/l	80.0	ND	104	70-130			
Cadmium	79.9	1.0	0.10	ug/l	80.0	ND	100	70-130			
Copper	80.3	2.00	0.500	ug/l	80.0	1.68	98	70-130			
Lead	77.4	1.0	0.20	ug/l	80.0	0.398	96	70-130			
Selenium	80.3	2.0	0.50	ug/l	80.0	ND	100	70-130			
Thallium	79.3	1.0	0.20	ug/l	80.0	ND	99	70-130			
Matrix Spike Analyzed: 02/15/2010 (10B1598-MS2) Source: ITB0900-02											
Antimony	82.9	2.0	0.30	ug/l	80.0	ND	104	70-130			
Cadmium	81.1	1.0	0.10	ug/l	80.0	ND	101	70-130			
Copper	84.1	2.00	0.500	ug/l	80.0	1.41	103	70-130			
Lead	78.7	1.0	0.20	ug/l	80.0	0.252	98	70-130			
Selenium	77.8	2.0	0.50	ug/l	80.0	ND	97	70-130			
Thallium	82.9	1.0	0.20	ug/l	80.0	ND	104	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1598 Extracted: 02/12/10											
Matrix Spike Dup Analyzed: 02/15/2010 (10B1598-MSD1)						Source: ITB0888-01					
Antimony	84.1	2.0	0.30	ug/l	80.0	ND	105	70-130	1	20	
Cadmium	80.8	1.0	0.10	ug/l	80.0	ND	101	70-130	1	20	
Copper	82.7	2.00	0.500	ug/l	80.0	1.68	101	70-130	3	20	
Lead	79.1	1.0	0.20	ug/l	80.0	0.398	98	70-130	2	20	
Selenium	81.4	2.0	0.50	ug/l	80.0	ND	102	70-130	1	20	
Thallium	80.5	1.0	0.20	ug/l	80.0	ND	101	70-130	1	20	

Batch: 10B1911 Extracted: 02/16/10

Blank Analyzed: 02/16/2010 (10B1911-BLK1)

Aluminum	ND	0.050	0.040	mg/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	0.0243	0.050	0.020	mg/l							Ja
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
Silver	ND	10	6.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							

LCS Analyzed: 02/16/2010 (10B1911-BS1)

Aluminum	0.502	0.050	0.040	mg/l	0.500		100	85-115			
Arsenic	472	10	7.0	ug/l	500		94	85-115			
Beryllium	483	2.0	0.90	ug/l	500		97	85-115			
Boron	0.498	0.050	0.020	mg/l	0.500		100	85-115			
Calcium	2.44	0.10	0.050	mg/l	2.50		97	85-115			
Chromium	456	5.0	2.0	ug/l	500		91	85-115			
Iron	0.481	0.040	0.015	mg/l	0.500		96	85-115			
Magnesium	2.36	0.020	0.012	mg/l	2.50		94	85-115			
Nickel	464	10	2.0	ug/l	500		93	85-115			
Silver	242	10	6.0	ug/l	250		97	85-115			
Vanadium	467	10	3.0	ug/l	500		93	85-115			
Zinc	460	20	6.0	ug/l	500		92	85-115			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1911 Extracted: 02/16/10											
Matrix Spike Analyzed: 02/16/2010 (10B1911-MS1)					Source: ITB1030-02						
Aluminum	1.49	0.050	0.040	mg/l	0.500	0.882	122	70-130			
Arsenic	516	10	7.0	ug/l	500	13.4	101	70-130			
Beryllium	486	2.0	0.90	ug/l	500	ND	97	70-130			
Boron	2.08	0.050	0.020	mg/l	0.500	1.56	105	70-130			
Calcium	29.1	0.10	0.050	mg/l	2.50	26.3	112	70-130			MHA
Chromium	461	5.0	2.0	ug/l	500	ND	92	70-130			
Iron	1.73	0.040	0.015	mg/l	0.500	1.11	125	70-130			
Magnesium	24.0	0.020	0.012	mg/l	2.50	21.2	112	70-130			MHA
Nickel	468	10	2.0	ug/l	500	7.99	92	70-130			
Silver	244	10	6.0	ug/l	250	7.93	94	70-130			
Vanadium	524	10	3.0	ug/l	500	44.0	96	70-130			
Zinc	482	20	6.0	ug/l	500	15.1	93	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1911-MSD1)					Source: ITB1030-02						
Aluminum	1.50	0.050	0.040	mg/l	0.500	0.882	123	70-130	0.4	20	
Arsenic	507	10	7.0	ug/l	500	13.4	99	70-130	2	20	
Beryllium	486	2.0	0.90	ug/l	500	ND	97	70-130	0.1	20	
Boron	2.05	0.050	0.020	mg/l	0.500	1.56	99	70-130	1	20	
Calcium	28.8	0.10	0.050	mg/l	2.50	26.3	101	70-130	1	20	MHA
Chromium	451	5.0	2.0	ug/l	500	ND	90	70-130	2	20	
Iron	1.67	0.040	0.015	mg/l	0.500	1.11	113	70-130	4	20	
Magnesium	23.6	0.020	0.012	mg/l	2.50	21.2	96	70-130	2	20	MHA
Nickel	465	10	2.0	ug/l	500	7.99	91	70-130	0.7	20	
Silver	246	10	6.0	ug/l	250	7.93	95	70-130	0.8	20	
Vanadium	517	10	3.0	ug/l	500	44.0	95	70-130	1	20	
Zinc	473	20	6.0	ug/l	500	15.1	92	70-130	2	20	

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Kathleen A. Robb For Heather Clark
 Project Manager

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

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Report Number: ITB0892

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 Received: 02/06/10

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1942 Extracted: 02/16/10											
Blank Analyzed: 02/16/2010 (10B1942-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/16/2010 (10B1942-BS1)											
Mercury	7.96	0.20	0.10	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B1942-MS1)											
						Source: ITB0974-01					
Mercury	7.91	0.20	0.10	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1942-MSD1)											
						Source: ITB0974-01					
Mercury	7.91	0.20	0.10	ug/l	8.00	ND	99	70-130	0.03	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1845 Extracted: 02/15/10											
Blank Analyzed: 02/16/2010 (10B1845-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/16/2010 (10B1845-BS1)											
Antimony	81.7	2.0	0.30	ug/l	80.0		102	85-115			
Cadmium	81.8	1.0	0.10	ug/l	80.0		102	85-115			
Lead	84.1	1.0	0.20	ug/l	80.0		105	85-115			
Selenium	82.4	2.0	0.50	ug/l	80.0		103	85-115			
Thallium	87.0	1.0	0.20	ug/l	80.0		109	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B1845-MS1) Source: ITB1082-03											
Antimony	82.8	20	3.0	ug/l	80.0	ND	103	70-130			
Cadmium	81.7	10	1.0	ug/l	80.0	1.14	101	70-130			
Lead	74.3	10	2.0	ug/l	80.0	ND	93	70-130			
Selenium	88.1	20	5.0	ug/l	80.0	10.3	97	70-130			
Thallium	78.4	10	2.0	ug/l	80.0	ND	98	70-130			
Matrix Spike Analyzed: 02/16/2010 (10B1845-MS2) Source: ITB0888-01											
Antimony	86.1	2.0	0.30	ug/l	80.0	ND	108	70-130			
Cadmium	83.4	1.0	0.10	ug/l	80.0	ND	104	70-130			
Lead	78.5	1.0	0.20	ug/l	80.0	ND	98	70-130			
Selenium	83.6	2.0	0.50	ug/l	80.0	0.511	104	70-130			
Thallium	85.5	1.0	0.20	ug/l	80.0	ND	107	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1845-MSD1) Source: ITB1082-03											
Antimony	85.7	20	3.0	ug/l	80.0	ND	107	70-130	4	20	
Cadmium	84.8	10	1.0	ug/l	80.0	1.14	105	70-130	4	20	
Lead	76.5	10	2.0	ug/l	80.0	ND	96	70-130	3	20	
Selenium	93.5	20	5.0	ug/l	80.0	10.3	104	70-130	6	20	
Thallium	80.8	10	2.0	ug/l	80.0	ND	101	70-130	3	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1846 Extracted: 02/15/10											
Blank Analyzed: 02/16/2010 (10B1846-BLK1)											
Aluminum	ND	0.050	0.040	mg/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	0.0453	0.050	0.020	mg/l							Ja
Calcium	0.0573	0.10	0.050	mg/l							Ja
Chromium	ND	5.0	2.0	ug/l							
Iron	0.0219	0.040	0.015	mg/l							Ja
Magnesium	0.0150	0.020	0.012	mg/l							Ja
Nickel	ND	10	2.0	ug/l							
Silver	ND	10	6.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							

LCS Analyzed: 02/16/2010 (10B1846-BS1)

Aluminum	0.510	0.050	0.040	mg/l	0.500		102	85-115			
Arsenic	521	10	7.0	ug/l	500		104	85-115			
Beryllium	486	2.0	0.90	ug/l	500		97	85-115			
Boron	0.521	0.050	0.020	mg/l	0.500		104	85-115			
Calcium	2.42	0.10	0.050	mg/l	2.50		97	85-115			
Chromium	509	5.0	2.0	ug/l	500		102	85-115			
Iron	0.499	0.040	0.015	mg/l	0.500		100	85-115			
Magnesium	2.42	0.020	0.012	mg/l	2.50		97	85-115			
Nickel	480	10	2.0	ug/l	500		96	85-115			
Silver	218	10	6.0	ug/l	250		87	85-115			
Vanadium	489	10	3.0	ug/l	500		98	85-115			
Zinc	499	20	6.0	ug/l	500		100	85-115			

Matrix Spike Analyzed: 02/16/2010 (10B1846-MS1)

											Source: ITB0895-01
Aluminum	0.519	0.050	0.040	mg/l	0.500	ND	104	70-130			
Arsenic	543	10	7.0	ug/l	500	ND	109	70-130			
Beryllium	503	2.0	0.90	ug/l	500	ND	101	70-130			
Boron	0.617	0.050	0.020	mg/l	0.500	0.110	102	70-130			
Calcium	28.3	0.10	0.050	mg/l	2.50	24.7	144	70-130			MHA
Chromium	533	5.0	2.0	ug/l	500	ND	107	70-130			
Iron	0.567	0.040	0.015	mg/l	0.500	ND	113	70-130			
Magnesium	7.76	0.020	0.012	mg/l	2.50	4.98	111	70-130			

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1846 Extracted: 02/15/10											
Matrix Spike Analyzed: 02/16/2010 (10B1846-MS1)						Source: ITB0895-01					
Nickel	488	10	2.0	ug/l	500	ND	98	70-130			
Silver	231	10	6.0	ug/l	250	ND	92	70-130			
Vanadium	500	10	3.0	ug/l	500	ND	100	70-130			
Zinc	523	20	6.0	ug/l	500	12.7	102	70-130			
Matrix Spike Analyzed: 02/16/2010 (10B1846-MS2)						Source: ITB0887-04					
Aluminum	1.66	0.050	0.040	mg/l	0.500	0.761	179	70-130			MI
Arsenic	510	10	7.0	ug/l	500	ND	102	70-130			
Beryllium	481	2.0	0.90	ug/l	500	ND	96	70-130			
Boron	0.549	0.050	0.020	mg/l	0.500	0.0701	96	70-130			
Calcium	13.1	0.10	0.050	mg/l	2.50	11.0	84	70-130			MHA
Chromium	502	5.0	2.0	ug/l	500	ND	100	70-130			
Iron	1.16	0.040	0.015	mg/l	0.500	0.642	104	70-130			
Magnesium	5.35	0.020	0.012	mg/l	2.50	3.23	85	70-130			
Nickel	465	10	2.0	ug/l	500	ND	93	70-130			
Silver	234	10	6.0	ug/l	250	ND	93	70-130			
Vanadium	486	10	3.0	ug/l	500	ND	97	70-130			
Zinc	497	20	6.0	ug/l	500	10.3	97	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1846-MSD1)						Source: ITB0895-01					
Aluminum	0.497	0.050	0.040	mg/l	0.500	ND	99	70-130	4	20	
Arsenic	534	10	7.0	ug/l	500	ND	107	70-130	2	20	
Beryllium	480	2.0	0.90	ug/l	500	ND	96	70-130	5	20	
Boron	0.599	0.050	0.020	mg/l	0.500	0.110	98	70-130	3	20	
Calcium	27.1	0.10	0.050	mg/l	2.50	24.7	96	70-130	4	20	MHA
Chromium	510	5.0	2.0	ug/l	500	ND	102	70-130	4	20	
Iron	0.509	0.040	0.015	mg/l	0.500	ND	102	70-130	11	20	
Magnesium	7.37	0.020	0.012	mg/l	2.50	4.98	96	70-130	5	20	
Nickel	472	10	2.0	ug/l	500	ND	94	70-130	3	20	
Silver	222	10	6.0	ug/l	250	ND	89	70-130	4	20	
Vanadium	480	10	3.0	ug/l	500	ND	96	70-130	4	20	
Zinc	510	20	6.0	ug/l	500	12.7	99	70-130	3	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 10B1953 Extracted: 02/16/10</u>											
Blank Analyzed: 02/16/2010 (10B1953-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/16/2010 (10B1953-BS1)											
Mercury	8.15	0.20	0.10	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B1953-MS1)											
						Source: ITB0907-01					
Mercury	7.43	0.20	0.10	ug/l	8.00	ND	93	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1953-MSD1)											
						Source: ITB0907-01					
Mercury	7.66	0.20	0.10	ug/l	8.00	ND	96	70-130	3	20	
<u>Batch: 10B2106 Extracted: 02/17/10</u>											
Blank Analyzed: 02/17/2010 (10B2106-BLK1)											
Copper	ND	2.00	0.500	ug/l							
LCS Analyzed: 02/17/2010 (10B2106-BS1)											
Copper	77.6	2.00	0.500	ug/l	80.0		97	85-115			
Matrix Spike Analyzed: 02/17/2010 (10B2106-MS1)											
						Source: ITB1775-07					
Copper	76.0	2.00	0.500	ug/l	80.0	2.19	92	70-130			
Matrix Spike Dup Analyzed: 02/17/2010 (10B2106-MSD1)											
						Source: ITB1775-07					
Copper	77.2	2.00	0.500	ug/l	80.0	2.19	94	70-130	2	20	

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DISSOLVED INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0756 Extracted: 02/06/10											
Blank Analyzed: 02/06/2010 (10B0756-BLK1)											
Chromium VI	ND	1.0	0.25	ug/l							
LCS Analyzed: 02/06/2010 (10B0756-BS1)											
Chromium VI	4.95	1.0	0.25	ug/l	5.00		99	90-110			
Matrix Spike Analyzed: 02/06/2010 (10B0756-MS1)											
						Source: ITB0889-01					
Chromium VI	4.80	1.0	0.25	ug/l	5.00	ND	96	90-110			
Matrix Spike Dup Analyzed: 02/06/2010 (10B0756-MSD1)											
						Source: ITB0889-01					
Chromium VI	4.91	1.0	0.25	ug/l	5.00	ND	98	90-110	2	10	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 10B0807 Extracted: 02/07/10											
Blank Analyzed: 02/07/2010 (10B0807-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 02/07/2010 (10B0807-BS1)											
Chloride	4.79	0.50	0.25	mg/l	5.00		96	90-110			
Nitrate-N	1.06	0.11	0.060	mg/l	1.13		94	90-110			
Nitrite-N	1.47	0.15	0.090	mg/l	1.52		97	90-110			
Sulfate	9.92	0.50	0.20	mg/l	10.0		99	90-110			
Matrix Spike Analyzed: 02/07/2010 (10B0807-MS1) Source: ITB0887-04											
Chloride	9.87	0.50	0.25	mg/l	5.00	4.64	105	80-120			
Nitrate-N	1.52	0.11	0.060	mg/l	1.13	0.404	99	80-120			
Nitrite-N	1.51	0.15	0.090	mg/l	1.52	ND	100	80-120			
Sulfate	19.0	0.50	0.20	mg/l	10.0	8.79	102	80-120			
Matrix Spike Analyzed: 02/07/2010 (10B0807-MS2) Source: ITB0886-01											
Chloride	12.1	0.50	0.25	mg/l	5.00	7.33	96	80-120			C8
Nitrate-N	1.65	0.11	0.060	mg/l	1.13	0.587	94	80-120			
Nitrite-N	1.50	0.15	0.090	mg/l	1.52	ND	99	80-120			
Sulfate	16.1	0.50	0.20	mg/l	10.0	7.37	88	80-120			C8
Matrix Spike Dup Analyzed: 02/07/2010 (10B0807-MSD1) Source: ITB0887-04											
Chloride	9.84	0.50	0.25	mg/l	5.00	4.64	104	80-120	0.3	20	
Nitrate-N	1.52	0.11	0.060	mg/l	1.13	0.404	98	80-120	0.4	20	
Nitrite-N	1.53	0.15	0.090	mg/l	1.52	ND	100	80-120	0.9	20	
Sulfate	19.0	0.50	0.20	mg/l	10.0	8.79	102	80-120	0.03	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 10B1111 Extracted: 02/10/10</u>											
Blank Analyzed: 02/10/2010 (10B1111-BLK1)											
Fluoride	0.0333	0.10	0.020	mg/l							Ja
LCS Analyzed: 02/10/2010 (10B1111-BS1)											
Fluoride	1.03	0.10	0.020	mg/l	1.00		103	90-110			
Matrix Spike Analyzed: 02/10/2010 (10B1111-MS1)											
						Source: ITB0532-05					
Fluoride	1.19	0.10	0.020	mg/l	1.00	0.129	107	80-120			
Matrix Spike Dup Analyzed: 02/10/2010 (10B1111-MSD1)											
						Source: ITB0532-05					
Fluoride	1.18	0.10	0.020	mg/l	1.00	0.129	105	80-120	2	20	
<u>Batch: 10B1250 Extracted: 02/10/10</u>											
Blank Analyzed: 02/10/2010 (10B1250-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/10/2010 (10B1250-BS1)											
Total Cyanide	190	5.0	2.2	ug/l	200		95	90-110			
Matrix Spike Analyzed: 02/10/2010 (10B1250-MS1)											
						Source: ITB0359-02					
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115			
Matrix Spike Dup Analyzed: 02/10/2010 (10B1250-MSD1)											
						Source: ITB0359-02					
Total Cyanide	182	5.0	2.2	ug/l	200	ND	91	70-115	3	15	
<u>Batch: 10B1300 Extracted: 02/11/10</u>											
Blank Analyzed: 02/11/2010 (10B1300-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1300 Extracted: 02/11/10											
LCS Analyzed: 02/11/2010 (10B1300-BS1)											
Total Dissolved Solids	1010	10	1.0	mg/l	1000		101	90-110			
Duplicate Analyzed: 02/11/2010 (10B1300-DUP1)											
						Source: ITB0770-04					
Total Dissolved Solids	122	10	1.0	mg/l		120			2	10	
Batch: 10B1450 Extracted: 02/11/10											
Blank Analyzed: 02/11/2010 (10B1450-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/11/2010 (10B1450-BS1)											
Total Suspended Solids	994	10	1.0	mg/l	1000		99	85-115			
Duplicate Analyzed: 02/11/2010 (10B1450-DUP1)											
						Source: ITB0770-04					
Total Suspended Solids	19.0	10	1.0	mg/l		19.0			0	10	
Batch: 10B1575 Extracted: 02/12/10											
Blank Analyzed: 02/12/2010 (10B1575-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
LCS Analyzed: 02/12/2010 (10B1575-BS1)											
Ammonia-N (Distilled)	10.6	0.50	0.50	mg/l	10.0		106	80-115			
Matrix Spike Analyzed: 02/12/2010 (10B1575-MS1)											
						Source: ITB0887-04					
Ammonia-N (Distilled)	11.2	0.50	0.50	mg/l	10.0	0.560	106	70-120			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1575 Extracted: 02/12/10											
Matrix Spike Dup Analyzed: 02/12/2010 (10B1575-MSD1)						Source: ITB0887-04					
Ammonia-N (Distilled)	11.5	0.50	0.50	mg/l	10.0	0.560	109	70-120	2	15	
Batch: 10B1658 Extracted: 02/13/10											
Blank Analyzed: 02/13/2010 (10B1658-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 02/13/2010 (10B1658-BS1)											
Perchlorate	24.4	4.0	0.90	ug/l	25.0		98	85-115			
Matrix Spike Analyzed: 02/13/2010 (10B1658-MS1)						Source: ITB1511-01					
Perchlorate	24.6	4.0	0.90	ug/l	25.0	1.91	91	80-120			
Matrix Spike Dup Analyzed: 02/13/2010 (10B1658-MSD1)						Source: ITB1511-01					
Perchlorate	24.7	4.0	0.90	ug/l	25.0	1.91	91	80-120	0.2	20	

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Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
 Received: 02/06/10

METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 53280 Extracted: 02/23/10											
Matrix Spike Dup Analyzed: 02/26/2010 (F0B090470001D)						Source: F0B090470001					
Total Uranium	30	1.4	0.4	pCi/L	27.7	0.566	106	62-150	1	20	
Matrix Spike Analyzed: 02/26/2010 (F0B090470001S)						Source: F0B090470001					
Total Uranium	29.7	1.4	0.4	pCi/L	27.7	0.566	105	62-150			
Blank Analyzed: 02/26/2010 (F0B220000280B)						Source:					
Total Uranium	0.046	0.693	0.21	pCi/L				-			U
LCS Analyzed: 02/26/2010 (F0B220000280C)						Source:					
Total Uranium	30.2	0.7	0.2	pCi/L	27.7		109	90-120			

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METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 43108 Extracted: 02/10/10											
Matrix Spike Analyzed: 02/18/2010 (F0B090470001S)						Source: F0B090470001					
Gross Alpha	47.2	3	1	pCi/L	49.4	2	91	35-150			
Gross Beta	79	4	1.5	pCi/L	68.0	3.9	110	54-150			
Duplicate Analyzed: 02/18/2010 (F0B090470001X)						Source: F0B090470001					
Gross Alpha	0.84	3	0.94	pCi/L		2		-			U
Gross Beta	3.2	4	1.5	pCi/L		3.9		-			Jb
Blank Analyzed: 02/19/2010 (F0B120000108B)						Source:					
Gross Alpha	-0.28	2	0.87	pCi/L				-			U
Gross Beta	-0.23	4	1.1	pCi/L				-			U
LCS Analyzed: 02/19/2010 (F0B120000108C)						Source:					
Gross Alpha	34.8	3	1.2	pCi/L	49.4		70	62-134			
Gross Beta	71.6	4	1	pCi/L	68.0		105	58-133			

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METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 42136 Extracted: 02/11/10											
Duplicate Analyzed: 02/19/2010 (F0B090470001X)						Source: F0B090470001					
Cesium 137	1.2	20	14	pCi/L		-2.9		-			U
Potassium 40	-50	NA	200	pCi/L		-100		-			U
Blank Analyzed: 02/19/2010 (F0B110000136B)						Source:					
Cesium 137	1.8	20	14	pCi/L				-			U
Potassium 40	-80	NA	210	pCi/L				-			U
LCS Analyzed: 02/19/2010 (F0B110000136C)						Source:					
Americium 241	140000	NA	500	pCi/L	141000		99	87-110			
Cobalt 60	88000	NA	200	pCi/L	87900		100	89-110			
Cesium 137	52900	20	200	pCi/L	53100		100	90-110			

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METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 41160 Extracted: 02/10/10											
Duplicate Analyzed: 02/26/2010 (F0B090467001X)						Source: F0B090467001					
Radium (226)	0.07	1	0.29	pCi/L		0.089	-				U
Blank Analyzed: 02/26/2010 (F0B100000160B)						Source:					
Radium (226)	0.092	1	0.14	pCi/L			-				U
LCS Analyzed: 02/26/2010 (F0B100000160C)						Source:					
Radium (226)	10.4	1	0.2	pCi/L	11.3		93	68-136			

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METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 60257 Extracted: 03/01/10											
Blank Analyzed: 03/05/2010 (F0C010000257B)											
Radium 228	0.08	1	0.39	pCi/L				-			U
LCS Analyzed: 03/05/2010 (F0C010000257C)											
Radium 228	6.23	1	0.39	pCi/L	6.40		97	60-142			
LCS Dup Analyzed: 03/05/2010 (F0C010000257L)											
Radium 228	6.35	1	0.4	pCi/L	6.40		99	60-142	2	40	

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METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 41162 Extracted: 02/10/10											
Duplicate Analyzed: 02/19/2010 (F0B090475001X)						Source: F0B090475001					
Strontium 90	-0.15	3	0.42	pCi/L		-0.05		-			U
Blank Analyzed: 02/19/2010 (F0B100000162B)						Source:					
Strontium 90	-0.15	3	0.38	pCi/L				-			U
LCS Analyzed: 02/19/2010 (F0B100000162C)						Source:					
Strontium 90	6.82	3	0.34	pCi/L	6.80		100	80-130			

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METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 49035 Extracted: 02/18/10											
Duplicate Analyzed: 02/18/2010 (F0B090470001X)						Source: F0B090470001					
Tritium	80	500	92	pCi/L		114	-				U
Matrix Spike Analyzed: 02/18/2010 (F0B090473001S)						Source: F0B090473001					
Tritium	4650	500	90	pCi/L	4530	122	100	62-147			
Blank Analyzed: 02/18/2010 (F0B180000035B)						Source:					
Tritium	165	500	95	pCi/L							Jb
LCS Analyzed: 02/18/2010 (F0B180000035C)						Source:					
Tritium	4440	500	90	pCi/L	4530		98	85-112			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 48124 Extracted: 02/17/10											
Blank Analyzed: 02/18/2010 (G0B170000124B)						Source:					
1,2,3,4,6,7,8-HpCDD	2.3e-006	0.00005	0.0000011	ug/L				-			J, Q
1,2,3,4,6,7,8-HpCDF	6e-007	0.00005	0.0000004	ug/L				-			J, Q
2,3,7,8-TCDF	ND	0.00001	0.00000047	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.00000069	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.0000006	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.00000036	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000005	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.00000031	ug/L				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	0.00000046	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000004	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.00000057	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.00000044	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000031	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.00000052	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.00000046	ug/L				-			
OCDD	2.3e-005	0.0001	0.00000084	ug/L				-			J
OCDF	7.2e-007	0.0001	0.0000008	ug/L				-			J, Q
Total HpCDD	1.3e-005	0.00005	0.0000011	ug/L				-			J, Q
Total HpCDF	1.1e-006	0.00005	0.0000004	ug/L				-			J, Q
Total HxCDD	ND	0.00005	0.00000046	ug/L				-			
Total HxCDF	ND	0.00005	0.00000031	ug/L				-			
Total PeCDD	ND	0.00005	0.00000057	ug/L				-			
Total PeCDF	ND	0.00005	0.00000016	ug/L				-			
Total TCDD	ND	0.00001	0.00000046	ug/L				-			
Total TCDF	ND	0.00001	0.00000047	ug/L				-			
Surrogate: 13C-2,3,7,8-TCDF	0.0013			ug/L	0.00200		63	24-169			
Surrogate: 37Cl-2,3,7,8-TCDD	0.00072			ug/L	0.000800		90	35-197			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018			ug/L	0.00200		92	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0017			ug/L	0.00200		86	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.00200		79	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0017			ug/L	0.00200		87	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0016			ug/L	0.00200		82	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0017			ug/L	0.00200		86	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0017			ug/L	0.00200		86	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0016			ug/L	0.00200		81	29-147			

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 48124 Extracted: 02/17/10											
Blank Analyzed: 02/18/2010 (G0B170000124B)						Source:					
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0016			ug/L	0.00200		80	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0015			ug/L	0.00200		75	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0018			ug/L	0.00200		90	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0015			ug/L	0.00200		74	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0014			ug/L	0.00200		71	25-164			
Surrogate: 13C-OCDD	0.0039			ug/L	0.00400		98	17-157			
LCS Analyzed: 02/19/2010 (G0B170000124C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00111	0.00005	0.0000021	ug/L	0.00100		111	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00113	0.00005	0.0000023	ug/L	0.00100		113	82-122			Ba
2,3,7,8-TCDF	0.000222	0.00001	0.00000048	ug/L	0.000200		111	75-158			
1,2,3,4,7,8,9-HpCDF	0.00125	0.00005	0.0000004	ug/L	0.00100		125	78-138			
1,2,3,4,7,8-HxCDD	0.00128	0.00005	0.0000013	ug/L	0.00100		128	70-164			
1,2,3,4,7,8-HxCDF	0.00119	50	0.0000019	ug/L	0.00100		119	72-134			
1,2,3,6,7,8-HxCDD	0.00109	0.00005	0.0000011	ug/L	0.00100		109	76-134			
1,2,3,6,7,8-HxCDF	0.00114	0.00005	0.0000017	ug/L	0.00100		114	84-130			
1,2,3,7,8,9-HxCDD	0.00102	0.00005	0.00000097	ug/L	0.00100		102	64-162			
1,2,3,7,8,9-HxCDF	0.00118	0.00005	0.0000022	ug/L	0.00100		118	78-130			
1,2,3,7,8-PeCDD	0.00112	0.00005	0.0000013	ug/L	0.00100		112	70-142			
1,2,3,7,8-PeCDF	0.00114	0.00005	0.0000014	ug/L	0.00100		114	80-134			
2,3,4,6,7,8-HxCDF	0.00116	0.00005	0.0000016	ug/L	0.00100		116	70-156			
2,3,4,7,8-PeCDF	0.00115	0.00005	0.0000016	ug/L	0.00100		115	68-160			
2,3,7,8-TCDD	0.000231	0.00001	0.00000063	ug/L	0.000200		115	67-158			
OCDD	0.00222	0.0001	0.0000034	ug/L	0.00200		111	78-144			Ba
OCDF	0.0021	0.0001	0.0000025	ug/L	0.00200		105	63-170			Ba
Surrogate: 13C-2,3,7,8-TCDF	0.00139			ug/L	0.00200		70	22-152			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000723			ug/L	0.000800		90	31-191			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00186			ug/L	0.00200		93	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00176			ug/L	0.00200		88	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.00200		80	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00179			ug/L	0.00200		89	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00175			ug/L	0.00200		87	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00189			ug/L	0.00200		94	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00177			ug/L	0.00200		89	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00171			ug/L	0.00200		85	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00174			ug/L	0.00200		87	21-227			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 48124 Extracted: 02/17/10											
LCS Analyzed: 02/19/2010 (G0B170000124C)											
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00161			ug/L	0.00200		81	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00192			ug/L	0.00200		96	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00158			ug/L	0.00200		79	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00151			ug/L	0.00200		76	20-175			
Surrogate: 13C-OCDD	0.00383			ug/L	0.00400		96	13-199			

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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
ITB0892-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.7	15

Compliance Check

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LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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Compliance Check

