APPENDIX G

Section 30

Outfall 008 – February 5 & 6, 2010 Test America Analytical Laboratory Report THIS PAGE LEFT INTENTIONALLY BLANK

THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project: 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	CLIENT ID	MATRIX
ITB0892-01	Outfall 008 (Grab)	Water
ITB0892-02	Trip Blank	Water
ITB0892-03	Outfall 008 (Composite)	Water

Reviewed By:

Labb-Ecthlee **TestAmerica** Irvine

Kathleen A. Robb For Heather Clark Project Manager

THE LEADER IN ENVIRONMENTAL TESTING

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Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

PURGEABLES BY GC/MS (EPA 624) MDL Reporting Sample Dilution Date Data Date Method **Oualifiers** Analyte Batch Limit Limit Result Factor Extracted Analyzed 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 ND Bromoform EPA 624 10B0840 0.40 0.50 1 02/08/10 02/08/10 Bromomethane EPA 624 10B0840 0.42 10ND 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 0.36 ND 10B0840 0.50 1 02/08/10 02/08/10 Chloroethane EPA 624 10B0840 0.40 ND 1 02/08/10 02/08/10 1.0 Chloroform 0.33 ND 1 EPA 624 10B0840 0.50 02/08/10 02/08/10 Chloromethane EPA 624 10B0840 0.40 0.50 ND 1 02/08/10 02/08/10 ND Dibromochloromethane EPA 624 10B0840 0.40 1 02/08/10 02/08/10 0.50 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 ND 1 02/08/10 0.50 02/08/10 1,1-Dichloroethene EPA 624 10B0840 0.42 0.50 ND 1 02/08/10 02/08/10 ND cis-1,2-Dichloroethene EPA 624 10B0840 0.32 0.50 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 0.22 1 cis-1,3-Dichloropropene EPA 624 10B0840 0.50 ND 02/08/10 02/08/10 ND trans-1,3-Dichloropropene EPA 624 10B0840 0.32 0.50 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 ND Tetrachloroethene EPA 624 10B0840 0.32 0.50 1 02/08/10 02/08/10 Toluene EPA 624 10B0840 0.36 ND 1 02/08/10 02/08/10 0.50 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 0.30 ND 10B0840 0.50 1 02/08/10 02/08/10 Trichloroethene EPA 624 10B0840 0.26 0.50 ND 1 02/08/10 02/08/10 Trichlorofluoromethane ND 1 EPA 624 10B0840 0.34 0.50 02/08/10 02/08/10 Trichlorotrifluoroethane (Freon 113) 0.50 ND EPA 624 10B0840 5.0 1 02/08/10 02/08/10 Vinyl chloride ND EPA 624 10B0840 0.40 0.50 1 02/08/10 02/08/10 Xvlenes. Total EPA 624 10B0840 0.90 1.5 ND 1 02/08/10 02/08/10 Surrogate: 4-Bromofluorobenzene (80-120%) 95 % Surrogate: Dibromofluoromethane (80-120%) 104 % Surrogate: Toluene-d8 (80-120%) 106 %

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Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

PURGEABLES BY GC/MS (EPA 624) MDL Reporting Sample Dilution Date Data Date Method **Oualifiers** Analyte Batch Limit Limit Result Factor Extracted Analyzed 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 ND Bromoform EPA 624 10B0840 0.40 0.50 1 02/08/10 02/08/10 Bromomethane EPA 624 10B0840 0.42 10ND 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 0.36 ND 10B0840 0.50 1 02/08/10 02/08/10 Chloroethane EPA 624 10B0840 0.40 ND 1 02/08/10 02/08/10 1.0 Chloroform 0.33 ND 1 EPA 624 10B0840 0.50 02/08/10 02/08/10 Chloromethane EPA 624 10B0840 0.40 0.50 ND 1 02/08/10 02/08/10 ND Dibromochloromethane EPA 624 10B0840 0.40 1 02/08/10 02/08/10 0.50 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 ND 1 02/08/10 0.50 02/08/10 1,1-Dichloroethene EPA 624 10B0840 0.42 0.50 ND 1 02/08/10 02/08/10 ND cis-1,2-Dichloroethene EPA 624 10B0840 0.32 0.50 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 0.22 1 cis-1,3-Dichloropropene EPA 624 10B0840 0.50 ND 02/08/10 02/08/10 ND trans-1,3-Dichloropropene EPA 624 10B0840 0.32 0.50 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 ND Tetrachloroethene EPA 624 10B0840 0.32 0.50 1 02/08/10 02/08/10 Toluene EPA 624 10B0840 0.36 ND 1 02/08/10 02/08/10 0.50 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 0.30 ND 10B0840 0.50 1 02/08/10 02/08/10 Trichloroethene EPA 624 10B0840 0.26 0.50 ND 1 02/08/10 02/08/10 Trichlorofluoromethane ND 1 EPA 624 10B0840 0.34 0.50 02/08/10 02/08/10 Trichlorotrifluoroethane (Freon 113) 0.50 ND EPA 624 10B0840 5.0 1 02/08/10 02/08/10 Vinyl chloride ND EPA 624 10B0840 0.40 0.50 1 02/08/10 02/08/10 Xvlenes. Total EPA 624 10B0840 0.90 1.5 ND 1 02/08/10 02/08/10 Surrogate: 4-Bromofluorobenzene (80-120%) 96 % Surrogate: Dibromofluoromethane (80-120%) 101 % Surrogate: Toluene-d8 (80-120%) 108 %

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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-- 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)				Sample	ed: 02/06/1	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	
Surrogate: 4-Bromofluorobenzene (80-120%)				95 %				
Surrogate: Dibromofluoromethane (80-120%	ó)				104 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Sample ID: ITB0892-02 (Trip Blank - Wat	er)				Sample	ed: 02/06/1	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	
Surrogate: 4-Bromofluorobenzene (80-120%)				96 %				
Surrogate: Dibromofluoromethane (80-120%	ó)				101 %				
Surrogate: Toluene-d8 (80-120%)					108 %				

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Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)											
			MDL	Reporting	-	Dilution	Date	Date	Data		
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers		
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)				Sample	ed: 02/05/1	10				
Reporting Units: ug/l		1051050	• •			0.040					
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	G		
Benzidine	EPA 625	10B1058	9.4	19	ND	0.943	02/09/10	02/11/10	С		
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			

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Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

1	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 (Comp	oosite) - Water)	- cont.			Sample	ed: 02/05/1	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 (C	omposite) - Water)				Sample	ed: 02/05/1	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	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	(70-130%)				94 %				
Surrogate: 1,3-Dimethyl-2-nitrobenzene	(70-130%)				94 %				
Surrogate: Triphenylphosphate (70-130%	6)				106 %				
Surrogate: Triphenylphosphate (70-130%	6)				106 %				
Surrogate: Perylene-d12 (70-130%)					105 %				
Surrogate: Perylene-d12 (70-130%)					105 %				

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

Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

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 (Comj	posite) - Water)				Sample	ed: 02/05/1	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	С
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	С
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	
Surrogate: Decachlorobiphenyl (45-120%)					61 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					49 %				

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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

		TOTAL	PCBS	(EPA 608)	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 (Com	posite) - Water) - cont.													
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							
Surrogate: Decachlorobiphenyl (45-120%)					67 %										



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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

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

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Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

		Ι	META	LS					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Con	posite) - Water)				Sample	ed: 02/05/1	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	В
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 (Con	posite) - Water)				Sample	ed: 02/05/1	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	С

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Project ID: Annual Outfall 008

DISSOLVED METALS

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

Report Number: ITB0892

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

		DISSOI							
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (C	omposite) - Water)				Sample	ed: 02/05/1	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	В
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 (C	omposite) - Water)				Sample	ed: 02/05/1	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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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

	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)					Sample	ed: 02/06/1	10				
Reporting Units: ug/l											
Chromium VI	EPA 218.6	10B0756	0.25	1.0	ND	1	02/06/10	02/06/10			

TestAmerica Irvine Kathleen A. Robb For Heather Clark

Project Manager

THE LEADER IN ENVIRONMENTAL TESTING

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Project ID: Annual Outfall 008

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

Report Number: ITB0892

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

	INORGANICS										
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers		
Sample ID: ITB0892-03 (Outfall 008 (Co	omposite) - 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	В		
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 (Co	omposite) - Water)				Sample	ed: 02/05/1	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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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

	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)					Sample	ed: 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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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 900.0 MOD											
MDL Reporting Sample Dilution Date Date I Analyte Method Batch Limit Limit Result Factor Extracted Analyzed Qua											
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)				Sample	ed: 02/05/1	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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Report Number: ITB0892

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

EPA 901.1 MOD												
MDL Reporting Sample Dilution Date Date Da Analyte Method Batch Limit Limit Result Factor Extracted Analyzed Quali												
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)				Sample	ed: 02/05/1	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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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 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 00	98 (Composite) - Water)				Sample	ed: 02/05/1	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			

Project Manager



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

Report Number: ITB0892

Sampled: 02/05/10-02/06/10 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) - Wa	ter)			Sample	ed: 02/05/1	10				
Reporting Units: pCi/L											
Radium 228	EPA 904 MOD	60257	0.32	1	-0.03	1	03/01/10	03/05/10	U		

Project ID: Annual Outfall 008

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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 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)				Sample	ed: 02/05/1	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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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 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 0	08 (Composite) - Water)				Sample	ed: 02/05/1	10				
Reporting Units: pCi/L Tritium	EPA 906.0 MOD	49035	95	500	99	1	02/18/10	02/18/10	Jb		
1 I Itiulii	LIA JOO.0 MOD	47055)5	500	,,	1	02/10/10	02/10/10	30		

THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Annual Outfall 008

EPA-5 1613B

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

Report Number: ITB0892

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

		1	21 71-5 10	150					
			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITB0892-03 (Outfall 008 (Composite) - Water)				Sample	d: 02/05/1	10		
Reporting Units: ug/L					-				
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	48124	0.0000008	7 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	0.0000007	5 0.00005	0.0000052	1	02/17/10	02/19/10	J, Q, Ba
2,3,7,8-TCDF	EPA-5 1613B	48124	0.0000004	5 0.00001	0.0000014	1	02/17/10	02/19/10	J
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	48124	0.0000012	0.00005	0.0000007	7 1	02/17/10	02/19/10	J, Q
1,2,3,4,7,8-HxCDD	EPA-5 1613B	48124	0.0000007	0.00005	0.00000064	4 1	02/17/10	02/19/10	J, Q
1,2,3,4,7,8-HxCDF	EPA-5 1613B	48124	0.00000072	2 0.00005	0.0000013	1	02/17/10	02/19/10	J, Q
1,2,3,6,7,8-HxCDD	EPA-5 1613B	48124	0.0000005	6 0.00005	0.0000011	1	02/17/10	02/19/10	J, Q
1,2,3,6,7,8-HxCDF	EPA-5 1613B	48124	0.0000006	0.00005	0.0000008	7 1	02/17/10	02/19/10	J, Q
1,2,3,7,8,9-HxCDD	EPA-5 1613B	48124	0.00000052	2 0.00005	0.0000014	1	02/17/10	02/19/10	J, Q
1,2,3,7,8,9-HxCDF	EPA-5 1613B	48124	0.0000007	9 0.00005	ND	1	02/17/10	02/19/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	48124	0.0000008	8 0.00005	ND	1	02/17/10	02/19/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	48124	0.0000005		ND	1	02/17/10	02/19/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	48124	0.00000062		0.0000004		02/17/10	02/19/10	J, Q
2,3,4,7,8-PeCDF	EPA-5 1613B	48124			ND	1	02/17/10	02/19/10	
2,3,7,8-TCDD	EPA-5 1613B	48124			ND	1	02/17/10	02/19/10	
OCDD	EPA-5 1613B	48124	0.0000013		0.00012	1	02/17/10	02/19/10	Ba
OCDF	EPA-5 1613B	48124	0.0000009		0.0000073	1	02/17/10	02/19/10	J, Ba
Total HpCDD	EPA-5 1613B	48124			0.000034	1	02/17/10	02/19/10	J, Ba
Total HpCDF	EPA-5 1613B	48124			0.0000096	1	02/17/10	02/19/10	J, Q, Ba
Total HxCDD	EPA-5 1613B	48124			0.0000044		02/17/10	02/19/10	J, Q
Total HxCDF	EPA-5 1613B	48124	0.0000006		0.0000044		02/17/10	02/19/10	J, Q
Total PeCDD	EPA-5 1613B	48124			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			ND	1	02/17/10	02/19/10	
Total TCDF	EPA-5 1613B	48124	0.0000004	5 0.00001	0.0000014	1	02/17/10	02/19/10	J
Surrogate: 13C-2,3,7,8-TCDF (24-1699	%)				53 %				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-19	07%)				94 %				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)				69 %				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (2	28-143%)				63 %				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (2	26-138%)				63 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32	2-141%)				65 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26	-152%)				67 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28	8-130%)				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 (25-1	,				69 %				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-1	,				64 %				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28					72 %				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-1					62 %				
Surrogate: 13C-2,3,7,8-TCDD (25-164)					58 %				
Surrogate: 13C-OCDD (17-157%)					68 %				
6									

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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) - Wa	ter) - cont			Sample	ed: 02/05/1	0				
Reporting Units: ug/L											
2,3,7,8-TCDF	EPA-5 1613B	48124	0.0000028	3 0.00001	ND	1	02/17/10	02/19/10			
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					67 %						
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	<i>б</i>)				94 %						

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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

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) - Wate	r				
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) (ITB08	92-03) - 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 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 Limits	RPD	RPD Limit	Data Qualifiers
·		Linnt	MDL	Units	Level	Result	JUNEC	Linnts	KI D	Linnt	Quaimers
Batch: 10B0840 Extracted: 02/08/10)										
Blank Analyzed: 02/08/2010 (10B0840-E	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-BS	51)										
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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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)

	D K	Reporting	MDI	TT •4	Spike	Source	A/ DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0840 Extracted: 02/08/10)										
LCS Analyzed: 02/08/2010 (10B0840-BS	1)										
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	0.00	0.50	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 (10B	0840-MS1)				Sou	rce: ITB	0892-01				
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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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)

A I 4 -	D14	Reporting	MDI	T	Spike	Source	0/DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0840 Extracted: 02/08/10	-										
Matrix Spike Dup Analyzed: 02/08/2010	(10B0840-N	(SD1)			Sou	rce: ITB)892-01				
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 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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/10	-										
Blank Analyzed: 02/08/2010 (10B0840-Bl	L K1)										
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-BS)	l)										
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 (10B	0840-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)					Sou	rce: ITB()892-01				
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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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 Limits	RPD	RPD Limit	Data Qualifiers	
Batch: 10B1058 Extracted: 02/09/1	0											
Blank Analyzed: 02/11/2010 (10B1058-I	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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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 Limits	RPD	RPD Limit	Data Qualifiers
-							,				L
Batch: 10B1058 Extracted: 02/09/10	<u>)</u>										
Blank Analyzed: 02/11/2010 (10B1058-E	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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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10)										
	<u> </u>										
Blank Analyzed: 02/11/2010 (10B1058-E	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-BS	51)										MNR1
Acenaphthene	83.7	10	3.0	ug/l	100		84	60-120			
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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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	RPD	RPD Limit	Data Qualifiers
e e e e e e e e e e e e e e e e e e e		Linnt	MDL	Units	Level	Kesuit	/OREC	Linnts	ΝD	Linut	Quaimers
Batch: 10B1058 Extracted: 02/09/10)										
LCS Analyzed: 02/11/2010 (10B1058-BS	51)										MNR1
4,6-Dinitro-2-methylphenol	100	20	4.0		100		100	45-120			MINKI
	88.4		4.0 8.0	ug/l				40-120			
2,4-Dinitrophenol	86.2	20 10	8.0 3.5	ug/l	100 100		88 86	40-120 65-120			
2,4-Dinitrotoluene 2,6-Dinitrotoluene	80.2 85.8	10	2.0	ug/l	100		86	65-120			
	83.8 102	10 20	2.0 3.5	ug/l	100		102	65-120 65-135			
Di-n-octyl phthalate	84.4	20 20	3.5 2.5	ug/l	100		84	60-120			
1,2-Diphenylhydrazine/Azobenzene Fluoranthene	84.4 87.7	20 10	2.5 3.0	ug/l	100		88	60-120 60-120			
Fluorene	87.7	10	3.0	ug/l	100		83	65-120			
Hexachlorobenzene	82.0 82.1	10 10	3.0 3.0	ug/l	100						
	82.1 61.7			ug/l			82	60-120			
Hexachlorobutadiene		10	4.0	ug/l	100		62 126	40-120			T
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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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10	0_										
	_										
LCS Analyzed: 02/11/2010 (10B1058-BS	51)										MNR1
Surrogate: 2-Fluorobiphenyl	84.2			ug/l	100		84	50-120			
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 (10B105	58-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	

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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)

A 17	D L	Reporting	MDI	TT •4	Spike	Source	A/ DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1058 Extracted: 02/09/1	<u>0</u>										
LCS Dup Analyzed: 02/11/2010 (10B10)											
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	
		-		0			-	-		-	

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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1058 Extracted: 02/09/10	<u> </u>										
LCS Dup Analyzed: 02/11/2010 (10B105	8-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. <i>3</i>			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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0759 Extracted: 02/06/10	_										
Blank Analyzed: 02/09/2010 (10B0759-B	LK1)										
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-BS	1)										
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 (10B075	9-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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Report Number: ITB0892

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

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

	D L	Reporting			Spike	Source	A/DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1291 Extracted: 02/11/10)										
Blank Analyzed: 02/12/2010 (10B1291-B	LK1)										
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-BS	1)										
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	0.0020	ug/l	0.500		93	55-120			
Endosulfan sulfate	0.404	0.0050	0.0030	ug/l	0.500		86	60-120			
Endrin	0.431	0.010	0.0030	ug/l	0.500		80 95	55-115			
Liquili	0.4//	0.0050	0.0020	ug/1	0.500		95	55-115			

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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

ORGANOCHLORINE PESTICIDES (EPA 608)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1291 Extracted: 02/11/10	_										
LCS As a long d. 02/12/2010 (10D1201 DS)	D										
LCS Analyzed: 02/12/2010 (10B1291-BS)	,	0.010	0.0020	/1	0.500		70	50 120			
Endrin aldehyde Endrin ketone	0.393 0.454	0.010 0.010	0.0020 0.0030	ug/l	0.500 0.500		79	50-120 55-120			
				ug/l			91 76				
gamma-BHC (Lindane)	0.381 0.415	0.020	0.0030	ug/l	0.500		76	45-115			
Heptachlor		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 70	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 (10B	1291-MS1)				Sou	rce: ITB()602-01				
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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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

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-M	ISD1)			Sou	rce: ITB(602-01				
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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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

TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
·		Linit	MDL	emis	Level	ixesuit	JURLE	Linits	NI D	Linnt	Quanners
Batch: 10B1291 Extracted: 02/11/10	-										
Blank Analyzed: 02/11/2010 (10B1291-B	LK1)										
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-BS	2)										
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 (10B	1291-MS2)				Sou	rce: ITB	0602-01				
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-M	SD2)			Sou	rce: ITB	0602-01				
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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Report Number: ITB0892

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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-B	LK1)										
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/17/2010 (10B1991-BS	1)										
Hexane Extractable Material (Oil & Grease)	20.5	5.0	1.4	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 02/17/2010 (10B199	1-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 Limits	RPD	RPD Limit	Data Qualifiers
·		Linit		emus	Lever	nesun	/onee	Linits	IN D	Linnt	Qualifiers
Batch: 10B1598 Extracted: 02/12/10	_										
Blank Analyzed: 02/15/2010 (10B1598-B	LK1)										
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-BS	1)										
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 (10B	1598-MS1)				Sou	rce: ITB	0888-01				
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 (10B	1598-MS2)				Sou	rce: ITB	0900-02				
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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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

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1598 Extracted: 02/12/10)										
	<u> </u>										
Matrix Spike Dup Analyzed: 02/15/2010	(10B1598-M	SD1)			Sou	rce: ITB(888-01				
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-E	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-BS	51)										
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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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1911 Extracted: 02/16/10)										
Matrix Spike Analyzed: 02/16/2010 (10B	31911-MS1)				Sou	rce: ITB1	1030-02				
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-M	SD1)			Sou	rce: ITB1	1030-02				
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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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

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1942 Extracted: 02/16/10	<u>)</u>										
Blank Analyzed: 02/16/2010 (10B1942-B	LK1)										
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/16/2010 (10B1942-BS	1)										
Mercury	7.96	0.20	0.10	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B	1942-MS1)				Sou	rce: ITB	0974-01				
Mercury	7.91	0.20	0.10	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1942-MSD1)					Sou	rce: ITB	0974-01				
Mercury	7.91	0.20	0.10	ug/l	8.00	ND	99	70-130	0.03	20	



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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1845 Extracted: 02/15/10	<u>) </u>										
Blank Analyzed: 02/16/2010 (10B1845-B	LK1)										
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-BS	1)										
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 (10B	31845-MS1)				Sou	rce: ITB	1082-03				
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 (10B	31845-MS2)				Sou	rce: ITB	0888-01				
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-M	ISD1)			Sou	rce: ITB	1082-03				
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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Report Number: ITB0892

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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
-		Linnt	MDL	Units	Levei	Result	/orec	Linnts	KI D	Linnt	Quaimers
Batch: 10B1846 Extracted: 02/15/1	<u>0</u>										
Blank Analyzed: 02/16/2010 (10B1846-1	RLK1)										
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							
				C							
LCS Analyzed: 02/16/2010 (10B1846-B											
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 (10)	B1846-MS1)				Sou	rce: ITB	0895-01				
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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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: 10B1846 Extracted: 02/15/10	<u>)</u>										
Matrix Spike Analyzed: 02/16/2010 (10B	31846-MS1)				Sou	rce: ITB)895-01				
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 (10B	31846-MS2)				Sou	rce: ITB(887-04				
Aluminum	1.66	0.050	0.040	mg/l	0.500	0.761	179	70-130			<i>M1</i>
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-M	ISD1)			Sou	rce: ITB()895-01				
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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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: 10B1953 Extracted: 02/16/10	-										
Blank Analyzed: 02/16/2010 (10B1953-B	LK1)										
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/16/2010 (10B1953-BS	l)										
Mercury	8.15	0.20	0.10	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B	1953-MS1)				Sou	rce: ITB()907-01				
Mercury	7.43	0.20	0.10	ug/l	8.00	ND	93	70-130			
Matrix Spike Dup Analyzed: 02/16/2010	(10B1953-MSI	D1)			Sou	rce: ITB()907-01				
Mercury	7.66	0.20	0.10	ug/l	8.00	ND	96	70-130	3	20	
Batch: 10B2106 Extracted: 02/17/10	-										
Blank Analyzed: 02/17/2010 (10B2106-Bl	LK1)										
Copper	ND	2.00	0.500	ug/l							
LCS Analyzed: 02/17/2010 (10B2106-BS)	l)										
Copper	77.6	2.00	0.500	ug/l	80.0		97	85-115			
Matrix Spike Analyzed: 02/17/2010 (10B	2106-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	10 (10B2106-MSD1)				Sou	rce: ITB	1775-07				
Copper	77.2	2.00	0.500	ug/l	80.0	2.19	94	70-130	2	20	