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LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITB0892-03	Ammonia-N, Titr 4500NH3-C (w/dis	Ammonia-N (Distilled)	mg/l	0	0.50	10
ITB0892-03	Antimony-200.8	Antimony	ug/l	0	2.0	6
ITB0892-03	Boron-200.7	Boron	mg/l	0.062	0.050	1
ITB0892-03	Cadmium-200.8	Cadmium	ug/l	0	1.0	3.1
ITB0892-03	Chloride - 300.0	Chloride	mg/l	15	0.50	150
ITB0892-03	Copper-200.8	Copper	ug/l	14	2.00	14
ITB0892-03	Fluoride SM4500F,C	Fluoride	mg/l	0.26	0.10	1.6
ITB0892-03	Lead-200.8	Lead	ug/l	10	1.0	5.2
ITB0892-03	Nickel-200.7	Nickel	ug/l	7.21	10	100
ITB0892-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.67	0.11	8
ITB0892-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITB0892-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.67	0.26	8
ITB0892-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0.79	4.0	6
ITB0892-03	Selenium-200.8	Selenium	ug/l	0.62	2.0	5
ITB0892-03	Sulfate-300.0	Sulfate	mg/l	13	0.50	300
ITB0892-03	TDS - SM2540C	Total Dissolved Solids	mg/l	204	10	950
ITB0892-03	Thallium-200.8	Thallium	ug/l	0.18	1.0	2
ITB0892-03	Zinc-200.7	Zinc	ug/l	49	20	160

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Compliance Check

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LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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Received: 02/06/10

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
Ba	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
C8	Calibration Verification recovery was above the method control limit for this analyte. A high bias may be indicated.
J	Estimated result. Result is less than the reporting limit.
Ja	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.
Jb	Result is greater than sample detection limit but less than stated reporting limit.
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
Q	Estimated maximum possible concentration (EMPC).
U	Result is less than the sample detection limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For 1,2-Diphenylhydrazine:

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 218.6	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 525.2	Water		
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM 4500-F-C	Water	X	X
SM2340B-Diss	Water		
SM2340B	Water	X	X
SM2540C	Water	X	
SM4500CN-E	Water	X	X
SM4500NH3-C	Water	X	X

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnrc
Samples: ITB0892-03

Analysis Performed: Bioassay-Acute 96hr
Samples: ITB0892-01

EMS-SUB California Cert #1119

117 W. Bellevue Drive - Pasadena, CA 91105

Analysis Performed: Asbestos-TEM (100.2 - DW)
Samples: ITB0892-03

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

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

Project ID: Annual Outfall 008

Report Number: ITB0892

Sampled: 02/05/10-02/06/10
Received: 02/06/10

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITB0892-03

Method Performed: EPA 900.0 MOD
Samples: ITB0892-03

Method Performed: EPA 901.1 MOD
Samples: ITB0892-03

Method Performed: EPA 903.0 MOD
Samples: ITB0892-03

Method Performed: EPA 904 MOD
Samples: ITB0892-03RE1

Method Performed: EPA 905 MOD
Samples: ITB0892-03

Method Performed: EPA 906.0 MOD
Samples: ITB0892-03

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ITB0892-03, ITB0892-03RE1

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

ZC B0892

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Annual Outfall 008 GRAB Stormwater at Happy Valley		ANALYSIS REQUIRED		Field readings: (Log in and include in report Temp and pH) Temp °F = 10.2°C pH = 7.5 Time of readings = 8:15	
Test America Contact: Joseph Doak		Project Manager: Bronwyn Kelly		Oil & Grease (1664-HEM)		Comments	
Phone Number: (626) 568-6691		Fax Number: (626) 568-6515		VOCs 624 +A+A+2C/E		Cr (VI) (218.6)	
Sampler: <i>EWJ/PK</i>		Sampling Date/Time 2/6/2008 8:15		VOCs 624, Xylenes + PP		Acute Toxicity	
Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #		
Outfall 008	W	1L Amber	2	HCl	1A, 1B, 4	X	
Outfall 008	W	VOAs	3	HCl	2A, 2B, 2C, 4	X	
Outfall 008	W	VOAs	3	None	3A, 3B, 3C, 4	X	
Trip Blanks	W	VOAs	3	HCl	4A, 4B, 4C, 4	X	
Trip Blanks	W	VOAs	3	None	5A, 5B, 5C, 4	X	
Outfall 008	W	500 mL Poly	1	None	6	X	
Outfall 008	W	1 Gal Cube	1	None	7	X	
These Samples are the Grab Portion of Outfall 008 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	Turn-around time: (Check)			
<i>[Signature]</i>		<i>[Signature]</i>	2600 1430	24 Hour	72 Hour	10 Day	Normal: <input checked="" type="checkbox"/>
Relinquished By	Date/Time	Received By	Date/Time	48 Hour	5 Day	On Ice	<input checked="" type="checkbox"/> 297
<i>[Signature]</i>	2600 1700	<i>[Signature]</i>	2610 1700	Sample Integrity: (Check)	Inact	Data Requirements: (Check)	No Level IV: <input type="checkbox"/> All Level IV: <input checked="" type="checkbox"/> NPDES Level IV: <input checked="" type="checkbox"/>
Relinquished By	Date/Time	Received By	Date/Time				

LABORATORY REPORT



Date: February 15, 2010

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

"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

Laboratory No.: A-10020707-001/002
Sample I.D.: ITB0892-01, 03 (Outfall 008)

Sample Control: The sample was received by ATL chilled and with the chain of custody record attached. Testing conducted on only one sample per client instruction (rain runoff sample). Sample received outside the recommended 36 hour hold time and conduct per client instruction.

Date Sampled: 02/06/10, 02/05/10
Date Received: 02/07/10
Temp. Received: 2.4°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 02/07/10 to 02/14/10

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

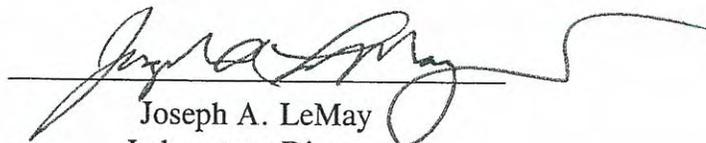
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).
Ceriodaphnia dubia Survival and Reproduction Test (EPA Method 1002).

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

Result Summary:

Acute:	<u>Survival</u>	<u>TUa</u>
Fathead Minnow:	100%	0.0
Chronic:	<u>NOEC</u>	<u>TUc</u>
<i>Ceriodaphnia</i> Survival:	100%	1.0
<i>Ceriodaphnia</i> Reproduction:	100%	1.0

Quality Control: Reviewed and approved by:


Joseph A. LeMay
Laboratory Director

**FATHEAD MINNOW PERCENT SURVIVAL TEST
EPA Method 2000.0**



Lab No.: A-10020707-001

Client/ID: TestAmerica ITB0892-01 Outfall 008

Start Date: 02/07/2010

TEST SUMMARY

Species: *Pimephales promelas*.

Age: 12 (1-14) days.

Regulations: NPDES.

Test solution volume: 250 ml.

Feeding: prior to renewal at 48 hrs.

Number of replicates: 2.

Dilution water: Moderately hard reconstituted water.

Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.

Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012.

Endpoints: Percent Survival at 96 hrs.

Test chamber: 600 ml beakers.

Temperature: 20 +/- 1°C.

Number of fish per chamber: 10.

QA/QC Batch No.: RT-100202.

TEST DATA

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.1	8.5	7.7	0	0	J 1400
	100%	19.4	9.7	7.3	0	0	
24 Hr	Control	19.4	8.1	8.0	0	0	Z 1200
	100%	19.3	8.7	7.6	0	0	
48 Hr	Control	19.3	8.1	7.9	0	0	R 1300
	100%	19.0	8.3	7.9	0	0	
Renewal	Control	19.8	9.0	8.0	0	0	R 1300
	100%	20.6	9.2	7.3	0	0	
72 Hr	Control	19.4	7.1	7.5	0	0	R 1500
	100%	19.0	7.0	7.5	0	0	
96 Hr	Control	19.1	8.2	7.7	0	0	R 1400
	100%	19.0	8.0	7.4	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.3; Conductivity: 191 umho; Temp: 2.4°C;

DO: 9.7 mg/l; Alkalinity: 68 mg/l; Hardness: 76 mg/l; NH₃-N: 0.3 mg/l.

Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No.

Control: Alkalinity: 71 mg/l; Hardness: 108 mg/l; Conductivity: 325 umho.

Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No.

Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

Dissolved Oxygen (DO) readings in mg/l O₂.

RESULTS

Percent Survival In: Control: 100 % 100% Sample: 100 %



CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST

- *Test and Results Summary*
- *Data Summary and Statistical Analyses*
- *Raw Test Data: Water Quality & Test Organism Measurements*

**CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0**



Lab No.: A-10020707-002
Client/ID: Test America – ITB0892-03 (Outfall 008)

Date Tested: 02/07/10 to 02/14/10

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-100207.

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%	27.9
100% Sample	100%	31.9

* Sample not statistically significantly less than Control.

CHRONIC TOXICITY

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

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥ 80%	Pass (100% survival)
≥ 15 young per surviving control female	Pass (27.9 young)
≥ 60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD < 47% for reproduction; if > 47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 8.8%)
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

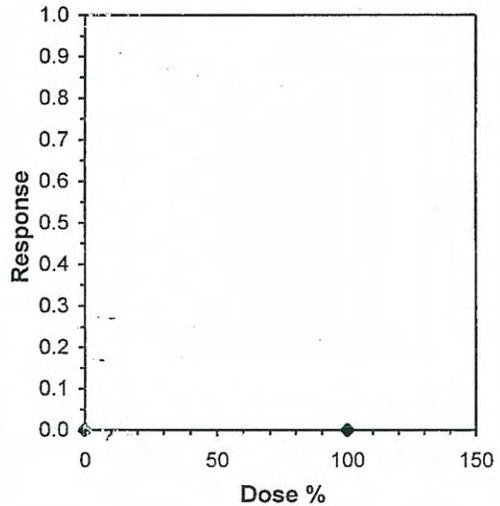
Start Date: 2/7/2010 15:00 Test ID: 10020707c Sample ID: ITB0892-03
 End Date: 2/14/2010 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial
 Sample Date: 2/5/2010 21:02 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia
 Comments:

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	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: 2/7/2010 15:00 Test ID: 10020707c Sample ID: ITB0892-03
 End Date: 2/14/2010 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: EFF2-Industrial
 Sample Date: 2/5/2010 21:02 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia
 Comments:

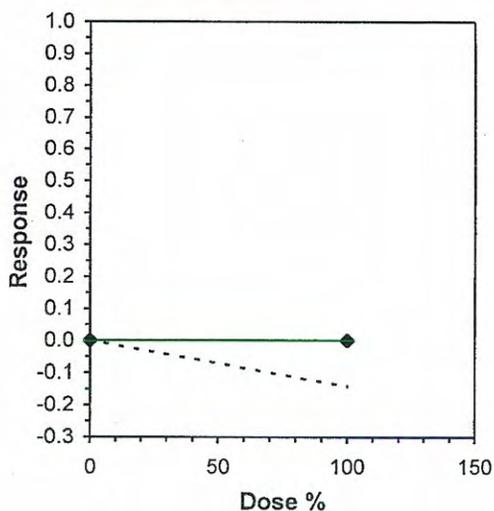
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	30.000	26.000	31.000	29.000	30.000	32.000	24.000	30.000	22.000	25.000
100	29.000	37.000	29.000	34.000	32.000	35.000	28.000	32.000	33.000	30.000

Conc-%	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%	Mean					N-Mean	
D-Control	27.900	1.0000	27.900	22.000	32.000	12.119	10				29.900	1.0000	
100	31.900	1.1434	31.900	28.000	37.000	9.163	10	-2.830	1.734	2.451	29.900	1.0000	

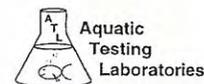
Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.95132	0.905	-0.2211	-1.0085		
F-Test indicates equal variances (p = 0.67)	1.3381	6.54109				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences Treatments vs D-Control	2.45097	0.08785	80	9.98889	0.0111	1, 18

Linear Interpolation (200 Resamples)

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



CERIODAPHNIA DUBIA CHRONIC BIOASSAY
EPA METHOD 1002.0 Raw Data Sheet



Lab No.: A-10020707-00L

Client ID: TestAmerica - ITB0892-03 Outfall 008

Start Date: 02/07/2010

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr												
Analyst Initials:		[Signature]													
Time of Readings:		1430/1430		1430/1500		1500/1400		1400/1400		1400/1500		1500/1600		1600/1400	
Control	DO	8.3	8.1	8.2	8.3	8.2	8.4	8.2	8.0	8.3	8.0	8.1	7.8	8.0	8.1
	pH	7.7	7.8	7.6	7.8	8.0	7.6	7.7	7.9	7.7	7.6	7.7	7.7	7.5	7.5
	Temp	24.3	24.8	24.0	25.6	25.6	24.7	24.4	24.6	25.7	25.0	25.4	25.3	25.9	24.4
100%	DO	10.0	7.4	9.6	8.8	8.5	8.2	9.1	7.4	9.3	8.0	9.2	7.9	8.8	7.9
	pH	7.3	8.0	7.8	8.2	7.7	7.7	7.3	8.0	7.4	7.8	7.4	7.9	7.5	8.0
	Temp	25.0	24.9	24.2	25.4	25.2	24.5	25.2	25.0	25.0	25.2	25.1	25.5	25.0	24.9

Additional Parameters	Control	100% Sample
Conductivity (umohms)	349	217
Alkalinity (mg/l CaCO ₃)	67	76
Hardness (mg/l CaCO ₃)	90	80
Ammonia (mg/l NH ₃ -N)	0.1	0.1

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

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	[Signature]
	2	0	0	0	0	0	0	0	0	0	0	0	10	[Signature]
	3	4	5	4	4	4	0	3	3	2	4	33	10	[Signature]
	4	0	0	0	0	9	6	5	10	7	9	46	10	[Signature]
	5	8	6	10	9	0	0	16	17	13	12	91	10	[Signature]
	6	18	0	0	0	0	10	0	0	0	0	28	10	[Signature]
	7	0	15	17	16	17	16	(19)	(17)	(17)	(16)	81	10	[Signature]
	Total	30	26	31	29	30	32	24	30	22	25	279	10	[Signature]
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	[Signature]
	2	0	0	0	0	0	0	0	0	0	0	0	10	[Signature]
	3	4	6	4	5	3	4	4	4	4	4	42	10	[Signature]
	4	9	0	0	10	0	0	10	0	11	7	47	10	[Signature]
	5	16	12	7	0	11	11	14	9	0	0	80	10	[Signature]
	6	0	19	18	19	18	20	(17)	19	18	19	150	10	[Signature]
	7	(19)	(20)	(19)	(20)	(19)	(17)	(16)	(17)	(18)	(17)	0	10	[Signature]
	Total	29	37	29	34	32	35	26	32	33	30	319	10	[Signature]

Circled fourth brood not used in statistical analysis.

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



***CHAIN
OF
CUSTODY***

SUBCONTRACT ORDER
TestAmerica Irvine

ITB0892

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: 2-4 °C

Ice: Y N

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

Analysis	Units	Expires	Comments
----------	-------	---------	----------

Sample ID: ITB0892-01 (Outfall ^{05 per} 010 (Grab) - Water)		Sampled: 02/06/10 08:15	
Bioassay-Acute 96hr	% Survival	02/07/10 20:15	FH minnow, EPA/821-R02-012, Sub to Aquatic

Containers Supplied:
1 gal Poly (J)

Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)		Sampled: 02/05/10 21:02	
Bioassay-7 dy Chmic	N/A	02/07/10 09:02	Cerio, EPA/821-R02-013, Sub to Aquatic testing

Containers Supplied:
1 gal Poly (P)

~~_____~~ 2-7-10 9:05
Released By _____ Date/Time _____
2-7-10 11:06
Released By _____ Date/Time _____

_____ 2-7-10 9:05
Received By _____ Date/Time _____
_____ 2-7-10 11:00
Received By _____ Date/Time _____



***REFERENCE
TOXICANT
DATA***

FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS



QA/QC Batch No.: RT-100202

TEST SUMMARY

Species: *Pimephales promelas*.
 Age: 13 days old.
 Regulations: NPDES.
 Test chamber volume: 250 ml.
 Feeding: Prior to renewal at 48 hrs.
 Temperature: 20 +/- 1°C.
 Number of replicates: 2.
 Dilution water: MHSF.

Source: In-lab culture.
 Test type: Static-Renewal.
 Test Protocol: EPA-821-R-02-012.
 Endpoints: LC50 at 96 hrs.
 Test chamber: 600 ml beakers.
 Aeration: None.
 Number of organisms per chamber: 10.
 Photoperiod: 16/8 hrs light/dark.

TEST DATA

Date/Time: Analyst:	INITIAL			24 Hr					48 Hr				
	<u>2-2-10 1200</u>			<u>2-3-10 1300</u>					<u>2-4-10 1200</u>				
	<u>Rm</u>			<u>Rm</u>					<u>Rm</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>19.6</u>	<u>8.4</u>	<u>7.6</u>	<u>19.4</u>	<u>7.9</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.2</u>	<u>7.1</u>	<u>7.9</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>19.6</u>	<u>8.5</u>	<u>7.6</u>	<u>19.2</u>	<u>8.0</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.2</u>	<u>7.3</u>	<u>7.7</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>19.6</u>	<u>8.5</u>	<u>7.7</u>	<u>19.1</u>	<u>8.0</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.1</u>	<u>7.2</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>19.6</u>	<u>8.5</u>	<u>7.7</u>	<u>19.1</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.1</u>	<u>7.2</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>19.6</u>	<u>8.6</u>	<u>7.7</u>	<u>19.0</u>	<u>6.8</u>	<u>7.3</u>	<u>10</u>	<u>10</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Date/Time: Analyst:	RENEWAL			72 Hr					96 Hr				
	<u>2-4-10 1200</u>			<u>2-5-10 1200</u>					<u>2-6-10 1130</u>				
	<u>Rm</u>			<u>Rm</u>					<u>Rm</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>19.5</u>	<u>8.8</u>	<u>7.8</u>	<u>19.5</u>	<u>7.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.6</u>	<u>6.3</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>19.5</u>	<u>8.8</u>	<u>7.8</u>	<u>19.4</u>	<u>7.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.6</u>	<u>6.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>19.5</u>	<u>8.9</u>	<u>7.8</u>	<u>19.2</u>	<u>7.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.6</u>	<u>6.5</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>19.5</u>	<u>8.9</u>	<u>7.8</u>	<u>19.2</u>	<u>7.3</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.5</u>	<u>6.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Comments: Control: Alkalinity: 69 mg/l; Hardness: 94 mg/l; Conductivity: 330 umho.
 SDS: Alkalinity: 68 mg/l; Hardness: 94 mg/l; Conductivity: 333 umho.

Concentration-response relationship acceptable? (see attached computer analysis):

Yes (response curve normal)

No (dose interrupted indicated or non-normal)

Acute Fish Test-96 Hr Survival

Start Date: 2/2/2010 12:00 Test ID: RT100202f Sample ID: REF-Ref Toxicant
 End Date: 2/6/2010 11:30 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate
 Sample Date: 2/2/2010 Protocol: ACUTE-EPA-821-R-02-012 Test Species: PP-Pimephales promelas
 Comments:

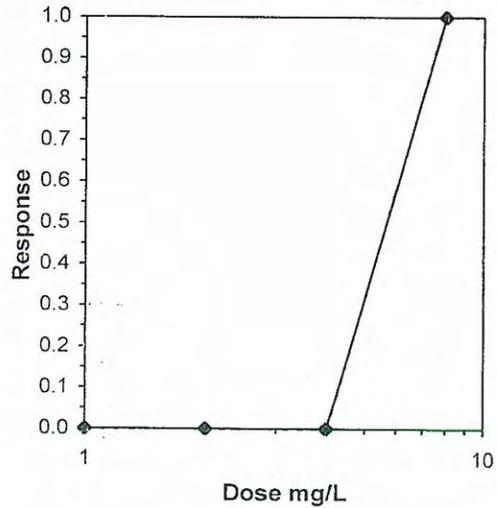
Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	1.0000	1.0000
8	0.0000	0.0000

Conc-mg/L	Transform: Arcsin Square Root							Number Resp	Total Number
	Mean	N-Mean	Mean	Min	Max	CV%	N		
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
4	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

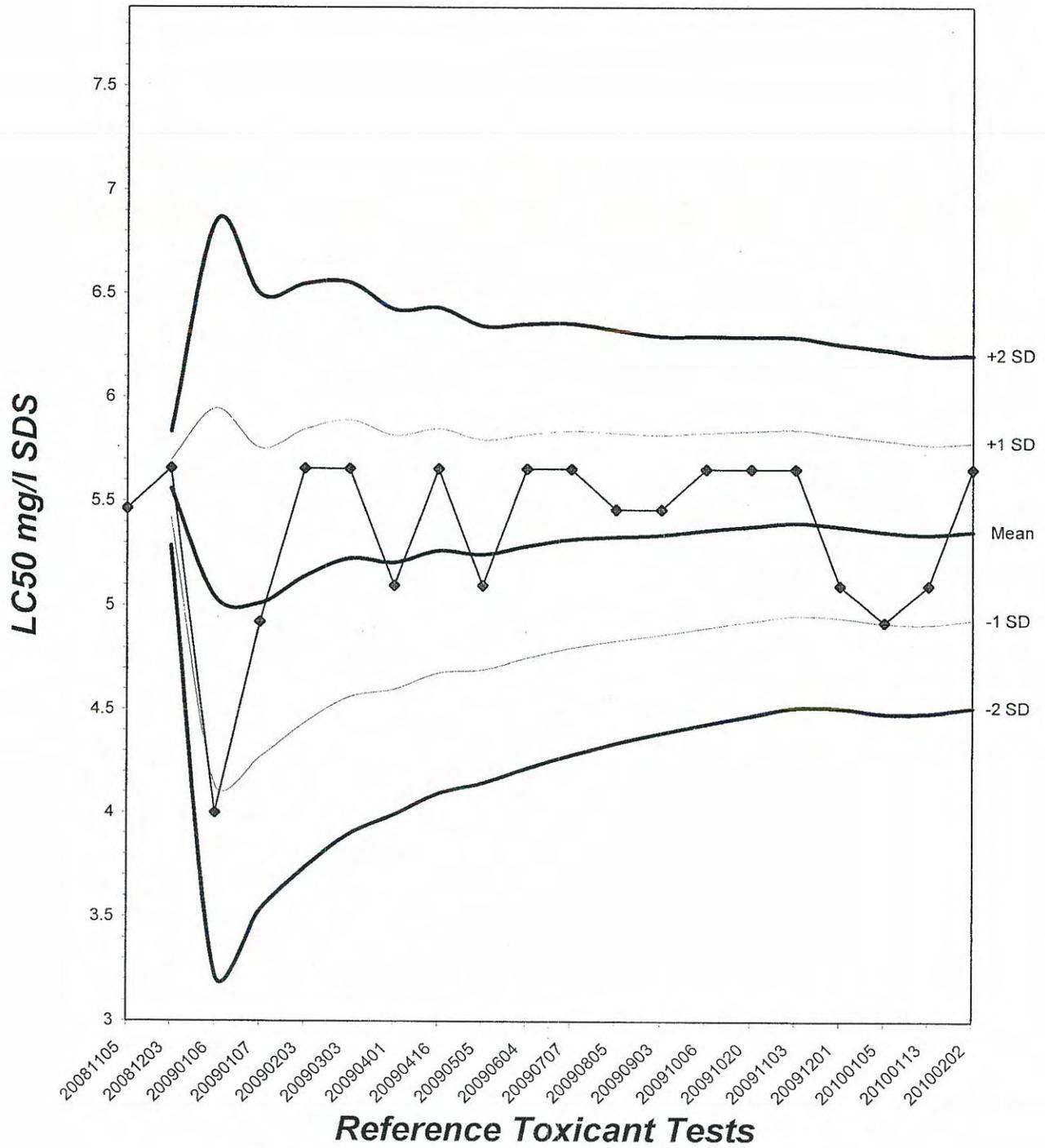
Trim Level	EC50	Graphical Method
0.0%	5.6569	

5.6569



Fathead Minnow Acute Laboratory Control Chart

CV% = 7.91



TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT-100202

SOURCE: In-Lab Culture

DATE HATCHED: 1-20-10

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

MORTALITIES 48 HOURS PRIOR TO
TO USE IN TESTING: 0

DATE USED IN LAB: 1/5/10

AVERAGE FISH WEIGHT: 0.006 gm

LOADING LIMITS: 0.65 gm/liter @ 20°C, 0.40 gm/liter @ 25°C

Approximately 1000 fish per 10 liters limit if held overnight for acclimation without filtration @ 20°C for fish with a mean weight of 0.006 gm.

Approximately 650 fish per 10 liters limit if held overnight for acclimation without filtration @ 25°C for fish with a mean weight of 0.006 gm.

200 ml test solution volume = 0.013 gm mean fish weight limit @ 20°C; 0.008 @ 25°C

250 ml test solution volume = 0.016 gm mean fish weight limit @ 20°C; 0.010 @ 25°C

ACCLIMATION WATER QUALITY:

Temp.: 19.6°C

pH: 7.6

Ammonia: 0.1 mg/l NH₃-N

DO: 8.4 mg/l

Alkalinity: 69 mg/l

Hardness: 94 mg/l

READINGS RECORDED BY: _____



DATE: 2-3-10

Test Temperature Chart

Test No: RT-100202

Date Tested: 02/02/10 to 02/06/10

Acceptable Range: 20 \pm 1 $^{\circ}$ C





Ceriodaphnia dubia
Chronic Toxicity Test
Reference
Toxicant
Data

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0
REFERENCE TOXICANT - NaCl



QA/QC Batch No.: RT-100207

Date Tested: 02/07/10 to 02/14/10

TEST SUMMARY

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

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

RESULTS SUMMARY

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		28.5	
0.25 g/l	100%		30.9	
0.5 g/l	100%		25.5	
1.0 g/l	100%		15.4	*
2.0 g/l	100%		2.9	*
4.0 g/l	0%	*	0	**

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

CHRONIC TOXICITY

Survival LC50	2.8 g/l
Reproduction IC25	0.66 g/l

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥15 young per surviving control female	Pass (28.5 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 14.7%)
Stat. sig. diff. conc. relative difference >13%	Pass (Stat. sig. diff. conc. Relative difference = 46.0%)
Concentration response relationship acceptable	Pass (Response curve normal)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date: 2/7/2010 15:00 Test ID: RT100207c Sample ID: REF-Ref Toxicant
 End Date: 2/14/2010 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride
 Sample Date: 2/7/2010 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	1.0000	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
4	0.0000	0.0000	10	0	10	10			10	10

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

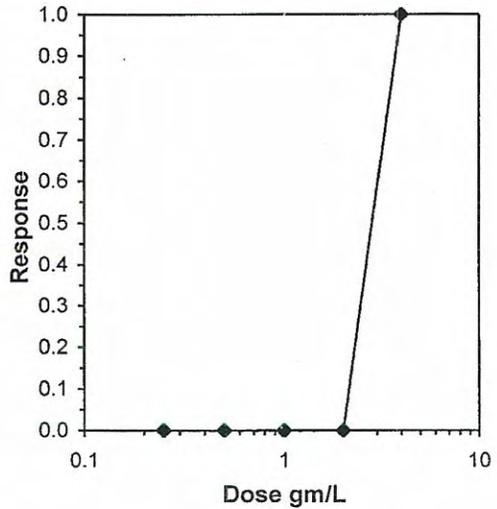
Fisher's Exact Test 2 4 2.82843

Treatments vs D-Control

Graphical Method

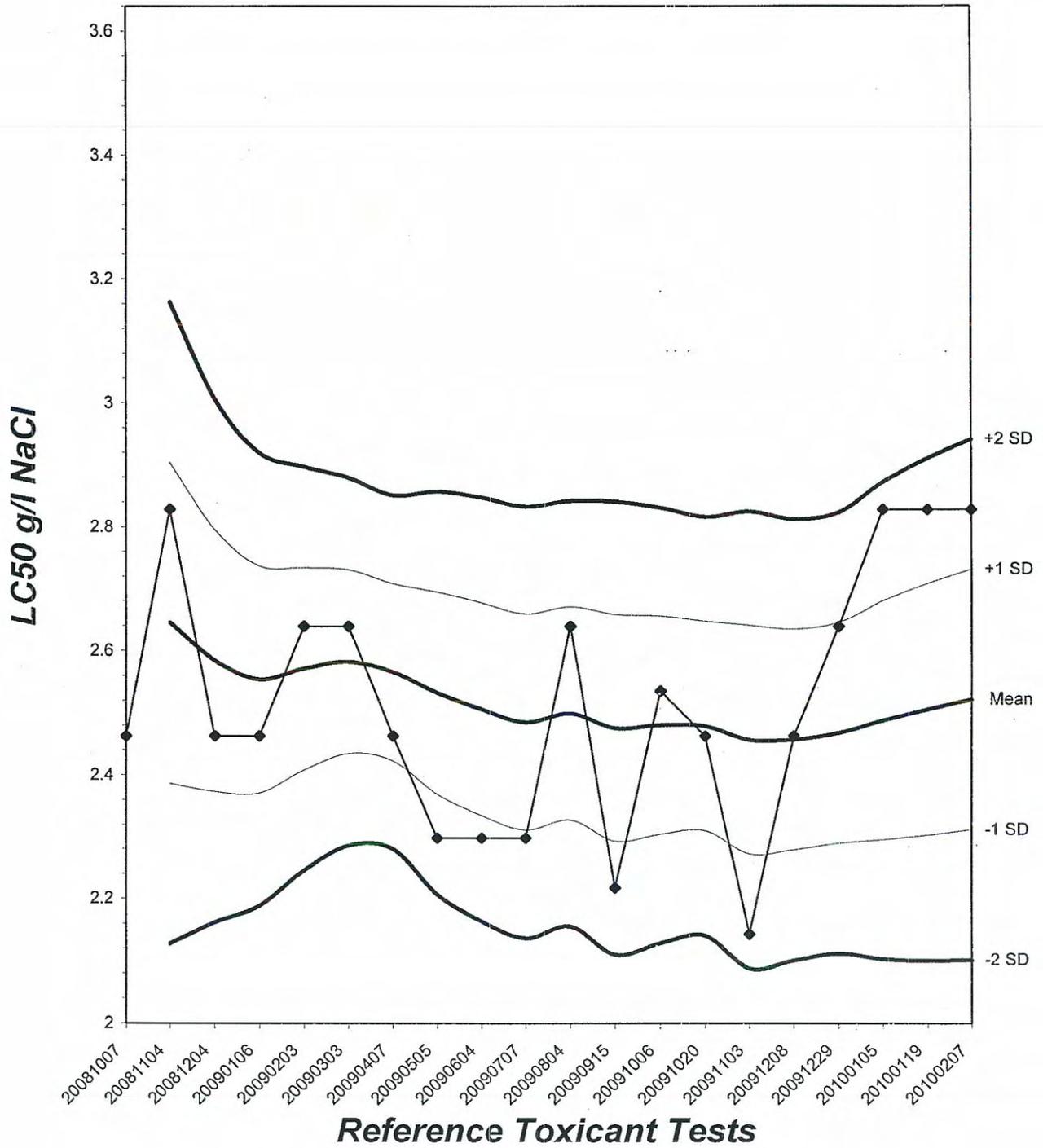
Trim Level EC50
 0.0% 2.8284

2.8284



Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 8.34



Ceriodaphnia Survival and Reproduction Test-Reproduction

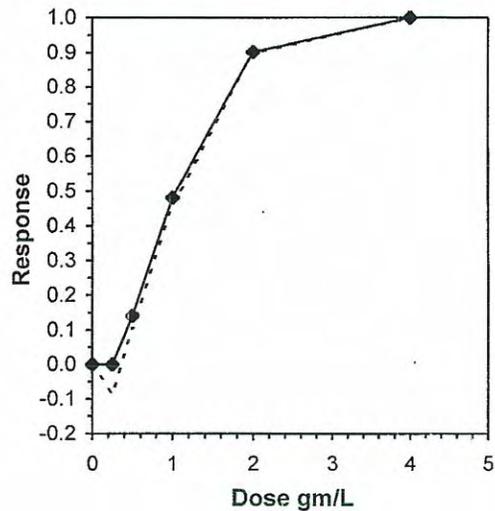
Start Date: 2/7/2010 15:00 Test ID: RT100207c Sample ID: REF-Ref Toxicant
 End Date: 2/14/2010 14:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride
 Sample Date: 2/7/2010 Protocol: FWCH EPA Test Species: CD-Ceriodaphnia dubia
 Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	30.000	29.000	30.000	32.000	29.000	30.000	30.000	25.000	26.000	24.000
0.25	48.000	29.000	31.000	31.000	27.000	27.000	28.000	36.000	25.000	27.000
0.5	27.000	26.000	26.000	28.000	25.000	25.000	30.000	25.000	18.000	25.000
1	24.000	13.000	15.000	19.000	24.000	13.000	11.000	13.000	11.000	11.000
2	3.000	3.000	2.000	3.000	2.000	3.000	4.000	4.000	2.000	3.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Conc-gm/L	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical	Isotonic	
			Mean	Min	Max	CV%	N			Mean	N-Mean
D-Control	28.500	1.0000	28.500	24.000	32.000	9.097	10			29.700	1.0000
0.25	30.900	1.0842	30.900	25.000	48.000	21.867	10	110.50	76.00	29.700	1.0000
0.5	25.500	0.8947	25.500	18.000	30.000	12.158	10	79.00	76.00	25.500	0.8586
*1	15.400	0.5404	15.400	11.000	24.000	33.280	10	56.00	76.00	15.400	0.5185
*2	2.900	0.1018	2.900	2.000	4.000	25.444	10	55.00	76.00	2.900	0.0976
4	0.000	0.0000	0.000	0.000	0.000	0.000	10			0.000	0.0000

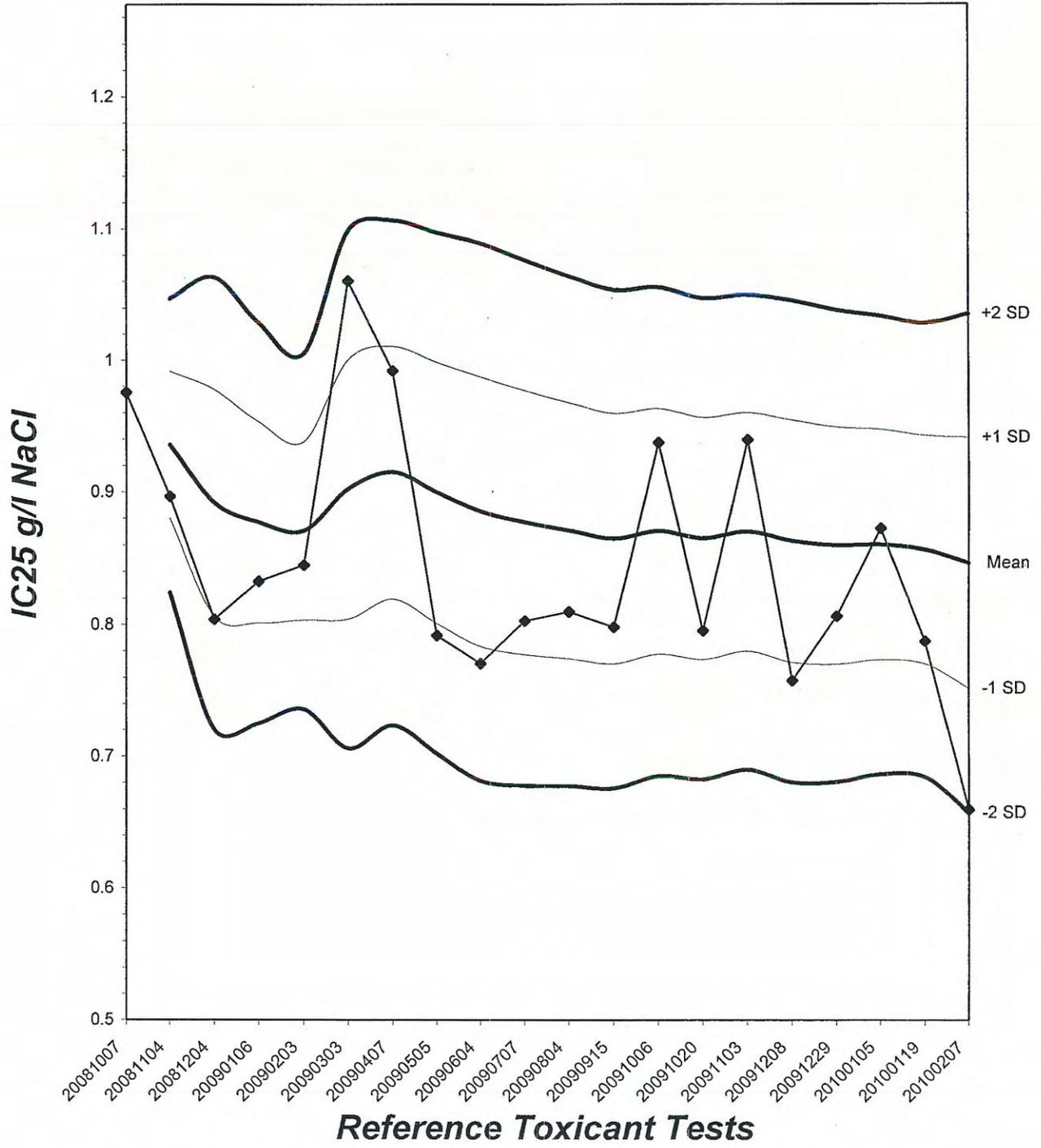
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution ($p \leq 0.05$)	0.87968	0.947	1.72192	5.90298
Bartlett's Test indicates unequal variances ($p = 1.75E-06$)	32.1843	13.2767		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	0.5	1	0.70711	
Treatments vs D-Control				

Point	gm/L	SD	Linear Interpolation (200 Resamples)		
			95% CL	Skew	
IC05	0.3384	0.0442	0.2691	0.4525	0.4001
IC10	0.4268	0.0548	0.3537	0.5444	0.4118
IC15	0.5126	0.0553	0.4160	0.6069	0.0105
IC20	0.5861	0.0571	0.4714	0.6748	-0.2745
IC25	0.6597	0.0572	0.5402	0.7608	-0.3338
IC40	0.8802	0.0645	0.7629	1.0101	0.4008
IC50	1.0440	0.0882	0.8903	1.2112	0.2244



Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 11.2



CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl

Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-100207

Start Date: 02/07/2010

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	5	0	4	4	3	4	4	4	3	4	35	10	R
	4	0	5	0	0	0	9	10	7	9	9	49	10	R
	5	8	8	12	11	10	0	16	14	14	11	104	10	R
	6	0	0	0	0	0	17	(17)	(15)	(17)	(12)	17	10	R
	7	17	16	14	17	16	(15)	0	0	0	0	80	10	R
	Total	30	29	30	32	29	30	30	25	26	24	285	10	R
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	4	4	4	5	3	4	0	4	3	31	10	R
	4	0	0	0	0	9	8	11	10	9	0	47	10	R
	5	11	8	8	10	13	0	13	11	12	8	94	10	R
	6	18	17	19	17	(15)	16	(13)	0	(17)	16	103	10	R
	7	19	0	(7)	(16)	0	(17)	0	15	0	(15)	34	10	R
	Total	38	29	31	31	27	27	28	36	25	27	309	10	R
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	2	0	3	0	3	3	0	0	4	3	18	10	R
	4	0	4	4	2	5	0	6	4	6	5	36	10	R
	5	7	5	0	0	0	7	8	6	8	0	41	10	R
	6	18	17	19	12	17	0	16	0	0	0	99	10	R
	7	0	0	0	14	(16)	15	0	15	(14)	17	61	10	R
	Total	27	26	26	28	25	25	30	25	18	25	255	10	R

Circled fourth brood not used in statistical analysis.

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

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



QA/QC No.: RT-100207

Start Date: 02/07/2010

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	Ln
	2	0	0	0	0	0	0	0	0	0	0	0	10	Ln
	3	3	0	2	3	3	0	0	2	2	0	15	10	Ln
	4	0	2	5	2	4	0	0	3	3	0	19	10	Ln
	5	5	4	0	0	0	0	4	0	0	0	19	10	Ln
	6	0	0	0	14	17	0	0	0	0	4	35	10	Ln
	7	16	7	8	0	0	2	7	8	6	7	66	10	Ln
	Total	24	13	15	19	24	13	11	13	11	11	154	10	Ln
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	Ln
	2	0	0	0	0	0	0	0	0	0	0	0	10	Ln
	3	0	0	0	0	0	0	0	0	0	0	0	10	Ln
	4	0	0	0	0	0	0	0	0	0	0	0	10	Ln
	5	0	0	0	0	0	0	0	0	0	0	0	10	Ln
	6	0	0	2	0	0	0	0	3	0	0	5	10	Ln
	7	3	3	0	3	2	3	4	1	2	3	24	10	Ln
	Total	3	3	2	3	2	3	4	4	2	3	29	10	Ln
4.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	0	Ln
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	0	0	0	0	0	0	0	0	0	0	0	0	Ln

Circled fourth brood not used in statistical analysis.

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

CARIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl Water Chemistries Raw Data Sheet



QA/QC No.: RT-100207

Start Date: 02/07/2010

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final												
Analyst Initials:		[Signature]		[Signature]		[Signature]		[Signature]		[Signature]		[Signature]		[Signature]	
Time of Readings:		1500	1430	1430	1500	1500	1400	1400	1400	1500	1500	1600	1600	1600	1400
Control	DO	8.3	8.3	8.1	8.4	8.2	8.3	8.3	8.2	8.4	8.2	8.1	7.9	8.0	8.0
	pH	7.7	8.0	8.2	8.0	8.0	7.8	8.0	7.8	7.7	7.7	7.7	7.8	7.5	7.6
	Temp	24.3	24.2	24.7	25.0	25.7	25.1	24.4	24.0	25.7	24.8	25.4	25.2	25.9	24.5
0.25 g/l	DO	8.4	8.4	8.2	8.4	8.2	8.3	8.3	8.2	8.4	8.2	8.1	8.0	8.0	7.9
	pH	8.0	7.8	8.0	8.0	8.0	7.8	8.0	7.8	7.7	7.7	7.7	7.8	7.5	7.5
	Temp	24.4	24.2	24.6	25.1	25.8	25.2	24.5	24.2	25.7	24.9	25.4	25.3	25.9	25.0
0.5 g/l	DO	8.2	8.3	8.2	8.3	8.2	8.3	8.3	8.1	8.4	8.2	8.1	8.0	8.0	8.1
	pH	7.9	7.8	7.8	8.0	8.1	7.8	7.8	7.8	7.7	7.7	7.7	7.8	7.6	7.5
	Temp	24.4	24.6	24.4	25.2	25.8	25.4	24.5	24.2	25.7	25.0	25.5	25.4	25.8	24.7
1.0 g/l	DO	8.3	8.4	8.4	8.3	8.3	8.2	8.3	8.1	8.3	8.3	8.2	7.9	8.0	8.0
	pH	7.9	7.8	7.8	8.0	8.1	7.8	7.8	7.8	7.7	7.7	7.7	7.8	7.6	7.6
	Temp	24.4	24.6	24.5	25.2	25.9	25.4	24.6	24.1	25.8	25.0	25.6	25.4	25.8	24.4
2.0 g/l	DO	8.2	8.0	8.4	8.5	8.3	8.2	8.3	8.1	8.3	8.3	8.2	8.1	8.0	8.3
	pH	7.9	7.8	7.7	8.0	8.1	7.8	7.8	7.8	7.7	7.7	7.8	7.8	7.7	7.6
	Temp	24.6	24.8	24.5	25.2	26.0	25.3	24.8	24.1	25.9	25.1	25.8	25.3	25.6	24.7
4.0 g/l	DO	8.3	8.0	-	-	-	-	-	-	-	-	-	-	-	-
	pH	8.1	7.7	-	-	-	-	-	-	-	-	-	-	-	-
	Temp	24.5	25.1	-	-	-	-	-	-	-	-	-	-	-	-

Dissolved Oxygen (DO) readings are in mg/l O₂; Temperature (Temp) readings are in °C.

Additional Parameters	Control			High Concentration		
	Day 1	Day 3	Day 5	Day 1	Day 3	Day 5
Conductivity (µS)	349	335	341	6240	3390	3510
Alkalinity (mg/l CaCO ₃)	67	68	67	67	68	68
Hardness (mg/l CaCO ₃)	90	93	92	90	92	92

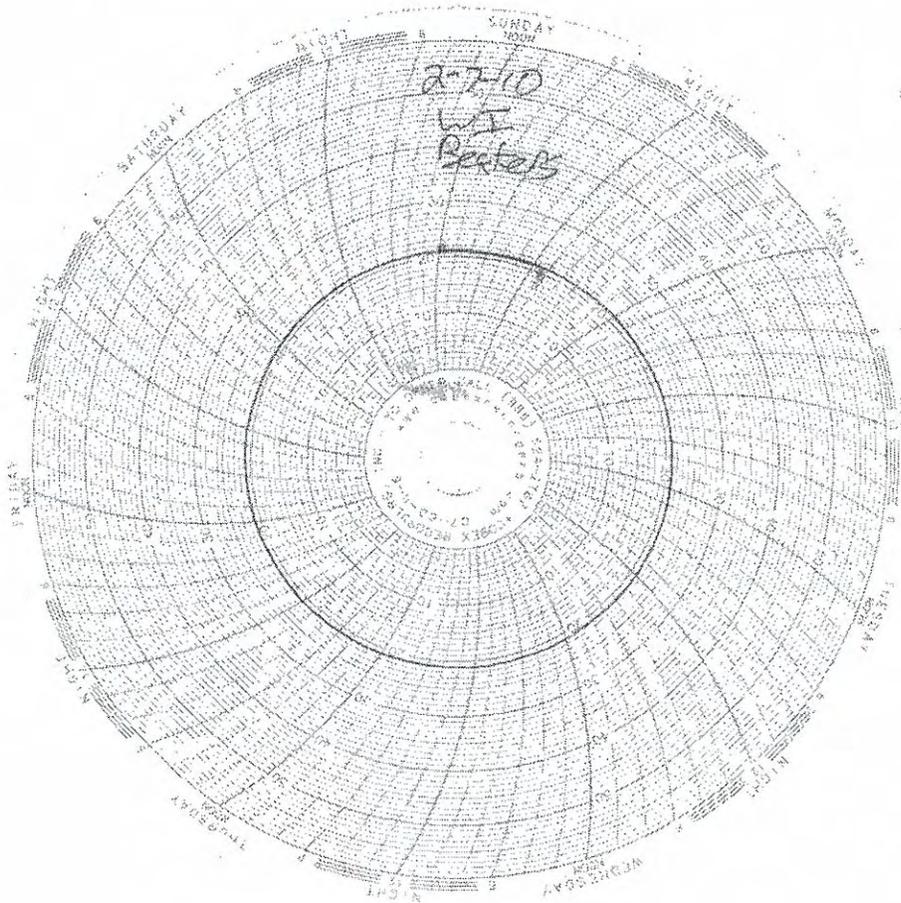
Source of Neonates										
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	3A	3B	2C	2D	1E	1F	3G	2H	3I	1J

Test Temperature Chart

Test No: RT-100207

Date Tested: 02/07/10 to 02/14/10

Acceptable Range: $25 \pm 1^\circ\text{C}$



DATE: February 15, 2010
CUSTOMER: Test America, Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614
ATTENTION: Joseph Doak
REPORT NO: 135418
REFERENCE: ITB0892
SUBJECT: ANALYSIS OF WATER SAMPLES FOR ASBESTOS BY TEM
ACCREDITATION: California Dept. of Health Services ELAP 1119

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

SAMPLE NO: ITB0892-03
DATE COLLECTED: 2/5/10 at 2102
RECEIVED: 2/8/10 at 1355
OZONATED: 2/8/10 at 1400 to 1700
FILTERED: 2/8/10 at 1721
ANALYZED: 2/10/10

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

The analytical sensitivity of 0.2 MFL was not reached due to turbidity.

The results of the analysis and the detection limit(s) are summarized on the following page(s), accompanied by the chain of custody.

Respectfully submitted,
EMS Laboratories, Inc.



B.M. Kolk
Laboratory Director
BMK/mt

*Note: The report shall not be reproduced, except in full, without the written approval of EMS Laboratories, Inc.
Note: The results of the analysis are based upon the sample 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. All the analytical quality control data meet the requirement of the procedure unless otherwise indicated. 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. The results have been corrected for the field blank or EMS blank if analyte is detected in the blank.*

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

EMS No. 135418 **Client** Test America
Sample No. ITB0892-03 **Date Analyzed** 2/10/2010

Fibers > 10 µm in length (chrysotile)	<u>BDL*</u>	MFL
Mass (chrysotile)	<u>0</u>	ug/L
More/Less than 5 Fibers in Sample (chrysotile)	<u>LESS</u>	
Poisson 95% Confidence Interval	<u>0 to 80</u>	MFL
Detection Limit	<u>22</u>	MFL

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

Particle Size Distribution (Chrysotile)

Particle Length - Microns							
0-0.49	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
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Particle Width - Microns							
0 - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 - .49	.50 - .99	1 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
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
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

TEM 7B (1994)

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

EMS No. 135418 **Date Analyzed** 2/10/2010
Client Test America
Sample No. EMS BLANK

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

Particle Size Distribution (Chrysotile)

Particle Length - Microns

0 - 0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Particle Width - Microns

0 - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Aspect Ratio L/W

0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>





TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. ITB0892

MWH-Pasadena Boeing

Lot #: FOB090481

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.


Kay Clay
Project Manager

March 17, 2010

Case Narrative
LOT NUMBER: F0B090481
Revised 03-17-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on February 9, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

Report revised to report the KPA uranium results in pCi/L.

Observations/Nonconformances

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

Strontium 90 Method: 905 MOD

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

Affected Sample:

F0B090481 (1): ITB0892-03

cut
122

F0B090481

SUBCONTRACT ORDER

TestAmerica Irvine
ITB0892

Revised

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:

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone : (314) 298-8566
Fax: (314) 298-8757

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: ITB0892-03	Water	Sampled:02/05/10 21:02		
Level 3 Data Package	02/17/10 12:00	03/05/10 21:02		
Uranium, Combined-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	02/17/10 12:00	08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Alpha-O	02/17/10 12:00	08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gamma Spec-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
<i>Containers Supplied:</i>				
2.5 gal Poly (L)	500 mL Amber (M)			

Released By	Date	Received By	Date
		<i>[Signature]</i>	2-9-10 1100
Released By	Date	Received By	Date

SUBCONTRACT ORDER
TestAmerica Irvine

ITB0892

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/Bocing

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: ITB0892-03 (Outfall 008 (Composite) - Water)

Sampled: 02/05/10 21:02

Gross Alpha-O	pCi/L	02/15/17	08/04/10 21:02	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	02/15/17	08/04/10 21:02	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 3 Data Package	N/A	02/15/17	03/05/10 21:02	\$0.00	0%	
Radium, Combined-O	pCi/L	02/15/17	02/05/11 21:02	\$200.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/15/17	02/05/11 21:02	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/15/17	02/05/11 21:02	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/15/17	02/05/11 21:02	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (L) 500 mL Amber (M)

Maryanne Summers 2/8/10 17:00 *FedEx* 2/8/10 17:00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s):

FOB 090467, 461 486
470, 462 489
473, 464 491
475, 465 494
476, 466 495

CONDITION UPON RECEIPT FORM

Client: TA Irvine

Quote No: 77635, 85044

COC/RFA No: below

122

Initiated By: EV

Date: 2-9-10

Time: 1100

Shipping Information

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

Shipping # (s):*

Sample Temperature (s):**

1. <u>4289 2133 2309 MRS</u>	6. _____	1. <u>ambient</u>	6. _____
2. _____	7. _____	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. <u>Y</u> N	Are there custody seals present on the cooler?	8. <u>Y</u> N	Are there custody seals present on bottles?
2. Y <u>N</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y N <u>N/A</u>	Do custody seals on bottles appear to be tampered with?
3. <u>Y</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. Y N <u>N/A</u>	Was sample received with proper pH? (If not, make note below)
4. <u>Y</u> N <u>2/9/10</u>	Sample received with Chain of Custody?	11. <u>Y</u> N	Sample received in proper containers?
5. <u>Y</u> <u>N</u> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N <u>N/A</u>	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. Y <u>N</u>	Was sample received broken?	13. <u>Y</u> N N/A	Was Internal COC/Workshare received?
7. <u>Y</u> N	Is sample volume sufficient for analysis?	14. <u>Y</u> 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:

ITB 0887 ITB 0773

95	36	
98 SN 2.9.10	97	<i>Revised chains were not relinquished for Boeing project.</i>
94	98	
88	99	
<u>92</u>	0800	
86	0590	
85	0602	<i>ITB 0800 label time is 1315; c-o-c reads 1254</i>
96		

Corrective Action:

Client Contact Name: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____
 Project Management Review: Jayma Pohl

Informed by: _____
 If released, notify: _____
 Date: 2-15-10

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN

METHODS SUMMARY

F0B090481

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Radium-226 by GFPC	EPA 903.0 MOD	
Radium-228 by GFPC	EPA 904 MOD	
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

F0B090481

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LVF42	001	ITB0892-03	02/05/10	21:02

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: ITB0892-03

Radiochemistry

Lab Sample ID: FOB090481-001
 Work Order: LVF42
 Matrix: WATER

Date Collected: 02/05/10 2102
 Date Received: 02/09/10 1100

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 # 0042136	Yld %
Cesium 137	-1.6	U	8.7	20.0	16	02/11/10	02/19/10
Potassium 40	-100	U	5300		200	02/11/10	02/19/10
Gross Alpha/Beta EPA 900							
				pCi/L		Batch # 0043108	Yld %
Gross Alpha	20.5		4.0	3.0	2.2	02/10/10	02/18/10
Gross Beta	10.8		1.7	4.0	1.2	02/10/10	02/18/10
SR-90 BY GFPC EPA-905 MOD							
				pCi/L		Batch # 0041162	Yld % 17
Strontium 90	0.85	U	0.89	3.00	1.4	02/10/10	02/19/10
TRITIUM (Distill) by EPA 906.0 MOD							
				pCi/L		Batch # 0049035	Yld %
Tritium	99	J	72	500	95	02/18/10	02/18/10
Total Uranium by KPA ASTM 5174-91							
				pCi/L		Batch # 0053280	Yld %
Total Uranium	0.811		0.086	0.693	0.21	02/23/10	02/26/10
Radium 226 by EPA 903.0 MOD							
				pCi/L		Batch # 0041160	Yld % 71
Radium (226)	0.34	J	0.18	1.00	0.21	02/10/10	02/26/10
Radium 228 by GFPC EPA 904 MOD							
				pCi/L		Batch # 0060257	Yld % 90
Radium 228	-0.03	U	0.17	1.00	0.32	03/01/10	03/05/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: FOB090481
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ /-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Radium 228 by GFPC EPA 904 MOD							
Radium 228	0.08	U	0.23	1.00	0.39	03/01/10	FOC010000-257B 03/05/10
Radium 226 by EPA 903.0 MOD							
Radium (226)	0.092	U	0.095	1.00	0.14	02/10/10	FOB100000-160B 02/26/10
SR-90 BY GFPC EPA-905 MOD							
Strontium 90	-0.15	U	0.20	3.00	0.38	02/10/10	FOB100000-162B 02/19/10
Gamma Cs-137 & Hits by EPA 901.1 MOD							
Cesium 137	1.8	U	7.7	20.0	14	02/11/10	FOB110000-136B 02/19/10
Potassium 40	-80	U	620		210	02/11/10	02/19/10
Gross Alpha/Beta EPA 900							
Gross Alpha	-0.28	U	0.35	2.00	0.87	02/10/10	FOB120000-108B 02/19/10
Gross Beta	-0.23	U	0.62	4.00	1.1	02/10/10	02/19/10
TRITIUM (Distill) by EPA 906.0 MOD							
Tritium	165	J	85	500	95	02/18/10	FOB180000-035B 02/18/10
Total Uranium by KPA ASTM 5174-91							
Total Uranium	0.0460	U	0.0057	0.693	0.21	02/23/10	FOB220000-280B 02/26/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: FOB090481
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Radium 226 by EPA 903.0 MOD			pCi/L	903.0 MOD			FOB100000-160C
Radium (226)	11.3	10.4	1.1	0.2	97	93	(68 - 136)
	Batch #:	0041160		Analysis Date:	02/26/10		
SR-90 BY GFPC EPA-905 MOD			pCi/L	905 MOD			FOB100000-162C
Strontium 90	6.80	6.82	0.77	0.34	83	100	(80 - 130)
	Batch #:	0041162		Analysis Date:	02/19/10		
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	901.1 MOD			FOB110000-136C
Americium 241	141000	140000	11000	500		99	(87 - 110)
Cesium 137	53100	52900	3000	200		100	(90 - 110)
Cobalt 60	87900	88000	5000	200		100	(89 - 110)
	Batch #:	0042136		Analysis Date:	02/19/10		
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			FOB120000-108C
Gross Beta	68.0	71.6	6.0	1		105	(58 - 133)
	Batch #:	0043108		Analysis Date:	02/19/10		
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			FOB120000-108C
Gross Alpha	49.4	34.8	4.3	1.2		70	(62 - 134)
	Batch #:	0043108		Analysis Date:	02/19/10		
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			FOB180000-035C
Tritium	4530	4440	460	90		98	(85 - 112)
	Batch #:	0049035		Analysis Date:	02/18/10		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			FOB220000-280C
Total Uranium	27.7	30.2	3.6	0.2		109	(90 - 120)
	Batch #:	0053280		Analysis Date:	02/26/10		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			FOB220000-280C
Total Uranium	5.54	5.97	0.61	0.21		108	(90 - 120)
	Batch #:	0053280		Analysis Date:	02/26/10		

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: FOB090481
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Radium 228 by GFPC EPA 904 MOD		pCi/L	904 MOD			FOC010000-257C	
Radium 228	6.40	6.23	0.74	87	97	(60 - 142)	
Spk 2	6.40	6.35	0.77	84	99	(60 - 142)	2 %RPD
	Batch #:	0060257		Analysis Date:	03/05/10		

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: FOB090473
 Matrix: WATER

Date Sampled: 02/05/10
 Date Received: 02/09/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
TRITIUM (Distill) by EPA	906.0	MOD	pCi/L		906.0	MOD			FOB090473-001
Tritium	4530	4650	470		122	77		100	(62 - 147)
	Batch #:	0049035			Analysis Date:	02/18/10			
Gross Alpha/Beta EPA	900		pCi/L		900.0	MOD			FOB090470-001
Gross Alpha	49.4	47.2	5.2		2.00	0.88		91	(35 - 150)
	Batch #:	0043108			Analysis Date:	02/18/10			
Gross Alpha/Beta EPA	900		pCi/L		900.0	MOD			FOB090470-001
Gross Beta	68.0	79.0	6.6		3.9	1.2		110	(54 - 150)
	Batch #:	0043108			Analysis Date:	02/18/10			

NOTE (S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: FOB090470
 Matrix: WATER

Date Sampled: 02/07/10 1143
 Date Received: 02/09/10 1100

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ+/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID		QC Control Limits
							% Yld	%Rec	
Total Uranium by KPA ASTM 5			pCi/L	5174-91			FOB090470-001		
Total Uranium	27.7	29.7	3.1	0.566	J	0.068		105	(62 - 150)
Spk2	27.7	30.0	3.1	0.566	J	0.068		106	(62 - 150)
						Precision:		1	%RPD
Batch #:		0053280		Analysis date:		02/26/10			

NOTE (S)

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: FOB090481
 Matrix: WATER

Date Sampled: 02/05/10
 Date Received: 02/09/10

Parameter	SAMPLE Result		Total Uncert. (2 σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID		
									Precision	
Radium 226 by EPA 903.0 MOD					903.0 MOD			FOB090467-001		
Radium (226)	0.089	U	0.098	92	0.07	U	0.16	92	31	%RPD
	Batch #:		0041160	(Sample)	0041160		(Duplicate)			
Gamma Cs-137 & Hits by EPA 901.1 MOD					901.1 MOD			FOB090470-001		
Cesium 137	-2.9	U	9.0		1.2	U	7.8		479	%RPD
Potassium 40	-100	U	43000		-50	U	230		93	%RPD
	Batch #:		0042136	(Sample)	0042136		(Duplicate)			
Gross Alpha/Beta EPA 900					900.0 MOD			FOB090470-001		
Gross Alpha	2.00	J	0.88		0.84	U	0.66		82	%RPD
Gross Beta	3.9	J	1.2		3.2	J	1.1		20	%RPD
	Batch #:		0043108	(Sample)	0043108		(Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD					906.0 MOD			FOB090470-001		
Tritium	114	J	75		80	U	66		35	%RPD
	Batch #:		0049035	(Sample)	0049035		(Duplicate)			
SR-90 BY GFPC EPA-905 MOD					905 MOD			FOB090475-001		
Strontium 90	-0.05	U	0.23	72	-0.15	U	0.23	69	97	%RPD
	Batch #:		0041162	(Sample)	0041162		(Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.

SUBCONTRACT ORDER
TestAmerica Irvine

ITB0892

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water) Sampled: 02/05/10 21:02						
1613-Dioxin-HR-Alta	ug/l	02/17/10	02/12/10 21:02	\$375.00	0%	J flags,17 congeners,no TEQ,ug/L,sub=West Sac
Level 4 Data Package - Out	N/A	02/17/10	03/05/10 21:02	\$0.00	0%	
Containers Supplied: 1 L Amber (N)						

Margaret Salt 2/8/10 17:00
Released By Date/Time

FedEx 2/8/10 17:00
Received By Date/Time

Released By Date/Time

Clyde 2-9-10 1230
Received By Date/Time

CLIENT HAL - Irvine PM LL LOG # 63181

LOT# (QUANTIMS ID) 90810426 QUOTE# 85239 LOCATION W3A

DATE RECEIVED 2-9-10 TIME RECEIVED 940 Checked (✓)

DELIVERED BY FEDEX ON TRAC CLIENT

GOLDENSTATE UPS GO-GETTERS OTHER

TAL COURIER TAL SF VALLEY LOGISTICS

CUSTODY SEAL STATUS INTACT BROKEN N/A

CUSTODY SEAL #(S) Seal

SHIPPING CONTAINER(S) TAL CLIENT N/A

COC #(S) NA

TEMPERATURE BLANK Observed: NA Corrected: _____

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 1, 2, 2 Average 2 Corrected Average 2

LABORATORY THERMOMETER ID:

IR UNIT: #4 #5 OTHER _____

CV 2-9-10
Initials Date

pH MEASURED YES ANOMALY N/A

LABELED BY.....