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METHOD BLANK/QC DATA

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-B	LK1)										
Chromium VI	ND	1.0	0.25	ug/l							
LCS Analyzed: 02/06/2010 (10B0756-BS	l)										
Chromium VI	4.95	1.0	0.25	ug/l	5.00		99	90-110			
Matrix Spike Analyzed: 02/06/2010 (10B	0756-MS1)				Sou	rce: ITB	0889-01				
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)					Sou	rce: ITB	0889-01				
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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0807 Extracted: 02/07/10		2		e mus	20,01	1105411	, und e	2	111 2		Quantor 5
Batch. 10B0007 Extracted. 02/07/10	-										
Blank Analyzed: 02/07/2010 (10B0807-Bl	L K1)										
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 (10B0	0807-MS1)				Sou	rce: ITB()887-04				
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 (10B	0807-MS2)				Sou	rce: ITB()886-01				
Chloride	12.1	0.50	0.25	mg/l	5.00	7.33	96	80-120			<i>C8</i>
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			<i>C8</i>
Matrix Spike Dup Analyzed: 02/07/2010	(10B0807-M	SD1)			Sou	rce: ITB(0887-04				
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
Batch: 10B1111 Extracted: 02/10/10	-										
Blank Analyzed: 02/10/2010 (10B1111-B	LK1)										
Fluoride	0.0333	0.10	0.020	mg/l							Ja
LCS Analyzed: 02/10/2010 (10B1111-BS	1)										
Fluoride	1.03	0.10	0.020	mg/l	1.00		103	90-110			
Matrix Spike Analyzed: 02/10/2010 (10B	1111-MS1)				Sou	rce: ITB(0532-05				
Fluoride	1.19	0.10	0.020	mg/l	1.00	0.129	107	80-120			
Matrix Spike Dup Analyzed: 02/10/2010	(10B1111-MS	D1)			Sou	rce: ITB(0532-05				
Fluoride	1.18	0.10	0.020	mg/l	1.00	0.129	105	80-120	2	20	
Batch: 10B1250 Extracted: 02/10/10	-										
Blank Analyzed: 02/10/2010 (10B1250-B	LK1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/10/2010 (10B1250-BS	1)										
Total Cyanide	190	5.0	2.2	ug/l	200		95	90-110			
Matrix Spike Analyzed: 02/10/2010 (10B	1250-MS1)				Sou	rce: ITB(0359-02				
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115			
Matrix Spike Dup Analyzed: 02/10/2010	(10B1250-MS	D1)	Source: ITB0359-02								
Total Cyanide	182	5.0	2.2	ug/l	200	ND	91	70-115	3	15	
Batch: 10B1300 Extracted: 02/11/10	-										
Blank Analyzed: 02/11/2010 (10B1300-B	LK1)										
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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1300 Extracted: 02/11/10	<u>)</u>										
LCS Analyzed: 02/11/2010 (10B1300-BS	1)										
Total Dissolved Solids	1010	10	1.0	mg/l	1000		101	90-110			
Duplicate Analyzed: 02/11/2010 (10B130	0-DUP1)				Sou	rce: ITB	0770-04				
Total Dissolved Solids	122	10	1.0	mg/l		120			2	10	
Batch: 10B1450 Extracted: 02/11/10	<u>)</u>										
Blank Analyzed: 02/11/2010 (10B1450-B	LK1)										
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/11/2010 (10B1450-BS	1)										
Total Suspended Solids	994	10	1.0	mg/l	1000		99	85-115			
Duplicate Analyzed: 02/11/2010 (10B145	0-DUP1)				Sou	rce: ITB	0770-04				
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-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
LCS Analyzed: 02/12/2010 (10B1575-BS	1)										
Ammonia-N (Distilled)	10.6	0.50	0.50	mg/l	10.0		106	80-115			
Matrix Spike Analyzed: 02/12/2010 (10B1575-MS1)					Sou	rce: ITB	0887-04				
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-MS	5 D 1)			Sou	rce: ITB()887-04				
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-B	LK1)										
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 02/13/2010 (10B1658-BS)	l)										
Perchlorate	24.4	4.0	0.90	ug/l	25.0		98	85-115			
Matrix Spike Analyzed: 02/13/2010 (10B	1658-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	10 (10B1658-MSD1)				Sou	rce: ITB	1511-01				
Perchlorate	24.7	4.0	0.90	ug/l	25.0	1.91	91	80-120	0.2	20	



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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

ASTM 5174-91

Analyte Batch: 53280 Extracted: 02/23/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup Analyzed: 02/26/2010	(F0B09047000	1D)			Sou	rce: F0B0	9047000	1			
Total Uranium	30	1.4	0.4	pCi/L	27.7	0.566	106	62-150	1	20	
Matrix Spike Analyzed: 02/26/2010 (F0E	8090470001S)				Sou	rce: F0B0	9047000	1			
Total Uranium	29.7	1.4	0.4	pCi/L	27.7	0.566	105	62-150			
Blank Analyzed: 02/26/2010 (F0B220000	280B)				Sou	rce:					
Total Uranium	0.046	0.693	0.21	pCi/L				-			U
LCS Analyzed: 02/26/2010 (F0B2200002	80C)				Sou	rce:					
Total Uranium	30.2	0.7	0.2	pCi/L	27.7		109	90-120			



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Report Number: ITB0892

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

METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 43108 Extracted: 02/10/10											
Matrix Spike Analyzed: 02/18/2010 (F0I	3090470001S)				Sou	irce: F0B()9047000	1			
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 (F0B090	0470001X)				Sou	irce: F0B)9047000	1			
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 (F0B120000)108B)				Sou	irce:					
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 (F0B1200001	.08C)				Sou	irce:					
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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Report Number: ITB0892

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

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: 42136 Extracted: 02/11/10											
Duplicate Analyzed: 02/19/2010 (F0B09	0470001X)				Sou	rce: F0B()9047000	1			
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 (F0B11000	0136B)				Sou	rce:					
Cesium 137	1.8	20	14	pCi/L				-			U
Potassium 40	-80	NA	210	pCi/L				-			U
LCS Analyzed: 02/19/2010 (F0B110000	136C)				Sou	rce:					
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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Report Number: ITB0892

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

METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte <u>Batch: 41160 Extracted: 02/10/10</u>	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Duplicate Analyzed: 02/26/2010 (F0B09	0467001X)				Sou	rce: F0B0	9046700	1			
Radium (226)	0.07	1	0.29	pCi/L		0.089		-			U
Blank Analyzed: 02/26/2010 (F0B10000	0160B)				Sou	rce:					
Radium (226)	0.092	1	0.14	pCi/L				-			U
LCS Analyzed: 02/26/2010 (F0B100000	160C)				Sou	rce:					
Radium (226)	10.4	1	0.2	pCi/L	11.3		93	68-136			



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Report Number: ITB0892

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

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte Batch: 60257 Extracted: 03/01/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 03/05/2010 (F0C01000 Radium 228	0257B) 0.08	1	0.39	pCi/L	Sou	rce:		-			U
LCS Analyzed: 03/05/2010 (F0C010000) Radium 228	257C) 6.23	1	0.39	pCi/L	Sou 6.40	rce:	97	60-142			
LCS Dup Analyzed: 03/05/2010 (F0C01) Radium 228	0000257L) 6.35	1	0.4	pCi/L	Sou 6.40	rce:	99	60-142	2	40	



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Report Number: ITB0892

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

METHOD BLANK/QC DATA

EPA 905 MOD

Analyte <u>Batch: 41162 Extracted: 02/10/10</u>	Result	Reporting Limit	MDL	Units	Spike Level	Source Result %	%REC REC Limits	RPD Limit	Data Qualifiers
Duplicate Analyzed: 02/19/2010 (F0B09 Strontium 90	00475001X) -0.15	3	0.42	pCi/L	Sou	rce: F0B0904 -0.05	475001		U
Blank Analyzed: 02/19/2010 (F0B10000 Strontium 90	00162B) -0.15	3	0.38	pCi/L	Sou	rce:	-		U
LCS Analyzed: 02/19/2010 (F0B100000 Strontium 90	162C) 6.82	3	0.34	pCi/L	Sou 6.80	rce:	100 80-130		



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Report Number: ITB0892

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

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: 49035 Extracted: 02/18/10											
Duplicate Analyzed: 02/18/2010 (F0B09)470001X)				Sou	rce: F0B0	9047000	1			
Tritium	80	500	92	pCi/L		114		-			U
Matrix Spike Analyzed: 02/18/2010 (F0	3090473001S)				Sou	rce: F0B0	9047300	1			
Tritium	4650	500	90	pCi/L	4530	122	100	62-147			
Blank Analyzed: 02/18/2010 (F0B180000	0035B)				Sou	rce:					
Tritium	165	500	95	pCi/L				-			Jb
LCS Analyzed: 02/18/2010 (F0B1800000	35C)				Sou	rce:					
Tritium	4440	500	90	pCi/L	4530		98	85-112			



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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

EPA-5 1613B

		Reporting	g		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 48124 Extracted: 02/17/10											
Blank Analyzed: 02/18/2010 (G0B1700)	00124B)				Sou	rce:					
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	0.0000036	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	0.0000084	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: 37Cl4-2,3,7,8-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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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

	D L	Reporting	-	T T • /	Spike	Source	AUDEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 48124 Extracted: 02/17/10											
Blank Analyzed: 02/18/2010 (G0B1700	00124B)				Sou	rce:					
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 (G0B17000	0124C)				Sou	rce:					
1,2,3,4,6,7,8-HpCDD	0.00111	0.00005	0.0000021	ug/L	0.00100		111	70-140			Ва
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	0.000004	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	0.0000097	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	0.0000063	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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0.00383

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Surrogate: 13C-OCDD

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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

EPA-5 1613B

Analyte Batch: 48124 Extracted: 02/17/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Analyzed: 02/19/2010 (G0B170000	0124C)				Sou	rce:					
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			

ug/L

0.00400

96

13-199



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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

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	Limit
ITB0892-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	Limit

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
ITB0892-03	Ammonia-N, Titr 4500NH3-C (v		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 30	0.0 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

MWH-Pasadena/BoeingProject ID:Annual Outfall 008618 Michillinda Avenue, Suite 200Sampled:02/05/10-02/06/10Arcadia, CA 91007Report Number:ITB0892Received:02/06/10Attention:Bronwyn KellyTT02/06/1002/06/10

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.

						Compnance
<u>LabNumber</u>	Analysis	Analyte	Units	Result	MRL	Limit

TestAmerica Irvine Kathleen A. Robb For Heather Clark Project Manager

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 008

Report Number: ITB0892

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



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: 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	Х	Х
EPA 200.7-Diss	Water	Х	Х
EPA 200.7	Water	Х	Х
EPA 200.8-Diss	Water	Х	Х
EPA 200.8	Water	Х	Х
EPA 218.6	Water	Х	Х
EPA 245.1-Diss	Water	Х	Х
EPA 245.1	Water	Х	Х
EPA 300.0	Water	Х	Х
EPA 314.0	Water	Х	Х
EPA 525.2	Water		
EPA 608	Water	Х	Х
EPA 624	Water	Х	Х
EPA 625	Water	Х	Х
Filtration	Water	N/A	N/A
SM 2540D	Water	Х	Х
SM 4500-F-C	Water	Х	Х
SM2340B-Diss	Water		
SM2340B	Water	Х	Х
SM2540C	Water	Х	
SM4500CN-E	Water	Х	Х
SM4500NH3-C	Water	Х	Х

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 Chrnic Samples: ITB0892-03

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

EMS-SUB California Cert #1119

117 W. Bellevue Drive - Pasadena, CA 91105Analysis Performed: Asbestos-TEM (100.2 - DW) Samples: ITB0892-03

TestAmerica Irvine

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

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

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

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

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CHAIN OF CUSTODY FORM

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Page 1 of 2

665		Field readings: (Log in and include in report Temp and pH)	Temp °F = (0, 2, C		Time of readings = ` \$:15	Comments														order.		10 Day: Normal:		1 × 1		
ZTB0897																			1	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.	-	/2 Hour5 Day:		On los X 2 CU ?	k) All Level IV:	
	ANALYSIS REQUIRED																/	/		es will follow and are	Turm-around time: (Check)	24 Mour.		Sample Integrity: (Check) Intact:	Data Requirements: (Check) No Level IV:	
		٦٢ (١٧) (٢٩٤.6) كرينو Toxicity										×	×							vent. Composite sampl	Date/Time:	2661 1430	Date/Fime;	201012a		
		Oil & Grease (1664-HEM) VOCs 624, Xylenes + PP						× ×	× /:	× N	×					AL AL				for this storm ev	<u> </u>	ly				
		ES 8 py Valley		Phone Number:		Preservative Bottle #	HCI 1A, 1B 4	HCI 2A, 2B, 2C ⁴	None 3A, 3B, 3C ⁴	HCI 4A, 4B, 4CV	None 5A, 5B, 5CV	None 6 t	None 7 •							n of Outfall 008	Received By		Received By	Received B		
	Project:	Boeing-SSFL NPDES Annual Outfall 008 GRAB Stormwater at Happy Valley			(626) 568-6691 Fax Number: (626) 568-6515	- Sampling Date/Time Pres	26/2010 8:15		-		- -	-	~ 	1						e the Grab Portio			6:	UNC)	I	
		Doak			-	ainer #of pe cont.	2	. 3	As 3	As 3	As 3	L Poly 1	Cube 1							Samples ar	Date/Time:	1	Date/Time:	2610		
	dress:	MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak		: Bronwyn I	JBR-	Sample Container Matrix Type	W 1L Amber	W VOAs	W VOAs	W VOAs	w voas	W 500 mL Poly	W 1 Gal Cube		•					These	•	M				
	Client Name/Address:			Project Manager: Bronwyn Kelly	Sampler: Bull PAC	Sample St Description N	Outfall 008	Outfall 008	Outfall 008	Trip Blanks	Trip Blanks	Outfall 008	Outfall 008	+							Relinquished By	- W	Relinquished By	Relinduished By		

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FLOW Filter w/in 24hrs of receipt at Unfiltered and unpreserved Comments NPDES Level IV: nalysis 2000 シード Normal: 10 Day: XD (S.001) sotsedaA × On Ice: X All Level IV: Hardness as CaCO₃ Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni, Se, Zn + PP, 72 Hour: × 5 Day: Data Requirements: (Check) Tum-around time: (Check) These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event. Sample Integrity: (Check) -Oyanide × ANALYSIS REQUIRED No Level IV: × Chronic Toxicity 24 Hour: ____ 48 Hour COC Page 2 of 2 list the Composite Samples for Outfall 008 for this storm event. Intact: × SVOCs (625) + PP (1.109 TO 0.109) 751-20,04 Radium 228 (904.0), Uranium (908.0), K-& (1.509 or 0.509) 825 muibeA benidmoD × 140C 1430 IstoT ,(0.209) 06-12 ,(0.309) (E-H) mutinT ,(0.009)staß azorD ,(0.009)staß azorD dd × Pesticides/PCBs , Chlorpyrifos, Diazinon + 2-6-10 221 ,201 × Date/Time: × (S.02E) N-sinommA Nitrate-N, Nitrite-N × Cl.' SO4, NO3+NO2-N, F, Perchlorate × (cDD (and all congeners) × Hardness as CaCO₃ , 99 + nZ , 56, Al, Ni, Se, Zn + PP, × × Total Recoverable Metals: Sb, Cd, Cu, Pb, Received BV 13A⁶ 13B⁴ 17, 16A, 16B 10A, 10B 14A, 14B 4 8B • 9Å, 9B* 15A.4 158 4 18 19 ° Bottle # 8A 4 ÷ Received, 12. 20 Stormwater at Happy Valley Preservative H₂SO₄ NaOH 50NH EONH None Boeing-SSFL NPDES Annual Outfall 008 Deb (626) 568-6515 (626) 568-6691 Phone Number 215 21:02 COMPOSITE Fax Number: Sampling Date/Time Þ 26-50 Project: 1 Date/Time Date/Time Date/Time # of Cant. . 2 --N \$ _ ~ _ --÷ Test America Contact: Joseph Doak 500 mL Poly 2.5 Gal Cube 500 mL Amber Project Manager: Bronwyn Kelly 1 Gal Poly 1L Amber 1L Amber 1L Amber 1L Poly 1L Poly Container 1L Poly 1L Poly MVVH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Type Sampler: Ew/BK Sample Matrix Client Name/Address ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ Outfall 008 Dup elinquished By ished B Description Outfall 008 Outfall 008 Outfall 008 Outfall 008 Outfall 008 Outfalk 008 Outfall 008 Outfall 008 Outfall 008 Outfall 008 Outfail 008 Outfall 008 Outfall 008 Sample

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Page 2 of 2

CHAIN OF CUSTODY FORM

Test America version 8/29/09

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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.

02/06/10, 02/05/10
02/07/10
2.4°C
0.0 mg/1
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:	Survival	TUa
Fathead Minnow:	100%	0.0
Chronic:	NOEC	TUc
Ceriodaphnia Survival:	100%	1.0
Ceriodaphnia Reproduction:	100%	1.0

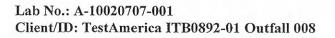
Quality Control:

Reviewed and approved by:

Joseph A. LeMay Laboratory Director

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of the Laboratory's name for advertising or publicity purpose without authorization is prohibited.

FATHEAD MINNOW PERCENT SURVIVAL TEST EPA Method 2000.0



Start Date: 02/07/2010

TEST SUMMARY

Species: Pimephales promelas. Age: (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.

Aquatic

Testing

Laboratories

		TI	EST DATA	<u> </u>		15	
		°C	DO		# E	Dead	Analyst & Time
			DO	pН	A	В	of Readings
DUTIAL	Control	20.1	8.5	7.7	0	0	n.
INITIAL	100%	19.4	9.7	7. 3	0	0	1400
24.11	Control	19.4	8.1	8.0	0	0	2
24 Hr	100%	19.3	8.7	7.6	0	0	1200
48 Hr	Control	19.3	8.1	7.9	0	0	R
48 FIF	100%	19.0	8.3	7.9	\square	0	1300
D1	Control	19.8	9.0	8.0	0	0	m
Renewal	100%	20.6	9.2	7.3	0	0	1300
72 11	Control	19.4	2.1	7.5	0	0	fm
72 Hr	100%	19.0	7.0	7.5	0	0	1522)
06 11	Control	19.1	8.2	7.7	0	0	R
96 Hr	100%	19.0	8.0	2.4	0	0	1400

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.3; Conductivity: 191 umho; Temp: 2.4°C; DO: 1.7 mg/l; Alkalinity: 18 mg/l; Hardness: 76 mg/l; NH₅-N: 0.3 mg/l. Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / Nd. Control: Alkalinity: 71 mg/l; Hardness: 168 mg/l; Conductivity: 325 umho. Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / Nd. 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 %	ċ
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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

Per Female
100% 27.9
100% 31.9

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											
all a second a second constant					uatic Tes				ITB0892-03 EFF2-Industrial CD-Ceriodaphnia dubia			
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		

		200-0-0	200-20	Lett.	100			Not			Fisher's	1-Tailed	Isot	onic
Conc-%	Mean	N-Mean	Resp	Resp	Total	N	Exact P	Critical	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				

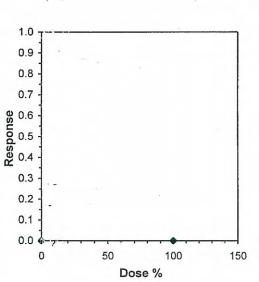
Hypothesis	Test (1-tail	0.05)	NOEC	LOEC	ChV	TU	
Fisher's Exa			100	>100		1	
Treatments	vs D-Control						
				Line	ar Interpo	lation (20	0 Resamples)
Point	%	SD	95%	6 CL	Skew		
IC05	>100						
IC10	>100						
IC15	>100						1.0
1020	>100						

>100

>100 >100

>100

IC20 IC25 IC40 IC50



ToxCalc v5.0.23

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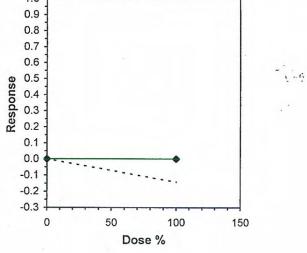
Î.,

Ceriodaphnia Survival and Reproduction Test-Reproduction												
Start Date:	2/7/2010 1	15:00	Test ID:	10020707	С	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 2	21:02		: FWCH EPA Test Specie					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		

				Transform: Untransformed				1-Tailed		Isot	onic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	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

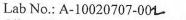
Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.95132		0.905		-0.2211	-1.0085
F-Test indicates equal variances (p = 0.67)	1.3381		6.54109			
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant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

Point	%	SD	95% CL	ear Interpolation (2 Skew	1 1	
		00	55 /8 CL	Skew		
IC05	>100					
IC10	>100					
IC15	>100				1.0	
IC20	>100				0.9	
IC25	>100				0.8	
IC40	>100					
IC50	>100				0.7	
	*** ***********		1000 Protocolistic and		0.6 -	



Reviewed by: //

CERIODAPHNIA DUBIA CHRONIC BIOASSAY EPA METHOD 1002.0 Raw Data Sheet



Client ID: TestAmerica - ITB0892-03 Outfall 008

Start Date: 02/07/2010

					ee eutrali eee							Start	Date. U.	2101120	10		
		DA	Y 1	D	AY 2		DAY	3	D	AY4		DAY 5		D	AY 6	D	AY 7
		0 hr	24hr	0 hr	24hr	01	nr	24hr	0 hr	24hr	01	ır	24hr	0 hr	24hr	0 hr	24hr
Analyst	Initials:	h	F	1-	K	- 12	2	S	R	R	6	2.1	m	R	h	R	h
Time of R	eadings:	Kni	1430	1430	P150	150	00/	1400	1400	1400	190	10 1.	500	1500	1600	1600	14m
	DO	8.3	8.1	8.2	8.3	8.	2	8.4	8.2	8.0	8	3 8	2.0	8.1	2.8	8.0	8.1
Control	pН	7.7	7-8	7-6	7-8			7.6	2.7	7.9	7.		2.6	7.7	2.7	7.5	7.5
	Temp	24.3	24-8	24.0	25.6	, 25.		24.7	24.4				5.0	25.4	252	25.9	244
	DO	10.0	7.4	9.6	8.8			8.2	9.1	7.4	9.		2.0	97	2.9	88	174
100%	pН	7.3	8.0	2-8	8.2			7.7	7.3	8.0			2.8	7.4	7.9	7.5	80
	Temp	250	249	34.2	25.4			24.5	25.2	25.0		1 1	5.2	25.1	25.5	25.0	249
	Ad	ditional P	arameter	s						itrol					100% Sam		1
	Cor	ductivity	(umohms))					34						21-	7	
	Alkalinity (mg/l CaCO ₃)									7					26		
	Hardness (mg/I CaCO ₃)									10					ちの		
	Ammonia (mg/l NH3-N)							0-1				۷	0.1				
							Sourc	e of Neo	onates				And in Figure 1				
Rep	licate:		A	В	(0	D		E	F		G	T	Н	1		5
Broo	od ID:	5	4	6B	6	C	41	\geq	YE	61	-	46	,	SH	61	= 5	T
C 1						Numb	er of y	Young P	roduced		and Applement	and the second second	Tet		and the second second		
Sample		Day	A	B	С	D	E	F	G	н	I	J		al Live oung	No. Live Adults		nalyst nitials
		1	0	00	0	0	0	0	0	0	C	0	6	0	10		A
		2	C		0	0	0	0	0	0	0	0	(0	10		C
		3	4	5	4	4	4	0	3	3	2	4	3	3	10		E
Control	ļ	4	0	0	D		9	6	5	10	2	9	ч		10	/	en
		5	8	10	10	9	0	0	lle	17	13	12	9		10	-	n
		6	18		0	0	0	10	0	0	U	0		8	10		P
		7	30	15	17	16	17	16	0	(7)	0	(16)	8		10		4
		Total					30	32	24		- I	25		76	10		4
		1	0		0	0	0	0	0	0		0	C		10		5
		2	0	0	0	0	0	0	0	0	0	0	-4	3	10		0
		4	9	6	4	SID	30	4	4	4	4	4	4	5	10		m
100%		5	11	12	2	0	11	0	14	0	1	7	X	0	10		50
		6	-6	IG	18	19	15	20	A	ic	18	1C	0	50	10		Pal
		7	Tig	150)	Tal	Ral	G	m -	KO	哥	TRY	17	5 1	5-	10		1
		Total	80	37	29	341-	32	35	25	321	221	10	21	9	10		77
Circled fo				- def	2.1	<u></u>	<u>v</u> 1		10-0	20	22	201	>1		10	11 1	

Circled fourth brood not used in statistical analysis.