LABELS CHECKED BY.....

PEER REVIEW _____ NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING WETCHEM N/A

VOA-ENCORES N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES N/A

CLOUSEAU TEMPERATURE EXCEEDED (2 °C - 6 °C)* N/A

WET ICE BLUE ICE GEL PACK NO COOLING AGENTS USED PM NOTIFIED

CV 2/10/10
Initials Date

Notes 892

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

Lot ID: 60B100426

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

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

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

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Analytical Data Package Prepared For
TestAmerica - Irvine, CA

ITB0892

Radiochemical Analysis By

TestAmerica

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: TARL

Data Package Contains 18 Pages

Report No.: 43801

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
41277		ITB0892-03	J0D280537-1	L0NN21AC	9L0NN210	0118345
		ITB0892-03	J0D280537-1	L0NN21AA	9L0NN210	0118346
		ITB0892-03	J0D280537-1	L0NN21AD	9L0NN210	0118347
		ITB0892-03	J0D280537-1	L0NN21AE	9L0NN210	0118349

Certificate of Analysis

May 10, 2010

TestAmerica – Irvine, CA
17461 Derian Avenue
Suite# 100
Irvine, California 92614

Attention: Debby Wilson

Date Received by Lab	:	April 28, 2010
Sample Number/Matrix	:	One (1) Water
SDG Number	:	41277
Project	:	MWH-Pasadena Boeing
Project Number	:	ITB0892

CASE NARRATIVE

I. Introduction

On April 28, 2010, one water sample was received at the TestAmerica Richland laboratory for radiochemical analysis. Upon receipt, the sample was assigned the TestAmerica identification number as described on the cover page of the Analytical Data Package. The sample was assigned to Lot Number J0D280537.

II. Sample Receipt

The sample was received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical uncertainties.

The analyses requested were:

Alpha Spectroscopy

Americium by method RL-ALP-010 (RICH-RC-5080)*

Plutonium by method RL-ALP-001 (RICH-RC-5087)*

Thorium by method RL-ALP-005 (RICH-RC-5084)*

Uranium by method RL-ALP-009 (RICH-RC-5079)*

* SOP Id#'s changed effective 7-01-2008. Attached is a cross reference until SOP Id#'s are changed in all systems.

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

V. Comments

The information to complete the State of California form was not provided and requested. The WSA was received.

Alpha Spectroscopy

Americium by method RL-ALP-010 (RICH-RC-5080):

The LCS, batch blank, and sample results are within acceptance limits.

Plutonium by method RL-ALP-001 (RICH-RC-5087):

The LCS, batch blank, and sample results are within acceptance limits.

Thorium by method RL-ALP-005 (RICH-RC-5084):

The LCS, batch blank, and sample results are within acceptance limits.

Uranium by method RL-ALP-009 (RICH-RC-5079):

The LCS, batch blank, and sample results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW and/or NELAC, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:



Christi Hayes
Project Manager

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Asbestos	RL-ASB-001	N/A	NIOSH 7400	Fiber Counting by Phase Contrast Microscopy based on NIOSH 7400
Asbestos	RL-ASB-002	N/A	NIOSH 9002	Sample Prep and Analysis for Asbestos (bulk) by Polarized Light Microscopy based on NIOSH 9002
Alpha - Gross	ARCHIVED	RICH-RB-5035	Liquid Scintillation Anal/ Packard	DETERMINATION OF GROSS ALPHA IN NASAL SMEARS BY LIQUID SCINTILLATION COUNTING
Alpha - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Alpha - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Alpha - Gross	RL-GPC-002	RICH-RC-5021	00-02 EPA 520	DETERMINATION OF GROSS ALPHA ACTIVITY IN WATER BY COPRECIPITATION
Alpha - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
Am	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Am	RL-ALP-010	RICH-RC-5080	Am03/Pu11HASL 300 NAS-NS-3006	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Beta - Gross	RL-GPC-001	RICH-RC-5014	9310 / EPA SW846 900.0 / EPA 600	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310
Beta - Gross	RL-GPC-007	RICH-RC-5020	SM 7110B EPA 680	DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION
Beta - Gross	RL-GPC-008	RICH-RC-5036	ER100 / LANL	PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS
C14	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
C14	RL-LSC-008	RICH-RC-5022	EPA C-01 / EPA 520	CARBON 14 BY DIGESTION METHOD
C14	RL-LSC-009	RICH-RC-5040	Mod C14 / EPA 680	DETERMINATION OF CARBON-14 BY BENZENE SYNTHESIS
C14	RL-LSC-010	RICH-RC-5046	EPA C-01 / EPA 520	DETERMINATION OF CARBON-14 IN GRAPHITE AND SOIL
C14	RL-LSC-011	RICH-RC-5047	Mod H-02 / EPA 520	DETERMINATION OF CARBON-14 IN WATER BY DIRECT COUNTING
Cm	RL-ALP-003	RICH-RC-5072	Mod RP 725 / DOE0089T EXT Chromatography	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
Coliform	RL-WC-001	RICH-WC-5001	9222B	DETERMINATION OF TOTAL COLIFORM: MULTIPLE TUBE FERMENTATION TECHNIQUE
Coliform	RL-WC-002	RICH-WC-5002	9131	TOTAL COLIFORMS BY MEMBRANE FILTRATION
Coliform	RL-WC-005	RICH-WC-5007	9223	TOTAL COLIFORM BY THE COLILERT METHOD
Cr6+	RL-WC-003	RICH-WC-5003	7196A, SW846	DETERMINATION OF HEXAVALENT CHROMIUM [Cr(VI)] IN WATER, SOIL, AND SIMILAR MATRICES
Cr6+	RL-WC-004	RICH-WC-5005	3060 / SW846	DETERMINATION OF HEXAVALENT CHROMIUM (CrVI) IN SOLID MATRICES WITH ALKALINE DIGESTION
Fe	RL-LSC-015	RICH-RC-5074	EXT Chromatography ModFe55/PNL-ALO-435	SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY
Fe55	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Fe59	RL-LSC-016	RICH-RC-5023	R4-73-014 / EPA HASL 300	DETERMINATION OF IRON-55 AND IRON-59 IN WATER
Gamma	RL-GAM-001	RICH-RC-5017	901.0 / HASL 300 ASTM D3649	PREPARATION OF ALL MATRICES FOR ANALYSIS BY GAMMA SPECTROSCOPY
H3	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
H3	RL-LSC-003	RICH-RB-5034	7500-3 / SM	DETERMINATION OF TRITIUM IN URINE BY DISTILLATION
H3	RL-LSC-004	RICH-RC-5004	H3 / EPA LV539	DETERMINATION OF TRITIUM IN AIR
H3	RL-LSC-005	RICH-RC-5007	Mod '906.0 / EPA 600	SEPARATION OF TRITIUM IN WATER AND AQUEOUS COMPONENT OF WINE
H3	RL-LSC-007	RICH-RC-5024	H-3 by EE EPA LV539 / HASL 300	DETERMINATION OF LOW LEVEL TRITIUM IN WATER BY ELECTROLYTIC ENRICHMENT
H3	RL-LSC-002	RICH-RC-5037	H-3 in Water/Tissue / LV 539	DETERMINATION OF TRITIUM BY CRYOGENIC DISTILLATION

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
H3	RL-LSC-006	RICH-RC-5048	H-3 in Water/Tissue / LV 539	TRITIUM PREPARATION IN MILK SAMPLES
I129	RL-GAM-002	RICH-RC-5025	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	RL-GAM-002	RICH-RC-5025	R4-73-014I/EPA ASTM D2334 (Discontinued)	DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD
I131	ARCHIVED	RICH-RC-5049	HASL 300 (1983)	DETERMINATION OF IODINE-131 IN MILK BY BATCH ION-EXCHANGE
Metals	ARCHIVED	BHI-MT-0001	6010	ICP-AE SPECTROSCOPY, SPECTROMETRIC METHOD FOR TRACE ELEMENT ANALYSIS, METHOD 6010A FOR Bechtel
Metals	RL-MT-001	RICH-MT-0001	6010B	ICP-AES for TRACE ELEMENT ANALYSIS, METHOD 6010B
Metals	RL-MT-002	RICH-MT-0002	SW486 3050B	ACID DIGESTION FOR ICP ANALYSIS
Metals	RL-MT-003	RICH-MT-0003	NIOSH 7300	DIGESTION PREP based on METHOD NIOSH 7300
Ni	RL-LSC-015	RICH-RC-5074	EXT Chromatography ModFe55/PNL-ALO-435	SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY
Ni63	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Ni63	RL-LSC-017	RICH-RC-5069	EXT Chromatography Mod RP300 / DOE0089T	SEPARATION OF Ni-63 BY EXTRACTION CHROMATOGRAPHY
Np	RL-ALP-013	RICH-RC-5009	NAS-NS-3060	DETERMINATION OF NEPTUNIUM-237 BY LIQUID-LIQUID EXTRACTION IN ALL MATRICES
Np	RL-ALP-006	RICH-RC-5064	EXT Chromatography	SEPARATION OF NEPTUNIUM BY EXTRACTION CHROMATOGRAPHY
P32	RL-LSC-001	RICH-RB-5013	Mod H-02 / EPA 520	TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE
Pb	RL-ALP-011	RICH-RC-5076	EXT Chromatography	DETERMINATION OF LEAD-210 BY EXTRACTION CHROMATOGRAPHY
Po	RL-ALP-007	RICH-RB-5001	NAS-NS-3037 HASL 300	DETERMINATION OF POLONIUM-210 IN URINE
Po	RL-ALP-012	RICH-RC-5012	Po-01 / HASL 300 Mod U01 HASL 300	SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS
Prep - Bioassay	ARCHIVED	RICH-RB-0001		PREPARATION FOR RAPID BIOASSAY ANALYSES
Prep - Bioassay	RL-PRP-001	RICH-RB-5002	Mod Pu06 / HASL 300	PREPARATION OF URINE AND BLOOD SAMPLES
Prep - Bioassay	ARCHIVED	RICH-RB-5004	ASTM D1429-95	DETERMINATION OF SPECIFIC GRAVITY OF URINE
Prep - Bioassay	RL-RPL-002	RICH-RB-5036	Pub 6490,6601 / PNL	PREPARATION OF SYNTHETIC URINE AND FECES USING RECIPES FROM HPS N13.30 PREFORMANCE TESTING
Prep - Bioassay	RL-PRP-002	RICH-RB-5037	LA-10300-M R200 ASTM D3865	PREPARATION OF FECAL SAMPLES USING HYDROFLUORIC ACID DIGESTION
Prep - Bioassay	RL-RPL-003	RICH-RC-5028	ICRP Publication 23	PREPARATION OF SYNTHETIC URINE AND FECES
Prep - Count	RL-ALP-016	RICH-RC-5003	G-03 / HASL 300	COPRECIPIATION OF SOME ACTINIDES ON NEODYMIUM FLUORIDE FOR ALPHA-PARTICLE SPECTROMETRY
Prep - Count	RL-ALP-015	RICH-RC-5039	G-03 / HASL 300 Anal Chem 1972	ELECTRODEPOSITION OF ACTINIDES
Prep - Count	RL-ALP-014	RICH-RC-5085	Morrison & Freiser NAS-NS-3050	ANHYDROUS ETHER EXTRACTION OF URANIUM
Prep - Env	RL-KPA-001	RICH-RC-5015	ASTM / D5174-97	ENVIRONMENTAL SAMPLE PREPARATION FOR URANIUM BY LASER-INDUCED PHOSPHORESCENCE
Prep - Env	RL-PRP-004	RICH-RC-5016	Sr02 / HASL 300	PREPARATION OF ENVIRONMENTAL MATRICES
Prep - Env	RL-PRP-007	RICH-RC-5045	Mod Pu02 / HASL 300	PREPARATION OF MIXED BED RESINS AND PRE-FILTERS
Prep - Env	RL-PRP-008	RICH-RC-5068	Mod ER100 / LA10300	PREPARATION OF SOIL, VEGETATION AND AIR FILTERS BY MIXED STRONG ACID LEACHING
Prep - Resin	RL-ALP-017	RICH-RC-5018	Mod Pu11 / Mod 300	ION-EXCHANGE PREPARATION
Prep - Soil	RL-PRP-003	RICH-RC-5013	Pu02A / HASL 300	PREPARATION OF SOIL SAMPLES
Prep - Soil	RL-PRP-005	RICH-RC-5019	D5259 / ASTM SW 846/3015/3051/3052	PREPARATION AND DISSOLUTION OF SEDIMENTS AND SOIL BY MICROWAVE BOMB DIGESTION

Isotope	Richland SOP #	Old Richland SOP #	Method Reference	Title
Prep - Soil	RL-PRP-006	RICH-RC-5032	Pu02A / HASL 300	COMPLETE DISSOLUTION BY MIXED ACIDS IN A TEFLON BEAKER
Prep - Soil	RL-PRP-009	RICH-RC-5077	Mod ER100 / LA10300	PREPARATION OF SMALL SOIL SAMPLES FOR GAMMA SPEC AND/OR RADIOCHEM ANAL BY ACID DIGESTION
Prep - Urine	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Prep - Water	RL-PRP-010	RICH-RC-5086	AnalyticaChemActa1992 RP800 / DOE00089T	URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION
Pu	ARCHIVED	RICH-RB-5015	Pu11 / HASL 300	RAPID DETERMINATION OF PLUTONIUM IN FECES
Pu	RL-ALP-002	RICH-RC-5010	Pu11 / HASL 300	DETERMINATION OF ISOTOPIC PLUTONIUM IN ALL MATRICES
Pu	RL-ALP-010	RICH-RC-5080	Am03 HASL 300 Pu11 / HASL 300	SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM
Pu	RL-ALP-001	RICH-RC-5087	AnalyticaChemActa1992 RP800 / DOE00089T	DETERMINATION OF PLUTONIUM BY EXTRACTION CHROMATOGRAPHY
Ra	RL-RA-001	RICH-RC-5005	903.1 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-001	RICH-RC-5005	904.0 / EPA 600	RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0
Ra	RL-RA-002	RICH-RC-5027	Mod D2460 / ASTM 903.0 / EPA 600	DETERMINATION OF TOTAL RADIUM
Rn	RL-LSC-019	RICH-RC-5082	913.0 / EPA	DETERMINATION OF RADON-222 - ADAPTED FROM METHOD 913.0
S35	ARCHIVED	RICH-RB-5020	Hillebrand, Lundeell, Bright, Hoffman 1953	DETERMINATION OF SULFUR-35 IN URINE
Se79	RL-LSC-012	RICH-RC-5043	Selenium / NAS-NS-3030	RADIOCHEMICAL DETERMINATION OF SELENIUM-79
Solubility	ARCHIVED	RICH-RC-5035	Kalfward&Thomas PNL3716	DETERMINATION OF SOLUBILITY OF RADIOACTIVE PARTICLE CONSTITUENTS
Sr	RL-GPC-005	RICH-RB-5007	Mod Sr02 / HASL 300 Mod 905.0 / EPA 600	DETERMINATION OF TOTAL STRONTIUM IN URINE
Sr	RL-GPC-006	RICH-RB-5021	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	DETERMINATION OF STRONTIUM IN FECES
Sr	ARCHIVED	RICH-RB-5022	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	DETERMINATION OF TOTAL STRONTIUM IN URINE FOR RAPID ANALYSIS
Sr	ARCHIVED	RICH-RB-5031	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	RAPID DETERMINATION OF TOTAL STRONTIUM IN FECES
Sr	RL-GPC-003	RICH-RC-5006	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	STRONTIUM SEPARATION IN ENVIROMENTAL MATRICES
Sr - Yt	RL-GPC-004	RICH-RC-5071	Mod Sr02 / HASL300 Mod 905.0 / EPA 600	YTTRIUM-90 SEPARATION FOR STRONTIUM-90 DETERMINATION IN ALL MATRICES
Tc	RL-LSC-014	RICH-RC-5065	EXT Chromatography Mod RP550 / DOE0089T	DETERMINATION OF TECHNETIUM-99 BY EXTRACTION CHROMATOGRAPHY
Tc	RL-LSC-013	RICH-RC-5078	Tc01 / HASL 300	SEPARATION OF TECHNETIUM-99 IN ALL MATRICES
Th	RL-ALP-008	RICH-RB-5006	Mod Th01 / HASL 300	SEPARATION OF THORIUM FROM URINE AND FECAL SAMPLES
Th	RL-ALP-005	RICH-RC-5084	Mod Th01 / HASL 300 Anal Chim Acta 1982	DETERMINATION OF THORIUM ISOTOPIC IN ENVIRONMENTAL MATRICES
U	RL-ALP-012	RICH-RC-5012	Po-01 / HASL 300 Mod U01 / HASL 300	SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS
U	RL-KPA-002	RICH-RC-5031	Mod U01 / HASL 300	SEPARATION OF TOTAL URANIUM IN WATER AND URINE
U	RL-KPA-003	RICH-RC-5058	D5174 / ASTM	DETERMINATION OF URANIUM BY PHOSPHORESCENCE ANALYSIS
U	RL-ALP-004	RICH-RC-5067	EXT Chromatography Mod RP725 / DOE0089T	SEPARATION OF URANIUM BY EXTRACTION CHROMATOGRAPHY
U	RL-ALP-003	RICH-RC-5072	EXT Chrom Mod RP725 & 800 / DOE0089T	SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY
U	RL-ALP-009	RICH-RC-5079	EXT Chromatography Mod RP725 / DOE0089T	DETERMINATION OF ISOTOPIC URANIUM IN ALL MATRICES

Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, $R = \text{constants} * f(x,y,z,...)$. The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/\sqrt{n}), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) <i>u_c</i>.. Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u_c</i> , the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt} / \text{BkgrndCntMin}) / \text{SCntMin})) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgrndCnt} / \text{BkgrndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$. For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = $(S-D) / [\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 10-May-10

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 43801

SDG No: 41277

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
0118345	RL-ALP-002								
	ITB0892-03								
	L0NN21AC	Pu-238	5.02E-02 +- 1.9E-02	U	pCi/g	56%	5.02E-02	1.00E+00	
		Pu-239/40	5.01E-02 +- 2.7E-02	U	pCi/g	56%	5.01E-02	1.00E+00	
0118347	RL-ALP-010								
	ITB0892-03								
	L0NN21AD	Am-241	5.12E-02 +- 1.9E-02	U	pCi/g	79%	5.12E-02	1.00E+00	
0118349	RAD-TH ISO BY ALPHA								
	ITB0892-03								
	L0NN21AE	Th-228	8.25E+00 +- 1.3E+00		pCi/g	99%	8.54E-02	1.00E+00	
		Th-230	6.03E+00 +- 9.7E-01		pCi/g	99%	4.80E-02	1.00E+00	
		Th-232	7.08E+00 +- 1.1E+00		pCi/g	99%	4.80E-02	1.00E+00	
0118346	RL-ALP-009								
	ITB0892-03								
	L0NN21AA	U-233/234	2.81E+00 +- 4.7E-01		pCi/g	93%	5.04E-02	5.00E-01	
		U-235/236	1.23E-01 +- 4.9E-02		pCi/g	93%	2.83E-02	5.00E-01	
		U-238	3.88E+00 +- 6.3E-01		pCi/g	93%	6.70E-02	5.00E-01	

No. of Results: 9

TestAmerica
rptSTLRchSaSummary2 V5.2.5
A2002

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUD))] as defined by ICPT BOA.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary

Date: 10-May-10

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 43801

SDG No.: 41277

Batch	Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC MDA
RL-ALP-002									
0118345 BLANK QC,									
	LONTH1AA	Pu-238	7.77E-05 +- 4.1E-05	U	pCi/g	78%			7.77E-05
		Pu-239/40	6.15E-05 +- 3.8E-05	U	pCi/g	78%			6.15E-05
0118345 LCS,									
	LONTH1AC	Pu-239/40	3.05E-02 +- 4.3E-03		pCi/g	83%	91%	-0.1	9.22E-05
RL-ALP-010									
0118347 BLANK QC,									
	LONTM1AA	Am-241	6.28E-05 +- 2.4E-05	U	pCi/g	98%			6.28E-05
0118347 LCS,									
	LONTM1AC	Am-241	3.90E-02 +- 5.5E-03		pCi/g	110%	91%	-0.1	5.01E-05
RAD-TH ISO BY ALPHA									
0118349 BLANK QC,									
	LONTN1AA	Th-228	5.93E-04 +- 2.2E-04		pCi/g	108%			1.15E-04
		Th-230	1.05E-04 +- 7.6E-05	U	pCi/g	108%			1.05E-04
		Th-232	1.05E-04 +- 5.8E-05	U	pCi/g	108%			1.05E-04
0118349 LCS,									
	LONTN1AC	Th-230	1.09E-02 +- 1.8E-03		pCi/g	103%	95%	-0.1	1.10E-04
RL-ALP-009									
0118346 BLANK QC,									
	LONTK1AA	U-233/234	6.61E-05 +- 5.0E-05	U	pCi/g	94%			6.61E-05
		U-235/236	6.61E-05 +- 2.5E-05	U	pCi/g	94%			6.61E-05
		U-238	7.38E-05 +- 4.1E-05	U	pCi/g	94%			7.38E-05
0118346 LCS,									
	LONTK1AC	U-233/234	9.30E-03 +- 1.5E-03		pCi/g	86%	109%	0.1	5.90E-05
		U-238	9.20E-03 +- 1.5E-03		pCi/g	86%	103%	0.0	6.84E-05
No. of Results:		14							

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.
 rptSTLRchQcSummary V5.2.5 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

**FORM I
SAMPLE RESULTS**

Date: 10-May-10

Lab Name: TestAmerica SDG: 41277 Collection Date: 2/5/2010 9:02:00 PM
 Lot-Sample No.: J0D280537-1 Report No.: 43801 Received Date: 4/28/2010 10:00:00 AM
 Client Sample ID: ITB0892-03 COC No.: Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2s)	Total Uncert(2s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0118345 RL-ALP-002 Work Order: L0NN21AC Report DB ID: 9L0NN210												
Pu-238	5.02E-02	U	1.9E-02	1.9E-02	5.02E-02	pCi/g	56%	0.14	5/5/10 11:11 p	1.0	0.33647	ALP37
							1.00E+00	0.71		g	g	
Pu-239/40	5.01E-02	U	2.7E-02	2.7E-02	5.01E-02	pCi/g	56%	0.41	5/5/10 11:11 p	1.0	0.33647	ALP37
							1.00E+00	(1.5)		g	g	
Batch: 0118346 RL-ALP-009 Work Order: L0NN21AA Report DB ID: 9L0NN210												
U-233/234	2.81E+00		2.1E-01	4.7E-01	5.04E-02	pCi/g	93%	(55.6)	5/5/10 02:43 a	1.0	0.33292	ALP1
							5.00E-01	(11.9)		g	g	
U-235/236	1.23E-01		4.5E-02	4.9E-02	2.83E-02	pCi/g	93%	(4.3)	5/5/10 02:43 a	1.0	0.33292	ALP1
							5.00E-01	(5.1)		g	g	
U-238	3.88E+00		2.5E-01	6.3E-01	6.70E-02	pCi/g	93%	(57.9)	5/5/10 02:43 a	1.0	0.33292	ALP1
							5.00E-01	(12.2)		g	g	
Batch: 0118347 RL-ALP-010 Work Order: L0NN21AD Report DB ID: 9L0NN210												
Am-241	5.12E-02	U	1.9E-02	1.9E-02	5.12E-02	pCi/g	79%	-0.22	5/5/10 11:29 p	1.0	0.33647	ALP121
							1.00E+00	-(1.2)		g	g	
Batch: 0118349 RAD-TH ISO BY ALPHA Work Order: L0NN21AE Report DB ID: 9L0NN210												
Th-228	8.25E+00		4.9E-01	1.3E+00	8.54E-02	pCi/g	99%	(96.5)	5/5/10 02:41 a	1.0	0.3308	ALP171
							1.00E+00	(12.6)		g	g	
Th-230	6.03E+00		4.0E-01	9.7E-01	4.80E-02	pCi/g	99%	(125.7)	5/5/10 02:41 a	1.0	0.3308	ALP171
							1.00E+00	(12.4)		g	g	

Ratio U-234/238 = 0.7

TestAmerica MDC|MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.2.5 A2002

FORM I

Date: 10-May-10

SAMPLE RESULTS

Lab Name: TestAmerica
 Lot-Sample No.: J0D280537-1
 Client Sample ID: ITB0892-03
 SDG: 41277
 Report No.: 43801
 COC No.:
 Collection Date: 2/5/2010 9:02:00 PM
 Received Date: 4/28/2010 10:00:00 AM
 Matrix: WATER

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Th-232	7.08E+00		4.3E-01	1.1E+00	4.80E-02	pCi/g	99%	(147.6)	5/5/10 02:41 a	1.0	0.3308	ALP171
						1.52E-02	1.00E+00	(12.6)		g	g	

No. of Results: 9 Comments:

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.2.5 A2002

FORM II

Date: 10-May-10

BLANK RESULTS

Lab Name: TestAmerica
Matrix: WATER

SDG: 41277
Report No.: 43801

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0118345 RL-ALP-002 Work Order: LONTH1AA Report DB ID: LONTH1AB												
Pu-238	7.77E-05	U	4.1E-05	4.1E-05	7.77E-05	pCi/g	78%	0.22	5/5/10 11:11 p	200.04	200.04	ALP39
					2.75E-05	1.00E+00		0.81		g		
Pu-239/40	6.15E-05	U	3.7E-05	3.8E-05	6.15E-05	pCi/g	78%	0.41	5/5/10 11:11 p	200.04	200.04	ALP39
					1.94E-05	1.00E+00		(1.3)		g		
Batch: 0118347 RL-ALP-010 Work Order: LONTM1AA Report DB ID: LONTM1AB												
Am-241	6.28E-05	U	2.4E-05	2.4E-05	6.28E-05	pCi/g	98%	0.	5/5/10 11:29 p	200.04	200.04	ALP124
					1.99E-05	1.00E+00		0.		g		
Batch: 0118349 RAD-TH ISO BY ALPHA Work Order: LONTN1AA Report DB ID: LONTN1AB												
Th-228	5.93E-04	U	2.0E-04	2.2E-04	1.15E-04	pCi/g	108%	(5.2)	5/5/10 02:41 a	207.53	207.53	ALP173
					3.63E-05	1.00E+00		(5.5)		g		
Th-230	1.05E-04	U	7.6E-05	7.6E-05	1.05E-04	pCi/g	108%	0.68	5/5/10 02:41 a	207.53	207.53	ALP173
					3.33E-05	1.00E+00		(1.9)		g		
Th-232	1.05E-04	U	5.7E-05	5.8E-05	1.05E-04	pCi/g	108%	0.41	5/5/10 02:41 a	207.53	207.53	ALP173
					3.33E-05	1.00E+00		(1.5)		g		
Batch: 0118346 RL-ALP-009 Work Order: LONTK1AA Report DB ID: LONTK1AB												
U-233/234	6.61E-05	U	4.9E-05	5.0E-05	6.61E-05	pCi/g	94%	0.93	5/5/10 02:44 a	208.99	208.99	ALP4
					2.48E-05	5.00E-01		(2.5)		g		
U-235/236	6.61E-05	U	2.5E-05	2.5E-05	6.61E-05	pCi/g	94%	-0.19	5/5/10 02:44 a	208.99	208.99	ALP4
					2.48E-05	5.00E-01		-1.		g		
U-238	7.38E-05	U	4.1E-05	4.1E-05	7.38E-05	pCi/g	94%	0.25	5/5/10 02:44 a	208.99	208.99	ALP4
					2.86E-05	5.00E-01		0.9		g		
Ratio U-234/238 = 3.3												

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchBlank U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.2.5 A2002

FORM II

Date: 10-May-10

BLANK RESULTS

Lab Name: TestAmerica
 Matrix: WATER

SDG: 41277
 Report No. : 43801

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
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No. of Results: 9 Comments:

TestAmerica MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

rpt\$TLRchBlank
 V5.2.5 A2002

FORM II
LCS RESULTS

Date: 10-May-10

Lab Name: TestAmerica SDG: 41277
 Matrix: WATER Report No.: 43801

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 0118345													
RL-ALP-002				Work Order: LONTH1AC			Report DB ID: LONTH1CS						
Pu-239/40	3.05E-02		9.7E-04	4.3E-03	9.22E-05	pCi/g	83%	3.35E-02	1.01E-03	91%	5/5/10 11:11 p	210.71	ALP40
							Rec Limits:	70	130	-0.1		g	
Batch: 0118347													
RL-ALP-010				Work Order: LONTM1AC			Report DB ID: LONTM1CS						
Am-241	3.90E-02		1.0E-03	5.5E-03	5.01E-05	pCi/g	110%	4.28E-02	1.40E-03	91%	5/5/10 11:29 p	210.71	ALP125
							Rec Limits:	70	130	-0.1		g	
Batch: 0118349													
RAD-TH ISO BY ALPHA				Work Order: LONTN1AC			Report DB ID: LONTN1CS						
Th-230	1.09E-02		8.1E-04	1.8E-03	1.10E-04	pCi/g	103%	1.16E-02	3.47E-04	95%	5/5/10 02:41 a	201.96	ALP174
							Rec Limits:	70	130	-0.1		g	
Batch: 0118346													
RL-ALP-009				Work Order: LONTK1AC			Report DB ID: LONTK1CS						
U-233/234	9.30E-03		4.9E-04	1.5E-03	5.90E-05	pCi/g	86%	8.53E-03	5.19E-05	109%	5/5/10 02:44 a	204.28	ALP5
							Rec Limits:	70	130	0.1		g	
U-238	9.20E-03		4.8E-04	1.5E-03	6.84E-05	pCi/g	86%	8.93E-03	5.43E-05	103%	5/5/10 02:44 a	204.28	ALP5
							Rec Limits:	70	130	0.0		g	

No. of Results: 5 Comments:

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V5.2.5 A2002

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122

FOB090481

SUBCONTRACT ORDER

TestAmerica Irvine
ITB0892

Revised

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:

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone: (314) 298-8566
Fax: (314) 298-8757

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: ITB0892-03	Water	Sampled: 02/05/10 21:02	[REDACTED]	LONN2
Level 3 Data Package	02/17/10 12:00	03/05/10 21:02		
Uranium, Combined-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	02/17/10 12:00	08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Alpha-O	02/17/10 12:00	08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gamma Spec-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, k-40 and cs-137 only, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (L) 500 mL Amber (M)



JOD280537

TA = Irvine.
Q# 74861
JOD280537
SDG 41277
DUG 50710
T Day T.A.T

Released By	Date	Received By	Date
		<i>[Signature]</i>	2.9.10 1100
Released By	Date	Received By	Date

Released by B. J. 4/27/10 1700

TestAmerica		Work Sharing Agreement		St. Louis	
Import Lab Information		Export Lab Information		Exporting Lab Project Name	
Lab Name	Richland	PM Contact Name	Erika Jordan	MWH-Pasadena Boeing	
PM Contact Name	Erika Jordan	Backup Contact Name			
Backup Contact Name		PM Contact Name	Lynn Fussner		
Pricing Information		Project Information		Quote or Contract Reference ID	
QA/QC (i.e. MS/MSD) Billable?		Client Company Name	MWH-Pasadena Boeing	ITB0892	
Raw Data Surcharge	%	Date First Samples to Arrive			
EDD Surcharge	%	Est. Duration of Sampling Event			
TAT Surcharges	%				
Penalty Terms	None				
Other Charges Not in Unit Price? (i.e. canisters, regulators, shipping, bottles)	None				
Project Details					
Non-Standard Work Product	No				
Quality Assurance Plan	No				
Certifications					
Analyte/Cmpd. List with RIs Attached	Yes-See Attached				
Results Dry-Weight Corrected					
Special Method Holding Times	None				
Internal Chain of Custody Required	No				
Known Hazards/High Analyte Level	No				
Saturday/Special Delivery Options	None				
Special Instructions	None				
Reporting Limit Convention	Report to RL with no "J" Values				
Deliverable Requirements		Transmittal medium	Format Column	Import Lab's Unit Price	Unit Price w/Surcharges
Preliminary Report:	No		TAT		
Final Report:	No	ID			
EDD:	Yes	Element			
Total Access/MyTestAmerica	No	NA			
Custom Forms:	No	NA	See Attached		
Analysis		Method	Matrix	# of Samples	Extended Price
Uranium 238	10-A-CO-SR-01				\$ -
Rhodium 232	10-A-9R-S1-01				\$ -
Plutonium 236	10-A-6A-SO-01				\$ -
Americium 241	10-A-8Y-SN-01				\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
Approximate Total Project Value					\$ -

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 4:00 AM 4/28/10 GM Screen Results (out) 3 (in) 3 Initials [initials]
Client: TA-Irvine SDG #: 41277 NA [] SAF #: [initials]
Work Order Number: 100280537 Chain of Custody # QTB0892
Shipping Container ID: [initials] Air Bill # [initials]

Item 1 through 5 for shipping container only. Initial appropriate response.