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





CHAIN OF CUSTODY

SUBCONTRACT ORDER TestAmerica Irvine

. .

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ITB0892

SENDING LABORATORY	<u>′:</u>	RECEIVING LAB	ORATORY:
TestAmerica Irvine		Aquatic Testing	J Laboratories-SUB
17461 Derian Avenue.	Suite 100		t Street, Unit 107
Irvine, CA 92614		Ventura, CA 93	
Phone: (949) 261-1022		Phone :(805) 6	50-0546
Fax: (949) 260-3297		Fax: (805) 650	
Project Manager: Josep	h Doak		n: CA - CALIFORNIA ature: <u>2-4</u> °C Ice: N N
		date is requested => Due Date:	Initials:
Standard TAT is reques			
Standard TAT is reques Analysis	Units	Expires	Comments
	Units	Expires	Comments
Analysis	Units	Expires	Comments
Analysis Sample ID: ITB0892-01 ((Units Dutfall 0.10 (Grab) - Wa	Expires iter) Sampled: 02/06/10 0	Comments 8:15 FH minnow, EPA/821-R02-012, Sub to
Analysis Sample ID: ITB0892-01 (0 Bioassay-Acute 96hr	Units Dutfall 0.10 (Grab) - Wa	Expires iter) Sampled: 02/06/10 0	Comments 8:15 FH minnow, EPA/821-R02-012, Sub to
Analysis Sample ID: ITB0892-01 (0 Bioassay-Acute 96hr <i>Containers Supplied:</i>	Units Dutfall 010 (Grab) - Wa % Survival	Expires (ter) <u>Sampled: 02/06/10 0</u> 02/07/10 20:15	Comments 18:15 FH minnow, EPA/821-R02-012, Sub to Aquatic
Analysis Sample ID: ITB0892-01 ((Bioassay-Acute 96hr <i>Containers Supplied:</i> 1 gal Poly (J)	Units Dutfall 010 (Grab) - Wa % Survival	Expires Iter) <u>Sampled: 02/06/10 0</u> 02/07/10 20:15	Comments 18:15 FH minnow, EPA/821-R02-012, Sub to Aquatic
Analysis Sample ID: ITB0892-01 (0 Bioassay-Acute 96hr <i>Containers Supplied:</i> 1 gal Poly (J) Sample ID: ITB0892-03 (0	Units Dutfall 010 (Grab) - Wa % Survival	Expires (ter) <u>Sampled: 02/06/10 0</u> 02/07/10 20:15 (e) - Water) <u>Sampled: 02/05/10 2</u>	Comments 18:15 FH minnow, EPA/821-R02-012, Sub to Aquatic 11:02 Cerio, EPA/821-R02-013, Sub to

	27-1	ares les	2-7/0 90	5
Released By	Date/Time	Received By MAS AT	Date/Time	n)
Released By	Date/Time	Received By	Date/Time	Page 1 of 1



REFERENCE TOXICANT DATA

FATHEAD MINNOW ACUTE Method 2000.0 Reference Toxicant - SDS



QA/QC Batch No.: RT-100202

Species: *Pimephales promel*as. Age: <u>/3</u> 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.

TEST SUMMARY

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

		INITIAI	_			24 Hr					48 Hr		
Date/Time:	2-2-	-10	1200)	2-3	-10		13	00	2-	4-10		120	2
Analyst:		R	~			h	-		An				
	°C	DO	pН	°C	DO	pН	# E	Dead	°C	DO	pН	# E	Dead
							A	B				A	В
Control	19.6	8.4	7.6	19.4	7.9	7.4	0	0	19.2	7.1	7.9	0	0
1.0 mg/l	19.6	8.5	7.6	19.2	8.0	7.4	U	D	19.2	7.3	7.7	D	D
2.0 mg/l	19.6	8.5	7.7	19.1	8.0	7.4	0	0	19.1	7.2	7.6	0	0
4.0 mg/l	19.6	8.5	7.7	19.1	7.6	7.4	0	0	19.1	7.2	7.6	0	0
8.0 mg/l	19.6	8.6	7.7	19.0	6.8	7.3	W	10		-			
	R	RENEWA	L		72 Hr 96 Hr								
Date/Time:	2-4.	-10	1200	2-5-10 1200					2-4	1-10		11	30
Analyst:		R	-	m				R					
	°C	DO	pН	°C	DO	pН	# D	Dead	°C	DO	pН	# C	Dead
						P**	A	В				А	В
Control	19.5	8.8	7.8	19.5	7.4	7.4	0	0	20.6	6.3	7.4	0	0
1.0 mg/l	19.5	8.8	7.8	19.4	7.4	7.4	0	0	20.6	6.6	7.4	0	0
2.0 mg/l	19.5	8.9	7.8	19.2	7.4	7.4	0	0	20.6	6.5	7.4	0	0
4.0 mg/1	19.5	8.9	7.8	19.2	7.3	7.4	0	0	20.5	6.4	7.4	0	0
8.0 mg/l)	-		-	-	-	-			-	_	-
Comments:	Contro SDS:	ol: Alkal Alkal	inity: linity:	<u>69</u> m 68 m	g/l; Har g/l; Har	dness: dness:	<u>99</u> n 94 n	ng/l; Co ng/l; Co	onductivit onductivit	y: <u>3</u> 3 y: <u>3</u> 3	U umh	0. 0.	
Concent	ration-re	Ye	s (respo	nse curv	e norma				analysis)				

				Acute Fish Test-96	Hr Survival	
	2/2/2010 2/6/2010 2/2/2010		Lab ID:	RT100202f CAATL-Aquatic Testing Lab ACUTE-EPA-821-R-02-012		REF-Ref Toxicant SDS-Sodium dodecyl sulfate 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				

4 1.0000 1.0000 8 0.0000 0.0000

				Tra	ansform:	Arcsin Sc	uare Roo	t	 Number	Total
Co	nc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
	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

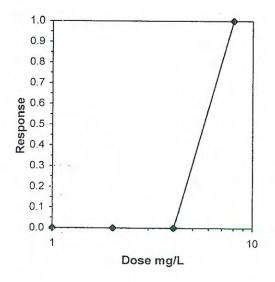
 Auxiliary Tests
 Statistic
 Critical
 Skew
 Kurt

 Normality of the data set cannot be confirmed
 Equality of variance cannot be confirmed
 Graphical Method
 Graphical Method
 Graphical Method

 Trim Level
 EC50

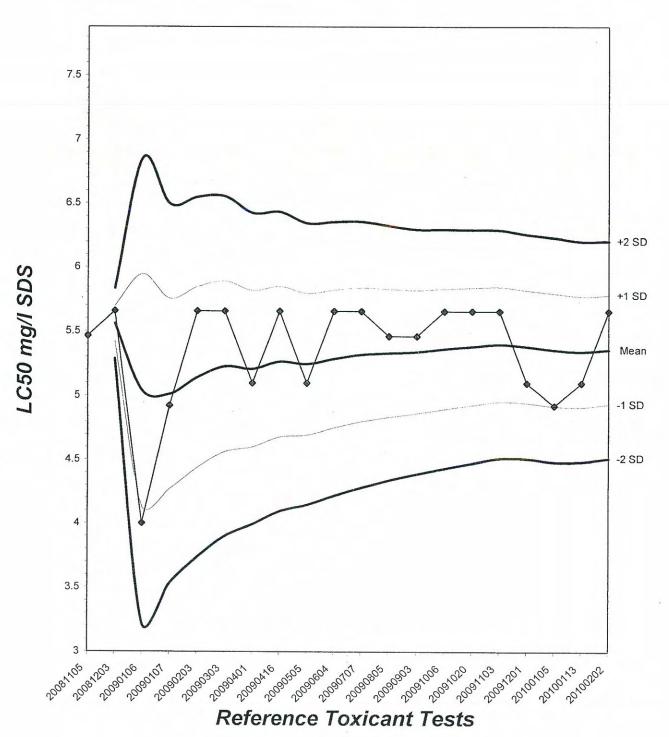
 0.0%
 5.6569

5.6569



Fathead Minnow Acute Laboratory Control Chart

CV% = 7.91



TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL (Pimephales promelas)

QA/QC BATCH NO .: _ R.T-100202
SOURCE: In-Lab Culture
DATE HATCHED: <u>1-20-10</u>
APPROXIMATE QUANTITY:
GENERAL APPEARANCE:
MORTALITIES 48 HOURS PRIOR TO TO USE IN TESTING:
DATE USED IN LAB: $1 \le 1 \le 0$
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.: <u>19-6</u> °C	pH: 7-6	Ammonia: <u>20-</u> 1	_mg/l NH ₃ -N
DO: $8/4$ mg/l	Alkalinity: <u>67</u> mg	/l Hardness:	<u>99</u> mg/l

READINGS RECORDED BY: _	An	DATE:	2-3-10



Test Temperature Chart

Test No: RT-100202 Date Tested: 02/02/10 to 02/06/10 Acceptable Range: 20+/- 1°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.

Sample Concentration	Percent Sur	vival	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/1	0%	*	0	**	
* Statistically signifi ** Reproduction data from		greater t	han survival N		

RESULTS SUMMARY

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)

			Cerioda	phnia Sur	vival and	Reprodu	ction Tes	t-7 Day	Survival	
Start Date:	2/7/2010 1	5:00	Test ID:	RT100207	Ċ		Sample ID	:	REF-Ref T	oxicant
End Date:	2/14/2010	14:00	Lab ID:	CAATL-Ag	uatic Test	ting Labs	Sample Ty	/pe:	NACL-Soc	lium chloride
Sample Date:	2/7/2010		Protocol:	FWCH EP	A		Test Spec	ies:	CD-Cerioc	laphnia 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

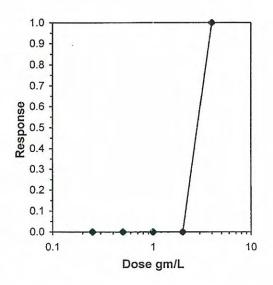
				Not			Fisher's	1-Tailed	Number	Total
Conc-gm/L	Mean	N-Mean	Resp	Resp	Total	N	Exact P	Critical	Resp	Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	1.0000	1.0000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

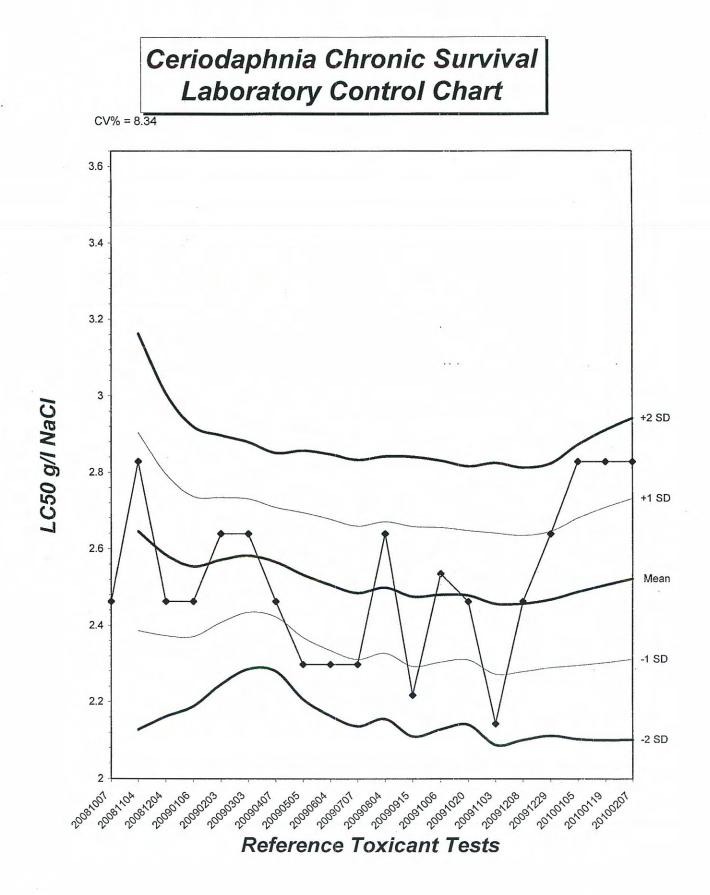
 Trim Level
 EC50

 0.0%
 2.8284

2.8284



Reviewed by:_

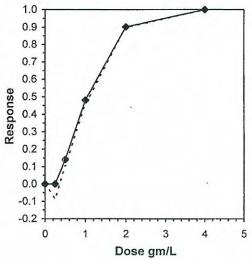


Start Date:	2/7/2010 1	5:00	Test ID:	RT100207	'c		Sample ID	:	REF-Ref T	oxicant
End Date:	2/14/2010	14:00	Lab ID:	CAATL-Ac	uatic Tes	ting Labs	Sample Ty	pe:	NACL-Soc	lium chloride
Sample Date:	2/7/2010		Protocol:	FWCH EP	A		Test Spec	ies:	CD-Cerioc	laphnia dubia
Comments:										
Conc-gm/L	1	2	3	4	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

				Transform	n: Untran	sformed		Rank	1-Tailed	Isot	onic
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	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	1	****			Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates nor	n-normal dis	stribution	(p <= 0.05)		0.87968	0.947	1.72192	5.90298
Bartlett's Test indicates unequal					32.1843	13.2767		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU			and the second sec	
Steel's Many-One Rank Test	0.5	1	0.70711					
Treatments vs D-Control								

IC10 0	0.3384 0.4268	0.0442	0.2691	0.4525	0.4001				
	0.4268	0.0548	0 0507						
C15 (0.0010	0.3537	0.5444	0.4118				
	0.5126	0.0553	0.4160	0.6069	0.0105	1.0)		
C20 (0.5861	0.0571	0.4714	0.6748	-0.2745	0.9	1	-	
C25 (0.6597	0.0572	0.5402	0.7608	-0.3338		-	/	
C40 (0.8802	0.0645	0.7629	1.0101	0.4008	0.8	4	/	
IC50 -	1.0440	0.0882	0.8903	1.2112	0.2244	0.7	7 -	1	

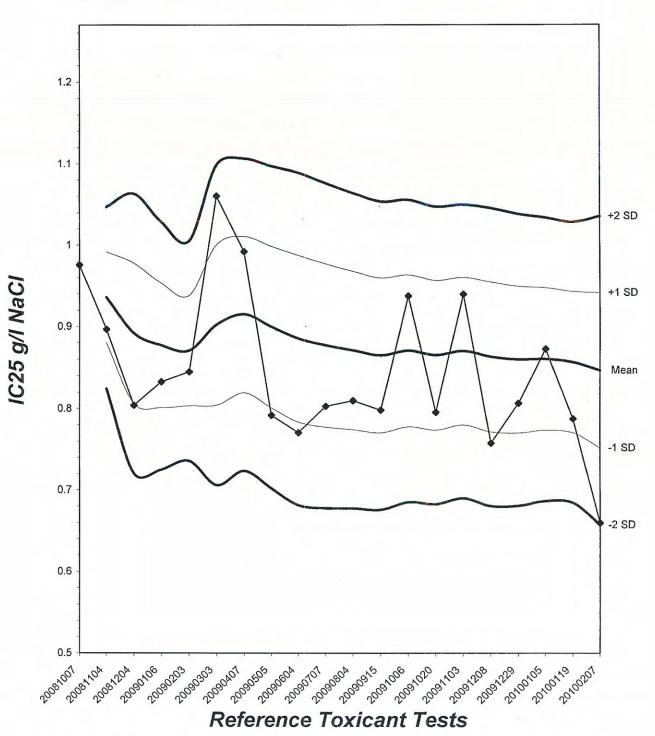


Reviewed by:

a shintara



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			Nu	mbei	of Ye	oung	Produ	uced			Total Live	No. Live	Analyst
Sample	Day	A	B	C	D	E	F	G	н	I	J	Young	Adults	Initials
	1	0	0	0	0	0	0	0	0	0	0	0	10	A
	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
Control	4	0	5	0	0	0	9	10	7	9	9	49	10	R
Control	5	8	8	12	11	10	0	16	14	14	11	104	10	hy
	6	0	0	0	0	0	12	(17)	13	D	12	17	10	k
	7	17	16	14	17	16(15)	0	0	0	0	80	10	14
	Total	30	29	30	32	29	30	30	25	26	24	285	10	V
	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	12	0	0	0	0	0	0	0	0	0	0	10	R
	3	0	4	4	4	5	3	4	0	4	3	21	10	R
0.05 //	4	0	0	0	0	9	8	11	10	9	0	47	10	La
0.25 g/l	5	11	8	8	10	13	0	13	11	12	8	qu	10	hy
	6	18	17	19	17	15	114	13	0	$(\widehat{)}$	16	103	10	h
	7	19	0	(7)	16	0	(7)	O	15	0	(IS)	34	10	10
	Total	88	29	31	31	27	27	28	36	25	27	309	10	1
	1	0	0	0	0	0	0	0	C	0	C	0	10	Ch
	2	0	0	0	∂	0	0	0	0	0	0	0	10	Bu
	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	han
0.5 g/l	5	7	5	0	0	0	2	8	6	8	0	41	10	Ra
	6	18	17	19	12	17	0	16	0		0	99	10	h
	7	0	0	0	14	(16)	15	0	15	19	17	61	10	n
	Total	27	26	26	28	25	25	30	X	10	25	255	10	10

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

Aquatic Testing CX

QA/QC No.: RT-100207

Start Date:02/07/2010

G	D			Nu	imbe	r of Y	oung]	Produ	ced			Total	No.	Analyst
Sample	Day	A	B	С	D	Е	F	G	н	I.	J	Live Young	Live Adults	Initials
	1	0	0	0	0	0	0	0	0	0	C	0	10	C
	2	0	0	0	0	0	0	0	0	0	\mathcal{O}	C	10	In
	3	30	0	2	3	3	0	0	2	2	0	15	10	fr
1.0 ~/1	4	0	2	5	2	4	C	0	3	3	0	19	10	In
1.0 g/l	5	5	4	0	0	0	6	4	0	0	0	19	10	h
*	6	0	0	0	14	17	0	0	0	0	4	35	10	h
	7	16	2	8	0	0	2	7	8	.6	7	66	10	K
	Total	24	13	15	19	24	13	11	13	11	11	15.4	10	
	1	σ	0	0	0	0	0	C	C	C	C	0	10	1
	2	0	0	0	C	C	0	0	C	C	C	D	10	1
	3	C	0	0	0	C	C	0	C	C	0	0	10	2
2.0 ~/1	4	0	0	0	0	0	C	0	C	0	0	U	10	2
2.0 g/l	5	0	0	0	0	0	C	0	0	0	0	C	10	n
	6	0	0	2	0	0	0	0	N	0	0	5	10	2
	7	3	3	0	3	Z	3	4	1	2	M	24	10	U
	Total	2	3	2	3	2	-3	4	Ч	2_	3	29	10	
	1	X	A	X	R	X	X	X	X	x	/	0	0	1
	2) (1	-	-	1	-	-	~	-			-	-
	3	(1	-	-		-	•	1	-	1			
10-1	4	-		-									-	-
4.0 g/l	5	1	[-	(-	-		-	-	1		-	-
	6	-	-		-	-	-	-	-	-	-	-	_	
	7	-		-	-		-	gamman.		-	-		<u> </u>	
	Total	0	0	0	0	0	0.	0	C	0	0	0	0	1

C\RIODAPHNIA DUBIA CHRONIC BIOASSAY Reference Toxicant - NaCl Water Chemistries Raw Data Sheet

Aquatic Testing Laboratories

QA/QC No.: RT-100207

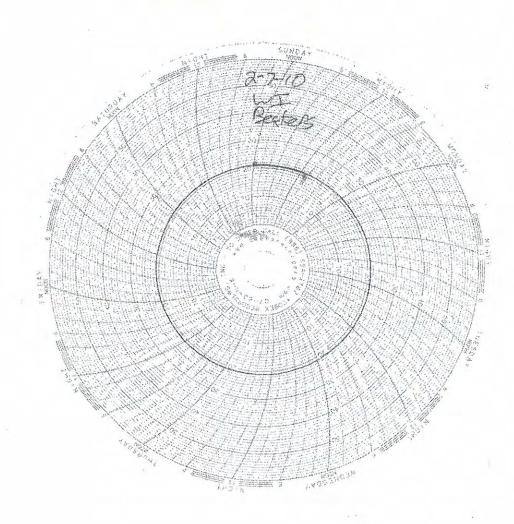
Start Date:02/07/2010

	DAY 1 DAY 2 DAY 3 DAY 4 DAY 5														
		DA	Y 1	DA	Y 2	DA	Y 3	DA	Y 4	DA	Y 5	DA	Y 6	DA	XY 7
		Initial	Final	Initial A	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst l	nitials:	N	P	V	Rn	han	how	R	for	R	hm	R	Rm	han	2
Time of R	eadings:	150	1430	1430	1500	1500	1400	1400	1400	1400	1500	ISau	1600	1600	MW
	DO	8.3	83	8.1	8.4	8.2	8.3	8.3	8.2	8.4	8.2	8.1	7.9	8.0	80
Control	pH	7-7	8.0	8.2	8.0	8.0	2.8	8.0	7.8	7.7	7.7	7.7	7.8	7.5	7.6
	Temp	243	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
	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
0.25 g/l	pН	8.0	7.8	8.0	8.0	8.0	7.8	8.0	2.8	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	250
	DO	8.2	8.3	8.2	8.3	8.2	8.3	8.3	8.1	8.4	8.2	8.1	810	8.0	8.1
0.5 g/l	рН	7-9	7-8	7.8	8.0	8.1	7-8	7.8	7.8	7.7	7.7	2.7	2.8	7.6	75
	Temp	24.4	24.6	24.4	25.2	25.8	25.4	24.5	24.2	25.7	25.0	2575	25.4	25.8	247
	DO	8.3	8.4	8.4	8.3	8.3	8.2	8.3	8.1	8.3	8.3	8.2	2.9	8.0	70
1.0 g/l	рН	7.9	7.5	7.8	80	8.1	7-8	7.8	2.8	2.7	7.7	7.7	2.8	7.6	7.6
	Temp	24.5	24,6	24-5	25.2	25.9	25.4	24.6	24.1	25.8	25.0	25.6	25.4	25.8	
	DO	8.2	80	8.4	8.5	8.3	8.2	8.3	8.1	8:3	8.3	8.2	8.1	8.0	8.3
2.0 g/l	pН	7.9	7.8	7.7	8.0	8.1	7.8	7.8	7.8	7.7	7.7	7.8	2.8	7.7	7.6
-	Temp	24.6	24.8	245	25.2	26.0	25.3	24.8	24.1	25.9	25.1	25.8	25.3	25.1	247
	DO	83	8.0				-	-	-	-	-		-	1	(
4.0 g/l	pH	8.1	7.7	~		_	-	-	-	-	-	-		-	-
	Temp	24.5	25.1	~	-		-	-							
	Di	ssolved	Oxyge	n (DO)	reading	gs are in	mg/l	O ₂ ; Temp	perature	e (Temp) readin	gs are i	n ⁰C.		
	Additional	Paramet	ors				Conti	ol				High Co	oncentra	tion	
	Additional				Day	1	Day 3	3	Day 5		Day 1		Day 3		Day 5
	Conducti	vity (µS))		34	9	335	-	341	6	240	3	390	3	510
	Alkalinity (Contractory Processing of the local diversion	67 68 67				_	67		1.8		68
	Hardness (1	mg/l CaCo	O ₃)		90		93	•	92		90		92		72
			T		T		Т	leonates							_ 1
	licate:		A 3A	B	C		D D	E	F	3	G	H	$ $ $ $ $\neg \neg$		
Bro	od ID:	717	32	12	4		IE	111		6	241	37		5	



Test Temperature Chart

Test No: RT-100207 Date Tested: 02/07/10 to 02/14/10 Acceptable Range: 25+/- 1°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 o	f 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.