1. Custody Seals on shipping container intact? Yes No [] No Custody Seal []
2. Custody Seals dated and signed? Yes No [] No Custody Seal []
3. Chain of Custody record present? Yes No []
4. Cooler temperature: NA 5. Vermiculite/packing materials is NA [] Wet [] Dry

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 2 @ 200ml ea
7. Sample holding times exceeded? NA [] Yes [] No
8. Samples have:
 tape
 custody seals
 hazard labels
 appropriate sample labels
2LP each
9. Samples are:
 in good condition
 broken
 leaking
 have air bubbles
(Only for samples requiring head space)
10. Sample pH taken? NA [] pH < 2 pH > 2 pH > 9 [] Amount of HNO₃ Added 4ml
11. Sample Location, Sample Collector Listed? * Yes No []
*For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [] No
13. Description of anomalies (include sample numbers): NA []

see other side for additional comments

Sample Custodian [signature] Date: 4/28/10
Client Informed on _____ by _____ Person contacted _____

No action necessary; process as is.

Project Manager [signature] Date 4/28/10

LS-023, Rev. 10, 10/09



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. ITB0892

MWH-Pasadena Boeing

Lot #: F0D230508

Debbie Wilson

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

TESTAMERICA LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "Lynn Fussner", is positioned above the printed name and title.

Lynn Fussner
Project Manager

May 4, 2010

Case Narrative
LOT NUMBER: **F0D230508-Revised**

This report is revised to reflect the sample receipt date of February 5, 2010.

This report contains the analytical results for the three samples received under chain of custody by TestAmerica St. Louis on February 5, 2010. These samples are associated with your MWH-Pasadena Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements, except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. **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.

Gross Alpha/Beta by GFPC (SW846 9310 MOD)

Suspended gross alpha: The sample duplicate, F0D260471-002X, was unable to count due to the high amount of solids on the filter. The solids dried and cracked on the filter paper which may cause detector inconsistencies.

Affected Samples:

F0D230508 (2); ITB0892-03

METHODS SUMMARY

F0D230508

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Gross Alpha/Beta by GFPC	SW846 9310 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0

References:

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

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F0D230508

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
L0FF8	001	ITB0892-03	02/05/10	21:02
L0FGM	002	ITB0892-03	02/05/10	21:02

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: ITB0892-03

Radiochemistry

Lab Sample ID: F0D230508-001
 Work Order: LOFF8
 Matrix: WATER

Date Collected: 02/05/10 2102
 Date Received: 02/05/10 2102

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Gross Alpha/Beta EPA 900				pCi/L		Batch # 0120166	Yld %
Gross Alpha	16.8		3.6	3.0	2.0	04/30/10	05/03/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

TestAmerica Irvine

Client Sample ID: ITB0892-03

Radiochemistry

Lab Sample ID: F0D230508-002
 Work Order: LOFGM
 Matrix: WATER

Date Collected: 02/05/10 2102
 Date Received: 02/05/10 2102

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
GROSS A/B BY GFPC SW846 9310 MOD				pCi/L		Batch # 0121056	Yld %
Gross Alpha, Dissolved	8.6		2.9	3.0	2.7	05/01/10	05/01/10
GROSS A/B BY GFPC SW846 9310 MOD				pCi/L		Batch # 0121057	Yld %
Gross Alpha, Suspended	4.0		1.0	3.0	0.9	04/30/10	05/03/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0D230508
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Gross Alpha/Beta EPA 900			pCi/L	Batch #	0120166	Yld %	F0D300000-166B
Gross Alpha	0.19	U	0.43	3.00	0.77	04/30/10	05/03/10
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	Batch #	0121056	Yld %	F0E010000-056B
Gross Alpha, Dissolved	0.11	U	0.43	3.00	0.81	05/01/10	05/01/10
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	Batch #	0121057	Yld %	F0E010000-057B
Gross Alpha, Suspended	1.95	J	0.68	3.00	0.64	04/30/10	05/03/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Bold results are greater than the MDC.

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

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: FOD230508
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			FOD300000-166C
Gross Alpha	49.4	47.0	5.2	1.2		95	(62 - 134)
	Batch #:	0120166			Analysis Date:	05/03/10	
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	9310 MOD			FOE010000-056C
Gross Alpha, Dissolved	49.4	52.3	5.8	0.9		106	(80 - 140)
	Batch #:	0121056			Analysis Date:	05/01/10	
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	9310 MOD			FOE010000-057C
Gross Alpha, Suspended	372	314	a 26	0.6		85 a	(0.0 - 0.0)
	Batch #:	0121057			Analysis Date:	05/03/10	

NOTE(S)

MDC is determined by instrument performance only

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F0D260471
 Matrix: WATER

Date Sampled: 01/18/10
 Date Received: 04/26/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD		F0D260471-001			
Gross Alpha	124	161	19	41.7	8.1	97	(35 - 150)		
	Batch #:	0120166	Analysis Date:		05/03/10				
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	9310 MOD		F0D260471-002			
Gross Alpha, Dissolved	444	443	47	1.4	1.5	100	(33 - 150)		
	Batch #:	0121056	Analysis Date:		05/01/10				

NOTE (S)

Data are incomplete without the case narrative.

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: FOD230508
 Matrix: WATER

Date Sampled: 01/18/10
 Date Received: 04/26/10

Parameter	SAMPLE Result	Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			FOD260471-001
Gross Alpha	41.7	8.1		47.1	9.0		12 %RPD
	Batch #:	0120166 (Sample)		0120166 (Duplicate)			
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	9310 MOD			FOD260471-002
Gross Alpha, Dissolved	1.4 U	1.5		1.1 U	1.5		24 %RPD
	Batch #:	0121056 (Sample)		0121056 (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.



REANALYSIS / SUB-CONTRACT / CLIENT RETURN FORM

Request Initiated by: Lynn Fussner
 Request Date: 4/21/2010
 Quote Number: 85044
 Client Number: 440
 SDG Number: F0B090481-ITB0892

Request is for (check one):

- Return to Client – (Client FedEx #)
- Reanalysis
- Sub-Contract Sample
- Additional Analysis

New Lot (check one):

- Yes
 - No
- SD 4/23/10*

Old Lot Number: _____

Client ID	Sampled date/time*	Shelf Location	Line item from quote (include Rad Screen if required)
ITB0892-03	2/2/10 1535	R300	1. Gross Alpha
			2. 9310 Gross Alpha Dissolved
			3. 9310 Gross Alpha Suspended
			4. Hold - Sediment

* or attach original Chain of Custody

↑ please add in lot comments. TX.

Due Date for New Login:

Analytical: 5/3/10 Report: 5/3/10

For Sub-Contract or Return to Client ONLY

Shipping Address: _____

Contact Person: _____
 Phone Number: _____

Project Manager Signature: *[Signature]*

DO NOT HAVE LAB PULL ORIGINAL SAMPLE

Completed by: *[Signature]* Date: 4.23.10

New Login Lot Number: F0D230508 (place copy of this form in old file)

Initial that Containers were Re-labeled: *[Signature]* (place below lot number of old label)

*cut
122*

F03090481

SUBCONTRACT ORDER

TestAmerica Irvine

ITB0892

Revised

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:

TestAmerica St. Louis
 13715 Rider Trail North
 Earth City, MO 63045
 Phone : (314) 298-8566
 Fax: (314) 298-8757

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: ITR0892-03	Water	Sampled:02/05/10 21:02	[REDACTED]	
Level 3 Data Package	02/17/10 12:00	03/05/10 21:02		
Uranium, Combined-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Barium-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	02/17/10 12:00	08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Alpha-O	02/17/10 12:00	08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gamma Spec-O	02/17/10 12:00	02/05/11 21:02		Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
<i>Containers Supplied:</i>				
2.5 gal Poly (L)	500 mL Amber (M)			

Released By	Date	Received By	Date
		<i>[Signature]</i>	2-9-10 1100
Released By	Date	Received By	Date

SUBCONTRACT ORDER
TestAmerica Irvine
ITB0892

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: ITB0892-03 (Outfall 008 (Composite) - Water) Sampled: 02/05/10 21:02						
Gross Alpha-O	pCi/L	02/15/17	08/04/10 21:02	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	02/15/17	08/04/10 21:02	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 3 Data Package	N/A	02/15/17	03/05/10 21:02	\$0.00	0%	
Radium, Combined-O	pCi/L	02/15/17	02/05/11 21:02	\$200.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/16/17	02/05/11 21:02	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/15/17	02/05/11 21:02	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/15/17	02/05/11 21:02	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
<i>Containers Supplied:</i>						
2.5 gal Poly (L)	500 mL Amber (M)					

Maryjane Summ 2/8/10 17:00
 Released By Date/Time

Fedex 2/8/10 17:00
 Received By Date/Time

Released By Date/Time

Received By Date/Time

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): FOB 080417 461 466
470, 472 481
473, 464 491
473, 465 491
478, 466 495

CONDITION UPON RECEIPT FORM

Client: FA Irvine
 Quote No: 77635 85044
 COC/REA No: Below
 Initiated By: EV Date: 2-9-10 Time: 11:00

Shipping Information

Shipper: RedEx UPS DHL Courier Client Other: _____ Multiple Packages: (X) N
 Shipping # (s):* 4289 2133 2309 MRS Sample Temperature (s)** ambient
 1. _____ 6. _____
 2. _____ 7. _____
 3. _____ 8. _____
 4. _____ 9. _____
 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. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Are there custody seals present on the cooler?	8. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Are there custody seals present on bottles?
2. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <u>2/9/10</u>	Sample received with Chain of Custody?	11. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Sample received in proper containers?
5. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Was sample received broken?	13. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Was Internal COC/Workshare received?
7. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Is sample volume sufficient for analysis?	14. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Was pH taken by original TestAmerica lab?

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

Notes: ITB 0887 ITB 0773

95	36	
88 SN 2.9.10	97	<u>Revised chains were not relinquished for Boeing project.</u>
94	98	
88	99	
92	0800	
86	0590	
85	0602	<u>ITB0800 label time is 1315; c-o-c reads 1254</u>
96		

Corrective Action:
 Client Contact Name: _____ Informed by: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____
 Project Management Review: Jayna K. Jolte If released, notify: _____
 Date: 2-15-10

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 \S\svr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc

APPENDIX G

Section 31

Outfall 008 – February 27 & 28, 2010

MEC^X Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITB2837

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: ITB2837
 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 008 (Composite)	ITB2837-02	G0C020509-001, FOC020466-001	Water	2/28/2010 7:04:00 AM	ASTM 5174-91, 200.8, 200.8 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM 2540D

II. Sample Management

No anomalies were observed regarding sample management. A portion of the samples in several SDGs were received at ambient temperature at TestAmerica-St. Louis; however, the reviewer was unable to determine if the sample in ITB2827 was received at ambient temperature. Due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. 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. Custody seals were intact upon receipt at TA-West Sacramento and TestAmerica-St. Louis. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. 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 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: April 2, 2010

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 $\leq 20\%$ 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 a detect between the EDL and the RL for total PeCDD reported as an EMPC. The sample result for total PeCDD was also comprised of the same EMPC peak as the method blank total, and was therefore qualified as nondetected, "U," at the level of the EMPC.

- 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 a representative number of reportable sample results. The EMPC qualified as nondetected for method blank contamination was not further qualified as an EMPC. OCDF was reported as an EMPC and was therefore qualified as an estimated nondetect, "UJ," at the level of the EMPC. Any detects reported below the EDL, or 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: April 6, 2010

The sample listed in Table 1 for these analyses 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 Methods 200.8 and 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP-MS metals and 28 days for mercury, were met.
- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were $\leq 5\%$, and all masses of interest were calibrated to ≤ 0.1 amu and ≤ 0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 . CCVs bracketing the dissolved chromium analysis had high recoveries; however, as dissolved cadmium was not detected, no qualifications were required. All initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury. CRDL/CRI recoveries were within the control limits of 70-130%.
- Blanks: Lead was reported in the dissolved method blank at $-0.28 \mu\text{g/L}$; therefore, dissolved lead detected in the sample was qualified as estimated, "J." Method blanks and CCBs had no other applicable detects.
- Interference Check Samples: Recoveries were within 80-120%. Cadmium and copper were detected in the ICSAs; however, the reviewer was not able to determine if the detects were due to low-level contamination of the ICSA solution. There were no other target compounds present in the ICSA solution at concentrations indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: Recoveries were within 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 for dissolved mercury. Recoveries and RPDs were within laboratory-established QC limits. Method accuracy for the remaining analytes was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: All sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration. Copper and zinc were not bracketed by an internal standard of lower mass; therefore, copper and zinc the sample were qualified as estimated, "J," for detects and, "UJ," for nondetects.
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and 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 — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 7, 2010

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

- Holding Times: Aliquots for gross alpha and gross beta and total uranium were prepared beyond the five-day holding time for unpreserved aqueous samples; therefore, the results for these analytes were qualified as estimated, “J,” for detects and, “UJ,” for nondetects. The tritium sample was analyzed within 180 days of collection. Aliquots for the remaining analytes were prepared within the five-day analytical holding time for unpreserved samples.
- Calibration: The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability.

The gross alpha detector efficiency was less than 20%; therefore, the detect for gross alpha was qualified as estimated, “J.” The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% 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. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: Total uranium was detected in the method blank at 0.315 pCi/L; therefore, the total uranium detect was qualified as nondetected, “U,” at the level of contamination if detected above. Tritium and radium-228 were also detected in the method blanks but neither were detected in the site sample. There were no other analytes detected in the method blanks or the KPA CCBs.

- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs (radium-226, radium-228, strontium-90) were within laboratory-established control limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- 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. Any detects between the MDA and 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 reviewer noted that the total uranium preparation log was not signed as reviewed.

- 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.

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: April 6, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method SM2540D*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding times, 7 days from collection, was exceeded; therefore, TSS detected in the sample was qualified as estimated, "J."
- Calibration: The balance calibration check logs were reviewed and found to be acceptable.
- Blanks: TSS was not detected in the method blank.

- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either “J+” or “J-”; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and 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.

Validated Sample Result Forms ITB2837

Analysis Method *ASTM 5174-91*

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	ND	1.38	0.21	pCi/L		UJ	H, B

Analysis Method *EPA 200.8*

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	0.39	2.0	0.30	ug/l	J	J	DNQ
Cadmium	7440-43-9	0.15	1.0	0.10	ug/l	J	J	DNQ
Copper	7440-50-8	9.1	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	7.0	1.0	0.20	ug/l			
Selenium	7782-49-2	0.51	2.0	0.50	ug/l	J	J	DNQ
Thallium	7440-28-0	ND	1.0	0.20	ug/l		U	
Zinc	7440-66-6	33	20	5.0	ug/l		J	*III

Analysis Method *EPA 200.8-Diss*

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	0.30	2.0	0.30	ug/l	J	J	DNQ
Cadmium	7440-43-9	ND	1.0	0.10	ug/l	C	U	
Copper	7440-50-8	2.9	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	0.48	1.0	0.20	ug/l	J	J	B, DNQ
Selenium	7782-49-2	ND	2.0	0.50	ug/l		U	
Thallium	7440-28-0	ND	1.0	0.20	ug/l		U	
Zinc	7440-66-6	ND	20	5.0	ug/l		UJ	*III

Analysis Method *EPA 245.1*

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	ITB2837-02	Sample Date:	2/28/2010 7:04:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.00020	0.00010	mg/l		U	

Analysis Method *EPA 245.1-Diss*

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	ITB2837-02	Sample Date:	2/28/2010 7:04:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.00020	0.00010	mg/l		U	

Analysis Method *EPA 900.0 MOD*

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	ITB2837-02	Sample Date:	2/28/2010 7:04:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	7.9	3	2	pCi/L		J	H, C
Gross Beta	12587-47-2	6.7	4	1.1	pCi/L		J	H

Analysis Method *EPA 901.1 MOD*

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	ITB2837-02	Sample Date:	2/28/2010 7:04:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-3	20	18	pCi/L	U	U	
Potassium 40	13966-00-2	-60	0	250	pCi/L	U	U	

Analysis Method *EPA 903.0 MOD*

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	ITB2837-02	Sample Date:	2/28/2010 7:04:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.65	1	0.24	pCi/L	Jb	J	DNQ

Analysis Method *EPA 904 MOD*

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	-0.01	1	0.81	pCi/L	U	U	

Analysis Method *EPA 905 MOD*

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.13	3	0.41	pCi/L	U	U	

Analysis Method *EPA 906.0 MOD*

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	100	500	130	pCi/L	U	U	

Analysis Method EPA-5 1613B

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 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	2e-005	0.000047	0.000012	ug/L	J	J	DNQ
1,2,3,4,6,7,8-HpCDF	67562-39-4	7.7e-006	0.000047	0.0000028	ug/L	J	J	DNQ
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000047	0.0000043	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000047	0.0000056	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.000047	0.0000028	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.000047	0.0000051	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000047	0.0000024	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000047	0.0000043	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000047	0.0000026	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000047	0.000004	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000047	0.0000028	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000047	0.0000024	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000047	0.0000033	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.0000094	0.0000025	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.0000094	0.0000015	ug/L		U	
OCDD	3268-87-9	0.00016	0.000094	0.000023	ug/L			
OCDF	39001-02-0	ND	8.3e-006	0.0000085	ug/L	J, Q	UJ	*III
Total HpCDD	37871-00-4	4.1e-005	4.1e-005	0.000012	ug/L	J, Q	J	DNQ, *III
Total HpCDF	38998-75-3	1.3e-005	0.000047	0.0000028	ug/L	J	J	DNQ
Total HxCDD	34465-46-8	ND	0.000047	0.0000043	ug/L		U	
Total HxCDF	55684-94-1	ND	0.000047	0.0000024	ug/L		U	
Total PeCDD	36088-22-9	ND	0.000047	0.000004	ug/L	J, B	U	B
Total PeCDF	30402-15-4	ND	0.000047	0.0000026	ug/L		U	
Total TCDD	41903-57-5	ND	0.0000094	0.0000025	ug/L		U	
Total TCDF	55722-27-5	ND	0.0000094	0.0000015	ug/L		U	

Analysis Method SM 2540D

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: ITB2837-02 **Sample Date:** 2/28/2010 7:04:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	100	10	1.0	mg/l	H-1	J	H

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APPENDIX G

Section 32

Outfall 008 – February 27 & 28, 2010

Test America Analytical Laboratory Report

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LABORATORY REPORT

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

Project: Routine Outfall 008

Sampled: 02/27/10-02/28/10
Received: 02/27/10
Issued: 03/24/10 12:58

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.*

CASE NARRATIVE

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

HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.

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.

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

**ADDITIONAL
INFORMATION:**

WATER, 1613B, Dioxins/Furans with Totals

The continuing calibration standard, ST0308A, analyzed on March 8, 2010 at 10:52 has a percent difference value for 13C-1,2,3,6,7,8-HxCDD that is above the method recommended criteria of 118% recovery from the initial calibration curve. The percent recovery for this internal standard is within the acceptance limits in this sample and there is no adverse impact on the data.

Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

Some analytes are reported at a concentration below the estimated detection limit (EDL). The data is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1

Complete final report.

LABORATORY ID

ITB2837-01

ITB2837-02

CLIENT ID

Outfall 008

Outfall 008 (Composite)

MATRIX

Water

Water

Reviewed By:



TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-01 (Outfall 008 - Water)					Sampled: 02/27/10				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10C1221	1.3	4.8	ND	1	03/10/10	03/10/10	

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: mg/l									
Mercury	EPA 245.1	10C0382	0.00010	0.00020	ND	1	03/03/10	03/03/10	
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: ug/l									
Antimony	EPA 200.8	10C0076	0.30	2.0	0.39	1	03/01/10	03/03/10	J
Cadmium	EPA 200.8	10C0076	0.10	1.0	0.15	1	03/01/10	03/03/10	J
Copper	EPA 200.8	10C0076	0.50	2.0	9.1	1	03/01/10	03/02/10	
Lead	EPA 200.8	10C0076	0.20	1.0	7.0	1	03/01/10	03/02/10	
Selenium	EPA 200.8	10C0076	0.50	2.0	0.51	1	03/01/10	03/02/10	J
Thallium	EPA 200.8	10C0076	0.20	1.0	ND	1	03/01/10	03/02/10	
Zinc	EPA 200.8	10C0076	5.0	20	33	1	03/01/10	03/02/10	

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
 Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: mg/l									
Mercury	EPA 245.1-Diss	10C0381	0.00010	0.00020	ND	1	03/03/10	03/03/10	
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	10C0170	0.30	2.0	0.30	1	03/02/10	03/03/10	J
Cadmium	EPA 200.8-Diss	10C0170	0.10	1.0	ND	1	03/02/10	03/02/10	C
Copper	EPA 200.8-Diss	10C0170	0.50	2.0	2.9	1	03/02/10	03/02/10	
Lead	EPA 200.8-Diss	10C0170	0.20	1.0	0.48	1	03/02/10	03/02/10	J
Selenium	EPA 200.8-Diss	10C0170	0.50	2.0	ND	1	03/02/10	03/02/10	
Thallium	EPA 200.8-Diss	10C0170	0.20	1.0	ND	1	03/02/10	03/02/10	
Zinc	EPA 200.8-Diss	10C0170	5.0	20	ND	1	03/02/10	03/02/10	

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
 Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	10C0733	0.50	0.50	ND	1	03/05/10	03/05/10	
Chloride	EPA 300.0	10B3357	0.25	0.50	12	1	02/28/10	02/28/10	
Nitrate-N	EPA 300.0	10B3357	0.060	0.11	0.48	1	02/28/10	02/28/10	
Nitrite-N	EPA 300.0	10B3357	0.090	0.15	ND	1	02/28/10	02/28/10	
Nitrate/Nitrite-N	EPA 300.0	10B3357	0.15	0.26	0.48	1	02/28/10	02/28/10	
Sulfate	EPA 300.0	10B3357	0.20	0.50	10	1	02/28/10	02/28/10	
Total Dissolved Solids	SM2540C	10C0449	1.0	10	270	1	03/04/10	03/04/10	
Total Suspended Solids	SM 2540D	10C1623	1.0	10	100	1	03/12/10	03/12/10	H-1
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10C0480	0.90	4.0	1.6	1	03/04/10	03/04/10	J

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 618 Michillinda Avenue, Suite 200
 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	64219	0.000012	0.000047	2e-005	0.94	03/05/10	03/08/10	J
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	64219	0.0000028	0.000047	7.7e-006	0.94	03/05/10	03/08/10	J
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	64219	0.0000043	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	64219	0.0000056	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	64219	0.0000028	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	64219	0.0000051	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	64219	0.0000024	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	64219	0.0000043	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	64219	0.0000026	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	64219	0.000004	0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	64219	0.0000028	0.000047	ND	0.94	03/05/10	03/08/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	64219	0.0000024	0.000047	ND	0.94	03/05/10	03/08/10	
2,3,4,7,8-PeCDF	EPA-5 1613B	64219	0.0000033	0.000047	ND	0.94	03/05/10	03/08/10	
2,3,7,8-TCDD	EPA-5 1613B	64219	0.0000025	0.0000094	ND	0.94	03/05/10	03/08/10	
2,3,7,8-TCDF	EPA-5 1613B	64219	0.0000015	0.0000094	ND	0.94	03/05/10	03/08/10	
OCDD	EPA-5 1613B	64219	0.000023	0.000094	0.00016	0.94	03/05/10	03/08/10	
OCDF	EPA-5 1613B	64219	0.0000085	0.000094	8.3e-006	0.94	03/05/10	03/08/10	J, Q
Total HpCDD	EPA-5 1613B	64219	0.000012	0.000047	4.1e-005	0.94	03/05/10	03/08/10	J, Q
Total HpCDF	EPA-5 1613B	64219	0.0000028	0.000047	1.3e-005	0.94	03/05/10	03/08/10	J
Total HxCDD	EPA-5 1613B	64219	0.0000043	0.000047	ND	0.94	03/05/10	03/08/10	
Total HxCDF	EPA-5 1613B	64219	0.0000024	0.000047	ND	0.94	03/05/10	03/08/10	
Total PeCDD	EPA-5 1613B	64219	0.000004	0.000047	1e-005	0.94	03/05/10	03/08/10	J, B
Total PeCDF	EPA-5 1613B	64219	0.0000026	0.000047	ND	0.94	03/05/10	03/08/10	
Total TCDD	EPA-5 1613B	64219	0.0000025	0.0000094	ND	0.94	03/05/10	03/08/10	
Total TCDF	EPA-5 1613B	64219	0.0000015	0.0000094	ND	0.94	03/05/10	03/08/10	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%) 64 %
 Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%) 74 %
 Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%) 61 %
 Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%) 73 %
 Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%) 79 %
 Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%) 72 %
 Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%) 83 %
 Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%) 75 %
 Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%) 62 %
 Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%) 62 %
 Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%) 83 %
 Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%) 61 %
 Surrogate: 13C-2,3,7,8-TCDD (25-164%) 59 %
 Surrogate: 13C-2,3,7,8-TCDF (24-169%) 56 %
 Surrogate: 13C-OCDD (17-157%) 54 %
 Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%) 91 %

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Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	67296	0.21	0.69	1.38	1	03/10/10	03/12/10	

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Sampled: 02/27/10-02/28/10
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EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	68099	2	3	7.9	1	03/09/10	03/14/10	
Gross Beta	EPA 900.0 MOD	68099	1.1	4	6.7	1	03/09/10	03/14/10	

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EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	61272	18	20	-3	1	03/02/10	03/17/10	U
Potassium 40	EPA 901.1 MOD	61272	250	NA	-60	1	03/02/10	03/17/10	U

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Sampled: 02/27/10-02/28/10
Received: 02/27/10

EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	61258	0.24	1	0.65	1	03/02/10	03/18/10	Jb

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Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	61259	0.81	1	-0.01	1	03/02/10	03/18/10	U

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Received: 02/27/10

EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	61262	0.41	3	0.13	1	03/02/10	03/11/10	U

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Sampled: 02/27/10-02/28/10
Received: 02/27/10

EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)					Sampled: 02/28/10				
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	67136	130	500	100	1	03/08/10	03/09/10	U

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Sampled: 02/27/10-02/28/10
Received: 02/27/10

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 008 (Composite) (ITB2837-02) - Water					
EPA 300.0	2	02/28/2010 07:04	02/27/2010 17:25	02/28/2010 17:45	02/28/2010 20:07
Filtration	1	02/28/2010 07:04	02/27/2010 17:25	02/28/2010 15:00	02/28/2010 15:00

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Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1221 Extracted: 03/10/10											
Blank Analyzed: 03/10/2010 (10C1221-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/10/2010 (10C1221-BS1)											
Hexane Extractable Material (Oil & Grease)	19.3	5.0	1.4	mg/l	20.0		96	78-114			MNR1
LCS Dup Analyzed: 03/10/2010 (10C1221-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.6	5.0	1.4	mg/l	20.0		98	78-114	2	11	

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Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0076 Extracted: 03/01/10											
Blank Analyzed: 03/02/2010-03/03/2010 (10C0076-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	0.606	2.0	0.50	ug/l							J
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	5.0	ug/l							
LCS Analyzed: 03/02/2010-03/03/2010 (10C0076-BS1)											
Antimony	77.6	2.0	0.30	ug/l	80.0		97	85-115			
Cadmium	79.1	1.0	0.10	ug/l	80.0		99	85-115			
Copper	86.5	2.0	0.50	ug/l	80.0		108	85-115			
Lead	82.4	1.0	0.20	ug/l	80.0		103	85-115			
Selenium	81.6	2.0	0.50	ug/l	80.0		102	85-115			
Thallium	84.7	1.0	0.20	ug/l	80.0		106	85-115			
Zinc	79.3	20	5.0	ug/l	80.0		99	85-115			
Matrix Spike Analyzed: 03/02/2010-03/03/2010 (10C0076-MS1) Source: ITB2772-01											
Antimony	77.9	2.0	0.30	ug/l	80.0	0.463	97	70-130			
Cadmium	75.8	1.0	0.10	ug/l	80.0	0.142	95	70-130			
Copper	85.5	2.0	0.50	ug/l	80.0	2.38	104	70-130			
Lead	81.1	1.0	0.20	ug/l	80.0	0.372	101	70-130			
Selenium	81.8	2.0	0.50	ug/l	80.0	ND	102	70-130			
Thallium	84.3	1.0	0.20	ug/l	80.0	ND	105	70-130			
Zinc	79.8	20	5.0	ug/l	80.0	ND	100	70-130			
Matrix Spike Analyzed: 03/02/2010-03/03/2010 (10C0076-MS2) Source: ITB2772-06											
Antimony	79.4	2.0	0.30	ug/l	80.0	0.471	99	70-130			
Cadmium	76.6	1.0	0.10	ug/l	80.0	ND	96	70-130			
Copper	86.3	2.0	0.50	ug/l	80.0	2.90	104	70-130			
Lead	77.6	1.0	0.20	ug/l	80.0	0.300	97	70-130			
Selenium	82.1	2.0	0.50	ug/l	80.0	0.609	102	70-130			
Thallium	81.3	1.0	0.20	ug/l	80.0	ND	102	70-130			
Zinc	79.1	20	5.0	ug/l	80.0	ND	99	70-130			