Bmilie

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 TEM (EPA-600 R 94 134) EPA 100.2

LAB NO: CLIENT:	135418 Test America 2/10/2010				,		
			FILTER	MEDIA DATA			
Laboratory	Client	Туре	Diameter	Effective Area	No. of G.O.	Analyzed	Sample
I.D.	1.D.		mm	mm^2		Area, mm^2	
135418-3	ITB0892-03*	PC	47	1017	10	0.094	0.5

* FOR FIBERS > 10um ONLY

ANALYTICAL RESULTS

Laboratory	Client		of Asbesto		Detection			ION (MFL)
I.D.	I.D.	All Sizes	5-9.9um	>10um	Limit (MFL)	All Sizes	5-9.9um	>10um
135418-3	ITB0892-03*	-	-	N.D.	22.0	-	-	< 22
					·····			
					"			
	10. m ONILV		1			<u> </u>	l	

* FOR FIBERS > 10um ONLY

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

JF

Authorized Signature

PC - Polycarbonate MCE - Mixed cellulose ester G.O. - Grid Openings Str - Structures MFL - Millions of fibers per liter TEM-7A (2009Rev.)

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

EMS No.	135418	Client	Test America	
Sample No. ITBO	0892-03		Date Analyzed	2/10/2010
Fibers > 10 µm in	length (chrysotile)		BDL*	MFL
Mass (chrysotile)			0	ug/L
More/Less than 5	Fibers			
in Sample (chryso	otile)		LESS	
Poisson 95% Con	fidence Interval		<u> </u>	MFL
Detection Limit			22	MFL

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

Particle Size Distribution (Chrysotile)

Particle Length - Microns

O -0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 - 4.99	5.00 - 9.99	10 & UP
0	0	0	0	0	0	0	0
			Particle Widt	h - Microns			
O04	.0509	.114	.1519	.224	.2549	.5099	1 & UP
0	0	0	0	0	0	0	0
			Aspect R	atio L/W			
0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 - 99	100 - 199	200 & UP
0	0	0	0	0	0	0	0

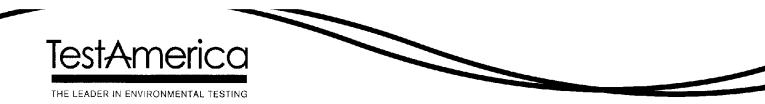
TEM 7B (1994)

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

EMS No.	135418	Date Analyzed	2/10/2010
Client	Test America		
Sample No.	EMS BLANK		
Fibers (chryso	tile)	ND	MFL.
> 5 Micron len	gth (chrysotile)	ND	MFL
Mass (chrysoti	ile)	0	ug/L
More/Less tha in Sample (chr		LESS	
	yootno,		
Sensitivity Lev	el	0.01	MFL

Particle Size Distribution (Chrysotile)

		Particle Lengt	h - Microns		
O -0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 & UP
0	0	0	0	0	0
		Particle Width	- Microns		
O04	.0509	.114	.1519	.224	.25 & UP
0	00	0	0	0	0
		Aspect Rat	io L/W		
0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 & UP
0	00	0	0	0	0



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. ITB0892

MWH-Pasadena Boeing

Lot #: F0B090481

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Kay Clay Project Manager

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.

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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.

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

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

RECEIVING LABORATORY:

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: ITB0892-03	Water	Sampled:02/05/10 21:02		
Level 3 Data Package	02/17/10 12:0	0 03/05/10 21:02		
Vranium, Combined-O	02/17/10 12:0	0 02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
· Radium, Combined-O -	02/17/10 12:0	0 02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	02/17/10 12:0	0 02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
, Tritium-O •	02/17/10 12:0	0 02/05/11 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	02/17/10 12:0	0 08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Alpha-O	02/17/10 12:0	0 08/04/10 21:02		Out St Louis, Boeing permit, DO NOT FILTER!
, Gamma Spec-O +	02/17/10 12:0	0 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 Ambe	r (M)		

Released By

Released By

Date

Date

Date Received By m-2.9.10 1100 Received Rv Date

SUBCONTRACT ORDER TestAmerica Irvine

ITB0892

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

Analysis	Units	Due	Expires	Interlab Price S	burch	Comments
ample ID: ITB0892-03 (0	Dutfall 008 (Co	mposite) - Wat	t er) Sampled	I: 02/05/10 21:02	2	
Gross Alpha-O 🧳	pCi/L	02/15/17	08/04/10 21:02		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 90-0	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	2 \$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Containers Supplied:						
2.5 gal Pely (L)	500 mL Am	ber (M)				

Nowy the Julie 2/8/10 17:00 Fedice

F0B090481

4 of 14

2/8/10 17:00

THE LEADER IN ENVIRON	MENTAL TESTING	<u></u>	e P	101, 4 82 489 173, 484 491
	UPON RECEIPT/FORM			1151.465 494
Client:			<u> </u>	176,460 495
Quote No:	77435.95044			<u>110 j 100 - 443</u>
COC/RFA No:		12	2	
Initiated By:	N	D-4	2.9.	10 Time: 1100
niniated by:	Shi Shi	Date:		<u>11me: ///00</u>
Shipper:	·			$\underline{\qquad} Multiple Packages: Y_{-} N$
Shipping # (s):*				Sample Temperature (s):**
1. 4289 2	133 2309 MB 6.			1. ambien 6.
2			,	2. 7.
· · ·				3. 8.
and the first second second second			· · ·	4 9
5.	10.			5. 10.
Numbered shipping line	s correspond to Numbered Sample Temp lines			d at 4°C ± 2°C- If not, note contents below. Temperature
	for yes, "N" for no and "N/A" for not applicable		NUL affect	the following: Metals-Liquid or Rad tests- Liquid or Solids
1. Y N	Are there custody seals present on the		N)	Are there custody seals present on bottles?
$2.$ Y $\sqrt{N/A}$	cooler? Do custody seals on cooler appear to l		<u> </u>	Do custody seals on bottles appear to be
2. Y N/A	tampered with? Were contents of cooler frisked after	9. Y	N NA	tampered with?
3. 🕥 N	opening, but before unpacking?	10. Y	n NA	Was sample received with proper pH ¹ ? (If not, make note below)
4. W N Sug. K	Sample received with Chain of Custody?	11. 7	N	Sample received in proper containers?
5. 8 NO N/A	Does the Chain of Custody match	12. Y	N (N/A	Headspace in VOA or TOX liquid samples?
6. Y (N)	sample ID's on the container(s)? Was sample received broken?		$- \bigcirc$	(If Yes, note sample ID's below)
\rightarrow	Is sample volume sufficient for	13. (3)		Was Internal COC/Workshare received?
7. (Y, N	analysis?		N N/A	Was pH taken by original TestAmerica lab?
	ANL, Sandia) sites, pH of ALL containers receive <u>LTB0887</u> <u>T</u> TB	ed must be verified, <i>ハ</i> フフ <i>ス</i>	EXCEPT V	DA, TOX and soils.
10100.	1 95	136		······
	-88 SN 2.9.16	97		wised chains were
	94	98	<u>K</u>	K role and the
······	98	199	 Z	min automation
	(92)	1800	\square	my project
		1590		PROSOD & Call Jama in 1215.
				BOSOD label time is 1315;
· · · · · · · · · · · · · · · · · · ·	96	602	<u> </u>	-0- reado 1254
Corrective Action:	······································		<u>.</u>	
 Client Contact N Sample(s) process 		Inform	ed by:	
	anna an 19 🗸			

METHODS SUMMARY

F0B090481

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

WO # SAMPLE# CLIENT SAMPLE ID	SAMPLED SAMP DATE TIME
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. 	<u></u>

- 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: Work Order: Matrix:	: F0B090481-00 LVF42 WATER)1		Date Collec Date Receiv		2/05/10 2102 2/09/10 1100	
Parameter	Result	Qual	Total Uncert. (2 g+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & H	lits by EPA 901.	1 MOD		pCi/L	Bate	h # 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	A EPA 900			pCi/L	Batc	h # 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 E	PA-905 MOD			pCi/L	Batcl	h # 0041162	¥ld % 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	Batel	h # 0049035	Yld %
Tritium	99	J	72	500	95	02/18/10	02/18/10
Total Uranium by	KPA ASTM 5174-	-91		pCi/L	Bate	h # 0053280	Yld %
Total Uranium	0.811		0.086	0.693	0.21	02/23/10	02/26/10
Radium 226 by E	PA 903.0 MOD			pCi/L	Batcl	h # 0041160	Yld % 71
Radium (226)	0.34	J	0.18	1.00	0.21	02/10/10	02/26/10
Radium 228 by GF	PC EPA 904 MOD			pCi/L	Batcl	n # 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:	F0B090481
Matrix:		WATER

Parameter	Result	Qual	Total Uncert. (2 s+/-)	RL	MDC		Prep Date	Lab Sample ID Analysis Date
Radium 228 by G	FPC EPA 904 MC	D	pCi/L	Batch #	0060257	¥ld %	88 E	0С010000-257в
Radium 228	0.08	U	0.23	1.00	0.39		03/01/10	03/05/10
Radium 226 by	EPA 903.0 MOD		pCi/L	Batch #	0041160	Yld %	95 E	0B100000-160B
Radium (226)	0.092	U	0.095	1.00	0.14		02/10/10	02/26/10
SR-90 BY GFPC	EPA-905 MOD		pCi/L	Batch #	0041162	Yld %	80 F	0в100000-162в
Strontium 90	-0.15	U	0.20	3.00	0.38		02/10/10	02/19/10
Gamma Cs-137 &	Hits by EPA 90	1.1 MOD	pCi/L	Batch #	0042136	Yld %	F	0в110000-136в
Cesium 137	1.8	U	7.7	20.0	14		02/11/10	02/19/10
Potassium 40	-80	U	620		210		02/11/10	02/19/10
Gross Alpha/Bet	a EPA 900		pCi/L	Batch #	0043108	Yld %	F	'0B120000-108B
Gross Alpha	-0.28	U	0.35	2.00	0.87		02/10/10	02/19/10
Gross Beta	-0.23	U	0,62	4.00	1.1		02/10/10	02/19/10
TRITIUM (Distil	.1) by EPA 906.	0 MOD	pCi/L	Batch #	0049035	Yld %	F	0B180000-035B
Tritium	165	J	85	500	95		02/18/10	02/18/10
Total Uranium b	y KPA ASTM 517	4-91	pCi/L	Batch #	0053280	Yld %	F	08220000-2808
Total Uranium	0.0460	U	0.0057	0.693	0.21		02/23/10	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:	F0B090481
Matrix:		WATER

	Total			Lab Sample ID				
Parameter	Spike Amount	Result	Unce (2 σ·		MDC	% Yld	१ Rec	QC Control Limits
Radium 226 by EP	A 903.0 MOD		pCi/L	903.0	MOD		F0B1	100000-160C
Radium (226)	11.3	10.4	1,1		0.2	97	93	(68 - 136)
	Batch #:	0041160			Analysis Date:	02/20	5/10	
SR-90 BY GFPC EP	A-905 MOD		pCi/L	905 M	IOD		F0B1	L00000-162C
Strontium 90	6.80	6.82	0.7	,	0.34	83	100	(80 - 130)
	Batch #:	0041162			Analysis Date:	02/19	9/10	
Gamma Cs-137 & Hi	ts by EPA 901.1	MOD	pCi/L	901.1	MOD		F0B1	10000-136C
Americium 241	141000	140000	1100	0	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	9/10	
Gross Alpha/Beta	EPA 900		pCi/L	900.0	MOD		F0B1	20000-108C
Gross Beta	68.0	71.6	6.0		1		105	(58 - 133)
	Batch #:	0043108			Analysis Date:	02/19	9/10	
Gross Alpha/Beta	EPA 900		pCi/L	900.0	MOD		F0B1	20000-108C
Gross Alpha	49.4	34.8	4.3		1.2		70	(62 - 134)
	Batch #:	0043108			Analysis Date:	02/19	9/10	
TRITIUM (Distill)	by EPA 906.0 M	OD	pCi/L	906.0	MOD		F0B1	80000-035C
Tritium	4530	4440	460		90		98	(85 - 112)
	Batch #:	0049035			Analysis Date:	02/18	8/10	
Total Uranium by	KPA ASTM 5174-9	1	pCi/L	5174-	91		F0B2	20000-280C
Total Uranium	27.7	30.2	3.6		0.2		109	(90 - 120)
	Batch #:	0053280			Analysis Date:	02/26	5/10	
Total Uranium by	KPA ASTM 5174-9	1	pCi/L	5174-	91		F0B2	20000-280C
Total Uranium	5.54	5.97	0.63		0.21		108	(90 - 120)
	Batch #:	0053280			Analysis Date:	02/26	5/10	

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0B090481 Matrix: WATER

Parameter Spike Amo				Total			Lab	Sample ID
		Spike Amount	Result	Uncert. (2 σ+/-) %		% Rec	QC Control Limits	Precision
Radium 228 b	y GFPC	EPA 904 MOD	pC	Li/L 904 MO	2		FOCO	10000-257C
Radium 228	Spk 2	6.40 6.40	6.23 6.35	0.74 0.77	87 84	97 99	(60 - 142) (60 - 142)	2 %RPD
		Batch #:	0060257		Analysi	s Date:	03/05/10	

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id:	F0B090473	Date Sampled:	02/05/10
Matrix:	WATER	Date Received:	02/09/10

						QC Sample	e ID
Parameter	Spike Amount	Spike Result	Total Uncert. (2g+/-)	Spike Sample Yld. Resul	OHCELC.	%YLD %REC	QC Control Limits
TRITIUM (Distill) by E	pCi/L	906.0 M	מכ	F0B090473	F0B090473-001		
Tritium	4530	4650	470	122	77	100	(62 - 147)
	Batch #:	0049035	An	alysis Date:	02/18/10		
Gross Alpha/Beta EPA 90	00	1	pCi/L	900.0 M	DD	F0B090470	0-001
Gross Alpha	49.4	47.2	5.2	2.00	0.88	91	(35 - 150)
	Batch #:	0043108	An	alysis Date:	02/18/10		
Gross Alpha/Beta EPA 90	00		pCi/L	900.0 M	DD	F0B090470	0-001
Gross Beta	68.0	79.0	6.6	3.9	1.2	110	(54 - 150)
	Batch #:	0043108	An	alysis 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 J Matrix:	ID:	FOBO90470 WATER						ampled: eceived:	02/0 02/0	•	1143 1100
Parameter		Spike Amount	SPIKE Result	Total Uncert. (2 σ+/-)	Spike Yld	SAMPLE Result		Total Uncert. (2g +/-)	% Yld	QC Samp] %Rec	le ID QC Control Limits
Total Uranium	by KP	A ASTM 5		pCi/L	5	5174-91			F	0809047	70-001
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 Preci	.sion:	106 1	(62 - 150) %RPD
		Batch	#: 0053280	An	lysis d	ate:	02/2	26/10			

NOTE (S)

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID:	F0B090481	Date Sampled:	02/05/10
Matrix:	WATER	Date Received:	02/09/10

	Total			Total	QC Sample ID			
SAMPLE Result	Uncert. (2σ+/-)	% Yld	DUPLICATE Result	(2 σ+/-)	% Yld	Precisi	on	
PA 903.0 MOD		pCi/L	903.0 MOD	I	FOI	B090467-00)1	
0.089	J 0.098	92	0.07 U	0.16	92	31	%RPD	
Batch	#: 0041160	(Sample)	0041160 (D	uplicate)				
its by EPA 901	.1 MOD	pCi/L	901.1 MOD	I.	FOI	B090470-00	1	
-2.9	J 9.0		1.2 U	7.8		479	%RPD	
-100	J 43000		-50 U	230		93	%RPD	
Batch	#: 0042136	(Sample)	0042136 (D	uplicate)				
EPA 900		pCi/L	900.0 MOD		FOI	B090470-00	1	
2.00	J 0.88		0.84 U	0.66		82	%RPD	
3.9	J 1.2		3.2 J	1.1		20	%RPD	
Batch	#: 0043108	(Sample)	0043108 (D	uplicate)				
) by EPA 906.0	MOD	pCi/L	906.0 MOD		FOI	B090470-00	1	
114	J 75		80 U	66		35	%RPD	
Batch	#: 0049035	(Sample)	0049035 (D	uplicate)				
PA-905 MOD		pCi/L	905 MOD		FOI	B090475-00	1	
-0.05	J 0.23	72	-0.15 U	0.23	69	97	%RPD	
Batch	#: 0041162	(Sample)	0041162 (D	uplicate)				
	Result PA 903.0 MOD 0.089 Batch its by EPA 901 -2.9 -100 Batch EPA 900 2.00 3.9 Batch) by EPA 906.0 114 Batch PA-905 MOD -0.05	SAMPLE Result Uncert. (2σ+/-) PA 903.0 MOD 0.098 0.089 0.098 Batch #: 0041160 its by EPA 901.1 MOD -2.9 0 -100 U 43000 Batch #: 0042136 EPA 900 0.88 3.9 1.2 Batch #: 0043108) by EPA 906.0 MOD 114 J 75 Batch #: 0049035 PA-905 MOD -0.05 0.23	SAMPLE Result Uncert. (2σ+/-) % Yld PA 903.0 MOD pCi/L 0.089 0.098 92 Batch #: 0041160 (Sample) its by EPA 901.1 MOD pCi/L -2.9 U 9.0 -100 U 43000 Batch #: 0042136 (Sample) EPA 900 pCi/L 2.00 J 0.88 3.9 J 1.2 Batch #: 0043108 (Sample)) by EPA 906.0 MOD pCi/L 114 J 75 Batch #: 0049035 (Sample) PA-905 MOD pCi/L -0.05 U 0.23 72	SAMPLE Result Uncert. $(2\sigma +/-)$ DUPLICATE Result PA 903.0 MOD pCi/L 903.0 MOD 0.089 0.098 92 0.07 0 Batch #: 0041160 (Sample) 0041160 (D its by EPA 901.1 MOD pCi/L 901.1 MOD 01.1 MOD -2.9 U 9.0 1.2 0 -100 U 43000 -50 0 Batch #: 0042136 (Sample) 0042136 0 2.00 J 0.88 0.84 0 3.9 J 1.2 3.2 J Batch #: 0043108 (Sample) 0043108<(D	SAMPLE Result Uncert. $(2\sigma +/-)$ DUPLICATE Result Uncert. (2 σ +/-) PA 903.0 MOD pCi/L 903.0 MOD 0.089 U 0.098 92 0.07 U 0.16 Batch #: 0041160 (Sample) 0041160 (Duplicate) its by EPA 901.1 MOD pCi/L 901.1 MOD -2.9 U 9.0 1.2 U 7.8 -100 U 43000 -50 U 230 Batch #: 0042136 (Sample) 0042136 (Duplicate) EPA 900 pCi/L 900.0 MOD 2.00 J 0.88 0.84 U 0.66 3.9 J 1.2 3.2 J 1.1 Batch #: 0043108 (Sample) 0043108 (Duplicate)) by EPA 906.0 MOD pCi/L 906.0 MOD 114 J 75 80 U 66 Batch #: 0049035 (Sample) 0049035 (Duplicate) PA-905 MOD pCi/L 905 MOD -0.05 U 0.23 72 -0.15 U 0.23	SAMPLE Result Uncert. (2 σ +/-) DUPLICATE Nesult Durent. (2 σ +/-) Number Number PA 903.0 MOD pCi/L 903.0 MOD FOI PA 903.0 MOD pCi/L 903.0 MOD FOI 0.089 0.098 92 0.07 0.16 92 Batch #: 0041160 (Sample) 0041160 (Duplicate) its by EPA 901.1 MOD pCi/L 901.1 MOD FOI -2.9 U 9.0 1.2 U 7.8 -100 U 43000 -50 U 230 Batch #: 0042136 (Sample) 0042136 (Duplicate) EPA 900 pCi/L 900.0 MOD FOI 2.00 J 0.88 0.84 U 0.66 3.9 J 1.2 3.2 J 1.1 Batch #: 0043108 (Sample) 0043108 (Duplicate)) by EPA 906.0 MOD pCi/L 905.0 MOD FOI 114 J	SAMPLE Result Uncert. (2 \sigma+/-) DUPLICATE Notert. (2 \sigma+/-) Notert. Result DUPLICATE (2 \sigma+/-) Notert. (2 \sigma+/-) Precisi PA 903.0 MOD pCi/L 903.0 MOD F0B090467-00 0.089 U 0.098 92 0.07 U 0.16 92 31 Batch #: 0041160 (Sample) 0041160 (Duplicate) F0B090470-00 -2.9 9.0 1.2 U 7.8 479 -100 U 43000 -50 U 230 93 -33 -33 Batch #: 0042136 (Sample) 0042136 (Duplicate) F0B090470-00 -2.0 -2.0 J 1.2 3.2 J 1.1 20 Batch #: 0043108 (Sample) 0043108 (Duplicate) -20 <td< td=""></td<>	

Data are incomplete without the case narrative.

SUBCONTRACT ORDER TestAmerica Irvine

ITB0892

SENDING LABORATORY:	RECEIVING LABORATORY:
TestAmerica Irvine	TestAmerica West Sacramento
17461 Derian Avenue. Suite 100	880 Riverside Parkway
Irvine, CA 92614	West Sacramento, CA 95605
Phone: (949) 261-1022	Phone :(916) 373-5600
Fax: (949) 260-3297	Fax: (916) 372-1059
Project Manager: Joseph Doak	Project Location: CA - CALIFORNIA
Client: MWH-Pasadena/Boeing	Receipt Temperature: <u>°C Ice: Y / N</u>

Analysis	Units	Due	Expires	Interlab Price Sur	ch	Comments
Sample ID: ITB0892-03 (Outf	all 008 (C	omposite) - Wate	r) Sampled	i: 02/05/10 21:02		
1613-Dioxin-HR-Alta	ug/l	02/17/10	02/12/10 21:02	2 \$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	2 \$0.00	0%	
Containers Supplied: 1 L Amber (N)						

a fal 60:<u>710</u> 2/2 Date/ Time Released By

Released By

Date/Time

Received By

 ∂' 17:00 8/10 Date/Time

Received By

2-9-1 Dáte/Time -10

(230 Page 1 of 1



LOT RECEIPT CHECKLIST TestAmerica West Sacramento

411111 THE LEADER IN ENVIRONMENTAL TESTING

CLIENT	Frice		PM		# 4318	2
LOT# (QUANTIMS ID) _	GOBIOD	426	_QUOTE#	85239	_LOCATION_	Lo 3A
DATE RECEIVED	2-9-10	TIME RECEIVI	ED	40	Cnec	cked (✓)
DELIVERED BY	FEDEX	ON TRAC				
GOLDENSTATE] UPS	GO-GETTE	RS	OTHER		
] TAL SF		GISTICS			D,
CUSTODY SEAL STAT	2		🗌 N/A			
CUSTODY SEAL #(S)	<u> </u>	al				•
SHIPPPING CONTAINE			ENT N//	Α.		K L
COC #(S)		AN				Z
TEMPERATURE BLANK	Observed:	NK	_ Corrected:			
SAMPLE TEMPERATUR	RE - (TEMPERATI	JRES ARE IN °C	C)	n 		
Observed: (, 2		Corre	ected Average	<u> </u>		
LABORATORY THERM IR UNIT: #4	#5					Ð
	(AL	2-9-10
e	-				Initials D	Date
pH MEASURED		3 🗌 AN	OMALY	,∕_TN/A	2 	
LABELED BY						Image: A state
LABELS CHECKED BY. PEER REVIEW			·····	•••••		
SHORT HOLD TEST NO	TIFICATION	r	SAMPLÈ REC	CEIVING		D
,			WETCHEM	ZN/A		
•		and the second	VOA-ENCOR	ES N/A		
	ED OF FILTER/PR	ESERVE VIA VI	ERBAL & EMAII			Ą
COMPLETE SH	IPMENT RECEIVE	D IN GOOD CO NTAINERS, PRI	NDITION WITH ESERVATIVES	□ N/A `	:	
		URE EXCEED	ED (2 °C – 6 °C)) ^{*1} 🗋 N/A		
				ING AGENTS U	ISED 🗌 P	M NOTIFIED
					CN	a 110/10
,				Initia	lls Dai	te
Notes 892				-		
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*1 Acceptable temperature range for State of Wisconsin samples is \leq 4°C.

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	тн	E LEADE	R IN ENV	IRONMEI	VTAL TES	TING				ID:_	******		_G	o Bl	004	26				
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500AGB						-		+		-								-	†	+
AGJ	1.			1				1						-						+
500AGJ	1		1	1		1			1	-								+		
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Ziploc												+								
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h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid

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

zn = zinc acetate

LEAVE NO SPACES BLANK. USE "NA" IF NOT APPLICABLE.

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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 <u>18</u> 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



THE LEADER IN ENVIRONMENTAL TESTING

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

<u>Americium by method RL-ALP-010 (RICH-RC-5080)</u>: The LCS, batch blank, and sample results are within acceptance limits.

<u>Plutonium by method RL-ALP-001 (RICH-RC-5087)</u>: The LCS, batch blank, and sample results are within acceptance limits.

<u>Thorium by method RL-ALP-005 (RICH-RC-5084)</u>: The LCS, batch blank, and sample results are within acceptance limits.

<u>Uranium by method RL-ALP-009 (RICH-RC-5079)</u>: 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 Microsopy 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

Update 7/01/08

TestAmerica Laboratories, Inc.

T .	Richland SOP #	Old Richland SOP #		
Isotope	SOP #	SOF #	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
Ро	RL-ALP-007	RICH-RB-5001	NAS-NS-3037 HASL 300	DETERMINATION OF POLONIUM-210 IN URINE
Ро	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	COPRECIPITATION 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

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TestAmerica Laboratories, Inc.

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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		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

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	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					

Drinking Water Method Cross References

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 = 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/?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) u _{c -} 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, u_c 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 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * 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%. $MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.$
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 = $(S-D)/[sqrt(TPUs^2 + TPUd^2)]$ 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

TestAmerica TARL

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

Report No. : 43801

SDG No: 41277

Client Id Batch Work Ord	der Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
0118345 RL-ALP-00	02							
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-0 ⁻ ITB0892-03	10							
L0NN21AD	Am-241	5.12E-02 +- 1.9E-02	U	pCi/g	79%	5.12E-02	1.00E+00	
0118349 RAD-TH IS ITB0892-03	SO BY ALPHA							
LONN21AE	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-00 ITB0892-03	99							
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							

QC Results Summary

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	Blas	MDC MDA
RL-ALP-002 0118345 BLANK (QC,							
L0NTH1AA	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,			1				
LONTM1AA 0118347 LCS,	Am-241	6.28E-05 +- 2.4E-05	Ų	pCi/g	98%			6.28E-05
L0NTM1AC	Am-241	3.90E-02 +- 5.5E-03		pCi/g	110%	91%	-0.1	5.01E-05
RAD-TH ISO BY ALF 0118349 BLANK (
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	υ	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 (2C,							
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,								
L0NTK1AC	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							

TestAmericaBias- (Result/Expected)-1 as defined by ANSI N13.30.rptSTLRchQcSum
mary V5.2.5 A2002U 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.

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Bindle U: JOD280537-1 Feport No.: 43801 Accessed Date: 428/2010 Cr00000 AM Sample U: Tradia Jour Corr Accessed Date: 428/2010 Cr00000 AM Sample U: Frauti June Frauti Matrix: Matrix: Matrix: Matrix: Matrix: Matrix: Corroco0 AM Reading U: Frauti June Frauticity Frauticity Advised Bate: Advised		ab Name-		merica			SDG:	412	77		Collection Date:	2/5/2010 9:	:02:00 PM	
Sample I: FID0392-03 Matrix	-	-ot-Samp		0537-1	_		Repor		01		Received Date:	4/28/2010	10:00:00 AN	V
Result Contractional formational form	J	Client Sar	nple ID: ITB08	92-03			000	Vo. :			Matrix:	WATER		
HeadCount andTrada andMarchade action to action to andFordial action to action to act		TB0892									Ord	ered by Client	Sample ID,	Batch No
HALP-002 HALP-002 Nork Order: LONN21AC Report BJ. B. SLONNEID S.G.F.O.1111 10 0.33647 6.022 -02 1.95E-02 1.95E-02 1.95E-02 1.95E-02 0.05 0.11 555/1011111 10 0.33647 1 2.01E-02 5.01E-02 5.01E-02 1.58E-02 1.00E+00 0.71 555/1011111 10 0.33647 1 2.01E-02 5.01E-02 5.01E-02 1.58E-02 1.00E+00 11.5 0 0.33647 1 2.01E-01 2.1E-01 4.7E-01 5.01E-02 1.00E+00 11.5 0 <th>Parar</th> <th>neter</th> <th>Result</th> <th>Qual</th> <th>Count Error (2s)</th> <th>Total Uncert(2 s)</th> <th>MDC MDA, Action Lev</th> <th></th> <th></th> <th>Rst/MDC, Rst/TotUcert</th> <th>Analysis, Prep Date</th> <th>Total Sa Size</th> <th>Aliquot Size</th> <th>Primary Detector</th>	Parar	neter	Result	Qual	Count Error (2s)	Total Uncert(2 s)	MDC MDA, Action Lev			Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
G202E-02 1.9E-02 0.011:11 1.0 0.03647 1.501E-02 1.9 2.7E-02 5.01E-02 5.01E-02 1.50E-02 1.50E-02 1.50E-02 1.50E-02 1.50E-02 1.50E-02 0.41 0.03647 0	atch: 01	18345	RL-ALP-002				LONN21AC	Report	DB ID: 9LON	V210				
1.55E-02 1.55E-02 1.00E+00 0.71 9 9 9 H-ALP-009 2.1E-02 2.7E-02 5.01E-02 1.58E-02 1.00E+00 0.71 10 0.3367 H-ALP-009 2.1E-01 4.7E-01 5.04E-02 1.58E-02 1.00E+00 1.5 9 9 H-ALP-009 2.1E-01 4.7E-01 5.04E-02 5.00E-01 (1.5) 55710.02:43 a 10 0.33262 1.23E-01 4.5E-02 2.88E-02 5.00E-01 (1.9) 55710.02:43 a 10 0.33262 2.88E+00 2.126-01 6.70E-02 5.00E-01 (1.9) 55710.02:43 a 10 0.32262 3.88E+00 2.88E+00 8.78 (57.9) 55710.02:43 a 10 0.32262 1.23E-01 6.71E-02 0.01 (1.2) 55710.02:43 a 10 0.32262 3.88E+00 1.89E-03 5.00E-01 (1.2) 55710.02:43 a 10 0.32862 6.041 1.38E-01 1.99E-02 5.00E-01<	۵.	u-238	5.02E-02	Ð	1.9E-02	1.9E-02		pCi/g	56%	0.14	5/5/10 11:11 p	1.0	0.33647	ALP37
								1.59E-02	1.00E+00	0.71		0	0	
I.Add I.SBE-00 I.SBE-01 SA-10 SA-10 I.SBE-00 I.SBE-00 I.SBE-01 I.SBE-01 SA-10	Pu	-239/40	5.01E-02	⊃	2.7E-02	2.7E-02		pCi/g	56%	0.41	5/5/10 11:11 p	1.0	0.33647	ALP37
HL-ALP-009 North Order: LONU21A Report DB D: LONU21A Report DB D: LONU21A 10 0.33292 1 2.81E+00 2.1E-01 4.7E-01 5.04E-02 $5.00E-02$ $5.00E-01$ (11.9) 9 9 1 1.23E-01 4.5E-02 $4.9E-02$ $2.00E-02$ $5.00E-01$ (11.9) 9 9 1 1.23E-01 $4.5E-02$ $6.70E-02$ $5.00E-01$ (11.9) 9 9 9 3.88E+00 $5.5E-01$ $6.76E-02$ $6.00E-01$ (11.2) 9 9 9 9 3.88E+00 $2.5E-01$ $6.76E-02$ $6.00E-01$ (11.2) 5.5710 0.243 10 0.33292 Ru-LP-010 $1.23E-02$ $0.020E-01$ (12.2) 5.5710 0.0243 10 0.33292 Ru-LP-010 $1.96-02$ $5.00E-01$ (12.2) 5.5710 10 0.33647 Ru-L-LP-010 $1.9E-02$ $5.10E-02$ $5.10E-01$								1.58E-02	1.00E+00	(1.5)		ŋ	6	
U-233224 2.81E+00 2.1E-01 4.7E-01 5.04E-02 5.04E-02 5.00E-01 (11.9) 5.5/10 02:43 a 10 0.3322 U-233526 1.33E-01 4.5E-02 4.9E-02 2.00E-02 5.00E-01 (11.9) 5.5/10 02:43 a 10 0.3322 U-2335 1.33E-101 4.5E-02 6.32E-02 5.00E-01 (11.9) 5.6/10 02:43 a 10 0.3322 U-2335 3.38E+00 2.5E-01 6.70E-02 5.00E-01 (11.2) 5.710 02:43 a 10 0.3322 U-2335 3.38E+00 2.5E-01 6.70E-02 5.00E-01 (12.2) 9 9 9 U-3335 MontAndari 4.75 5.00E-01 (12.2) 5.010 11:29 p 10 0.3364 U-3335 MontAndari 1.3E+02 1.3E+02 5.12E-02 1.00E+00 (12.2) 9 9 9 9 U-3335 MontAndari 1.3E+02 1.3E+02 1.00E+02 1.22 5.5/10 11:29 10 0 0 0 </td <td>latch: 01</td> <td>18346</td> <td>RL-ALP-009</td> <td></td> <td></td> <td></td> <td>LONN21AA</td> <td>Report</td> <td>DB ID: 9LON</td> <td>V210</td> <td></td> <td></td> <td></td> <td></td>	latch: 01	18346	RL-ALP-009				LONN21AA	Report	DB ID: 9LON	V210				
-235726 $1.23E \cdot 01$ $4.5E \cdot 02$ $4.9E \cdot 02$ $2.80E \cdot 02$ $6.00E - 01$ (1.9) $5.67 \cdot 10 \cdot 02$ 9 9 $-2382 \cdot 02$ $-23E \cdot 01$ $-3E \cdot 02$ $-3E \cdot 01$	3-N	233/234	2.81E+00		2.1E-01	4.7E-01			93%	(55.6)	5/5/10 02:43 a	1.0	0.33292	ALP1
U-235230 1.23E-01 $4.5E-02$ $4.9E-02$ $2.83E-02$ $5.00E-01$ (5.1) $56/1002.43$ 10 0.33292 U-2383 $3.38E+00$ $2.5E-01$ $6.3E-01$ 6.79 $56/1002.43$ 10 0.33292 U-2383 $3.38E+00$ $2.5E-01$ $6.3E-01$ 6.79 $56/1002.43$ 10 0.33292 U-2383 $3.38E+00$ $2.5E-01$ $6.3E-01$ 6.79 $56/1002.43$ 10 0.33292 U-2383 $3.38E+00$ $2.5E-01$ 6.79 $56/1002.43$ 10 0.33292 Mm-241 $M-1-1$ $N-1$ $N-1$ $N-1$ $N-1$ $N = 1$								2.00E-02	5.00E-01	(11.9)		b	6	
U-238 3.88E+00 (3.7) (5.7) <t< td=""><td>5-U</td><td>235/236</td><td>1.23E-01</td><td></td><td>4.5E-02</td><td>4.9E-02</td><td></td><td>pCi/g</td><td>63%</td><td>(4.3)</td><td>5/5/10 02:43 a</td><td>1.0</td><td>0.33292</td><td>ALP1</td></t<>	5-U	235/236	1.23E-01		4.5E-02	4.9E-02		pCi/g	63%	(4.3)	5/5/10 02:43 a	1.0	0.33292	ALP1
U-238 3.88 + 60 2.5 ± 01 $6.7 \oplus 1$ $6.7 \oplus 1$ 57.9 $55/10.02.43$ 10 0.3322 118347 RLALP-010 2.88 ± 0.1 12.2 $5.0 \oplus -0.1$ (12.2) 9 9 0118347 RLALP-010 Nork Order: Nork Order: LNN21A 12.2 $2.65/10.11.29 p$ 10 0.3364 $4m-241$ 5.12 ± 02 $1.9 \oplus 022$ $5.5/10.11.29 p$ 10 0.3364 $4m-241$ 5.12 ± 02 $1.9 \oplus 022$ $5.6/10.11.29 p$ 10 0.3364 $4m-241$ 5.12 ± 02 $1.9 \oplus 022$ $5.6/10.11.29 p$ 10 0.3364 $4m-241$ $8.16 \oplus 01$ $1.9 \oplus 026$ 6.02 6.22 $5.6/10.11.29 p$ 10 0.3364 1181 ± 02 1.00 ± 001 $1.00 \oplus 0.22$ $5.6/10.02.41 a$ 10 0.3364 $1122b$ 1.00 ± 001 1.20 6.22 $5.6/10.02.41 a$ 10 0.3368 $1122b$ $1.2 \oplus 0$ $1.2 \oplus 0$ $1.2 \oplus 0$								8.95E-03	5.00E-01	(5.1)		0	ŋ	
0118347 RI-ALP-010 2.83E-02 5.00E-01 (12.2) 9 9 0118347 RI-ALP-010 work Order: LoNN21AD Merk Order: LoNN21AD 1.3410-1.334285 a.7 1.0 0.33647 Am-241 5.12E-02 U 1.9E-02 1.9E-02 1.9E-02 1.9E-02 0.014-00 1.0 0.33647 Am-241 5.12E-02 U 1.9E-02 1.9E-02 1.9E-02 1.9E-02 0.022 5/5/10 11:29 p 1.0 0.33647 Am-241 Am-241 Am-241 Am-241 1.00E+00 (12) 1.0 0.33647 17-28 BAD-THISO BY ALPHA Nork Order: LONN21A Report DB1: 9LONN210 (12) 9 9 9 17-28 BAD-THISO BY ALPHA Nork Order: LONN21A Report DB1: 9LONN210 (12) 9 </td <td>_</td> <td>J-238</td> <td>3.88E+00</td> <td></td> <td>2.5E-01</td> <td>6.3E-01</td> <td>0E-02</td> <td>pCi/g</td> <td>93%</td> <td>(57.9)</td> <td>5/5/10 02:43 a</td> <td>1.0</td> <td>0.33292</td> <td>ALP1</td>	_	J-238	3.88E+00		2.5E-01	6.3E-01	0E-02	pCi/g	93%	(57.9)	5/5/10 02:43 a	1.0	0.33292	ALP1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$								2.83E-02	5.00E-01	(12.2)		0	0	
0118347 RL-ALP-010 work Order: LONN21A Report DB ID: 9LONN210 33647 Am-241 $5.12\mathbf{F}.02$ $1.9\mathbf{F}.02$ $5.12\mathbf{F}.02$ $5.13\mathbf{F}.02$ $5.5/10$ 1.0 9.3647 Am-241 $5.12\mathbf{F}.02$ $1.9\mathbf{F}.02$ $1.9\mathbf{F}.02$ $1.9\mathbf{F}.02$ $5.5/10$ 1.0 9.3647 0118349 RAD-TH ISO BY ALPHA Work Order: $1.81\mathbf{F}.02$ $1.00\mathbf{F}+00$ (1.2) 9 9 9 0118349 RAD-TH ISO BY ALPHA Work Order: $1.81\mathbf{F}.02$ $1.00\mathbf{F}+00$ (1.2) 9 9 9 0118349 RAD-TH ISO BY ALPHA Work Order: $1.81\mathbf{F}.02$ $1.00\mathbf{F}+00$ (1.2) 9 9 9 0118349 RAD-TH ISO BY ALPHA Work Order: $1.3\mathbf{F}.02$ $1.00\mathbf{F}+00$ (1.2) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Ratio U-2</td><td>234/238 = 0.7</td><td></td><td></td><td></td><td></td></t<>									Ratio U-2	234/238 = 0.7				
Am-241 5.12E-02 U 1.9E-02 1.0E+00 (1.2) 9 9 9 0118349 RaD-TH ISO BY ALPHA work Order: LONN21AE Report DB ID: 9LONN210 9 <td< td=""><td></td><td>18347</td><td>RL-ALP-010</td><td></td><td></td><td>Work Order:</td><td></td><td>_</td><td>t DB ID: 9LON</td><td>N210</td><td></td><td></td><td></td><td></td></td<>		18347	RL-ALP-010			Work Order:		_	t DB ID: 9LON	N210				
1.81E-02 1.00E+00 (1.2) 9 9 9 0118349 RaD-TH ISO BY ALPHA Work Order: LONN21AE Report DB ID: 9LONN21A 9 <	A	m-241	5.12E-02		1.9E-02	1.9E-02	2E-02	ğ	79%	-0.22	5/5/10 11:29 p	1.0	0.33647	ALP121
0118349 RAD-TH ISO BY ALPHA Work Order: LONN21AE Report DB ID: 9LONN210 Th-228 8.25E+00 4.9E-01 1.3E+00 8.54E-02 pCi/g 99% (<i>96.5</i>) 5/5/10 02:41 a 1.0 0.3308 3.31E-02 1.00E+00 (<i>12.6</i>) 99% (<i>12.6</i>) 9 Th-230 6.03E+D0 4.0E-01 9.7E-01 4.80E-02 pCi/g 99% (<i>12.5.7</i>) 5/5/10 02:41 a 1.0 0.3308 1.52E-02 1.00E+00 (<i>12.4</i>) 9 9								1.81E-02	1.00E+00	-(1.2)		6	6	
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 3.31E-02 3.31E-02 1.00E+00 (12.6) 9 9 9 9 6.03E+00 4.0E-01 9.7E-01 4.80E-02 pCi/g 99% (12.6) 5/5/10 02:41 a 1.0 0.3308 1.52E-02 1.00E+00 (12.4) 5/5/10 02:41 a 1.0 0.3308	atch: 01	18349	RAD-TH ISO BY /	ALPHA			LONN21AE	Report	DB ID: 9LON	V210				
3.31E-02 1.00E+00 (12.6) 9 9 9 6.03E+00 4.0E-01 9.7E-01 4.80E-02 DCi/g 99% (125.7) 5/5/10 02:41 a 1.0 0.3308 1.52E-02 1.00E+00 (12.4) 9 9 9 9	F	h-228	8.25E+00		4.9E-01	1.3E+00		pCi/g	66%	(96.5)	5/5/10 02:41 a	1.0	0.3308	ALP171
6.03E+00 4.0E-01 9.7E-01 4.80E-02 pCi/g 99% (<i>125.7</i>) 5/5/10 02:41 a 1.0 0.3308 1.52E-02 1.00E+00 (<i>12.4</i>) g g g								3.31E-02	1.00E+00	(12.6)		ß	ŋ	
1.00E+00 (12.4) g	F	-h-230	6.03E+00		4.0E-01	9.7E-01		pCi/g	%66	(125.7)	5/5/10 02:41 a	1.0	0.3308	ALP171
								1.52E-02	1.00E+00	(12.4)		Ð	Ð	

				SAN	SAMPLE RESULTS	SULTS					
Lab Name:	TestAmerica	m		SDG:	41277	77		Collection Date: 2/5/2010 9:02:00 PM	2/5/2010 9:0	02:00 PM	
Lot-Sample No.: J0D280537-1	J0D280537-	F		Report No. :	No.: 43801	01		Received Date:	4/28/2010 10:00:00 AM	0:00:00 AN	_
Client Sample ID: ITB0892-03	ITB0892-03			COC No. :	0.:			Matrix:	WATER		
ITB0892								Ord	Ordered by Client Sample ID, Batch No.	Sample ID, E	3atch No.
F Parameter	Result Qual	Count Qual Error (2 s)	Total Uncert(2 s)	MDC/MDA, Rpt Unit, Action Lev Lc	Rpt Unit, Lc	Vield CRDL(RL)	Yield Rst/MDC, CRDL(RL) Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Th-232 7.	7.08E+00	4.3E-01	1.1E+00	4.80E-02 pCi/g)Ci/g	%66	(147.6)	5/5/10 02:41 a	1.0	0.3308	ALP171
					1.52E-02	1.00E+00	(12.6)		ĝ	ŋ	

FORM I

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. 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. rptSTLRchSample V5.2.5 A2002 TestAmerica

TestAmerica Laboratories, Inc.