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Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0076 Extracted: 03/01/10											
Matrix Spike Dup Analyzed: 03/02/2010-03/03/2010 (10C0076-MSD1)						Source: ITB2772-01					
Antimony	79.5	2.0	0.30	ug/l	80.0	0.463	99	70-130	2	20	
Cadmium	77.4	1.0	0.10	ug/l	80.0	0.142	97	70-130	2	20	
Copper	85.6	2.0	0.50	ug/l	80.0	2.38	104	70-130	0.2	20	
Lead	77.7	1.0	0.20	ug/l	80.0	0.372	97	70-130	4	20	
Selenium	83.1	2.0	0.50	ug/l	80.0	ND	104	70-130	2	20	
Thallium	80.9	1.0	0.20	ug/l	80.0	ND	101	70-130	4	20	
Zinc	81.0	20	5.0	ug/l	80.0	ND	101	70-130	1	20	

Batch: 10C0382 Extracted: 03/03/10

Blank Analyzed: 03/03/2010 (10C0382-BLK1)

Mercury	ND	0.00020	0.00010	mg/l							
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LCS Analyzed: 03/03/2010 (10C0382-BS1)

Mercury	0.00792	0.00020	0.00010	mg/l	0.00800		99	85-115			
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Matrix Spike Analyzed: 03/03/2010 (10C0382-MS1)

Source: ITB2842-01

Mercury	0.00764	0.00020	0.00010	mg/l	0.00800	ND	96	70-130			
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Matrix Spike Dup Analyzed: 03/03/2010 (10C0382-MSD1)

Source: ITB2842-01

Mercury	0.00771	0.00020	0.00010	mg/l	0.00800	ND	96	70-130	0.9	20	
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 Project Manager

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Arcadia, CA 91007
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Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0170 Extracted: 03/02/10											
Blank Analyzed: 03/02/2010-03/03/2010 (10C0170-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	5.0	ug/l							
LCS Analyzed: 03/02/2010-03/03/2010 (10C0170-BS1)											
Antimony	78.7	2.0	0.30	ug/l	80.0		98	85-115			
Cadmium	78.9	1.0	0.10	ug/l	80.0		99	85-115			
Copper	81.1	2.0	0.50	ug/l	80.0		101	85-115			
Lead	79.7	1.0	0.20	ug/l	80.0		100	85-115			
Selenium	78.6	2.0	0.50	ug/l	80.0		98	85-115			
Thallium	82.1	1.0	0.20	ug/l	80.0		103	85-115			
Zinc	76.1	20	5.0	ug/l	80.0		95	85-115			
Matrix Spike Analyzed: 03/02/2010-03/03/2010 (10C0170-MS1) Source: ITB2772-06											
Antimony	80.3	2.0	0.30	ug/l	80.0	0.432	100	70-130			
Cadmium	92.3	1.0	0.10	ug/l	80.0	ND	115	70-130			
Copper	82.5	2.0	0.50	ug/l	80.0	1.33	101	70-130			
Lead	77.7	1.0	0.20	ug/l	80.0	ND	97	70-130			
Selenium	81.5	2.0	0.50	ug/l	80.0	ND	102	70-130			
Thallium	79.7	1.0	0.20	ug/l	80.0	ND	100	70-130			
Zinc	76.0	20	5.0	ug/l	80.0	ND	95	70-130			
Matrix Spike Dup Analyzed: 03/02/2010-03/03/2010 (10C0170-MSD1) Source: ITB2772-06											
Antimony	80.3	2.0	0.30	ug/l	80.0	0.432	100	70-130	0.02	20	
Cadmium	93.8	1.0	0.10	ug/l	80.0	ND	117	70-130	2	20	
Copper	83.0	2.0	0.50	ug/l	80.0	1.33	102	70-130	0.7	20	
Lead	78.1	1.0	0.20	ug/l	80.0	ND	98	70-130	0.5	20	
Selenium	82.4	2.0	0.50	ug/l	80.0	ND	103	70-130	1	20	
Thallium	81.2	1.0	0.20	ug/l	80.0	ND	102	70-130	2	20	
Zinc	76.5	20	5.0	ug/l	80.0	ND	96	70-130	0.7	20	

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Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0381 Extracted: 03/03/10											
Blank Analyzed: 03/03/2010 (10C0381-BLK1)											
Mercury	ND	0.00020	0.00010	mg/l							
LCS Analyzed: 03/03/2010 (10C0381-BS1)											
Mercury	0.00813	0.00020	0.00010	mg/l	0.00800		102	85-115			
Matrix Spike Analyzed: 03/03/2010 (10C0381-MS1)											
						Source: ITB2837-02					
Mercury	0.00823	0.00020	0.00010	mg/l	0.00800	ND	103	70-130			
Matrix Spike Dup Analyzed: 03/03/2010 (10C0381-MSD1)											
						Source: ITB2837-02					
Mercury	0.00819	0.00020	0.00010	mg/l	0.00800	ND	102	70-130	0.4	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B3357 Extracted: 02/28/10											
Blank Analyzed: 02/28/2010 (10B3357-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 02/28/2010 (10B3357-BS1)											
Chloride	4.92	0.50	0.25	mg/l	5.00		98	90-110			
Nitrate-N	1.15	0.11	0.060	mg/l	1.13		102	90-110			
Nitrite-N	1.43	0.15	0.090	mg/l	1.52		94	90-110			
Sulfate	10.5	0.50	0.20	mg/l	10.0		105	90-110			
Matrix Spike Analyzed: 02/28/2010 (10B3357-MS1) Source: ITB2835-02											
Chloride	9.18	0.50	0.25	mg/l	5.00	3.82	107	80-120			
Nitrate-N	1.64	0.11	0.060	mg/l	1.13	0.423	108	80-120			
Nitrite-N	1.50	0.15	0.090	mg/l	1.52	ND	99	80-120			
Sulfate	16.6	0.50	0.20	mg/l	10.0	5.52	110	80-120			
Matrix Spike Analyzed: 03/01/2010 (10B3357-MS2) Source: ITB2836-02											
Chloride	17.7	0.50	0.25	mg/l	5.00	11.6	121	80-120			MI
Nitrate-N	1.96	0.11	0.060	mg/l	1.13	0.804	103	80-120			
Nitrite-N	1.65	0.15	0.090	mg/l	1.52	ND	109	80-120			
Sulfate	21.7	0.50	0.20	mg/l	10.0	11.0	107	80-120			
Matrix Spike Dup Analyzed: 02/28/2010 (10B3357-MSD1) Source: ITB2835-02											
Chloride	9.08	0.50	0.25	mg/l	5.00	3.82	105	80-120	1	20	
Nitrate-N	1.64	0.11	0.060	mg/l	1.13	0.423	108	80-120	0.3	20	
Nitrite-N	1.54	0.15	0.090	mg/l	1.52	ND	101	80-120	2	20	
Sulfate	17.6	0.50	0.20	mg/l	10.0	5.52	120	80-120	6	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0449 Extracted: 03/04/10											
Blank Analyzed: 03/04/2010 (10C0449-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/04/2010 (10C0449-BS1)											
Total Dissolved Solids	1000	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/04/2010 (10C0449-DUP1)											
Total Dissolved Solids	1480	20	2.0	mg/l		Source: ITB2775-01 1500			1	10	
Batch: 10C0480 Extracted: 03/04/10											
Blank Analyzed: 03/04/2010 (10C0480-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/04/2010 (10C0480-BS1)											
Perchlorate	25.7	4.0	0.90	ug/l	25.0		103	85-115			
Matrix Spike Analyzed: 03/04/2010 (10C0480-MS1)											
Perchlorate	27.3	4.0	0.90	ug/l	25.0	Source: ITB2837-02 1.62	103	80-120			
Matrix Spike Dup Analyzed: 03/04/2010 (10C0480-MSD1)											
Perchlorate	28.8	4.0	0.90	ug/l	25.0	Source: ITB2837-02 1.62	109	80-120	5	20	
Batch: 10C0733 Extracted: 03/05/10											
Blank Analyzed: 03/05/2010 (10C0733-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 10C0733 Extracted: 03/05/10</u>											
LCS Analyzed: 03/05/2010 (10C0733-BS1)											
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/05/2010 (10C0733-MS1)											
						Source: ITB2827-03					
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 03/05/2010 (10C0733-MSD1)											
						Source: ITB2827-03					
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0	ND	98	70-120	0	15	
<u>Batch: 10C1623 Extracted: 03/12/10</u>											
Blank Analyzed: 03/12/2010 (10C1623-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/12/2010 (10C1623-BS1)											
Total Suspended Solids	997	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/12/2010 (10C1623-DUP1)											
						Source: ITC0929-03					
Total Suspended Solids	12.0	10	1.0	mg/l		12.0			0	10	
Duplicate Analyzed: 03/12/2010 (10C1623-DUP2)											
						Source: ITC0917-02					
Total Suspended Solids	7.40	10	1.0	mg/l		7.40			0	10	J

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 Project Manager

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 Arcadia, CA 91007
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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 64219 Extracted: 03/05/10											
Blank Analyzed: 03/09/2010 (G0C050000219B)						Source:					
1,2,3,4,6,7,8-HpCDD	ND	0.00005	0.000016	ug/L				-			
1,2,3,4,6,7,8-HpCDF	ND	0.00005	0.0000034	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000055	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.0000048	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.0000025	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000048	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.0000022	ug/L				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	0.0000039	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000022	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.000004	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000031	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.000002	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000036	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000022	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.0000016	ug/L				-			
OCDD	ND	0.0001	0.000017	ug/L				-			
OCDF	ND	0.0001	0.0000083	ug/L				-			
Total HpCDD	ND	0.00005	0.000016	ug/L				-			
Total HpCDF	ND	0.00005	0.0000034	ug/L				-			
Total HxCDD	ND	0.00005	0.0000039	ug/L				-			
Total HxCDF	ND	0.00005	0.000002	ug/L				-			
Total PeCDD	1e-005	0.00005	0.000004	ug/L				-			J, Q
Total PeCDF	ND	0.00005	0.0000022	ug/L				-			
Total TCDD	ND	0.00001	0.0000022	ug/L				-			
Total TCDF	ND	0.00001	0.0000016	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0012			ug/L	0.002		61	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0015			ug/L	0.002		73	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0011			ug/L	0.002		57	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0013			ug/L	0.002		67	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0013			ug/L	0.002		66	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0015			ug/L	0.002		76	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0014			ug/L	0.002		72	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0014			ug/L	0.002		69	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.001			ug/L	0.002		50	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00098			ug/L	0.002		49	24-185			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 64219 Extracted: 03/05/10											
Blank Analyzed: 03/09/2010 (G0C050000219B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0015			ug/L	0.002		73	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00095			ug/L	0.002		48	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.00094			ug/L	0.002		47	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.00081			ug/L	0.002		40	24-169			
Surrogate: 13C-OCDD	0.0021			ug/L	0.004		52	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00069			ug/L	0.0008		87	35-197			
LCS Analyzed: 03/09/2010 (G0C050000219C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.000991	0.00005	0.00002	ug/L	0.001		99	70-140			
1,2,3,4,6,7,8-HpCDF	0.000953	0.00005	0.000068	ug/L	0.001		95	82-122			
1,2,3,4,7,8,9-HpCDF	0.000998	0.00005	0.000096	ug/L	0.001		100	78-138			
1,2,3,4,7,8-HxCDD	0.00105	0.00005	0.000063	ug/L	0.001		105	70-164			
1,2,3,4,7,8-HxCDF	0.000993	0.00005	0.000042	ug/L	0.001		99	72-134			
1,2,3,6,7,8-HxCDD	0.00101	0.00005	0.000059	ug/L	0.001		101	76-134			
1,2,3,6,7,8-HxCDF	0.00102	0.00005	0.000036	ug/L	0.001		102	84-130			
1,2,3,7,8,9-HxCDD	0.000988	0.00005	0.000048	ug/L	0.001		99	64-162			
1,2,3,7,8,9-HxCDF	0.00102	0.00005	0.000036	ug/L	0.001		102	78-130			
1,2,3,7,8-PeCDD	0.000934	0.00005	0.000075	ug/L	0.001		93	70-142			
1,2,3,7,8-PeCDF	0.00101	0.00005	0.000034	ug/L	0.001		101	80-134			
2,3,4,6,7,8-HxCDF	0.000967	0.00005	0.000033	ug/L	0.001		97	70-156			
2,3,4,7,8-PeCDF	0.00102	0.00005	0.000037	ug/L	0.001		102	68-160			
2,3,7,8-TCDD	0.000183	0.00001	0.000002	ug/L	0.0002		91	67-158			
2,3,7,8-TCDF	0.000199	0.00001	0.000017	ug/L	0.0002		100	75-158			
OCDD	0.00196	0.0001	0.000025	ug/L	0.002		98	78-144			
OCDF	0.00191	0.0001	0.000013	ug/L	0.002		95	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00141			ug/L	0.002		71	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00153			ug/L	0.002		76	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00133			ug/L	0.002		67	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00138			ug/L	0.002		69	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00148			ug/L	0.002		74	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00164			ug/L	0.002		82	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00155			ug/L	0.002		77	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00145			ug/L	0.002		72	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00123			ug/L	0.002		61	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00122			ug/L	0.002		61	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00165			ug/L	0.002		82	22-176			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 64219 Extracted: 03/05/10											
LCS Analyzed: 03/09/2010 (G0C050000219C)						Source:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00125			ug/L	0.002		63	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00107			ug/L	0.002		53	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.000951			ug/L	0.002		48	22-152			
Surrogate: 13C-OCDD	0.00238			ug/L	0.004		59	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000717			ug/L	0.0008		90	31-191			
LCS Dup Analyzed: 03/09/2010 (G0C050000219L)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00111	0.00005	0.000022	ug/L	0.001		111	70-140	11	50	
1,2,3,4,6,7,8-HpCDF	0.00104	0.00005	0.000087	ug/L	0.001		104	82-122	8.7	50	
1,2,3,4,7,8,9-HpCDF	0.00105	0.00005	0.000013	ug/L	0.001		105	78-138	4.8	50	
1,2,3,4,7,8-HxCDD	0.001	0.00005	0.0000071	ug/L	0.001		100	70-164	5	50	
1,2,3,4,7,8-HxCDF	0.00104	0.00005	0.0000064	ug/L	0.001		104	72-134	4.8	50	
1,2,3,6,7,8-HxCDD	0.00101	0.00005	0.0000068	ug/L	0.001		101	76-134	0.27	50	
1,2,3,6,7,8-HxCDF	0.00106	0.00005	0.0000055	ug/L	0.001		106	84-130	3.8	50	
1,2,3,7,8,9-HxCDD	0.00095	0.00005	0.0000055	ug/L	0.001		95	64-162	3.9	50	
1,2,3,7,8,9-HxCDF	0.00105	0.00005	0.0000058	ug/L	0.001		105	78-130	2.8	50	
1,2,3,7,8-PeCDD	0.000991	0.00005	0.0000075	ug/L	0.001		99	70-142	6	50	
1,2,3,7,8-PeCDF	0.00105	0.00005	0.0000058	ug/L	0.001		105	80-134	3.6	50	
2,3,4,6,7,8-HxCDF	0.001	0.00005	0.0000052	ug/L	0.001		100	70-156	3.6	50	
2,3,4,7,8-PeCDF	0.00105	0.00005	0.0000066	ug/L	0.001		105	68-160	3.2	50	
2,3,7,8-TCDD	0.000186	0.00001	0.0000023	ug/L	0.0002		93	67-158	1.7	50	
2,3,7,8-TCDF	0.000212	0.00001	0.000002	ug/L	0.0002		106	75-158	6.2	50	
OCDD	0.00229	0.0001	0.000041	ug/L	0.002		115	78-144	16	50	
OCDF	0.00217	0.0001	0.000021	ug/L	0.002		108	63-170	13	50	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.001			ug/L	0.002		50	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00119			ug/L	0.002		59	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.001			ug/L	0.002		50	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00113			ug/L	0.002		56	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00117			ug/L	0.002		59	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00127			ug/L	0.002		64	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00122			ug/L	0.002		61	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00113			ug/L	0.002		57	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.000927			ug/L	0.002		46	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.000872			ug/L	0.002		44	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00127			ug/L	0.002		64	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.000905			ug/L	0.002		45	13-328			

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Kathleen A. Robb For Heather Clark
 Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 64219 Extracted: 03/05/10											
LCS Dup Analyzed: 03/09/2010 (G0C050000219L)											
Surrogate: 13C-2,3,7,8-TCDD	0.000855			ug/L	0.002		43	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.000762			ug/L	0.002		38	22-152			
Surrogate: 13C-OCDD	0.00168			ug/L	0.004		42	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000666			ug/L	0.0008		83	31-191			

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Kathleen A. Robb For Heather Clark
 Project Manager

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 618 Michillinda Avenue, Suite 200
 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 67296 Extracted: 03/10/10											
Matrix Spike Dup Analyzed: 03/12/2010 (F0B230452001D)						Source: F0B230452001					
Total Uranium	26.9	0.7	0.2	pCi/L	27.7	0.677	95	62-150	4	20	
Matrix Spike Analyzed: 03/12/2010 (F0B230452001S)						Source: F0B230452001					
Total Uranium	28.1	0.7	0.2	pCi/L	27.7	0.677	99	62-150			
Blank Analyzed: 03/12/2010 (F0C080000296B)						Source:					
Total Uranium	0.315	0.693	0.21	pCi/L				-			Jb
LCS Analyzed: 03/12/2010 (F0C080000296C)						Source:					
Total Uranium	28.6	0.7	0.2	pCi/L	27.7		103	90-120			

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Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 68099 Extracted: 03/09/10											
Matrix Spike Analyzed: 03/14/2010 (F0C020462001S)						Source: F0C020462001					
Gross Alpha	47.1	3	1.1	pCi/L	49.4	2.1	91	35-150			
Gross Beta	74.2	4	1	pCi/L	68	1.5	107	54-150			
Duplicate Analyzed: 03/18/2010 (F0C020462001X)						Source: F0C020462001					
Gross Alpha	1.89	3	1.1	pCi/L		2.1		-			Jb
Gross Beta	1.52	4	0.94	pCi/L		1.5		-			Jb
Blank Analyzed: 03/15/2010 (F0C090000099B)						Source:					
Gross Alpha	0.66	2	0.85	pCi/L				-			U
Gross Beta	0.69	4	1	pCi/L				-			U
LCS Analyzed: 03/15/2010 (F0C090000099C)						Source:					
Gross Alpha	51.5	3	1	pCi/L	49.4		104	62-134			
Gross Beta	63.9	4	0.8	pCi/L	68		94	58-133			

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Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 61272 Extracted: 03/02/10											
Blank Analyzed: 03/16/2010 (F0C020000272B)						Source:					
Cesium 137	1.4	20	12	pCi/L				-			U
Potassium 40	-60	NA	220	pCi/L				-			U
LCS Analyzed: 03/17/2010 (F0C020000272C)						Source:					
Americium 241	146000	NA	600	pCi/L	141000		103	87-110			
Cobalt 60	85500	NA	200	pCi/L	87900		97	89-110			
Cesium 137	52300	20	300	pCi/L	53100		98	90-110			
Duplicate Analyzed: 03/17/2010 (F0C020462001X)						Source: F0C020462001					
Cesium 137	1.6	20	16	pCi/L		-1.6		-			U
Potassium 40	-80	NA	200	pCi/L		-80		-			U

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Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 61258 Extracted: 03/02/10											
Blank Analyzed: 03/18/2010 (F0C020000258B)											
Radium (226)	0.079	1	0.15	pCi/L				-			U
LCS Analyzed: 03/18/2010 (F0C020000258C)											
Radium (226)	12.4	1	0.1	pCi/L	11.3		110	68-136			
LCS Dup Analyzed: 03/18/2010 (F0C020000258L)											
Radium (226)	12	1	0.1	pCi/L	11.3		107	68-136	3	40	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 61259 Extracted: 03/02/10											
Blank Analyzed: 03/18/2010 (F0C020000259B)											
Radium 228	0.47	1	0.3	pCi/L				-			Jb
LCS Analyzed: 03/18/2010 (F0C020000259C)											
Radium 228	6.04	1	0.42	pCi/L	6.37		95	60-142			
LCS Dup Analyzed: 03/18/2010 (F0C020000259L)											
Radium 228	6	1	0.33	pCi/L	6.37		94	60-142	0.5	40	

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Kathleen A. Robb For Heather Clark
 Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 61262 Extracted: 03/02/10											
Blank Analyzed: 03/11/2010 (F0C020000262B)											
Strontium 90	0.15	3	0.37	pCi/L				-			U
LCS Analyzed: 03/11/2010 (F0C020000262C)											
Strontium 90	6.99	3	0.33	pCi/L	6.79		103	80-130			
LCS Dup Analyzed: 03/11/2010 (F0C020000262L)											
Strontium 90	6.53	3	0.35	pCi/L	6.79		96	80-130	7	40	

TestAmerica Irvine

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 Project Manager

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 618 Michillinda Avenue, Suite 200
 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
 Received: 02/27/10

METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 67136 Extracted: 03/08/10											
Duplicate Analyzed: 03/09/2010 (F0C020462001X)						Source: F0C020462001					
Tritium	86	500	130	pCi/L		49	-				U
Matrix Spike Analyzed: 03/09/2010 (F0C020465001S)						Source: F0C020465001					
Tritium	4260	500	130	pCi/L	4520	130	92	62-147			
Blank Analyzed: 03/09/2010 (F0C080000136B)						Source:					
Tritium	163	500	130	pCi/L							Jb
LCS Analyzed: 03/09/2010 (F0C080000136C)						Source:					
Tritium	4700	500	130	pCi/L	4520		104	85-112			

TestAmerica Irvine

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Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

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
ITB2837-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.29	4.8	15

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITB2837-02	Antimony-200.8	Antimony	ug/l	0.39	2.0	6
ITB2837-02	Cadmium-200.8	Cadmium	ug/l	0.15	1.0	3.1
ITB2837-02	Chloride - 300.0	Chloride	mg/l	12	0.50	150
ITB2837-02	Copper-200.8	Copper	ug/l	9.09	2.0	14
ITB2837-02	Lead-200.8	Lead	ug/l	7.01	1.0	5.2
ITB2837-02	Nitrate-N, 300.0	Nitrate-N	mg/l	0.48	0.11	8
ITB2837-02	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITB2837-02	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.48	0.26	8
ITB2837-02	Perchlorate 314.0 - Default	Perchlorate	ug/l	1.62	4.0	6
ITB2837-02	Selenium-200.8	Selenium	ug/l	0.51	2.0	5
ITB2837-02	Sulfate-300.0	Sulfate	mg/l	10	0.50	300
ITB2837-02	TDS - SM2540C	Total Dissolved Solids	mg/l	271	10	950
ITB2837-02	Thallium-200.8	Thallium	ug/l	0.10	1.0	2
ITB2837-02	Zinc-200.8	Zinc	ug/l	33	20	160

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Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

DATA QUALIFIERS AND DEFINITIONS

- B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- H-1** Sample analysis performed past the method-specified holding time per client's approval.
- 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.
- Jb** Result is greater than sample detection limit but less than stated reporting limit.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- Q** Estimated maximum possible concentration (EMPC).
- U** Result is less than the sample detection limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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ITB2837 <Page 36 of 38>

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2540C	Water	X	
SM4500NH3-C	Water	X	X

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

Subcontracted Laboratories

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITB2837-02

Method Performed: EPA 900.0 MOD
Samples: ITB2837-02

Method Performed: EPA 901.1 MOD
Samples: ITB2837-02

Method Performed: EPA 903.0 MOD
Samples: ITB2837-02

Method Performed: EPA 904 MOD
Samples: ITB2837-02

Method Performed: EPA 905 MOD
Samples: ITB2837-02

Method Performed: EPA 906.0 MOD
Samples: ITB2837-02

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITB2837

Sampled: 02/27/10-02/28/10
Received: 02/27/10

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ITB2837-02

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITB2837

MWH-Pasadena Boeing

Lot #: F0C020466

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.


Kay Clay
Project Manager

March 23, 2010

Case Narrative
LOT NUMBER: F0C020466

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 2, 2010. This sample is associated with your 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.

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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 were no nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F0C020466

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Radium-226 by GFPC	EPA 903.0 MOD	
Radium-228 by GFPC	EPA 904 MOD	
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

F0C020466

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LV7M2	001	ITB2837-02	02/28/10	07:04

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: ITB2837-02

Radiochemistry

Lab Sample ID: F0C020466-001
 Work Order: LV7M2
 Matrix: WATER

Date Collected: 02/28/10 0704
 Date Received: 03/02/10 0915

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD							
Cesium 137	-3	U	12	20	18	03/02/10	03/17/10
Potassium 40	-60	U	410		250	03/02/10	03/17/10
Gross Alpha/Beta EPA 900							
Gross Alpha	7.9		2.3	3.0	2.0	03/09/10	03/14/10
Gross Beta	6.7		1.2	4.0	1.1	03/09/10	03/14/10
SR-90 BY GFPC EPA-905 MOD							
Strontium 90	0.13	U	0.24	3.00	0.41	03/02/10	03/11/10
TRITIUM (Distill) by EPA 906.0 MOD							
Tritium	100	U	86	500	130	03/08/10	03/09/10
Total Uranium by KPA ASTM 5174-91							
Total Uranium	1.38		0.15	0.69	0.21	03/10/10	03/12/10
Radium 226 by EPA 903.0 MOD							
Radium (226)	0.65	J	0.23	1.00	0.24	03/02/10	03/18/10
Radium 228 by GFPC EPA 904 MOD							
Radium 228	-0.01	U	0.46	1.00	0.81	03/02/10	03/18/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

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

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: FOC020466
 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 #	0061258	Yld %	102 FOC020000-258B
Radium (226)	0.079	U	0.096	1.00	0.15	03/02/10	03/18/10
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch #	0061259	Yld %	98 FOC020000-259B
Radium 228	0.47	J	0.22	1.00	0.30	03/02/10	03/18/10
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch #	0061262	Yld %	76 FOC020000-262B
Strontium 90	0.15	U	0.22	3.00	0.37	03/02/10	03/11/10
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch #	0061272	Yld %	FOC020000-272B
Cesium 137	1.4	U	6.8	20.0	12	03/02/10	03/16/10
Potassium 40	-60	U	270		220	03/02/10	03/16/10
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch #	0067136	Yld %	FOC080000-136B
Tritium	163	J	99	500	130	03/08/10	03/09/10
Gross Alpha/Beta EPA 900			pCi/L	Batch #	0068099	Yld %	FOC090000-099B
Gross Alpha	0.66	U	0.59	2.00	0.85	03/09/10	03/15/10
Gross Beta	0.69	U	0.65	4.00	1.0	03/09/10	03/15/10
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch #	0067296	Yld %	FOC080000-296B
Total Uranium	0.315	J	0.039	0.693	0.21	03/10/10	03/12/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: FOC020466
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gamma Cs-137 & Hits by EPA 901.1 MOD							
			pCi/L	901.1 MOD			FOC020000-272C
Americium 241	141000	146000	11000	600		103	(87 - 110)
Cesium 137	53100	52300	3000	300		98	(90 - 110)
Cobalt 60	87900	85500	4800	200		97	(89 - 110)
	Batch #:	0061272		Analysis Date:	03/17/10		
TRITIUM (Distill) by EPA 906.0 MOD							
			pCi/L	906.0 MOD			FOC080000-136C
Tritium	4520	4700	480	130		104	(85 - 112)
	Batch #:	0067136		Analysis Date:	03/09/10		
Total Uranium by KPA ASTM 5174-91							
			pCi/L	5174-91			FOC080000-296C
Total Uranium	27.7	28.6	3.5	0.2		103	(90 - 120)
	Batch #:	0067296		Analysis Date:	03/12/10		
Total Uranium by KPA ASTM 5174-91							
			pCi/L	5174-91			FOC080000-296C
Total Uranium	5.54	5.62	0.58	0.21		101	(90 - 120)
	Batch #:	0067296		Analysis Date:	03/12/10		
Gross Alpha/Beta EPA 900							
			pCi/L	900.0 MOD			FOC090000-099C
Gross Beta	68.0	63.9	5.4	0.8		94	(58 - 133)
	Batch #:	0068099		Analysis Date:	03/15/10		
Gross Alpha/Beta EPA 900							
			pCi/L	900.0 MOD			FOC090000-099C
Gross Alpha	49.4	51.5	5.8	1.0		104	(62 - 134)
	Batch #:	0068099		Analysis Date:	03/15/10		

NOTE(S)

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

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0C020466
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Radium 226 by EPA	903.0 MOD		pCi/L	903.0 MOD			F0C020000-258C
Radium (226)	11.3	12.4	1.2	104	110	(68 - 136)	
Spk 2	11.3	12.0	1.2	105	107	(68 - 136)	3 %RPD
	Batch #:	0061258		Analysis Date:	03/18/10		
Radium 228 by GFPC EPA	904 MOD		pCi/L	904 MOD			F0C020000-259C
Radium 228	6.37	6.04	0.73	99	95	(60 - 142)	
Spk 2	6.37	6.00	0.71	103	94	(60 - 142)	0.5 %RPD
	Batch #:	0061259		Analysis Date:	03/18/10		
SR-90 BY GFPC EPA	905 MOD		pCi/L	905 MOD			F0C020000-262C
Strontium 90	6.79	6.99	0.80	77	103	(80 - 130)	
Spk 2	6.79	6.53	0.76	77	96	(80 - 130)	7 %RPD
	Batch #:	0061262		Analysis Date:	03/11/10		

NOTE(S)

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: FOC020462
 Matrix: WATER

Date Sampled: 02/26/10
 Date Received: 03/02/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			FOC020462-001		
Gross Alpha	49.4	47.1	5.5		2.1	1.2	91		(35 - 150)
	Batch #:	0068099		Analysis Date:	03/14/10				
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			FOC020462-001		
Gross Beta	68.0	74.2	6.2		1.50	0.79	107		(54 - 150)
	Batch #:	0068099		Analysis Date:	03/14/10				
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			FOC020465-001		
Tritium	4520	4260	450		130	92	92		(62 - 147)
	Batch #:	0067136		Analysis Date:	03/09/10				

NOTE(S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: FOB230452 Date Sampled: 02/20/10 1349
 Matrix: WATER Date Received: 02/23/10 0910

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							% Yld	%Rec	
Total Uranium by KPA ASTM 5			pCi/L	5174-91		FOB230452-001			
Total Uranium	27.7	28.1	3.4	0.677	J	0.074	99		(62 - 150)
Spk2	27.7	26.9	3.3	0.677	J	0.074	95		(62 - 150)
							Precision:	4	%RPD
Batch #:			0067296	Analysis date:		03/12/10			

NOTE(S)

Data are incomplete without the case narrative.