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Date: 10-May-10

BLANK RESULTS

rix:WATERRiseutiQualCountTotalResultQualFeror (2 s)Uncert(2 s)RL-ALP-002U $4.1E-05$ Work Order:7.77E-05U $4.1E-05$ $4.1E-05$ 7.77E-05U $3.8E-05$ U6.15E-05U $2.4E-05$ $2.4E-05$ 6.28E-05U $2.4E-05$ $2.4E-05$ 6.28E-05U $2.4E-05$ $2.4E-05$ 6.28E-04U $2.2E-04$ 1.05E-04U $7.6E-05$ 6.61E-05U $4.9E-05$ 6.61E-05U $2.5E-05$ 6.61E-05U $2.5E-05$ 6.61E-05U $2.5E-05$ 6.61E-05U $2.5E-05$	Report No. : 43801 ADC, Analysis, Total Sa	01
ResultCount ResultTotal LoMDC MDA, Rpt Unit, 	Analysis,	
RL-ALP-002 Work Order: LUNTH1A Report DBID: LUNTH1 7.77E-05 U 4.1E-05 7.77E-05 PCUG 78% 7.77E-05 U 3.7E-05 5.15E-05 1.00E+00 78% 6.15E-05 U 3.7E-05 5.15E-05 pCUG 78% 7.77E-05 U 3.7E-05 5.100E+00 78% 7.14E-05 U 3.7E-05 pCUG 78% 7.15E-05 U 3.7E-05 5.00E+00 78% 7.15E-04 U 2.4E-05 6.28E-05 1.00E+00 98% 7.85E-05 U 1.99E-05 1.00E+00 98% 1.00E+00 7.93E-04 U 7.6E-05 1.05E-04 pCVg 108% 5.93E-04 U 7.6E-05 1.05E-04 pCVg 108% 6.93E-04 U 1.56E-04 pCVg 108% 3.33E-05 1.00E+00 1.05E-04 U 1.56E-05 1.05E-04 pCVg 108%	Prep Date	a Aliquot Primary Size Detector
$7.77E-05$ U $4.1E-05$ $4.1E-05$ $4.1E-05$ $7.77E-05$ $1.00E+00$ 78% $6.15E-05$ U $3.7E-05$ $3.8E-05$ $6.15E-05$ $100E+00$ 78% $R_{L-ALP}-010$ $3.7E-05$ $3.8E-05$ $3.8E-05$ $1.94E-05$ $100E+00$ 78% $R_{L-ALP}-010$ $Work Order: LONTM1AA Report DB ID: LONTM1 R-ALP-010 Vork Order: LONTM1AA Report DB ID: LONTM1 6.28E-05 U 2.4E-05 2.4E-05 1.99E-05 1.00E+00 98\% RAD-TH ISO BY ALPHA Work Order: LONTN1AA Report DB ID: LONTM1 5.93E-04 2.0E-04 1.15E-04 1.16E-04 108\% 5.93E-04 V.FE-05 7.6E-05 7.6E-05 1.00E+00 108\% 1.05E-04 1.56E-04 1.56E-04 1.56E-04 108\% 108\% 1.05E-04 1.56E-05 1.05E-04 1.56E-04 1.06E+00 108\% 108\%$		
6.15E-05 U 3.7E-05 3.8E-05 0.00E+00 RL-ALP-010 1.94E-05 1.94E-05 1.00E+00 RL-ALP-010 Nork Order: 1.94E-05 1.00E+00 RL-ALP-010 Nork Order: LONTM1AA Report DB ID: LONTM1 6.28E-05 U 2.4E-05 2.4E-05 0.00E+00 6.28E-05 U 2.4E-05 2.4E-05 0.00E+00 6.28E-05 U 2.4E-05 0.00E+00 98% 78AD-TH ISO BY ALPHA Nork Order: LONTN1AA Report DB ID: LONTN1A 5.93E-04 U 7.6E-05 1.05E-04 108% 5.93E-04 U 7.6E-05 1.05E-04 108% 1.05E-04 U 7.6E-05 1.05E-04 108% 1.05E-04 U 7.6E-05 1.05E-04 0.06+00 1.05E-04 U 7.6E-05 7.6E-05 1.00E+00 1.05E-04 U 3.33E-05 1.00E+00 108% 1.05E-04 U 0.5E-05 1.05E-04 0.06+00 1.05E-04 U 0.5E-05 1.05E-04	22 5/5/10 11:11 p	200.04 ALP39
6.15E-05 0 $3.7E-05$ $3.8E-05$ $6.15E-05$ $1.94E-05$ $1.00E+00$ $RL-AIP-010$ $RL-AIP-010$ $Nork Order:$ $I.0NTM1AA$ $Report DB ID: LONTM1$ $RL-AIP-010$ U $2.4E-05$ $2.4E-05$ $6.28E-05$ $98%$ $6.28E-05$ U $2.4E-05$ $2.4E-05$ $6.28E-05$ $1.00E+00$ $98%$ $RAD-TH ISO BY ALPHA$ $Work Order:$ $LONTN1AA$ $Report DB ID: LONTN1A$ $RAD-TH ISO BY ALPHA$ $Work Order:$ $LONTN1AA$ $Report DB ID: LONTN1A$ $5.93E-04$ U $7.6E-05$ $1.05E-04$ $108%$ $5.93E-04$ U $7.6E-05$ $1.05E-04$ $108%$ $1.05E-04$ U $5.7E-05$ $5.38E-05$ $1.00E+00$ $1.05E-04$ U $5.7E-05$ $5.0E-06$ $9.09%$ $R-ALP-003$ U	31	б
1:06+00 1:06+00 1:06+00 RL-ALP-010 Work Order: L0NTM1AA Report DS1D: L0NTM1. 6.28E-05 U 2.4E-05 6.28E-05 pCi/g 98% 6.28E-05 U 2.4E-05 6.28E-05 pCi/g 98% 6.28E-05 U 2.4E-05 1.99E-05 pCi/g 98% RAD-TH ISO BY ALPHA Work Order: L0NTN1AA Report DS1D: L0NTN1A 5.93E-04 U 7.6E-05 1.15E-04 pCi/g 108% 1.05E-04 U 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 U 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 U 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.3E-05 5.32E-05 9.00E+00 108% 1.05E-04 U 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.32E-05 5.06E+00 108% 94% RI-ALP-009 U 4.9E-05 6.61E-05 94% 94% <t< td=""><td>41 5/5/10 11:11 p</td><td>200.04 ALP39</td></t<>	41 5/5/10 11:11 p	200.04 ALP39
RL-ALP-010 Work Order: LONTMIAA Report DB ID: LONTMI. 6.28E-05 U 2.4E-05 2.4E-05 6.28E-05 98% 6.28E-05 U 2.4E-05 2.4E-05 6.28E-05 98% RAD-TH ISO BY ALPHA Nork Order: 1.99E-05 1.00E+00 98% FAD-TH ISO BY ALPHA Work Order: LONTN1A Report DB ID: LONTN1 5.93E-04 1.15E-04 1.15E-04 108% 108% 1.05E-04 1.15E-04 PCI/9 108% 1.05E-04 U 7.6E-05 1.06E+00 108% 1.05E-04 U 7.6E-05 1.05E-04 PCI/9 108% 1.05E-04 U 7.6E-05 1.05E-04 PCI/9 108% 1.05E-04 U 3.33E-05 1.00E+000 108% 1.05E-04 U D16F-01 PCI/9 108% 1.05E-04 U D16F-01 PCI/9 108% RL-ALP-009 U 5.0E-05 5.0E-05 PC	3)	ð
6.28E-05 U 2.4E-05 2.4E-05 6.28E-05 prive 98% RAD-TH ISO BY ALPHA 1.99E-05 1.00E+00 1.99E-05 100E+00 5.93E-04 2.0E-04 1.15E-04 prive 108% 5.93E-04 U 7.6E-05 1.05E-04 prive 108% 1.05E-04 U 5.76E-05 5.8E-05 1.00E+00 108% 1.05E-04 U 5.76E-05 5.8E-05 1.00E+00 108% 1.05E-04 U 5.76E-05 5.8E-05 1.00E+00 108% 1.05E-04 U 0.56E-05 1.05E-04 prive 108% 1.05E-04 U 0.56E-05 1.05E-04 prive 108% 1.05E-04 U 0.0E-05 0.0E-05 <td></td> <td></td>		
1.99E-05 1.00E+00 RAD-TH ISO BY ALPHA Work Order: L0NTN1AA Report DB ID: L0NTN14 5.93E-04 2.0E-04 2.15E-04 1.15E-04 pCi/g 108% 1.05E-04 U 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.8E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 pCi/g 94% RI-ALP-009 U 4.9E-05 5.0E-05 pCi/g 94% 2.48E-05 pCi/g 94% 6.61E-05 U 2.5E-05 2.5E-05 pCi/g 94% 94% 2.48E-05 pCi/g 94% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04% 04%	l. 5/5/10 11:29 p	200.04 ALP124
RAD-TH ISO BY ALPHA Work Order: LONTN1AA Report DB ID: LONTN1 5.93E-04 2.0E-04 1.15E-04 pCi/g 108% 5.93E-04 U 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 pCi/g 108% RL-ALP-009 U 5.7E-05 5.8E-05 5.0E-05 9.4% 9.4% RL-ALP-005 U 4.9E-05 5.0E-05 9.4% 9.4% 9.4% RL-ALP-009 U 2.48E-05 6.61E-05 9.4% 9.4% 9.4% 6.61E-05 U 2.5E-05 5.00E-01 9.4% 9.4% 0.06		D
5.93E-04 2.0E-04 2.2E-04 1.15E-04 pCi/g 108% 3.63E-04 0 7.6E-05 7.0E+06 9.00E+00 108% 1.05E-04 0 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 0 7.6E-05 7.6E-05 1.05E-04 pCi/g 108% 1.05E-04 0 5.8E-05 5.8E-05 1.05E-04 pCi/g 108% 1.05E-04 0 5.7E-05 5.8E-05 1.05E-04 pCi/g 108% RL-ALP-009 0 4.9E-05 5.0E-05 6.61E-05 94% 6.61E-05 0 2.48E-05 6.61E-05 94% 6.61E-05 0 2.5E-05 6.61E-05 94%		
1.05E-04 U 7.6E-05 1.05E-04 DOE+00 1.05E-04 U 7.6E-05 1.05E-04 DOE+00 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 DOE+00 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 DOE+00 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 DOE+00 RL-ALP-009 U 4.9E-05 5.0E-05 0.00E+00 94% 6.61E-05 U 4.9E-05 5.0E-05 0.01E-01 94% 6.61E-05 U 2.48E-05 6.61E-05 0.09 94% 6.61E-05 U 2.5E-05 6.61E-05 DOI 94%	2) 5/5/10 02:41 a	207.53 ALP173
1.05E-04 U 7.6E-05 7.6E-05 1.05E-04 PCI/g 108% 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 PCI/g 108% 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 PCI/g 108% RL-ALP-009 Nork Order: 1.05E-04 PCI/g 108% 94% RL-ALP-005 U 4.9E-05 6.61E-05 94% 94% 6.61E-05 U 2.5E-05 6.61E-05 PCI/g 94% 6.61E-05 U 2.5E-05 6.61E-05 PCI/g 94% 6.61E-05 U 2.5E-05 6.61E-05 PCI/g 94%	5)	5
1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 pCi/g 108% 1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 pCi/g 108% RL-ALP-009 3.33E-05 1.00E+00 3.33E-05 1.00E+00 94% RL-ALP-009 Work Order: L0NTK1AA Report DB ID: L0NTK1 6.61E-05 U 4.9E-05 5.0E-05 6.61E-05 94% 6.61E-05 U 2.5E-05 6.61E-05 pCi/g 94% 6.61E-05 U 2.5E-05 6.61E-05 pCi/g 94%	58 5/5/10 02:41 a	207.53 ALP173
1.05E-04 U 5.7E-05 5.8E-05 1.05E-04 pCi/g 108% 3.33E-05 1.00E+00 3.33E-05 1.00E+00 108% RL-ALP-009 Work Order: L0NTK1AA Report DB ID: L0NTK1/ 6.61E-05 U 4.9E-05 5.0E-05 6.61E-05 94% 6.61E-05 U 2.5E-05 6.61E-05 pCi/g 94% 6.61E-05 U 2.5E-05 6.61E-05 pCi/g 94%	6)	ŋ
3.33E-05 1.00E+00 RL-ALP-009 Work Order: 6.61E-05 U 4.9E-05 5.0E-05 6.61E-05 94% 6.61E-05 U 4.9E-05 5.0E-05 6.61E-05 94% 6.61E-05 U 2.5E-05 6.61E-05 pci/g 94% 6.61E-05 U 2.5E-05 6.61E-05 pci/g 94%	41 5/5/10 02:41 a	207.53 ALP173
RL-ALP-009 Work Order: LONTK1AA Report DB ID: LONTK1 6.61E-05 U 4.9E-05 5.0E-05 6.61E-05 94% 6.61E-05 U 2.48E-05 5.00E-01 94% 6.61E-05 U 2.5E-05 6.61E-05 pCi/g 94% 6.61E-05 U 2.5E-05 6.61E-05 pCi/g 94%	5)	б
6.61E-05 U 4.9E-05 5.0Ë-05 6.61E-05 pCi/g 94% 2.48E-05 5.00E-01 6.61E-05 U 2.5E-05 2.5E-05 6.61E-05 pCi/g 94%		
2.48Ë-05 5.00E-01 6.61E-05 U 2.5E-05 2.5E-05 6.61E-05 pCi/g 94% 2.48E-05 5.00E-01	93 5/5/10 02:44 a	208.99 ALP4
6.61E-05 U 2.5E-05 2.5E-05 6.61E-05 pCi/g 94% 2.48E-05 c.01	5)	D
5 00E-01	19 5/5/10 02:44 a	208.99 ALP4
0.00L-0	_	6
U-238 7.38E-05 U 4.1E-05 4.1E-05 7.38E-05 pCi/g 94% 0.25	25 5/5/10 02:44 a	208.99 ALP4
2.86E-05 5.00E-01 0.9	D	D
Ratio U-234/238 =	38 = 3.3	

TestAmerica Laboratories, Inc.

h-May-10			Primary Detector
Date: 10-May-10			Aliquot Size
	41277	lo. : 43801	Total Sa Size
	SDG:	Report No. :	Analysis, Prep Date
			Rst/MDC, Rst/TotUcert
l ULTS			Yield
FORM II BLANK RESULTS			Rpt Unit, CRDL
BL/			MDC MDA, Lc
			Total Uncert(2 s)
			Count Error (2 s)
	TestAmerica	WATER	Result Quai
	Lab Name:	Matrix:	Parameter

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

Date: 10-May-10

FORM II

LCS RESULTS

Lab Name: TestAmerica

Report No. : 43801 SDG:

41277

Matrix:	Matrix: WATER									Repo	Report No. : 43801		
Parameter	Result	Qual	Count Error (2s)	Total Uncert(2s) MDC M	PA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 0118345	RL-ALP-002			Work Orde	Work Order: LONTH1AC		Report DB ID: LONTH1CS	LONTH1(S				
Pu-239/40	3.05E-02		9.7E-04	4.3E-03	9.22E-05 pCi/g	Di/g	83%	3.35E-I	3.35E-02 1.01E-03	91%	5/5/10 11:11 p	210.71	ALP40
						-	Rec Limits:	20	130	-0.1		δ	
Batch: 0118347	RL-ALP-010			Work Orde	Work Order: LONTM1AC		Report DB ID: LONTM1CS	LONTMI	CS SC				
Am-241	3.90E-02		1.0E-03	5.5E-03	5.01E-05 pCi/g	6/IC	110%		4.28E-02 1.40E-03	91%	5/5/10 11:29 p	210.71	ALP125
						-	Rec Limits:	70	130	-0.1		b	
Batch: 0118349	RAD-TH ISO BY ALPHA	(ALPH	A	Work Orde	Work Order: LONTN1AC		Report DB ID: LONTN1CS	LONTN1(SC				
Th-230	1.09E-02		8.1E-04	1.8E-03	1.10E-04 pCi/g	Di/g	103%		1.16E-02 3.47E-04	95%	5/5/10 02:41 a	201.96	ALP174
15						-	Rec Limits:	70	130	-0.1		ß	
Batch: 0118346	RL-ALP-009			Work Orde	Work Order: LONTK1AC		Report DB ID:	LONTK1CS	SS				
U-233/234	9.30E-03		4.9E-04	1.5E-03	5.90E-05 pCi/g	Di/g	86%	8.53E-(8.53E-03 5.19E-05 109%	109%	5/5/10 02:44 a	204.28	ALP5
						-	Rec Limits:	70	130	0.1		6	
U-238	9.20E-03		4.8E-04	1.5E-03	6.84E-05 pCi/g	Ci/g	86%	8.93E-I	8.93E-03 5.43E-05 103%	103%	5/5/10 02:44 a	204.28	ALP5
						-	Rec Limits:	70	130	0.0		ß	
No. of Results: 5	Comments:												

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

TestAmerica Laboratories, Inc.



SUBCONTRACT ORDER

TestAmerica Irvine

ITB0892

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Revise

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 Sar	npled:()2/05/10 21:02		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 Alphe-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 (1	M)		TAIN



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Released By	Date	Received By	Date	
		Such By	2.9.10	1100
Released By	Date	Received By	Date	
Returned by	1 Bir y/an/10	(700)		Page 1 of 1

TestAmerica Laboratories, Inc.

I estation tab Information						
				Project Name	MWH-Pasadena Boeing	ng
			Export Lab Information			
LaD Name	e Richland	~		PM Contact Name	e Lynn Fussner	
PM Contact Name Erika Jordon	e Erika Jordon		Bş	Backup Contact Name	6	
Backup Contact Name	9			Agreement Date		
Pricing Information			Project Information			
QA/QC (i.e. MS/MSD) Billable?	ż		CI	Client Company Name	e MWH-Pasadena Boeing	ng
Raw Data Surcharge	0	%	Date Fir	Date First Samples to Arrive		
EDD Surcharge	0	%	Est. Duratio	n of Sampling Event		
TAT Surcharges	S	%				
Penalty Terms None	s None	1				
Other Charges Not in Unit Price? (i.	a.					
canisters, regulators, shipping, bottles) None	s) None		Quote or Co	Quote or Contract Reference ID	ITB0892	
Project Details						
Non-Standard Work Product No	ti No					
Quality Assurance Plan No	n No					
Certifications	S					
Analyte/Cmpd. List with RLs Attached	d Yes-See Attached					
Results Dry-Weight Corrected	d					
Special Method Holding Times	s None					
Internal Chain of Custody Required No	d Nö	i				
Known Hazards/High Analyte Level No	el No					
Saturday/Special Delivery Options None	siNone	ļ				
Special Instructions None	s None					
Reporting Limit Conventio	Reporting Limit Convention Report to RL with no "J" Values					
		Transmittal			Import and Export Lab Agreement	
Deliverable Requirements		medium	Format Column	TAT		
Preliminary Report: No	t; No			-	Import lab must acknowledge	
Final Report: No	t: No		D		receipt of Agreement and samples	
EDI): Yes		Element		via E-Mail	
Total Access/MyTestAmerica No	a No	NA	NA			
Custom Forms: No	s: No	AN	See Attached			
	-11					
Analvsis	Method	Matrix	# of Samples	Import Lab's Unit Price	Unit Price w/Surcharges	Extended Price
Uranium 238	10-A-CO-SR-01				-	، ج
Rthorium 232	10-A-9R-S1-01				- -	، ب
Plutonium 236	10-A-6A-SO-01			-	' \$	• \$
Americium 241	10-A-8Y-SN-01				- -	، ب
					\$	- \$
					-	۰ ج
				-	•	• •
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Work Instruction No. CA-WI-010/A-03/07

Te	<u>estAmerica</u>
тне	LEADER IN ENVIRONMENTAL TESTING Sample Check-in List
Date	$\sqrt{2R}\sqrt{2}$
Clie	$TI = T \land Cig \land C$
	$\frac{1}{7777} 2257 \frac{1}{7777} \frac{1}{7777} \frac{1}{7777} \frac{1}{7777} \frac{1}{7777} \frac{1}{7777} \frac{1}{77777} \frac{1}{77777} \frac{1}{77777} \frac{1}{77777} \frac{1}{77777} \frac{1}{77777} \frac{1}{777777} \frac{1}{777777} \frac{1}{777777} \frac{1}{777777} \frac{1}{7777777} \frac{1}{77777777} \frac{1}{77777777777777777777777777777777777$
	k Order Number: 100/8005/ Chain of Custody #_UTB0892
	ping Container ID: Air Bill #
Item	1 through 5 for shipping container only. <u>Initial</u> appropriate response.
1.	Custody Seals on shipping container intact? Yes [64] No [] No Custody Seal []
2.	Custody Seals dated and signed? Yes [] No [.] No Custody Seal []
3.	Chain of Custody record present? Yest No []
4.	Cooler temperature: NIX 2 1 CV
Item	6 through 10 for samples. Initial appropriate response.
б.	Number of samples in shipping container (Each sample may contain multiple bottles): 202004
7.	Sample holding times exceeded?
8.	Samples have:
	Custody sealshazard labels 240-040
9.	Samples are:
2.	in good condition
	have air bubbles
10.	(Only for samples requiring head space) Sample pH taken? NA [] pH<2[] pH>2[] pH>2[] Amount SUBJOR (1)
 11.	Sample Location, Sample Collector Listed? *
	*For documentation only. No corrective action needed.
12.	Were any anomalies identified in sample receipt? Yes [] No Link
13,	Description of anomalies (include sample numbers): NA []
	see other side for additional comments
Samp	le Custodian Mac Carrie Date: 12870
Client	Informed on by Person contacted
	XI. No action necessary; process as is.
•	Project Manager Like And Date 4/28/10
LS-02	3, Rev. 10, 10/09

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TestAmerica Laboratories; Inc.

TestAmerica St. Louis



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.

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

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

References:

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- 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

WO # SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LOFF8 001	ITB0892-03	02/05/10	
LOFGM 002	ITB0892-03	02/05/10	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.

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

- Results noted as "ND" were not detected at or above the stated limit.

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

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ITB0892-03

Radiochemistry

Lab Sample ID: Work Order: Matrix:	FOD230508-00 LOFF8 WATER)1		Date Collected: Date Received:		02/05/10 2102 02/05/10 2102	
Parameter	Result	Qual	Total Uncert. (2 g+/-)	RL	mdc	Prep Date	Analysis Date
Gross Alpha/Beta EPA 900		pCi/L		Ba	tch # 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: Work Order: Matrix:	F0D230508-002 L0FGM WATER			Date Collec Date Receiv		02/05/10 2102 02/05/10 2102	
Parameter	Result	Qual	Total Uncert. (2 g+/-)	RL	mdc	Prep Date	Analysis Date
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L		Bate	ch # 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	Bat	ch # 0121057	Yld %	
Gross Alpha, Susper	nded 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

Matrix:	WATER							
			Total					Lab Sample ID
Parameter	Result	Qual	Uncert. (2 σ+/-)	RL	MDC		Prep Date	Analysis Date
Gross Alpha/Bet	a EPA 900		pCi/L	Batch #	0120166	¥ld %	E	'0D300000-166B
Gross Alpha	0.19	υ	0.43	3.00	0.77		04/30/10	05/03/10
GROSS A/B BY GE	PC SW846 9310	MOD	pCi/L	Batch #	0121056	Yld %	E	'0E010000-056B
Gross Alpha, Dissol	.ved 0.11	U	0.43	3.00	0,81		05/01/10	05/01/10
GROSS A/B BY GI	PC SW846 9310	MOD	pCi/L	Batch #	0121057	Yld %	E	'0E010000-057B
Gross Alpha, Susper	nded 1.95	J	0,68	3,00	0.64		04/30/10	05/03/10

NOTE (S)

Client Lot ID:

F0D230508

Data are incomplete without the case narrative.

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

.7 . Desuit is supplied that counts detection limit but less that stated converting limit

Laboratory Control Sample Report

Radiochemistry

Client	Lot	ID:	F0D230508
Matrix:			WATER

		Total			Lab Sample ID		
Parameter	Spike Amount	Result	Uncert. (2 σ+/-	MDC	% ¥ld % Rec	QC Control Limits	
Gross Alpha/Beta EPA	900		pCi/L	900.0 MOD	F0D3(0000-166C	
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 SW	846 9310 MOD		pCi/L	9310 MOD	F0E01	10000-056C	
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 SW	846 9310 MOD		pCi/L	9310 MOD	FOEO	L0000-057C	
Gross Alpha, Suspended	372	314	a 26	0.6	85 a	(0.0 - 0.0)	
	Batch #:	0121057		Analysis Date:	05/03/10		

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id:	F0D260471	Date Sampled:	01/18/10
Matrix:	WATER	Date Received:	04/26/10

			Total			Total		QC Sample ID		
Parameter	Spike Amount	Spike Result	Uncert. (2σ+/-)	-	Sample Result	Uncert. (2 c +/-)	%YLD	%REC	QC Control Limits	
Gross Alpha/Beta EPA 9	000	· · · · · · · · · · · · · · · · · · ·	pCi/L	900	.0 MOE)	F	0D260471	-001	
Gross Alpha	124	161	19	4	11.7	8.1		97	(35 - 150)	
	Batch #:	0120166	An	alysis Da	te:	05/03/10				
GROSS A/B BY GFPC SW84	6 9310 MOD		pCi/L	931	0 MOD		F	0D260471	-002	
Gross Alpha, Dissolved	444	443	47	:	L.4	1.5		100	(33 - 150)	
	Batch #:	0121056	An	alysis Da	te:	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: Matrix:	F0D230508 WATER				Date Sample Date Receiv		-,	
Parameter	SAMPLE Result	Total Uncert. (2 g +/-)	¥ Yld	DUPLICATE Result	Total Uncert. (2 g+/-)	s XIG	2C Sample ID Precis:	
Gross Alpha/Beta	EPA 900		pCi/L	900.0 MO	D	FO	D260471-0	01
Gross Alpha	41.7 Batch #:	8.1 0120166	(Sample)	47.1 0120166 (9.0 Duplicate)		12	%RPD
GROSS A/B BY GFPC	SW846 9310 MOD		pCi/L	9310 MOD		FO	D260471-0	02
Gross Alpha, Dissol	ved 1.4 U Batch #:	1.5 0121056	(Sample)	1.1 U 0121056 (1.5 Duplicate)		24	%RPD

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.