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

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: FOC020466
 Matrix: WATER

Date Sampled: 02/26/10
 Date Received: 03/02/10

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2σ +/-)	% Yld	QC Sample ID	
									Precision
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD		FOC020462-001		
Cesium 137	-1.6	U	6.8		1.6	U	8.4	5730	%RPD
Potassium 40	-80	U	440		-80	U	3300	2	%RPD
	Batch #:		0061272 (Sample)		0061272 (Duplicate)				
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD		FOC020462-001		
Tritium	49	U	79		86	U	84	55	%RPD
	Batch #:		0067136 (Sample)		0067136 (Duplicate)				
Gross Alpha/Beta EPA 900				pCi/L	900.0 MOD		FOC020462-001		
Gross Alpha	2.1	J	1.2		1.89	J	0.97	9	%RPD
Gross Beta	1.50	J	0.79		1.52	J	0.70	1	%RPD
	Batch #:		0068099 (Sample)		0068099 (Duplicate)				

NOTE(S)

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

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

Cub
304

SUBCONTRACT ORDER
TestAmerica Irvine
ITB2837

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: ITB2837-02 (Outfall 008 (Composite) - Water)

Sampled: 02/28/10 07:04

Gamma Spec-O	mg/kg	03/10/10	02/28/11 07:04	\$200.00	50%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/10/10	08/27/10 07:04	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/10/10	08/27/10 07:04	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	03/10/10	03/28/10 07:04	\$0.00	0%	
Radium 226-O	pCi/L	03/10/10	02/28/11 07:04	\$88.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 228-O	pCi/L	03/10/10	02/28/11 07:04	\$84.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/10/10	02/28/11 07:04	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/10/10	02/28/11 07:04	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/10/10	02/28/11 07:04	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (H) 500 mL Amber (l)

Released By

Date/Time

3/1/10 17:00

Received By

Date/Time

Fedex 3/1/10 17:00

Released By

Date/Time

Received By

Date/Time

Angela Esau 3/2/10 9:15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): FOC020457; 468

460
462
465
466

CONDITION UPON RECEIPT FORM

Client: TA Irvine

Quote No: 77635; 85044

COC/RFA No: Below

304

Initiated By: AB

Date: 3-2-10

Time: 9:15

Shipping Information

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

Shipping # (s):*	Sample Temperature (s):**
1. <u>4299 2133 5249</u>	1. <u>5</u>
2. <u>5043</u>	2. <u>ambient</u>
3. <u>5032</u>	3. <u>↓</u>
4. <u>5054</u>	4. <u>↓</u>
5. _____	5. _____
6. _____	6. _____
7. _____	7. _____
8. _____	8. _____
9. _____	9. _____
10. _____	10. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes: COC - ITB 2701 - TAT 3/9/10 per KC

2802827
2837
2835
2829 3 did not receive COC w/ WS w/ COC
2751
2766

Corrective Action:

Client Contact Name: _____ Informed by: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____ If released, notify: _____
 Project Management Review: Jayna Pohl Date: 3-4-10

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.

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APPENDIX G

Section 33

Outfall 008 – March 7, 2010

MEC^X Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITC0792

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: ITC0792
 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 008 (COMPOSITE)	ITC0792-02	G0C090501-001, FOC090516-001	Water	3/7/2010 11:38:00 AM	ASTM 5174-91, 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-St. Louis above the control limit at ambient temperature; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. 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. Custody seals were intact upon receipt at TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. 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 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: April 9, 2010

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 $\leq 20\%$ 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 detects between the EDL and the RL for approximately half of all target compounds. Most method blank results were reported as EMPCs; however, due to the extent of the method blank contamination, it was the reviewer's professional opinion that the EMPC results also be utilized to qualify sample results. Sample results for all isomers also present in the method blank and total HpCDD were

qualified as nondetected, “U,” at the levels of contamination. Remaining totals also present in the method blank were qualified as estimated, “J,” as only a portion of the total was considered method blank contamination. The laboratory flagged 2,3,4,6,7,8-HxCDF as method blank contamination in error, therefore, the result was not qualified.

- 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. The laboratory did not perform a confirmation analysis for 2,3,7,8-TCDF.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of LCS results. The EMPCs qualified as nondetected for method blank contamination were not further qualified as EMPCs. Any totals also containing EMPC peaks were qualified as estimated, “J.” Any detects reported below the EDL, or 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 METHOD 245.1—Mercury

Reviewed By: P. Meeks

Date Reviewed: April 8, 2010

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 (7/02)*.

- Holding Times: The analytical holding time, 28 days for mercury, was met.
- Tuning: Not applicable to this analysis.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were above the control limit; however, mercury was not detected in the site sample.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG/. Method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to this analysis.
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and 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 — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 13, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0*, *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. All remaining aliquots were prepared within the five-day analytical holding time for unpreserved samples.
- **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, the results for these analytes were qualified as estimated, "UJ," for nondetects and, "J," for detects. The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The strontium chemical yield was less than the control limit of 40%, at 25%; therefore, nondetected strontium-90 in the sample was qualified as estimated, "UJ." All remaining chemical yields were at least 40% 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. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- **Blanks:** Total Uranium was detected in the method blank at 0.315 pCi/L; therefore, total uranium detected in the sample was qualified as nondetected, "U," at the reporting limit. There were no other analytes detected in the method blanks or the KPA CCBs.
- **Blank Spikes and Laboratory Control Samples:** The recoveries and RPDs (radium-226, radium-228, strontium-90) were within laboratory-established control limits.
- **Laboratory Duplicates:** No laboratory duplicate analyses were performed on the sample in this SDG.
- **Matrix Spike/Matrix Spike Duplicate:** No MS/MSD or matrix spike analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- **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. Any

detects between the MDA and 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 reviewer noted that the total uranium preparation log was not signed as having been reviewed.

- 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 ITC0792

Analysis Method *ASTM 5174-91*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	ND	0.693	0.21	pCi/L	Jb	U	B

Analysis Method *EPA 245.1*

Sample Name Outfall 008 (COMPOSITE Matrix Type: Water **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method *EPA 245.1-Diss*

Sample Name Outfall 008 (COMPOSITE Matrix Type: Water **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method *EPA 900.0 MOD*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	0.82	3	1.6	pCi/L	U	UJ	C
Gross Beta	12587-47-2	2.2	4	1.6	pCi/L	Jb	J	DNQ

Analysis Method *EPA 901.1 MOD*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	0.9	20	15	pCi/L	U	U	
Potassium 40	13966-00-2	-30	0	220	pCi/L	U	U	

Analysis Method *EPA 903.0 MOD*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.104	1	0.05	pCi/L	Jb	J	C, DNQ

Analysis Method *EPA 904 MOD*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.25	1	0.51	pCi/L	U	U	

Analysis Method *EPA 905 MOD*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.42	3	1.5	pCi/L	U	UJ	*III

Analysis Method *EPA 906.0 MOD*

Sample Name Outfall 008 (COMPOSITE Matrix Type: WATER **Validation Level:** IV

Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	-54	500	150	pCi/L	U	U	

Analysis Method EPA-5 1613B

Sample Name Outfall 008 (COMPOSITE **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC0792-02 **Sample Date:** 3/7/2010 11:38:00 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	5.6e-006	0.0000021	ug/L	J, Q, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	4e-006	0.0000009	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	3.4e-006	0.00005	0.0000015	ug/L	J	J	DNQ
1,2,3,4,7,8-HxCDD	39227-28-6	ND	1.8e-006	0.0000016	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000002	ug/L	J, Ba	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	2.3e-006	0.00005	0.0000014	ug/L	J	J	DNQ
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000002	ug/L	J, Ba	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000012	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	9.2e-007	0.0000002	ug/L	J, Q, Ba	U	B
1,2,3,7,8-PeCDD	40321-76-4	1.6e-006	0.00005	0.0000009	ug/L	J	J	DNQ
1,2,3,7,8-PeCDF	57117-41-6	1.6e-006	0.00005	0.0000006	ug/L	J	J	DNQ
2,3,4,6,7,8-HxCDF	60851-34-5	2.3e-006	0.00005	0.0000002	ug/L	J, Ba	J	DNQ
2,3,4,7,8-PeCDF	57117-31-4	1.8e-006	0.00005	0.0000007	ug/L	J	J	DNQ
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000000	ug/L		U	
2,3,7,8-TCDF	51207-31-9	1.2e-006	0.00001	0.0000005	ug/L	J	J	DNQ
OCDD	3268-87-9	ND	0.0001	0.0000026	ug/L	J, Ba	U	B
OCDF	39001-02-0	ND	0.0001	0.0000013	ug/L	J, Ba	U	B
Total HpCDD	37871-00-4	ND	1e-005	0.0000021	ug/L	J, Q, Ba	U	B
Total HpCDF	38998-75-3	9.9e-006	9.9e-006	0.0000009	ug/L	J, Q, Ba	J	B, DNQ, *III
Total HxCDD	34465-46-8	4.1e-006	4.1e-006	0.0000014	ug/L	J, Q, Ba	J	B, DNQ, *III
Total HxCDF	55684-94-1	8.3e-006	8.3e-006	0.0000002	ug/L	J, Q, Ba	J	B, DNQ, *III
Total PeCDD	36088-22-9	4.1e-006	4.1e-006	0.0000009	ug/L	J, Q	J	DNQ, *III
Total PeCDF	30402-15-4	3.4e-006	0.00005	0.0000005	ug/L	J	J	DNQ
Total TCDD	41903-57-5	ND	0.00001	0.0000000	ug/L		U	
Total TCDF	55722-27-5	1.2e-006	0.00001	0.0000005	ug/L	J	J	DNQ

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APPENDIX G

Section 34

Outfall 008 – March 7, 2010

Test America Analytical Laboratory Report

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LABORATORY REPORT

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

Project: Routine Outfall 008

Sampled: 03/07/10
Received: 03/08/10
Issued: 04/06/10 17:18

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.*

CASE NARRATIVE

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

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

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

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

COMMENTS: 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.

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals

Sample: 1
Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

There are no other anomalies associated with this project.

LABORATORY ID

ITC0792-01

CLIENT ID

Outfall 008 (GRAB)

MATRIX

Water

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

LABORATORY ID

ITC0792-02

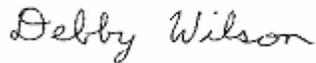
CLIENT ID

Outfall 008 (COMPOSITE)

MATRIX

Water

Reviewed By:



TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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ITC0792 <Page 2 of 37>

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-01 (Outfall 008 (GRAB) - Water)					Sampled: 03/07/10				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10C1956	1.3	4.7	ND	1	03/16/10	03/16/10	

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Project Manager

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ITC0792 <Page 3 of 37>

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: ug/l									
Mercury	EPA 245.1	10C2010	0.10	0.20	ND	1	03/16/10	03/16/10	
Antimony	EPA 200.8	10C1320	0.30	2.0	0.35	1	03/10/10	03/11/10	Ja
Cadmium	EPA 200.8	10C1320	0.10	1.0	ND	1	03/10/10	03/12/10	
Copper	EPA 200.8	10C1320	0.50	2.0	1.3	1	03/10/10	03/11/10	Ja
Lead	EPA 200.8	10C1320	0.20	1.0	0.38	1	03/10/10	03/11/10	Ja
Selenium	EPA 200.8	10C1320	0.50	2.0	0.59	1	03/10/10	03/11/10	Ja
Thallium	EPA 200.8	10C1320	0.20	1.0	ND	1	03/10/10	03/12/10	
Zinc	EPA 200.8	10C1320	5.0	20	ND	1	03/10/10	03/11/10	

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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10C2011	0.10	0.20	ND	1	03/16/10	03/16/10	
Antimony	EPA 200.8-Diss	10C1740	0.30	2.0	ND	1	03/14/10	03/16/10	
Cadmium	EPA 200.8-Diss	10C1740	0.10	1.0	ND	1	03/14/10	03/16/10	
Copper	EPA 200.8-Diss	10C1740	0.50	2.0	1.2	1	03/14/10	03/16/10	B, Ja
Lead	EPA 200.8-Diss	10C1740	0.20	1.0	ND	1	03/14/10	03/16/10	
Selenium	EPA 200.8-Diss	10C1740	0.50	2.0	0.60	1	03/14/10	03/16/10	Ja
Thallium	EPA 200.8-Diss	10C1740	0.20	1.0	ND	1	03/14/10	03/16/10	
Zinc	EPA 200.8-Diss	10C1740	5.0	20	ND	1	03/14/10	03/16/10	

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	10C1299	0.50	0.50	ND	1	03/10/10	03/10/10	
Chloride	EPA 300.0	10C0921	0.25	0.50	9.3	1	03/08/10	03/08/10	
Nitrate-N	EPA 300.0	10C0921	0.060	0.11	0.34	1	03/08/10	03/08/10	
Nitrite-N	EPA 300.0	10C0921	0.090	0.15	ND	1	03/08/10	03/08/10	
Nitrate/Nitrite-N	EPA 300.0	10C0921	0.15	0.26	0.34	1	03/08/10	03/08/10	
Sulfate	EPA 300.0	10C0921	0.20	0.50	7.2	1	03/08/10	03/08/10	
Total Dissolved Solids	SM2540C	10C1348	1.0	10	190	1	03/11/10	03/11/10	
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10C1047	0.90	4.0	ND	1	03/09/10	03/09/10	

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
Received: 03/08/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	76166	0.0000021	0.00005	5.6e-006	1.01	03/17/10	03/19/10	J, Q, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	76166	0.0000092	0.00005	4e-006	1.01	03/17/10	03/19/10	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	76166	0.0000015	0.00005	3.4e-006	1.01	03/17/10	03/19/10	J
1,2,3,4,7,8-HxCDD	EPA-5 1613B	76166	0.0000016	0.00005	1.8e-006	1.01	03/17/10	03/19/10	J, Q, Ba
1,2,3,4,7,8-HxCDF	EPA-5 1613B	76166	0.0000023	0.00005	2e-006	1.01	03/17/10	03/19/10	J, Ba
1,2,3,6,7,8-HxCDD	EPA-5 1613B	76166	0.0000014	0.00005	2.3e-006	1.01	03/17/10	03/19/10	J
1,2,3,6,7,8-HxCDF	EPA-5 1613B	76166	0.0000022	0.00005	2.2e-006	1.01	03/17/10	03/19/10	J, Ba
1,2,3,7,8,9-HxCDD	EPA-5 1613B	76166	0.0000012	0.00005	ND	1.01	03/17/10	03/19/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	76166	0.0000026	0.00005	9.2e-007	1.01	03/17/10	03/19/10	J, Q, Ba
1,2,3,7,8-PeCDD	EPA-5 1613B	76166	0.0000093	0.00005	1.6e-006	1.01	03/17/10	03/19/10	J
1,2,3,7,8-PeCDF	EPA-5 1613B	76166	0.0000064	0.00005	1.6e-006	1.01	03/17/10	03/19/10	J
2,3,4,6,7,8-HxCDF	EPA-5 1613B	76166	0.0000002	0.00005	2.3e-006	1.01	03/17/10	03/19/10	J, Ba
2,3,4,7,8-PeCDF	EPA-5 1613B	76166	0.0000071	0.00005	1.8e-006	1.01	03/17/10	03/19/10	J
2,3,7,8-TCDD	EPA-5 1613B	76166	0.0000002	0.00001	ND	1.01	03/17/10	03/19/10	
2,3,7,8-TCDF	EPA-5 1613B	76166	0.0000055	0.00001	1.2e-006	1.01	03/17/10	03/19/10	J
OCDD	EPA-5 1613B	76166	0.0000026	0.0001	3.5e-005	1.01	03/17/10	03/19/10	J, Ba
OCDF	EPA-5 1613B	76166	0.0000013	0.0001	1.1e-005	1.01	03/17/10	03/19/10	J, Ba
Total HpCDD	EPA-5 1613B	76166	0.0000021	0.00005	1e-005	1.01	03/17/10	03/19/10	J, Q, Ba
Total HpCDF	EPA-5 1613B	76166	0.0000092	0.00005	9.9e-006	1.01	03/17/10	03/19/10	J, Q, Ba
Total HxCDD	EPA-5 1613B	76166	0.0000014	0.00005	4.1e-006	1.01	03/17/10	03/19/10	J, Q, Ba
Total HxCDF	EPA-5 1613B	76166	0.0000021	0.00005	8.3e-006	1.01	03/17/10	03/19/10	J, Q, Ba
Total PeCDD	EPA-5 1613B	76166	0.0000093	0.00005	4.1e-006	1.01	03/17/10	03/19/10	J, Q
Total PeCDF	EPA-5 1613B	76166	0.0000055	0.00005	3.4e-006	1.01	03/17/10	03/19/10	J
Total TCDD	EPA-5 1613B	76166	0.0000002	0.00001	ND	1.01	03/17/10	03/19/10	
Total TCDF	EPA-5 1613B	76166	0.0000055	0.00001	1.2e-006	1.01	03/17/10	03/19/10	J

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	71 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	75 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	65 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	65 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	63 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	59 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	62 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	59 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	59 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	61 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	62 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	60 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	56 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	62 %
Surrogate: 13C-OCDD (17-157%)	36 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	93 %

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Debby Wilson For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	67296	0.21	0.693	0.678	1	03/10/10	03/12/10	Jb

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	70220	1.6	3	0.82	1	03/11/10	03/14/10	U
Gross Beta	EPA 900.0 MOD	70220	1.6	4	2.2	1	03/11/10	03/14/10	Jb

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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	69127	15	20	0.9	1	03/10/10	03/20/10	U
Potassium 40	EPA 901.1 MOD	69127	220	NA	-30	1	03/10/10	03/20/10	U

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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	69101	0.05	1	0.104	1	03/10/10	04/02/10	Jb

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Debby Wilson For Heather Clark
Project Manager

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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	69102	0.51	1	0.25	1	03/10/10	03/19/10	U

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Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	69104	1.5	3	0.42	1	03/10/10	03/20/10	U

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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)					Sampled: 03/07/10				
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	77060	150	500	-54	1	03/18/10	03/24/10	U

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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 008 (COMPOSITE) (ITC0792-02) - Water					
EPA 300.0	2	03/07/2010 11:38	03/08/2010 03:45	03/08/2010 14:00	03/08/2010 14:24

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Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1956 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C1956-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/16/2010 (10C1956-BS1)											
Hexane Extractable Material (Oil & Grease)	19.7	5.0	1.4	mg/l	20.0		98	78-114			MNR1
LCS Dup Analyzed: 03/16/2010 (10C1956-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.4	5.0	1.4	mg/l	20.0		97	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1320 Extracted: 03/10/10											
Blank Analyzed: 03/11/2010-03/12/2010 (10C1320-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	5.0	ug/l							
LCS Analyzed: 03/11/2010-03/12/2010 (10C1320-BS1)											
Antimony	76.5	2.0	0.30	ug/l	80.0		96	85-115			
Cadmium	79.4	1.0	0.10	ug/l	80.0		99	85-115			
Copper	78.4	2.0	0.50	ug/l	80.0		98	85-115			
Lead	80.3	1.0	0.20	ug/l	80.0		100	85-115			
Selenium	79.9	2.0	0.50	ug/l	80.0		100	85-115			
Thallium	79.7	1.0	0.20	ug/l	80.0		100	85-115			
Zinc	76.5	20	5.0	ug/l	80.0		96	85-115			
Matrix Spike Analyzed: 03/11/2010-03/12/2010 (10C1320-MS1)											
						Source: ITC0790-03					
Antimony	78.5	2.0	0.30	ug/l	80.0	0.353	98	70-130			
Cadmium	81.1	1.0	0.10	ug/l	80.0	ND	101	70-130			
Copper	79.6	2.0	0.50	ug/l	80.0	1.76	97	70-130			
Lead	75.7	1.0	0.20	ug/l	80.0	0.316	94	70-130			
Selenium	80.3	2.0	0.50	ug/l	80.0	ND	100	70-130			
Thallium	75.5	1.0	0.20	ug/l	80.0	ND	94	70-130			
Zinc	76.9	20	5.0	ug/l	80.0	ND	96	70-130			
Matrix Spike Analyzed: 03/11/2010-03/12/2010 (10C1320-MS2)											
						Source: ITC0791-03					
Antimony	78.9	2.0	0.30	ug/l	80.0	0.397	98	70-130			
Cadmium	81.3	1.0	0.10	ug/l	80.0	ND	102	70-130			
Copper	79.8	2.0	0.50	ug/l	80.0	1.36	98	70-130			
Lead	75.1	1.0	0.20	ug/l	80.0	0.231	94	70-130			
Selenium	82.0	2.0	0.50	ug/l	80.0	0.542	102	70-130			
Thallium	76.2	1.0	0.20	ug/l	80.0	ND	95	70-130			
Zinc	74.1	20	5.0	ug/l	80.0	ND	93	70-130			

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Sampled: 03/07/10
Received: 03/08/10

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1320 Extracted: 03/10/10											
Matrix Spike Dup Analyzed: 03/11/2010-03/12/2010 (10C1320-MSD1)						Source: ITC0790-03					
Antimony	79.1	2.0	0.30	ug/l	80.0	0.353	98	70-130	0.7	20	
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	4	20	
Copper	79.1	2.0	0.50	ug/l	80.0	1.76	97	70-130	0.6	20	
Lead	73.6	1.0	0.20	ug/l	80.0	0.316	92	70-130	3	20	
Selenium	82.2	2.0	0.50	ug/l	80.0	ND	103	70-130	2	20	
Thallium	73.8	1.0	0.20	ug/l	80.0	ND	92	70-130	2	20	
Zinc	75.4	20	5.0	ug/l	80.0	ND	94	70-130	2	20	

Batch: 10C2010 Extracted: 03/16/10

Blank Analyzed: 03/16/2010 (10C2010-BLK1)

Mercury	ND	0.20	0.10	ug/l
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LCS Analyzed: 03/16/2010 (10C2010-BS1)

Mercury	8.36	0.20	0.10	ug/l	8.00	105	85-115
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Matrix Spike Analyzed: 03/16/2010 (10C2010-MS1)

Source: ITC1476-01

Mercury	8.41	0.20	0.10	ug/l	8.00	ND	105	70-130
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Matrix Spike Dup Analyzed: 03/16/2010 (10C2010-MSD1)

Source: ITC1476-01

Mercury	8.38	0.20	0.10	ug/l	8.00	ND	105	70-130	0.5	20
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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1740 Extracted: 03/14/10											
Blank Analyzed: 03/16/2010 (10C1740-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	0.692	2.0	0.50	ug/l							Ja
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	5.0	ug/l							
LCS Analyzed: 03/16/2010 (10C1740-BS1)											
Antimony	84.4	2.0	0.30	ug/l	80.0		105	85-115			
Cadmium	81.0	1.0	0.10	ug/l	80.0		101	85-115			
Copper	82.0	2.0	0.50	ug/l	80.0		103	85-115			
Lead	83.1	1.0	0.20	ug/l	80.0		104	85-115			
Selenium	82.0	2.0	0.50	ug/l	80.0		103	85-115			
Thallium	82.8	1.0	0.20	ug/l	80.0		103	85-115			
Zinc	81.8	20	5.0	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 03/16/2010 (10C1740-MS1) Source: ITC1128-01											
Antimony	85.2	2.0	0.30	ug/l	80.0	ND	107	70-130			
Cadmium	77.6	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	76.4	2.0	0.50	ug/l	80.0	1.11	94	70-130			
Lead	78.0	1.0	0.20	ug/l	80.0	ND	97	70-130			
Selenium	95.3	2.0	0.50	ug/l	80.0	13.5	102	70-130			
Thallium	78.4	1.0	0.20	ug/l	80.0	ND	98	70-130			
Zinc	78.5	20	5.0	ug/l	80.0	ND	98	70-130			
Matrix Spike Analyzed: 03/16/2010 (10C1740-MS2) Source: ITC1128-02											
Antimony	85.1	2.0	0.30	ug/l	80.0	ND	106	70-130			
Cadmium	77.7	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	77.2	2.0	0.50	ug/l	80.0	2.21	94	70-130			
Lead	76.7	1.0	0.20	ug/l	80.0	ND	96	70-130			
Selenium	102	2.0	0.50	ug/l	80.0	20.5	102	70-130			
Thallium	76.9	1.0	0.20	ug/l	80.0	ND	96	70-130			
Zinc	77.1	20	5.0	ug/l	80.0	ND	96	70-130			

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Report Number: ITC0792

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1740 Extracted: 03/14/10											
Matrix Spike Dup Analyzed: 03/16/2010 (10C1740-MSD1)						Source: ITC1128-01					
Antimony	86.0	2.0	0.30	ug/l	80.0	ND	108	70-130	0.9	20	
Cadmium	79.0	1.0	0.10	ug/l	80.0	ND	99	70-130	2	20	
Copper	77.6	2.0	0.50	ug/l	80.0	1.11	96	70-130	2	20	
Lead	78.3	1.0	0.20	ug/l	80.0	ND	98	70-130	0.4	20	
Selenium	97.0	2.0	0.50	ug/l	80.0	13.5	104	70-130	2	20	
Thallium	77.9	1.0	0.20	ug/l	80.0	ND	97	70-130	0.6	20	
Zinc	79.4	20	5.0	ug/l	80.0	ND	99	70-130	1	20	

Batch: 10C2011 Extracted: 03/16/10

Blank Analyzed: 03/16/2010 (10C2011-BLK1)

Mercury	ND	0.20	0.10	ug/l							
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LCS Analyzed: 03/16/2010 (10C2011-BS1)

Mercury	8.65	0.20	0.10	ug/l	8.00		108	85-115			
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Matrix Spike Analyzed: 03/16/2010 (10C2011-MS1)

Source: ITC1128-01

Mercury	8.49	0.20	0.10	ug/l	8.00	ND	106	70-130			
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Matrix Spike Dup Analyzed: 03/16/2010 (10C2011-MSD1)

Source: ITC1128-01

Mercury	8.36	0.20	0.10	ug/l	8.00	ND	104	70-130	2	20	
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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0921 Extracted: 03/08/10											
Blank Analyzed: 03/08/2010 (10C0921-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 03/08/2010 (10C0921-BS1)											
Chloride	4.95	0.50	0.25	mg/l	5.00		99	90-110			
Nitrate-N	1.11	0.11	0.060	mg/l	1.13		98	90-110			
Nitrite-N	1.51	0.15	0.090	mg/l	1.52		100	90-110			
Sulfate	10.3	0.50	0.20	mg/l	10.0		103	90-110			
Matrix Spike Analyzed: 03/08/2010 (10C0921-MS1) Source: ITC0793-02											
Chloride	12.9	0.50	0.25	mg/l	5.00	7.84	102	80-120			
Nitrate-N	1.40	0.11	0.060	mg/l	1.13	0.258	101	80-120			
Nitrite-N	1.58	0.15	0.090	mg/l	1.52	ND	104	80-120			
Sulfate	22.1	0.50	0.20	mg/l	10.0	11.7	103	80-120			
Matrix Spike Analyzed: 03/08/2010 (10C0921-MS2) Source: ITC0878-02											
Chloride	11.8	0.50	0.25	mg/l	5.00	6.58	104	80-120			
Nitrate-N	4.50	0.11	0.060	mg/l	1.13	3.38	99	80-120			
Nitrite-N	1.59	0.15	0.090	mg/l	1.52	ND	105	80-120			
Sulfate	31.2	0.50	0.20	mg/l	10.0	20.3	109	80-120			
Matrix Spike Dup Analyzed: 03/08/2010 (10C0921-MSD1) Source: ITC0793-02											
Chloride	12.9	0.50	0.25	mg/l	5.00	7.84	101	80-120	0.07	20	
Nitrate-N	1.37	0.11	0.060	mg/l	1.13	0.258	98	80-120	3	20	
Nitrite-N	1.58	0.15	0.090	mg/l	1.52	ND	104	80-120	0.1	20	
Sulfate	22.0	0.50	0.20	mg/l	10.0	11.7	103	80-120	0.1	20	

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Debby Wilson For Heather Clark
 Project Manager

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 618 Michillinda Avenue, Suite 200
 Arcadia, CA 91007
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Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 10C1047 Extracted: 03/09/10</u>											
Blank Analyzed: 03/09/2010 (10C1047-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/09/2010 (10C1047-BS1)											
Perchlorate	24.0	4.0	0.90	ug/l	25.0		96	85-115			
Matrix Spike Analyzed: 03/09/2010 (10C1047-MS1)											
						Source: ITC0877-01					
Perchlorate	30.3	4.0	0.90	ug/l	25.0	6.15	97	80-120			
Matrix Spike Dup Analyzed: 03/09/2010 (10C1047-MSD1)											
						Source: ITC0877-01					
Perchlorate	30.6	4.0	0.90	ug/l	25.0	6.15	98	80-120	0.7	20	
<u>Batch: 10C1299 Extracted: 03/10/10</u>											
Blank Analyzed: 03/10/2010 (10C1299-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
LCS Analyzed: 03/10/2010 (10C1299-BS1)											
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/10/2010 (10C1299-MS1)											
						Source: ITC0421-01					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120			
Matrix Spike Dup Analyzed: 03/10/2010 (10C1299-MSD1)											
						Source: ITC0421-01					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120	0	15	
<u>Batch: 10C1348 Extracted: 03/11/10</u>											
Blank Analyzed: 03/11/2010 (10C1348-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1348 Extracted: 03/11/10											
LCS Analyzed: 03/11/2010 (10C1348-BS1)											
Total Dissolved Solids	998	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/11/2010 (10C1348-DUP1)											
Total Dissolved Solids	293	10	1.0	mg/l		290			1	10	

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Qualifiers
Batch: 76166 Extracted: 03/17/10										
Blank Analyzed: 03/18/2010 (G0C170000166B)					Source:					
1,2,3,4,6,7,8-HpCDD	1.1e-005	0.00005	0.000002	ug/L				-		J, Q
1,2,3,4,6,7,8-HpCDF	1.5e-006	0.00005	0.00000059	ug/L				-		J, Q
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000011	ug/L				-		
1,2,3,4,7,8-HxCDD	1.2e-006	0.00005	0.000001	ug/L				-		J
1,2,3,4,7,8-HxCDF	9.6e-007	0.00005	0.0000003	ug/L				-		J, Q
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000009	ug/L				-		
1,2,3,6,7,8-HxCDF	2.5e-007	0.00005	0.00000028	ug/L				-		J, Q
1,2,3,7,8,9-HxCDD	1.3e-006	0.00005	0.00000079	ug/L				-		J
1,2,3,7,8,9-HxCDF	3.5e-007	0.00005	0.00000032	ug/L				-		J, Q
1,2,3,7,8-PeCDD	ND	0.00005	0.00000072	ug/L				-		
1,2,3,7,8-PeCDF	ND	0.00005	0.00000052	ug/L				-		
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000026	ug/L				-		
2,3,4,7,8-PeCDF	ND	0.00005	0.00000056	ug/L				-		
2,3,7,8-TCDD	ND	0.00001	0.00000053	ug/L				-		
2,3,7,8-TCDF	ND	0.00001	0.00000056	ug/L				-		
OCDD	6.1e-005	0.0001	0.0000018	ug/L				-		J
OCDF	8.5e-006	0.0001	0.000001	ug/L				-		J
Total HpCDD	5e-005	0.00005	0.000002	ug/L				-		J, Q
Total HpCDF	4.4e-006	0.00005	0.0000008	ug/L				-		J, Q
Total HxCDD	5.9e-006	0.00005	0.00000089	ug/L				-		J
Total HxCDF	1.9e-006	0.00005	0.00000029	ug/L				-		J, Q
Total PeCDD	ND	0.00005	0.00000072	ug/L				-		
Total PeCDF	ND	0.00005	0.00000052	ug/L				-		
Total TCDD	ND	0.00001	0.00000053	ug/L				-		
Total TCDF	ND	0.00001	0.00000056	ug/L				-		
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018			ug/L	0.00200		92	23-140		
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.002			ug/L	0.00200		100	28-143		
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.00200		82	26-138		
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0016			ug/L	0.00200		81	32-141		
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0016			ug/L	0.00200		80	26-152		
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0015			ug/L	0.00200		77	28-130		
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0016			ug/L	0.00200		79	26-123		
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0016			ug/L	0.00200		79	29-147		
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0015			ug/L	0.00200		76	25-181		
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0015			ug/L	0.00200		73	24-185		