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REANALYSIS / SUB-CONTRACT / CLIENT RETURN FORM

Re	quest Initiated by: Request Date: Quote Number: Client Number: SDG Number:		nn Fussner /21/2010 85044 440 0481-ITB0892	
Rel Rel Sul	st is for (check one): turn to Client – <i>(Client FedE</i> analysis p-Contract Sample ditional Analysis	x#)	New Lot (check one): Yes No 4/(2.3)/16	
	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 - Seal ment	
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* or attach	original Chain of Custody	L	Olasca alch in	
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			TX.	
		ract or Return to		
	Project Manager Signa			
Comp	pleted by: All Cl	ache	Date: 4.23.10	
New Logi	in Lot Number:	230508	(place copy of this form in old file)	
Initial th	at Containers were Re-lat		(place below lot number of old label)	
SL-ADMI	N-0016, revised 02/27/08	/		

F0D230508

F0B090481



SUBCONTRACT ORDER

TestAmerica Trvine ITB0892

Revised

SENDING LABORATORY:RECETVING LABORATORY:TestAmerica IrvineTestAmerica St. Louis17461 Derian Avenue, Suite 10013715 Rider Trail Northhrvine, CA 92614Barth City, MO 63045Phone: (949) 261-1022Phone: (314) 298-8566Fax: (949) 260-3297Fax: (314) 298-8757Project Manager:Joseph Doak

Analysis	Due	Expires	Laboratary ID	Comments
Sample ID: ITB0892-03	Water Sa	mpled:02/05/10 21:02		
Level 3 Data Package	02/17/10 12:00	03/05/10 21:02		
Vranium, 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!
Trithan-O		.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)		

Released Hy	Date	Received By	Date	
	_	aught Br	2.9.10	1100
Released By	. Date	Received By	Date	

Page 1 of 1

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SUBCONTRACT ORDER TestAmerica Irvine

ITB0892

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

Analysis	Units	Due	Expires	Interlab Price S		Comments
ample ID: ITB0892-03 (C	utfall 008 (Co	mposite) - Wat	ter) Sampled	: 02/05/10 21:02	'. 2	
Gross Alpha-O 🧳	pCI/L	02/15/17	08/04/10 21:02		50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O N	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 FILTERI
Strontium 90-0	pCi/L	02/16/17	02/05/11 21:02	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTERI
Tritium-O	pGi/L	02/15/17	02/05/11 21:02	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTERI
Uranium, Combined-O	pCI/L	02/15/17	02/05/11 21:02	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTERI
Containers Supplied:	•					
2.5 gal Poly (L)	500 mL Am	ber (M)				

19 11th Suller - 2/8/10 17:00 Date/Time Released By

Received By

2/8/10 17:00 Date/Time

Released By

Date/Time

Received By

Date/Time

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Numbered skinning lines	correspond to Numbered Sample Temp lines	**Sau	ple musi	be nece	ved at 4%C#2°C	- If not note cont	ents below Temperature	
113 N. K. K. S. S. S. S.	or yes; "N" for no and 'N/A" for not applicable):	yar) pai	ce doei l	IOT affe	ct the following:	Metals-Liquid or	Rad tests Liquid or Solle	du
	Are there custody seals present on the-	8,		<u>.</u>	dra there	austody seale i	present on bottles?	
	cooler7 Do custody seals on cooler appear to be	_		<u>y</u>	Do ourto d		les appear to be	<u> </u>
2. Y N/A	tampered with?	9. 	YY	v Ø	V tampered	with?		
3. 🕼 Ń	Were contents of copler frisked after opening, but before unpacking?	10,	YP	N 1677	B Was same make note		th proper pH'?-(If no	xt,
4. (D N Sig.)0	Sample received with Chain of Custody?	11.(۲Ŷ٦	۹ ۲	Sample re	ceived in prop	er containers?	
5. 8 NO N/A	Does the Chain of Custody match sample ID's on the container(s)?	12,	YI	1 (1)	Headspac	e in VOA or T e sample ID's belo	OX liquid samples?	
6. Y (N)	Was sample received broken?	13, 1	(X)	V N//			kshare received?	
7. (¥ N	Is sample volume sufficient for						······································	
	analysis?	14.					al TestAmerica lab?	
	INL, Sandia) sites, pH of ALL containers received		enneo, i	SACEPT	YUA, TUX and	50118.		
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APPENDIX G

Section 31

Outfall 008 – February 27 & 28, 2010

MECX 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: Contract Task Order:	Boeing SSFL NPDES 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, F0C020466- 001	Water	2/28/2010	

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.

Qualifie	r 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.
Ν	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.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
Н	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
С	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.
В	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.
Е	Not applicable.	Duplicates showed poor agreement.
Ι	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
А	Not applicable.	ICP Serial Dilution %D were not within control limits.
Μ	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
Т	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

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.
Ρ	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.
*11, *111	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^{\times} Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613, and the National Functional Guidelines Chlorinated Dioxin/Furan Data Review (9/05).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had 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 ≤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 r² 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 µg/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 laboratoryestablished 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^{\times} 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 laboratoryestablished 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:WATERValue					Validation Level: IV		
Lab Sample Name:	ITB2837-02	Sam	ple Date:	2/28/2010	0 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 Matha	I EDA	200.8						

Analysis Method EPA 200.8

Sample NameOutfall 008 (Composite)Matrix Type:WaterValidation Level:IVLab Sample Name:ITB2837-02Sample 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	*Ш
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 NameOutfall 008 (Composite)Matrix Type:WaterValidation Level:IVLab Sample Name:ITB2837-02Sample 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	С	U	
Copper	7440-50-8	2.9	2.0	0.50	ug/l		J	*Ш
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

Sample Name	Outfall 008 (C	Composite) Matri	x Type:	Water	V	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple 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 Metho	od EPA 2	245.1-L	Diss					
Sample Name	Outfall 008 (C	Composite) Matri	x Type:	Water	V	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple 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 Metho	od EPA 9	900.0 M	10D					
Sample Name	Outfall 008 (C	Composite) Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple 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		1	Н
Analysis Metho	od EPA 9	901.1 M	10D					
Sample Name	Outfall 008 (C	Composite) Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple 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 Metho	od EPA 9	903.0 N	IOD					
maiysis metho		omnosite) Matri	x Type:	WATER	۲	alidation Le	vel: IV
-	Outfall 008 (C	omposite						
Sample Name Lab Sample Name:	Outfall 008 (C ITB2837-02		ple Date:	2/28/2010	7:04:00 AM			
Sample Name			ple Date: RL	2/28/2010 MDL) 7:04:00 AM Result Units	Lab Qualifier	Validation Qualifier	Validation Notes

Analysis Method EPA 245.1

Sample Name	Outfall 008 (C	omposite)) Matri	x Type:	WATER	I I	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple Date:	2/28/201	0 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 Metho	od EPA 9	005 MC	D					
Sample Name	Outfall 008 (C	omposite) Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple Date:	2/28/201	0 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 Metho	od EPA 9	906.0 M	lOD					
Sample Name	Outfall 008 (C	omposite) Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple Date:	2/28/201	0 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 904 MOD

Sample Name	Outfall 008 (C	Composite) Matri	Validation Level: IV				
Lab Sample Name:	ITB2837-02	ITB2837-02 Sampl			7:04:00 AM	I		
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	*Ш
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	В
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 EPA-5 1613B

Sample Name	Outfall 008 (Composite) Matr	ix Type:	Water	۷	alidation Le	vel: IV
Lab Sample Name:	ITB2837-02	Sam	ple 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	Н

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APPENDIX G

Section 32

Outfall 008 – February 27 & 28, 2010 Test America Analytical Laboratory Report THIS PAGE LEFT INTENTIONALLY BLANK

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

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THE LEADER IN ENVIRONMENTAL TESTING

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

 MWH-Pasadena/Boeing
 Project ID: Routine Outfall 008

 618 Michillinda Avenue, Suite 200
 Sampled: 02/27/10-02/28/10

 Arcadia, CA 91007
 Report Number: ITB2837

 Attention: Bronwyn Kelly
 Received: 02/27/10

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:

266-Lectalee **TestAmerica** Irvine

Kathleen A. Robb For Heather Clark Project Manager



THE LEADER IN ENVIRONMENTAL TESTING

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

Grease)

Project ID: Routine Outfall 008

Report Number: ITB2837

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

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

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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: 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



THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Routine Outfall 008

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

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) Reporting Units: mg/l			Sampled: 02/28/10								
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	С		
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			

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Kathleen A. Robb For Heather Clark Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Routine Outfall 008

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

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)					Sample	ed: 02/28/1	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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Project ID: Routine Outfall 008

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

Report Number: ITB2837

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

EPA-5 1613B									
Analyta	Method	Datah	MDL Limit	Reporting Limit	-	Dilution	Date Extra at a d	Date	Data Qualifiers
Analyte		Batch	Limit	Limit	Result		Extracted	Analyzed	Quanners
Sample ID: ITB2837-02 (Outfall 008 (Co Reporting Units: ug/L	omposite) - Water)				Sample	d: 02/28/1	10		
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		3 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	3 0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	64219	0.0000056	5 0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	64219	0.0000028	3 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	1 0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	64219	0.0000043	3 0.000047	ND	0.94	03/05/10	03/08/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	64219	0.0000026	5 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	3 0.000047	ND	0.94	03/05/10	03/08/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	64219	0.0000024	1 0.000047	ND	0.94	03/05/10	03/08/10	
2,3,4,7,8-PeCDF	EPA-5 1613B	64219	0.0000033	3 0.000047	ND	0.94	03/05/10	03/08/10	
2,3,7,8-TCDD	EPA-5 1613B	64219	0.0000025	5 0.0000094	ND	0.94	03/05/10	03/08/10	
2,3,7,8-TCDF	EPA-5 1613B	64219	0.0000015	5 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	5 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	3 0.000047	1.3e-005	0.94	03/05/10	03/08/10	J
Total HxCDD	EPA-5 1613B	64219	0.0000043	3 0.000047	ND	0.94	03/05/10	03/08/10	
Total HxCDF	EPA-5 1613B	64219	0.0000024	1 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	5 0.000047	ND	0.94	03/05/10	03/08/10	
Total TCDD	EPA-5 1613B	64219	0.0000025	5 0.0000094	ND	0.94	03/05/10	03/08/10	
Total TCDF	EPA-5 1613B	64219	0.0000015	5 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 (32-1	41%)				73 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-1	52%)				79 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-1	30%)				72 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-1	23%)				83 %				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					75 %				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-18)	1%)				62 %				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185	⁵ %)				62 %				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-1	36%)				83 %				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178	8%)				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 (35-1979	%)				91 %				

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Kathleen A. Robb For Heather Clark Project Manager



THE LEADER IN ENVIRONMENTAL TESTING

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

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

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)					Sample	ed: 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		

Project ID: Routine Outfall 008

TestAmerica Irvine Kathleen A. Robb For Heather Clark

Project Manager



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITB2837

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

EPA 900.0 MOD											
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers		
Sample ID: ITB2837-02 (Outfall 008 (Composite) - Water)				Sample	ed: 02/28/1	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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Report Number: ITB2837

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

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)				Sample	ed: 02/28/1	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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Report Number: ITB2837

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 00	8 (Composite) - Water)				Sample	ed: 02/28/1	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)				Sample	ed: 02/28/1	10				
Reporting Units: pCi/L											
Radium 228	EPA 904 MOD	61259	0.81	1	-0.01	1	03/02/10	03/18/10	U		

Project ID: Routine Outfall 008

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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

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)				Sample	ed: 02/28/1	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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Report Number: ITB2837

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)				Sample	ed: 02/28/1	10				
Reporting Units: pCi/L Tritium	Ci/L EPA 906.0 MOD 67136 130 500 100 1 03/08/10 03/09/10 U										

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Report Number: ITB2837

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

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 008 (Composite) (ITB2837	Hold Time (in days) 7-02) - Water	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
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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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-B Hexane Extractable Material (Oil &	S LK1) ND	5.0	1.4	mg/l							
Grease)				C							
LCS Analyzed: 03/10/2010 (10C1221-BS	1)										MNR1
Hexane Extractable Material (Oil & Grease)	19.3	5.0	1.4	mg/l	20.0		96	78-114			
LCS Dup Analyzed: 03/10/2010 (10C122	1-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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Report Number: ITB2837

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	%REC	%REC	RPD	RPD Limit	Data Qualifiers
-		Linnt	MDL	Units	Level	Result	70REC	Linns	KF D	Linnt	Quaimers
Batch: 10C0076 Extracted: 03/01/10	<u>0</u>										
Blank Analyzed: 03/02/2010-03/03/2010	(10C0076-B)	L K 1)									
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	D									
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: 03/02/2010-03/0)3/2010 (10C)	0076-MS1)			Sou	rce: ITB	2772-01				
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: 03/02/2010-03/0)3/2010 (10C	0076-MS2)			Sou	rce: ITB2	2772-06				
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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Report Number: ITB2837

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							,				Z
Matrix Spike Dup Analyzed: 03/02/2010	-03/03/2010 (1	0C0076-M	SD1)		Sou	rce: ITB2	2772-01				
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	<u>)</u>										
Blank Analyzed: 03/03/2010 (10C0382-B	LK1)										
Mercury	ND	0.00020	0.00010	mg/l							
LCS Analyzed: 03/03/2010 (10C0382-BS	1)										
Mercury	0.00792	0.00020	0.00010	mg/l	0.00800		99	85-115			
Matrix Spike Analyzed: 03/03/2010 (10C	C0382-MS1)				Sou	rce: ITB2	2842-01				
Mercury	0.00764	0.00020	0.00010	mg/l	0.00800	ND	96	70-130			
Matrix Spike Dup Analyzed: 03/03/2010	(10C0382-Ms	SD1)			Sou	rce: ITB2	2842-01				
Mercury	0.00771	0.00020	0.00010	mg/l	0.00800	ND	96	70-130	0.9	20	

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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	RPD	RPD Limit	Data Qualifiers
-		Limit	MDL	Onits	Level	Result	JUREC	Linits	ΜD	Linit	Quanners
Batch: 10C0170 Extracted: 03/02/10	<u>)</u>										
Blank Analyzed: 03/02/2010-03/03/2010	(10C0170-BL	K1)									
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 (1	0C0170-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: 03/02/2010-03/0	3/2010 (10C0	170-MS1)			Sou	rce: ITB2	2772-06				
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 (1	10C0170-MS	D1)		Sou	rce: ITB2	2772-06				
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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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0381 Extracted: 03/03/10	<u>)</u>										
Blank Analyzed: 03/03/2010 (10C0381-B	LK1)										
Mercury	ND	0.00020	0.00010	mg/l							
LCS Analyzed: 03/03/2010 (10C0381-BS	1)										
Mercury	0.00813	0.00020	0.00010	mg/l	0.00800		102	85-115			
Matrix Spike Analyzed: 03/03/2010 (10C	0381-MS1)				Sou	rce: ITB	2837-02				
Mercury	0.00823	0.00020	0.00010	mg/l	0.00800	ND	103	70-130			
Matrix Spike Dup Analyzed: 03/03/2010	(10C0381-MS	SD1)			Sou	rce: ITB	2837-02				
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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B3357 Extracted: 02/28/10	_										
	-										
Blank Analyzed: 02/28/2010 (10B3357-Bl	LK1)										
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 (10B3	3357-MS1)				Sou	rce: ITB2	2835-02				
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 (10B3	3357-MS2)				Sou	rce: ITB2	2836-02				
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-M	SD1)			Sou	rce: ITB2	2835-02				
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	
		0.15	0.000	-	1.50		101	00.120	2	20	
Nitrite-N	1.54	0.15	0.090	mg/l	1.52	ND	101	80-120	2	20	

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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

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0449 Extracted: 03/04/10	_										
Blank Analyzed: 03/04/2010 (10C0449-B	LK1)										
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/04/2010 (10C0449-BS	1)										
Total Dissolved Solids	1000	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/04/2010 (10C044	9-DUP1)				Sou	rce: ITB2	2775-01				
Total Dissolved Solids	1480	20	2.0	mg/l		1500			1	10	
Batch: 10C0480 Extracted: 03/04/10	-										
Blank Analyzed: 03/04/2010 (10C0480-B	LK1)										
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/04/2010 (10C0480-BS	1)										
Perchlorate	25.7	4.0	0.90	ug/l	25.0		103	85-115			
Matrix Spike Analyzed: 03/04/2010 (10C	0480-MS1)				Sou	rce: ITB2	2837-02				
Perchlorate	27.3	4.0	0.90	ug/l	25.0	1.62	103	80-120			
Matrix Spike Dup Analyzed: 03/04/2010	(10C0480-M	-MSD1) Source: ITB2837-02									
Perchlorate	28.8	4.0	0.90	ug/l	25.0	1.62	109	80-120	5	20	
Batch: 10C0733 Extracted: 03/05/10	-										
Blank Analyzed: 03/05/2010 (10C0733-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							

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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

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0733 Extracted: 03/05/10	-										
LCS Analyzed: 03/05/2010 (10C0733-BS	1)										
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/05/2010 (10C	0733-MS1)				Sou	rce: ITB2	2827-03				
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-M	(SD1)			Sou	rce: ITB2	2827-03				
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0	ND	98	70-120	0	15	
Batch: 10C1623 Extracted: 03/12/10	-										
Blank Analyzed: 03/12/2010 (10C1623-B	LK1)										
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/12/2010 (10C1623-BS	l)										
Total Suspended Solids	997	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/12/2010 (10C162	3-DUP1)				Sou	rce: ITC()929-03				
Total Suspended Solids	12.0	10	1.0	mg/l		12.0			0	10	
Duplicate Analyzed: 03/12/2010 (10C162	3-DUP2)				Sou	rce: ITC()917-02				
Total Suspended Solids	7.40	10	1.0	mg/l		7.40			0	10	J

TestAmerica Irvine



MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly 17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