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008
Report Number: ITC0792

Sampled: 03/07/10
Received: 03/08/10

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 76166 Extracted: 03/17/10											
Blank Analyzed: 03/18/2010 (G0C170000166B)											
Source:											
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0016			ug/L	0.00200		81	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0015			ug/L	0.00200		75	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0013			ug/L	0.00200		67	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0014			ug/L	0.00200		71	24-169			
Surrogate: 13C-OCDD	0.0027			ug/L	0.00400		68	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00074			ug/L	0.000800		92	35-197			
LCS Analyzed: 03/18/2010 (G0C170000166C)											
Source:											
1,2,3,4,6,7,8-HpCDD	0.00105	0.00005	0.0000077	ug/L	0.00100		105	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00104	0.00005	0.0000049	ug/L	0.00100		104	82-122			Ba
1,2,3,4,7,8,9-HpCDF	0.00119	0.00005	0.0000082	ug/L	0.00100		119	78-138			
1,2,3,4,7,8-HxCDD	0.00112	0.00005	0.00000098	ug/L	0.00100		112	70-164			Ba
1,2,3,4,7,8-HxCDF	0.00111	0.00005	0.0000039	ug/L	0.00100		111	72-134			Ba
1,2,3,6,7,8-HxCDD	0.00107	0.00005	0.00000092	ug/L	0.00100		107	76-134			
1,2,3,6,7,8-HxCDF	0.00108	0.00005	0.0000037	ug/L	0.00100		108	84-130			Ba
1,2,3,7,8,9-HxCDD	0.00106	0.00005	0.00000079	ug/L	0.00100		106	64-162			Ba
1,2,3,7,8,9-HxCDF	0.00109	0.00005	0.0000043	ug/L	0.00100		109	78-130			Ba
1,2,3,7,8-PeCDD	0.00108	0.00005	0.0000027	ug/L	0.00100		108	70-142			
1,2,3,7,8-PeCDF	0.00108	0.00005	0.0000028	ug/L	0.00100		108	80-134			
2,3,4,6,7,8-HxCDF	0.00108	0.00005	0.0000034	ug/L	0.00100		108	70-156			
2,3,4,7,8-PeCDF	0.00114	0.00005	0.0000031	ug/L	0.00100		114	68-160			
2,3,7,8-TCDD	0.000231	0.00001	0.00000078	ug/L	0.000200		116	67-158			
2,3,7,8-TCDF	0.00022	0.00001	0.00000093	ug/L	0.000200		110	75-158			
OCDD	0.00256	0.0001	0.0000049	ug/L	0.00200		128	78-144			Ba
OCDF	0.00248	0.0001	0.0000041	ug/L	0.00200		124	63-170			Ba
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00145			ug/L	0.00200		73	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00157			ug/L	0.00200		78	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00134			ug/L	0.00200		67	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00124			ug/L	0.00200		62	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00124			ug/L	0.00200		62	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00129			ug/L	0.00200		65	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00127			ug/L	0.00200		64	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00127			ug/L	0.00200		64	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00126			ug/L	0.00200		63	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00119			ug/L	0.00200		60	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00128			ug/L	0.00200		64	22-176			

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 76166 Extracted: 03/17/10											
LCS Analyzed: 03/18/2010 (G0C170000166C)											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00119			ug/L	0.00200		60	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00112			ug/L	0.00200		56	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00119			ug/L	0.00200		60	22-152			
Surrogate: 13C-OCDD	0.00151			ug/L	0.00400		38	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000752			ug/L	0.000800		94	31-191			

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 Project Manager

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

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Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 67296 Extracted: 03/10/10											
Matrix Spike Dup Analyzed: 03/12/2010 (F0B230452001D)						Source: F0B230452001					
Total Uranium	26.9	0.7	0.2	pCi/L	27.7	0.677	95	62-150	4	20	
Matrix Spike Analyzed: 03/12/2010 (F0B230452001S)						Source: F0B230452001					
Total Uranium	28.1	0.7	0.2	pCi/L	27.7	0.677	99	62-150			
Blank Analyzed: 03/12/2010 (F0C080000296B)						Source:					
Total Uranium	0.315	0.693	0.21	pCi/L				-			Jb
LCS Analyzed: 03/12/2010 (F0C080000296C)						Source:					
Total Uranium	5.62	0.69	0.21	pCi/L	5.54		101	90-120			

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METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 70220 Extracted: 03/11/10											
Matrix Spike Analyzed: 03/14/2010 (F0C090509001S)						Source: F0C090509001					
Gross Alpha	47.4	3	2.6	pCi/L	59.9	0.3	79	35-150			
Gross Beta	87	4	2.2	pCi/L	82.4	3.9	101	54-150			
Duplicate Analyzed: 03/14/2010 (F0C090509001X)						Source: F0C090509001					
Gross Alpha	1.9	3	2.1	pCi/L		0.3		-			U
Gross Beta	4.8	4	2.1	pCi/L		3.9		-			U
Blank Analyzed: 03/14/2010 (F0C110000220B)						Source:					
Gross Alpha	-0.16	3	0.79	pCi/L				-			U
Gross Beta	0.37	4	1.5	pCi/L				-			U
LCS Analyzed: 03/14/2010 (F0C110000220C)						Source:					
Gross Alpha	31.9	3	0.8	pCi/L	49.4		64	62-134			
Gross Beta	53	4	1.5	pCi/L	67.9		78	58-133			

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 Project Manager

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Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69127 Extracted: 03/10/10											
Duplicate Analyzed: 03/20/2010 (F0C090509001X)						Source: F0C090509001					
Cesium 137	-0.3	20	13	pCi/L		4.5		-			U
Potassium 40	-50	NA	220	pCi/L		-50		-			U
Blank Analyzed: 03/21/2010 (F0C100000127B)						Source:					
Cesium 137	1.9	20	14	pCi/L				-			U
Potassium 40	12	NA	210	pCi/L				-			U
LCS Analyzed: 03/21/2010 (F0C100000127C)						Source:					
Americium 241	131000	NA	500	pCi/L	141000		93	87-110			
Cobalt 60	79200	NA	200	pCi/L	87800		90	89-110			
Cesium 137	48400	20	200	pCi/L	53100		91	90-110			

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Sampled: 03/07/10
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METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69101 Extracted: 03/10/10											
Blank Analyzed: 04/02/2010 (F0C100000101B)											
Radium (226)	0.025	1	0.051	pCi/L				-			U
LCS Analyzed: 04/02/2010 (F0C100000101C)											
Radium (226)	10.6	1	0.05	pCi/L	11.3		94	68-136			
LCS Dup Analyzed: 04/02/2010 (F0C100000101L)											
Radium (226)	10.1	1	0.05	pCi/L	11.3		89	68-136	6	40	

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 Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69102 Extracted: 03/10/10											
Blank Analyzed: 03/19/2010 (F0C100000102B)											
Radium 228	0.19	1	0.39	pCi/L				-			U
LCS Analyzed: 03/19/2010 (F0C100000102C)											
Radium 228	7.41	1	0.36	pCi/L	6.37		116	60-142			
LCS Dup Analyzed: 03/19/2010 (F0C100000102L)											
Radium 228	7.87	1	0.42	pCi/L	6.37		124	60-142	6	40	

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

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69104 Extracted: 03/10/10											
Blank Analyzed: 03/20/2010 (F0C100000104B)											
Strontium 90	0.01	3	0.43	pCi/L				-			U
LCS Analyzed: 03/20/2010 (F0C100000104C)											
Strontium 90	6.64	3	0.4	pCi/L	6.79		98	80-130			
LCS Dup Analyzed: 03/20/2010 (F0C100000104L)											
Strontium 90	6.75	3	0.39	pCi/L	6.79		99	80-130	2	40	

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 618 Michillinda Avenue, Suite 200
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Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 77060 Extracted: 03/18/10											
Duplicate Analyzed: 03/23/2010 (F0C090509001X)						Source: F0C090509001					
Tritium	-26	500	150	pCi/L		34	-				U
Matrix Spike Analyzed: 03/24/2010 (F0C090512001S)						Source: F0C090512001					
Tritium	4170	500	150	pCi/L	4510	-17	93	62-147			
Blank Analyzed: 03/23/2010 (F0C180000060B)						Source:					
Tritium	83	500	150	pCi/L							U
LCS Analyzed: 03/23/2010 (F0C180000060C)						Source:					
Tritium	4450	500	150	pCi/L	4510		99	85-112			

TestAmerica Irvine

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Report Number: ITC0792

Sampled: 03/07/10
 Received: 03/08/10

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
ITC0792-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.38	4.7	15

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITC0792-02	Antimony-200.8	Antimony	ug/l	0.35	2.0	6
ITC0792-02	Cadmium-200.8	Cadmium	ug/l	0.028	1.0	3.1
ITC0792-02	Chloride - 300.0	Chloride	mg/l	9.30	0.50	150
ITC0792-02	Copper-200.8	Copper	ug/l	1.27	2.0	14
ITC0792-02	Lead-200.8	Lead	ug/l	0.38	1.0	5.2
ITC0792-02	Nitrate-N, 300.0	Nitrate-N	mg/l	0.34	0.11	8
ITC0792-02	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITC0792-02	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.34	0.26	8
ITC0792-02	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
ITC0792-02	Selenium-200.8	Selenium	ug/l	0.59	2.0	5
ITC0792-02	Sulfate-300.0	Sulfate	mg/l	7.22	0.50	300
ITC0792-02	TDS - SM2540C	Total Dissolved Solids	mg/l	190	10	950
ITC0792-02	Thallium-200.8	Thallium	ug/l	0.040	1.0	2
ITC0792-02	Zinc-200.8	Zinc	ug/l	0.036	20	160

TestAmerica Irvine

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Report Number: ITC0792

Sampled: 03/07/10
Received: 03/08/10

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
Ba	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J	Estimated result. Result is less than the reporting limit.
Ja	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.
Jb	Result is greater than sample detection limit but less than stated reporting limit.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
Q	Estimated maximum possible concentration (EMPC).
U	Result is less than the sample detection limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10
Received: 03/08/10

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 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
SM2540C	Water	X	
SM4500NH3-C	Water	X	X

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

Subcontracted Laboratories

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITC0792-02

Method Performed: EPA 900.0 MOD
Samples: ITC0792-02

Method Performed: EPA 901.1 MOD
Samples: ITC0792-02

Method Performed: EPA 903.0 MOD
Samples: ITC0792-02

Method Performed: EPA 904 MOD
Samples: ITC0792-02

Method Performed: EPA 905 MOD
Samples: ITC0792-02

Method Performed: EPA 906.0 MOD
Samples: ITC0792-02

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITC0792

Sampled: 03/07/10

Received: 03/08/10

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B

Samples: ITC0792-02

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITC0792

MWH-Pasadena Boeing

Lot #: FOC090516

Kathleen Robb

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

TESTAMERICA LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "Lynn Fussner", is positioned above the printed name and title.

Lynn Fussner
Project Manager

April 5, 2010

Case Narrative
LOT NUMBER: F0C090516

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 9, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

Observations/Nonconformances

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

Radium-226 by GFPC (EPA 903.0 MOD)

There was insufficient sample volume to perform MS/MSD analysis. A LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F0C090516 (1): ITC0792-02

Radium-228 by GFPC (EPA 904 MOD)

There was insufficient sample volume to perform MS/MSD analysis. A LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F0C090516 (1): ITC0792-02

Strontium 90 by GFPC (EPA 905 MOD)

The strontium carrier is lower than 40% for Strontium 90.

Affected Samples:

F0C090516 (1): ITC0792-02

METHODS SUMMARY

FOC090516

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Radium-226 by GFPC	EPA 903.0 MOD	
Radium-228 by GFPC	EPA 904 MOD	
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

FOC090516

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LWFXD	001	ITC0792-02	03/07/10	11:38

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: ITC0792-02

Radiochemistry

Lab Sample ID: FOC090516-001
 Work Order: LWF XD
 Matrix: WATER

Date Collected: 03/07/10 1138
 Date Received: 03/09/10 0915

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 # 0069127	Yld %
Cesium 137	0.9	U	8.3	20.0	15	03/10/10	03/20/10
Potassium 40	-30	U	220		220	03/10/10	03/20/10
Gross Alpha/Beta EPA 900							
				pCi/L		Batch # 0070220	Yld %
Gross Alpha	0.82	U	0.99	3.00	1.6	03/11/10	03/14/10
Gross Beta	2.2	J	1.1	4.0	1.6	03/11/10	03/14/10
SR-90 BY GFPC EPA-905 MOD							
				pCi/L		Batch # 0069104	Yld % 24
Strontium 90	0.42	U	0.90	3.00	1.5	03/10/10	03/20/10
TRITIUM (Distill) by EPA 906.0 MOD							
				pCi/L		Batch # 0077060	Yld %
Tritium	-54	U	66	500	150	03/18/10	03/24/10
Total Uranium by KPA ASTM 5174-91							
				pCi/L		Batch # 0067296	Yld %
Total Uranium	0.678	J	0.085	0.693	0.21	03/10/10	03/12/10
Radium 226 by EPA 903.0 MOD							
				pCi/L		Batch # 0069101	Yld % 83
Radium (226)	0.104	J	0.048	1.00	0.050	03/10/10	04/02/10
Radium 228 by GFPC EPA 904 MOD							
				pCi/L		Batch # 0069102	Yld % 77
Radium 228	0.25	U	0.31	1.00	0.51	03/10/10	03/19/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC.

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

U Result is less than the sample detection limit.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: FOC090516
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Total Uranium by KPA ASTM 5174-91							
Total Uranium	0.315	J	0.039	0.693	0.21	03/10/10	FOC080000-296B 03/12/10
Radium 226 by EPA 903.0 MOD							
Radium (226)	0.025	U	0.031	1.00	0.051	03/10/10	FOC100000-101B 04/02/10
Radium 228 by GFPC EPA 904 MOD							
Radium 228	0.19	U	0.24	1.00	0.39	03/10/10	FOC100000-102B 03/19/10
SR-90 BY GFPC EPA-905 MOD							
Strontium 90	0.01	U	0.24	3.00	0.43	03/10/10	FOC100000-104B 03/20/10
Gamma Cs-137 & Hits by EPA 901.1 MOD							
Cesium 137	1.9	U	7.6	20.0	14	03/10/10	FOC100000-127B 03/21/10
Potassium 40	12	U	93		210	03/10/10	03/21/10
Gross Alpha/Beta EPA 900							
Gross Alpha	-0.16	U	0.35	3.00	0.79	03/11/10	FOC110000-220B 03/14/10
Gross Beta	0.37	U	0.91	4.00	1.5	03/11/10	03/14/10
TRITIUM (Distill) by EPA 906.0 MOD							
Tritium	83	U	94	500	150	03/18/10	FOC180000-060B 03/23/10

NOTE (S)

Data are incomplete without the case narrative.

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

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

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: FOC090516
 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			F0C080000-296C
Total Uranium	27.7	28.6	3.5	0.2		103	(90 - 120)
	Batch #:	0067296		Analysis Date:	03/12/10		
Total Uranium by KPA ASTM 5174-91			pCi/L	5174-91			F0C080000-296C
Total Uranium	5.54	5.62	0.58	0.21		101	(90 - 120)
	Batch #:	0067296		Analysis Date:	03/12/10		
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	901.1 MOD			F0C100000-127C
Americium 241	141000	131000	10000	500		93	(87 - 110)
Cesium 137	53100	48400	2800	200		91	(90 - 110)
Cobalt 60	87800	79200	4400	200		90	(89 - 110)
	Batch #:	0069127		Analysis Date:	03/21/10		
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F0C110000-220C
Gross Alpha	49.4	31.9	3.8	0.8		64	(62 - 134)
	Batch #:	0070220		Analysis Date:	03/14/10		
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F0C110000-220C
Gross Beta	67.9	53.0	4.7	1.5		78	(58 - 133)
	Batch #:	0070220		Analysis Date:	03/14/10		
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			F0C180000-060C
Tritium	4510	4450	470	150		99	(85 - 112)
	Batch #:	0077060		Analysis Date:	03/23/10		

NOTE(S)

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

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0C090516
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Radium 226 by EPA	903.0 MOD		pCi/L	903.0 MOD			FOC100000-101C
Radium (226)	11.3	10.6	0.92	106	94	(68 - 136)	
Spk 2	11.3	10.1	0.87	101	89	(68 - 136)	6 %RPD
	Batch #:	0069101		Analysis Date:	04/02/10		
Radium 228 by GFPC EPA	904 MOD		pCi/L	904 MOD			FOC100000-102C
Radium 228	6.37	7.41	0.83	99	116	(60 - 142)	
Spk 2	6.37	7.87	0.90	85	124	(60 - 142)	6 %RPD
	Batch #:	0069102		Analysis Date:	03/19/10		
SR-90 BY GFPC EPA	905 MOD		pCi/L	905 MOD			FOC100000-104C
Strontium 90	6.79	6.64	0.80	87	98	(80 - 130)	
Spk 2	6.79	6.75	0.80	90	99	(80 - 130)	2 %RPD
	Batch #:	0069104		Analysis Date:	03/20/10		

NOTE(S)

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: FOC090512
 Matrix: WATER

Date Sampled: 03/07/10
 Date Received: 03/09/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
TRITIUM (Distill) by EPA	906.0	MOD	pCi/L		906.0	MOD			FOC090512-001
Tritium	4510	4170	440		-17	74		93	(62 - 147)
	Batch #:	0077060		Analysis Date:		03/24/10			
Gross Alpha/Beta EPA	900		pCi/L		900.0	MOD			FOC090509-001
Gross Alpha	59.9	47.4	6.6		0.3	1.1		79	(35 - 150)
	Batch #:	0070220		Analysis Date:		03/14/10			
Gross Alpha/Beta EPA	900		pCi/L		900.0	MOD			FOC090509-001
Gross Beta	82.4	87.0	7.4		3.9	1.4		101	(54 - 150)
	Batch #:	0070220		Analysis Date:		03/14/10			

NOTE (S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: FOB230452
 Matrix: WATER

Date Sampled: 02/20/10 1349
 Date Received: 02/23/10 0910

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2σ+/-)	Spike Yld	SAMPLE Result	Total Uncert. (2σ+/-)	QC Sample ID		QC Control Limits
							% Yld	%Rec	
Total Uranium by KPA ASTM 5			pCi/L	5174-91		FOB230452-001			
Total Uranium	27.7	28.1	3.4	0.677	J	0.074	99		(62 - 150)
Spk2	27.7	26.9	3.3	0.677	J	0.074	95		(62 - 150)
							Precision:	4	%RPD
Batch #:			0067296	Analysis date:		03/12/10			

NOTE (S)

Data are incomplete without the case narrative.

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

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: FOC090516
 Matrix: WATER

Date Sampled: 03/07/10
 Date Received: 03/09/10

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result	Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD			FOC090509-001
Cesium 137	4.5	U	9.4		-0.3	U	7.3	232 %RPD
Potassium 40	-50	U	360		-50	U	200	8 %RPD
	Batch #:		0069127 (Sample)		0069127 (Duplicate)			
Gross Alpha/Beta EPA 900				pCi/L	900.0 MOD			FOC090509-001
Gross Alpha	0.3	U	1.1		1.9	U	1.5	143 %RPD
Gross Beta	3.9	J	1.4		4.8		1.5	22 %RPD
	Batch #:		0070220 (Sample)		0070220 (Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD			FOC090509-001
Tritium	34	U	87		-26	U	72	1480 %RPD
	Batch #:		0077060 (Sample)		0077060 (Duplicate)			

NOTE(S)

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

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

U Result is less than the sample detection limit.

SUBCONTRACT ORDER

TestAmerica Irvine

ITC0792

*cut
342*

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: ITC0792-02 (Outfall 008 (COMPOSITE) - Water)

Sampled: 03/07/10 11:38

EDD + Level 4	N/A	03/17/10	04/04/10 11:38	\$0.00	0%	Excel EDD email to pm, include Std logs for Lvl IV
Gamma Spec-O	mg/kg	03/17/10	03/07/11 11:38	\$200.00	50%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/17/10	09/03/10 11:38	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/17/10	09/03/10 11:38	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 226-O	pCi/L	03/17/10	03/07/11 11:38	\$88.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 228-O	pCi/L	03/17/10	03/07/11 11:38	\$84.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/17/10	03/07/11 11:38	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/17/10	03/07/11 11:38	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/17/10	03/07/11 11:38	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (H) 500 mL Amber (I)



Released By

3/8/10
Date/Time

Date/Time

Fed-Ex

Received By

Received By

3/8/10 1700

Date/Time

Date/Time

3.9.18 8915

Page 1 of 1

Client Name/Address:				Project:				ANALYSIS REQUIRED										Comments
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007				Boeing-SSFL NPDES Routine Outfall 008 COMPOSITE Stormwater at Happy Valley														
Test America Contact: Joseph Doak				Project Manager: Bronwyn Kelly														
Phone Number: (626) 568-6691				Fax Number: (626) 568-6515														
Sampler: SD/AN																		
Sample Description	Sample Matrix	Container Type	# of Conl	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	TCDD (and all congeners)	Cf, 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, Se, Zn	Nitrate-N, Nitrite-N	Ammonia-N (350.2)			
Outfall 008	W	1L Poly	1	3/7/10-1138	HNO ₃	2A	X											
Outfall 008 Dup	W	1L Poly	1		HNO ₃	2B	X											
Outfall 008	W	1L Amber	2		None	3A, 3B	X											
Outfall 008	W	500 mL Poly	2		None	4A, 4B	X											
Outfall 008	W	500 mL Poly	1		None	5	X											
Outfall 008	W	2.5 Gal Cube	1		None	6A												
Outfall 008	W	500 ml Amber	1		None	6B												
Outfall 008	W	1 Gal Poly	1		None	7												
Outfall 008	W	1L Poly	1		None	8							X					
Outfall 008	W	500 mL Poly	1		None	9							X					
Outfall 008	W	500 mL Poly	1		H ₂ SO ₄	10								X				
COC Page 2 of 2 are the composite samples for Outfall 008 for this storm event.																		
These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.																		
Relinquished By: <i>[Signature]</i>				Received By: <i>[Signature]</i>				Date/Time: 3/7/10 1415										Turn-around time: (Check) 24 Hour: <input checked="" type="checkbox"/> 72 Hour: <input type="checkbox"/> 48 Hour: <input type="checkbox"/> 5 Day: <input type="checkbox"/> 10 Day: <input checked="" type="checkbox"/> Normal: <input type="checkbox"/>
Relinquished By: <i>[Signature]</i>				Received By: <i>[Signature]</i>				Date/Time: 3/7/10 1645										Sample integrity: (Check) Intact: <input type="checkbox"/> On Ice: <input checked="" type="checkbox"/>
Relinquished By: <i>[Signature]</i>				Received By: <i>[Signature]</i>				Date/Time: <i>[Blank]</i>										Data Requirements: (Check) No Level IV: <input type="checkbox"/> All Level IV: <input type="checkbox"/> NPDES Level IV: <input checked="" type="checkbox"/>

5*

Lot #(s): FOC090509:523
518; 526
516
518
526

CONDITION UPON RECEIPT FORM

Client: TA Irvine
 Quote No: 85044, 77635
 COC/RFA No: below
 Initiated By: JW

342

Date: 3.9.10 Time: 0915

Shipping Information

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

Shipping # (s):* _____ Sample Temperature (s):** _____

1. <u>4289 2133 6598</u>	6. _____	1. <u>ambient</u>	_____
2. <u>6570</u>	7. _____	2. <u>↓</u>	7. _____
3. <u>6587</u>	8. _____	3. <u>↓</u>	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. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was Internal COC/Workshare received?
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> 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: ITC 0630
755
754
464
792
793
790
791

Corrective Action:

Client Contact Name: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____
 Project Management Review: K. G.

Informed by: _____

If released, notify: _____
 Date: 03-11-10

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.

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APPENDIX G

Section 35

Outfall 008 – March 25, 2010

MEC^X Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITC2505

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: ITC2505
 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 008 (GRAB)	ITC2505-01	G0C270459-001, FOC270425-001	Water	3/25/2010 9:50:00 AM	ASTM 5174-91, 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-Irvine marginally below the temperature control limit; however, the samples were not noted to be frozen or damaged. The samples in this SDG were received at Test America-West Sacramento within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. Sample BLANK was not listed on any COC and no COC or transfer COC was provided by TestAmerica-St. Louis. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. 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 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: April 9, 2010

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 $\leq 20\%$ 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 detects between the EDL and the RL for all target compounds except 2,3,7,8-TCDD, 2,3,7,8-TCDF and total TCDF, the PeCDF isomers and total, and 1,2,3,4,7,8,9-HpCDF. Most method blank results were reported as EMPCs; however, due to the extent of the method blank contamination, it was the reviewer's professional opinion that the EMPC results also be utilized to qualify sample results.

Sample results for all isomers also present in the method blank, and for total HxCDF were qualified as nondetected, "U," at the levels of contamination. Results for remaining totals also present in the method blank were qualified as estimated, "J," as only a portion of the total was considered method blank contamination.

- 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 a representative number of LCS results. The EMPCs qualified as nondetected for method blank contamination were not further qualified as EMPCs. Any totals also containing EMPC peaks were qualified as estimated, "J." Any detects reported below the EDL, or 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 METHOD 245.1—Mercury

Reviewed By: P. Meeks
Date Reviewed: April 8, 2010

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 (7/02)*.

- Holding Times: The analytical holding time, 28 days for mercury, was met.
- Tuning: Not applicable to this analysis.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were above the control limit; however, mercury was not detected in the site sample.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG/. Method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to this analysis.
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and 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.

Mercury was not detected in the total fraction but was detected marginally above the reporting limit in the dissolved fraction.

- 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: May 1, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0*, *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 gross alpha and gross beta and total uranium, were prepared beyond the five-day analytical holding time for unpreserved samples; therefore, results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. All remaining aliquots were prepared within the five-day holding time for unpreserved aqueous samples.
- **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, the results for these analytes were qualified as estimated, "UJ," for nondetects and, "J," for detects. The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% 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. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- **Blanks:** Total uranium was detected in the method blank but not at a concentration sufficient to qualify the site sample. There were no other analytes detected in the method blanks or the KPA CCBs.
- **Blank Spikes and Laboratory Control Samples:** The recoveries and RPDs (strontium-90, radium-226, radium-228) were within laboratory-established control limits.
- **Laboratory Duplicates:** Laboratory duplicate analyses were performed on the sample in this SDG for cesium-137, potassium-40, gross alpha, gross beta, and tritium. The RPDs were within the laboratory-established control limits of the analytes were not detected in either sample.
- **Matrix Spike/Matrix Spike Duplicate:** MS/MSD analyses were performed on the sample in this SDG for total uranium and matrix spike analyses were performed for gross alpha and gross beta. All recoveries were within the laboratory-established control limit. Method accuracy for the remaining methods was evaluated based on the LCS or LCS/D results.

- **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. Any detects between the MDA and 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.
- **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 ITC2505

Analysis Method *ASTM 5174-91*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	1.61	0.68	0.21	pCi/L		J	H

Analysis Method *EPA 245.1*

Sample Name Outfall 008 **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method *EPA 245.1-Diss*

Sample Name Outfall 008 **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	0.16	0.20	0.10	ug/l	Ja	J	DNQ

Analysis Method *EPA 900.0 MOD*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	2.5	3	2.5	pCi/L	U	UJ	H,C
Gross Beta	12587-47-2	4.4	4	1.3	pCi/L		J	H

Analysis Method *EPA 901.1 MOD*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	1	20	12	pCi/L	U	U	
Potassium 40	13966-00-2	-90	0	220	pCi/L	U	U	

Analysis Method *EPA 903.0 MOD*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.2	1	0.17	pCi/L	Jb	J	C,DNQ

Analysis Method *EPA 904 MOD*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.07	1	0.49	pCi/L	U	U	

Analysis Method *EPA 905 MOD*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.12	3	0.52	pCi/L	U	U	

Analysis Method *EPA 906.0 MOD*

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	-106	500	190	pCi/L	U	U	

Analysis Method EPA-5 1613B

Sample Name Outfall 008 **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: ITC2505-01 **Sample Date:** 3/25/2010 9:50:00 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	0.00005	0.0000005	ug/L	J, B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000003	ug/L	J, B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	0.00001	0.00005	0.0000005	ug/L	J	J	DNQ
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000003	ug/L	J, B	U	B
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000003	ug/L	J, B	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000002	ug/L	J, B	U	B
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.0000054	0.0000003	ug/L	J, Q, B	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000002	ug/L	J, B	U	B
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000003	ug/L	J, B	U	B
1,2,3,7,8-PeCDD	40321-76-4	ND	0.0000052	0.0000007	ug/L	J, Q, B	U	B
1,2,3,7,8-PeCDF	57117-41-6	0.000004	0.00005	0.0000005	ug/L	J	J	DNQ
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000002	ug/L	J, B	U	B
2,3,4,7,8-PeCDF	57117-31-4	0.000004	0.00005	0.0000005	ug/L	J	J	DNQ
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000003	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000003	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000007	ug/L	J, B	U	B
OCDF	39001-02-0	ND	0.0001	0.0000006	ug/L	J, B	U	B
Total HpCDD	37871-00-4	0.000016	0.00005	0.0000005	ug/L	J, B	J	B, DNQ
Total HpCDF	38998-75-3	0.000019	0.00005	0.0000003	ug/L	J, B	J	B, DNQ
Total HxCDD	34465-46-8	0.00002	0.00002	0.0000002	ug/L	J, Q, B	J	B, DNQ, *III
Total HxCDF	55684-94-1	ND	0.000026	0.0000002	ug/L	J, Q, B	U	B
Total PeCDD	36088-22-9	0.000007	0.0000078	0.0000007	ug/L	J, Q, B	J	B, DNQ, *III
Total PeCDF	30402-15-4	0.000008	0.00005	0.0000001	ug/L	J	J	DNQ
Total TCDD	41903-57-5	ND	0.00001	0.0000001	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000001	ug/L		U	

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