AnalyeResultLimitMDLIvitsLevelResult%RE/LimitRPDLimitQualifersBatch: 64219 Extracted: G3/05/101Bank Analyzed: 63/09/2010 (GOC050UPUPSummer 10Summer 10L3,4,6,7,8-HpCDFND0,000050,000030,11 <t< th=""><th></th><th></th><th>Reporting</th><th>Ş</th><th></th><th>Spike</th><th>Source</th><th></th><th>%REC</th><th></th><th>RPD</th><th>Data</th></t<>			Reporting	Ş		Spike	Source		%REC		RPD	Data
Blank Analyzei: 03/09/2010 (GOC050000219B) 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 0.000005 ug/L - 1,2,3,4,7,8-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8-HpCDF ND 0.00005 0.000025 ug/L - 1,2,3,4,7,8-HpCDD ND 0.00005 0.000022 ug/L - 1,2,3,4,7,8-HpCDF ND 0.00005 0.000022 ug/L - 1,2,3,6,7,8-HxCDF ND 0.00005 0.000022 ug/L - 1,2,3,7,8-HxCDF ND 0.00005 0.000022 ug/L - 1,2,3,7,8-HxCDF ND 0.00005 0.00002 ug/L - 1,2,3,7,8-HxCDF ND 0.00005 0.00001 ug/L - 2,3,4,7,8-HxCDF ND 0.00001 0.00001 ug/L - 2,3,4,7,8-HxCDF ND 0.00001 0.000002	Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
1,2,3,4,6,7,8-HpCDD ND 0.00005 0.000013 ug/L - 1,2,3,4,6,7,8-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8-HsCDD ND 0.00005 0.0000048 ug/L - 1,2,3,4,7,8-HsCDF ND 0.00005 0.000003 ug/L - 1,2,3,6,7,8-HsCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.00002 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.00003 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-HsCDF ND 0.00005 0.00003 ug/L - 2,3,4,6,7,8-HsCDF ND 0.00001 0.00001 ug/L - 0CDF	Batch: 64219 Extracted: 03/05/10	-										
1,2,3,4,6,7,8-HpCDD ND 0.00005 0.000013 ug/L - 1,2,3,4,6,7,8-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8-HsCDD ND 0.00005 0.0000048 ug/L - 1,2,3,4,7,8-HsCDF ND 0.00005 0.000003 ug/L - 1,2,3,6,7,8-HsCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.00002 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.00003 ug/L - 1,2,3,7,8,9-HsCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-HsCDF ND 0.00005 0.00003 ug/L - 2,3,4,6,7,8-HsCDF ND 0.00001 0.00001 ug/L - 0CDF	Plank Analyzad, 02/00/2010 (COC050)	0007100)				Sou	NO.					
1,2,3,4,6,7,8-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8,9-HpCDF ND 0.00005 0.000005 ug/L - 1,2,3,4,7,8-HsCDD ND 0.00005 0.000002 ug/L - 1,2,3,4,7,8-HsCDD ND 0.00005 0.000002 ug/L - 1,2,3,6,7,8-HsCDF ND 0.00005 0.000002 ug/L - 1,2,3,6,7,8-HsCDF ND 0.00005 0.000002 ug/L - 1,2,3,6,7,8-HsCDF ND 0.00005 0.000002 ug/L - 1,2,3,7,8,9-HsCDD ND 0.00005 0.000002 ug/L - 1,2,3,7,8-PsCDD ND 0.00005 0.000002 ug/L - 1,2,3,7,8-PsCDF ND 0.00005 0.000002 ug/L - 2,3,4,7,8-PsCDF ND 0.00005 0.00002 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00001 ug/L - 0CDF ND 0.0001 0.00001 ug/L - Total HpCDF ND			0.00005	0.000016	ug/I	50u	rce:					
1,2,3,4,7,8,9+IpCDF ND 0.00005 0.000055 ug/L - 1,2,3,4,7,8,9+KCDD ND 0.00005 0.000025 ug/L - 1,2,3,4,7,8-HxCDF ND 0.00005 0.000025 ug/L - 1,2,3,6,7,8-HxCDF ND 0.00005 0.000024 ug/L - 1,2,3,6,7,8-HxCDF ND 0.00005 0.000022 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000024 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000024 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000024 ug/L - 1,2,3,7,8-PeCDF ND 0.00005 0.000024 ug/L - 2,3,4,7,8-PeCDF ND 0.00005 0.000024 ug/L - 2,3,7,8-PeCDF ND 0.00005 0.000024 ug/L - - 2,3,7,8-TCDF ND 0.0001 0.000016 ug/L - - 0CDF ND 0.0001 0.000016 ug/L - - <t< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td></t<>					-				-			
1,2,3,4,7,8+hCDD ND 0.00005 0.000025 ug/L - 1,2,3,4,7,8-hCDF ND 0.00005 0.000028 ug/L - 1,2,3,6,7,8-hCDF ND 0.00005 0.000023 ug/L - 1,2,3,6,8-hCDF ND 0.00005 0.000023 ug/L - 1,2,3,7,8-hCDD ND 0.00005 0.000022 ug/L - 1,2,3,7,8-hCDF ND 0.00005 0.00002 ug/L - 1,2,3,7,8-hCDF ND 0.00005 0.00002 ug/L - 1,2,3,7,8-hCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-hCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-hCDF ND 0.00005 0.00001 ug/L - 2,3,4,7,8-hCDF ND 0.00005 0.00001 ug/L - 2,3,4,7,8-hCDF ND 0.00001 ug/L - - 2,3,4,7,8-hCDF ND 0.00001 ug/L - - 0CDD ND 0.00001 0					-				-			
1,2,3,4,7,8-HxCDF ND 0.00005 0.000025 ug/L - 1,2,3,6,7,8-HxCDD ND 0.00005 0.000020 ug/L - 1,2,3,6,7,8-HxCDF ND 0.00005 0.000020 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000020 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000020 ug/L - 1,2,3,7,8-PcCDF ND 0.00005 0.000020 ug/L - 1,2,3,7,8-PcCDF ND 0.00005 0.000020 ug/L - 2,3,4,7,8-PcCDF ND 0.00005 0.000020 ug/L - 2,3,4,7,8-PcCDF ND 0.00005 0.000020 ug/L - 2,3,4,7,8-PcCDF ND 0.00005 0.00001 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00001 ug/L - 0CDF ND 0.0001 0.00001 ug/L - - 0CDF ND 0.00005 0.00002 ug/L - - Total HpCDF <td< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td></td<>					-				-			
1,2,3,6,7,8-HxCDD ND 0.00005 0.000002 ug/L - 1,2,3,6,7,8-HxCDF ND 0.00005 0.000039 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000022 ug/L - 1,2,3,7,8,9-HxCDF ND 0.00005 0.000022 ug/L - 1,2,3,7,8-PcDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.00005 0.000002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.00005 0.000002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.00005 0.000002 ug/L - 2,3,4,7,8-PcDF ND 0.0001 0.00002 ug/L - 2,3,7,8-TCDD ND 0.0001 0.00002 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00012 ug/L - 0CDD ND 0.0001 0.00002 ug/L - - 0CDF ND 0.0001 0.00003 ug/L - - Total HpCDF ND <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>					-				-			
1,2,3,6,7,8-HxCDF ND 0,00005 0,000029 ug/L - 1,2,3,7,8,9-HxCDD ND 0,00005 0,000022 ug/L - - 1,2,3,7,8,9-HxCDF ND 0,00005 0,000022 ug/L - - 1,2,3,7,8-PcCDF ND 0,00005 0,000014 ug/L - - 1,2,3,7,8-PcCDF ND 0,00005 0,00002 ug/L - - 2,3,4,7,8-PcCDF ND 0,00005 0,00002 ug/L - - 2,3,4,7,8-PcCDF ND 0,00005 0,00002 ug/L - - 2,3,7,8-PcCDF ND 0,0001 0,00002 ug/L - - - 2,3,7,8-PcCDF ND 0,0001 0,00002 ug/L -					-				_			
1,2,3,7,8,9-HxCDD ND 0.00005 0.0000022 ug/L 1,2,3,7,8,9-HxCDF ND 0.00005 0.000004 ug/L 1,2,3,7,8-PeCDD ND 0.00005 0.000001 ug/L 2,3,4,7,8-PeCDF ND 0.00005 0.000002 ug/L 2,3,4,7,8-PeCDF ND 0.00005 0.000003 ug/L 2,3,4,7,8-PeCDF ND 0.00005 0.000002 ug/L 2,3,4,7,8-PeCDF ND 0.00005 0.000003 ug/L 2,3,4,7,8-PeCDF ND 0.0001 0.00001 ug/L 2,3,4,7,8-PeCDF ND 0.0001 ug/L 2,3,4,7,8-PeCDF ND 0.0001 ug/L 2,3,4,7,8-PeCDF ND 0.0001 ug/L 2,3,4,7,8-PeCDF ND 0.0001 ug/L 0CDD ND 0.0001 ug/L OCDF ND 0.00005					-				_			
12,37,89-HxCDF ND 0.00005 0.000002 ug/L - 12,37,89-PcCDD ND 0.00005 0.000031 ug/L - 12,37,8-PcCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-PcCDF ND 0.00005 0.00002 ug/L - 2,3,4,7,8-PcCDF ND 0.00005 0.00002 ug/L - 2,3,7,8-PcCDF ND 0.00005 0.00002 ug/L - 2,3,7,8-PcCDF ND 0.00001 0.000016 ug/L - 2,3,7,8-TCDD ND 0.0001 0.000016 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00017 ug/L - 0CDD ND 0.0001 0.00001 ug/L - - 0CDF ND 0.0001 0.00001 ug/L - - Total HpCDF ND 0.00005 0.00002 ug/L - - Total HcCDF ND									_			
1,2,3,7,8-PcCDD ND 0.00005 0.000001 ug/L - 1,2,3,7,8-PcCDF ND 0.00005 0.00002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.00005 0.000036 ug/L - 2,3,4,6,7,8-PcCDF ND 0.00005 0.000002 ug/L - 2,3,7,8-PcCDF ND 0.00001 0.00002 ug/L - 2,3,7,8-TCDD ND 0.0001 0.00001 ug/L - 2,3,7,8-TCDF ND 0.0001 ug/L - - 0CDD ND 0.0001 ug/L - - - 0CDF ND 0.0005 0.00003 ug/L - - - 10tal HpCDF ND 0.0005 0.00004 ug/L - - - 10tal PcCDF ND					-				_			
1,2,3,7,8-PeCDF ND 0.0005 0.00002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.0005 0.00002 ug/L - 2,3,4,6,7,8-HxCDF ND 0.0005 0.00002 ug/L - 2,3,7,8-PeCDF ND 0.00005 0.00002 ug/L - 2,3,7,8-TCDD ND 0.0001 0.00001 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00001 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00001 ug/L - CCDD ND 0.0001 0.00001 ug/L - - OCDF ND 0.0001 0.00003 ug/L - - Total HpCDF ND 0.0005 0.00003 ug/L - - Total HxCDF ND 0.0005 0.00004 ug/L - - Total HxCDF ND 0.0005 0.00004 ug/L - - Total PCDF ND 0.0005 0.00004 ug/L - - Total TC									_			
2,3,4,6,7,8-HxCDF ND 0.00005 0.000002 ug/L - 2,3,4,7,8-PcCDF ND 0.00001 0.000022 ug/L - 2,3,7,8-PcCDF ND 0.0001 0.000012 ug/L - 2,3,7,8-TCDD ND 0.0001 0.000016 ug/L - 2,3,7,8-TCDF ND 0.0001 0.00017 ug/L - 0CDD ND 0.0001 0.000018 ug/L - OCDF ND 0.0001 0.000038 ug/L - Total HpCDF ND 0.00005 0.000034 ug/L - Total HxCDF ND 0.00005 0.000039 ug/L - Total HxCDF ND 0.00005 0.00002 ug/L - Total HxCDF ND 0.00005 0.00002 ug/L - - Total PeCDF ND 0.00005 0.00002 ug/L - - Total PeCDF ND 0.00005 0.00002 ug/L - - Total PeCDF ND 0.000					-				-			
23,4,7,8-PeCDF ND 0.00005 0.000036 ug/L - 2,3,7,8-TCDD ND 0.0001 0.000022 ug/L - 2,3,7,8-TCDF ND 0.0001 0.000016 ug/L - 0CDD ND 0.0001 0.000017 ug/L - OCDF ND 0.001 0.000038 ug/L - Total HpCDF ND 0.0005 0.000034 ug/L - Total HpCDF ND 0.0005 0.000034 ug/L - Total HxCDF ND 0.0005 0.000039 ug/L - Total HxCDF ND 0.0005 0.000022 ug/L - Total PeCDF ND 0.0005 0.00002 ug/L - Total PeCDF ND 0.0005 0.00002 ug/L - Total PeCDF ND 0.0005 0.00002 ug/L - Total PeCDF ND 0.0005 0.00022 ug/L - Total TCDD ND 0.0001 0.00022 ug/L -					-				-			
2,3,7,8-TCDD ND 0.00001 0.0000022 ug/L - 2,3,7,8-TCDF ND 0.00001 0.000016 ug/L - OCDD ND 0.0001 0.000017 ug/L - OCDF ND 0.0001 0.000033 ug/L - Total HpCDD ND 0.0005 0.000034 ug/L - Total HpCDF ND 0.0005 0.000039 ug/L - Total HxCDD ND 0.0005 0.000039 ug/L - Total HxCDF ND 0.0005 0.000039 ug/L - Total PeCDF ND 0.0005 0.000024 ug/L - Total PeCDF ND 0.0005 0.000024 ug/L - Total PeCDF ND 0.00055 0.000024 ug/L - - Total PeCDF ND 0.00055 0.000024 ug/L - - Total PeCDF ND 0.00016 ug/L - - - Total TCDD ND 0.00011 <td< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td></td<>					-				-			
2,3,7,8-TCDF ND 0.0001 0.00001 ug/L - OCDD ND 0.0001 0.00013 ug/L - OCDF ND 0.0001 0.000033 ug/L - Total HpCDD ND 0.00005 0.000034 ug/L - Total HpCDF ND 0.00005 0.000034 ug/L - Total HxCDD ND 0.00005 0.000034 ug/L - Total HxCDF ND 0.00005 0.000004 ug/L - Total PeCDD ND 0.0005 0.00002 ug/L - Total PeCDD ND 0.0005 0.00002 ug/L - Total PeCDF ND 0.0005 ug/L - - Total PeCDF ND 0.0005 ug/L - - Total TCDD ND 0.0001 ug/L - - Surrogate: 13C-1,2,3,4,6,7,8-HpCDD 0.012 ug/L - - Surrogate: 13C-1,2,3,4,6,7,8-HpCDF 0.015 ug/L 0.002 73 28-143					-				-			
OCDD ND 0.0001 0.0001 0.0001 0.0001 0.0001 0.0003 0.001 0.0003 0.001 0.001 0.0003 0.001					U				-			
OCDF ND 0.001 0.000083 ug/L - Total HpCDD ND 0.00005 0.000016 ug/L - Total HpCDF ND 0.00005 0.000034 ug/L - Total HpCDF ND 0.00005 0.000034 ug/L - Total HxCDD ND 0.00005 0.000002 ug/L - Total HxCDF ND 0.00005 0.00002 ug/L - Total PcCDD 1e-005 0.00005 0.00002 ug/L - Total PcCDF ND 0.00005 0.00002 ug/L - - Total PcCDF ND 0.00005 0.00002 ug/L - - Total PcCDF ND 0.0001 0.00002 ug/L - - Total TCDF ND 0.0001 0.0001 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 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>									-			
Total HpCDD ND 0.00005 0.00016 ug/L - Total HpCDF ND 0.00005 0.000034 ug/L - Total HxCDD ND 0.00005 0.000039 ug/L - Total HxCDD ND 0.00005 0.000002 ug/L - Total HxCDF ND 0.00005 0.00002 ug/L - Total PcCDD 1e-005 0.00005 0.00002 ug/L - - Total PcCDF ND 0.00005 0.00002 ug/L - - - Total PcCDF ND 0.00005 0.00002 ug/L - - - Total PcCDF ND 0.00001 0.00002 ug/L - - - Total TCDF ND 0.0001 0.00001 ug/L - - - Surrogate: 13C-1,2,3,4,6,7,8-HpCDP 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	OCDF	ND	0.0001		U				-			
Total HxCDD ND 0.00005 0.000034 ug/L - Total HxCDD ND 0.00005 0.000039 ug/L - Total HxCDF ND 0.00005 0.000002 ug/L - Total HxCDF ND 0.00005 0.000002 ug/L - Total PcCDD 1e-005 0.00005 0.00002 ug/L - - Total PcCDF ND 0.00005 0.000022 ug/L - - J, Q Total PcCDF ND 0.00001 0.000022 ug/L - - - - Total TCDD ND 0.0001 0.000022 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	Total HpCDD		0.00005		-				-			
Total HxCDD ND 0.00005 0.000039 ug/L - Total HxCDF ND 0.00005 0.00002 ug/L - Total PcCDD 1e-005 0.00005 0.00004 ug/L - J, Q Total PcCDF ND 0.00005 0.000022 ug/L - - J, Q Total PcCDF ND 0.00001 0.000022 ug/L -	*	ND	0.00005	0.0000034	-				-			
Total PeCDD le-005 0.00005 0.00004 ug/L - J, Q Total PeCDF ND 0.0005 0.000022 ug/L - <td< td=""><td>-</td><td>ND</td><td>0.00005</td><td>0.0000039</td><td>ug/L</td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td></td<>	-	ND	0.00005	0.0000039	ug/L				-			
Total PeCDF ND 0.00005 0.000022 ug/L - Total TCDD ND 0.00001 0.000002 ug/L - Total TCDF ND 0.00001 0.000016 ug/L - Surrogate: 13C-1,2,3,4,6,7,8-HpCDP 0.0012 Ug/L - - Surrogate: 13C-1,2,3,4,6,7,8-HpCDF 0.0015 Ug/L 0.002 61 23-140	Total HxCDF	ND	0.00005	0.000002	ug/L				-			
Total TCDD ND 0.00001 0.000022 ug/L - Total TCDF ND 0.0001 0.000016 ug/L - Surrogate: 13C-1,2,3,4,6,7,8-HpCDP 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	Total PeCDD	1e-005	0.00005	0.000004	ug/L				-			J, Q
Total TCDF ND 0.00001 0.000016 ug/L Surrogate: 13C-1,2,3,4,6,7,8-HpCDP 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	Total PeCDF	ND	0.00005	0.0000022	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD0.0012ug/L0.0026123-140Surrogate: 13C-1,2,3,4,6,7,8-HpCDF0.0015ug/L0.0027328-143	Total TCDD	ND	0.00001	0.0000022	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF 0.0015 ug/L 0.002 73 28-143	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-1,2,3,4,7,8,9-HpCDF 0.0011 ug/L 0.002 57 26-138	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-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-1,2,3,4,7,8-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-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-1,2,3,6,7,8-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-1,2,3,7,8,9-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-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	Surrogate: 13C-1,2,3,7,8-PeCDF	0.00098			ug/L	0.002		49	24-185			

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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-5 1613B

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 64219 Extracted: 03/05/10	-										
Blank Analyzed: 03/09/2010 (G0C050	000219B)				Sou	rce:					
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 (G0C05000)0219C)				Sou	rce:					
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	0.0000068	ug/L	0.001		95	82-122			
1,2,3,4,7,8,9-HpCDF	0.000998	0.00005	0.0000096	ug/L	0.001		100	78-138			
1,2,3,4,7,8-HxCDD	0.00105	0.00005	0.0000063	ug/L	0.001		105	70-164			
1,2,3,4,7,8-HxCDF	0.000993	0.00005	0.0000042	ug/L	0.001		99	72-134			
1,2,3,6,7,8-HxCDD	0.00101	0.00005	0.0000059	ug/L	0.001		101	76-134			
1,2,3,6,7,8-HxCDF	0.00102	0.00005	0.0000036	ug/L	0.001		102	84-130			
1,2,3,7,8,9-HxCDD	0.000988	0.00005	0.0000048	ug/L	0.001		99	64-162			
1,2,3,7,8,9-HxCDF	0.00102	0.00005	0.0000036	ug/L	0.001		102	78-130			
1,2,3,7,8-PeCDD	0.000934	0.00005	0.0000075	ug/L	0.001		93	70-142			
1,2,3,7,8-PeCDF	0.00101	0.00005	0.0000034	ug/L	0.001		101	80-134			
2,3,4,6,7,8-HxCDF	0.000967	0.00005	0.0000033	ug/L	0.001		97	70-156			
2,3,4,7,8-PeCDF	0.00102	0.00005	0.0000037	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	0.0000017	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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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly 17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Analyta	Result	Reporting Limit	; MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Analyte		Linnt	MDL	Units	Level	Kesuit	70KEU	Linnts	KF <i>D</i>	Linnt	Quanners
Batch: 64219 Extracted: 03/05/10	-										
LCS Analyzed: 03/09/2010 (G0C05000	10210 C)				Sou	rce:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00125			ug/L	0.002	ince.	63	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00125			ug/L ug/L	0.002		53	20-175			
Surrogate: 13C-2,3,7,8-TCDD Surrogate: 13C-2,3,7,8-TCDF	0.000951			ug/L ug/L	0.002		<i>48</i>	20-175			
Surrogate: 13C-OCDD	0.00238			ug/L ug/L	0.002		40 59	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000717			ug/L ug/L	0.0008		90	31-191			
Surrogaie. 57 617 2,5,7,6 1 655	0.000717			u8/1	0.0000		20	51 171			
LCS Dup Analyzed: 03/09/2010 (G0C)	050000219L)				Sou	rce:					
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	0.0000087	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 0.001	0.0001	0.000021	ug/L	0.002		108	63-170	13	50	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD				ug/L	0.002		50	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00119 0.001			ug/L	0.002 0.002		59 50	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.001			ug/L	0.002		50 56	20-186 21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDD Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00113			ug/L ug/L	0.002		50 59	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00117			ug/L ug/L	0.002		59 64	19-202 25-163			
<i>Surrogate: 13C-1,2,3,6,7,8-HxCDD</i> <i>Surrogate: 13C-1,2,3,6,7,8-HxCDF</i>	0.00127			ug/L ug/L	0.002		61	23-103			
<i>Surrogate: 13C-1,2,3,7,8,9-HxCDF</i> <i>Surrogate: 13C-1,2,3,7,8,9-HxCDF</i>	0.00122			ug/L ug/L	0.002		57	17-205			
Surrogate: 13C-1,2,3,7,8,9-fixCDF Surrogate: 13C-1,2,3,7,8-PeCDD	0.000927			ug/L ug/L	0.002		46	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDD Surrogate: 13C-1,2,3,7,8-PeCDF	0.000927			ug/L ug/L	0.002		40 44	21-227			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.000372			ug/L ug/L	0.002		44 64	21-192			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.000905			ug/L ug/L	0.002		45	13-328			
Smillguic. 15C 2, 5, 7, /, 0-1 CCD1	0.000705			"5/L	0.002		45	15 520			

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

Surrogate: 37Cl4-2,3,7,8-TCDD

0.000666

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31-191

83

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 (G0C)	50000219L)	Source:									
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			

ug/L

0.0008



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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

METHOD BLANK/QC DATA

ASTM 5174-91

Analyte Batch: 67296 Extracted: 03/10/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup Analyzed: 03/12/2010	(F0B23045200	1D)			Sou	rce: F0B2	23045200	1			
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 (F0I	3230452001S)				Sou	rce: F0B2	23045200	1			
Total Uranium	28.1	0.7	0.2	pCi/L	27.7	0.677	99	62-150			
Blank Analyzed: 03/12/2010 (F0C08000))296B)				Sou	rce:					
Total Uranium	0.315	0.693	0.21	pCi/L				-			Jb
LCS Analyzed: 03/12/2010 (F0C0800002	.96C)				Sou	rce:					
Total Uranium	28.6	0.7	0.2	pCi/L	27.7		103	90-120			



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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 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 68099 Extracted: 03/09/10											
Matrix Spike Analyzed: 03/14/2010 (F00	C020462001S)				Sou	rce: F0C	02046200	1			
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 (F0C020	0462001X)				Sou	rce: F0C	02046200	1			
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 (F0C09000	0099B)				Sou	rce:					
Gross Alpha	0.66	2	0.85	pCi/L				-			U
Gross Beta	0.69	4	1	pCi/L				-			U
LCS Analyzed: 03/15/2010 (F0C090000	199C)				Sou	rce:					
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			

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

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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: 61272 Extracted: 03/02/10											
Blank Analyzed: 03/16/2010 (F0C02000	0272B)				Sou	rce:					
Cesium 137	1.4	20	12	pCi/L				-			U
Potassium 40	-60	NA	220	pCi/L				-			U
LCS Analyzed: 03/17/2010 (F0C020000	272C)				Sou	rce:					
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 (F0C02	0462001X)		Source: F0C020462001								
Cesium 137	1.6	20	16	pCi/L		-1.6		-			U
Potassium 40	-80	NA	200	pCi/L		-80		-			U

Project Manager



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Report Number: ITB2837

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METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 61258 Extracted: 03/02/10											
Blank Analyzed: 03/18/2010 (F0C02000	0258B)				Sou	rce:					
Radium (226)	0.079	1	0.15	pCi/L				-			U
LCS Analyzed: 03/18/2010 (F0C020000	258C)				Sou	rce:					
Radium (226)	12.4	1	0.1	pCi/L	11.3		110	68-136			
LCS Dup Analyzed: 03/18/2010 (F0C02	20000258L)				Sou	rce:					
Radium (226)	12	1	0.1	pCi/L	11.3		107	68-136	3	40	



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Report Number: ITB2837

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

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte Batch: 61259 Extracted: 03/02/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 03/18/2010 (F0C02000 Radium 228	0259B) 0.47	1	0.3	pCi/L	Sou	rce:		-			Jb
LCS Analyzed: 03/18/2010 (F0C020000) Radium 228	259C) 6.04	1	0.42	pCi/L	Sou 6.37	rce:	95	60-142			
LCS Dup Analyzed: 03/18/2010 (F0C02 Radium 228	0000259L) 6	1	0.33	pCi/L	Sou 6.37	rce:	94	60-142	0.5	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: ITB2837

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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: 61262 Extracted: 03/02/10											
Blank Analyzed: 03/11/2010 (F0C02000	0262B)				Sou	rce:					
Strontium 90	0.15	3	0.37	pCi/L				-			U
LCS Analyzed: 03/11/2010 (F0C0200002	262C)				Sou	rce:					
Strontium 90	6.99	3	0.33	pCi/L	6.79		103	80-130			
LCS Dup Analyzed: 03/11/2010 (F0C02	0000262L)				Sou	rce:					
Strontium 90	6.53	3	0.35	pCi/L	6.79		96	80-130	7	40	



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Report Number: ITB2837

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METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result %F	%REC EC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 67136 Extracted: 03/08/10										
Duplicate Analyzed: 03/09/2010 (F0C02	0462001X)				Sou	rce: F0C0204	52001			
Tritium	86	500	130	pCi/L		49	-			U
Matrix Spike Analyzed: 03/09/2010 (F0	C020465001S)									
Tritium	4260	500	130	pCi/L	4520	130 9	2 62-147			
Blank Analyzed: 03/09/2010 (F0C08000	0136B)				Sou	rce:				
Tritium	163	500	130	pCi/L			-			Jb
LCS Analyzed: 03/09/2010 (F0C080000	136C)				Sou	rce:				
Tritium	4700	500	130	pCi/L	4520	1	4 85-112			

TestAmerica Irvine Kathleen A. Robb For Heather Clark Project Manager



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 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.

						Compliance
<u>LabNumber</u>	Analysis	Analyte	Units	Result	MRL	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	0.0 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

TestAmerica Irvine



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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

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



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 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	Х	Х
EPA 200.8-Diss	Water	Х	Х
EPA 200.8	Water	Х	Х
EPA 245.1-Diss	Water	Х	Х
EPA 245.1	Water	Х	Х
EPA 300.0	Water	Х	Х
EPA 314.0	Water	Х	Х
Filtration	Water	N/A	N/A
SM 2540D	Water	Х	Х
SM2540C	Water	Х	
SM4500NH3-C	Water	Х	Х

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

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

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

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

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

CHAIN OF CUSTODY FORM

	Page	1	of	2
77	32837			

Client Name//	Address:	_		Project:		······	<u> </u>								AL VOID					0/+-
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Test America	Contact:	Joseph Do	ak	and and an	rappy van	cy														
							(1664-HEM)													Temp °F = 53,4
Project Mana	der: Brou	www.Kelly		Phone Number	···	•	4 H-4													pH= 7,2
	3	····y····cony		(626) 568-669			166												1	Time of readings =
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Sample	Sample	Container	r	(626) 568-6515)	r	ō						1							
Description	Matrix	Туре	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil &													Comments
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CHAIN OF CUSTODY FORM

Page 2 of 2

Client Name/		:		Proje				ANALYSIS REQUIRED													
MWH-Arca					ig-SSFL			.ő	[Τ]		T								
618 Michillind	a Ave, S	Suite 200			ine Outfa	all 008		, Pb,				, K , gal			Ì						
Arcadia, CA	91007				POSITE			Cd, Cu,				0.0 03. 1 03.		1 d							
Test America	Contact	: Joseph Do	bak	Storm	Stormwater at Happy Valley				ers)	CI-, SO4, NO3+NO2-N, Perchlorate		, Gross Beta(900.0), 2), Sro90 (905.0), Total 226 (903.0 or 903.1) & 3), Uranium (908.0), K- or 901.1)		: Sb, Cd, Cu, Pb,							
Project Manag	ar Bro			Dhon	o. Nuumaha a			Me	gen	2-1), Grc 0), Sr 226 (0), Ur or 90		tals						1	Comments
i iojectinaria;	Jei. DIU	invyn Keny		1	e Numbe			ble	No	2		(900.0), G (906.0), 3 adium 22 (904.0), 1 901.0 or 9	₽	Me	Z	0.2)				i	
Compler: A		<u>.</u>		1° 1	568-669	1		rera Zn	all (33		a(900.0) (906.0) 3adium 3 (901.0		ed r	trit∈	(35					High Flow
Sampler: ς	June	5-1		1	umber:	-		je č	and	Ž		Phi H-3 ed F 37 37	P	e, Z	Z	Z					
Sample	Sample	Container			568-651	5		Щ. Ц.	ő	l õ	l I	s Al bine S-1	ŧ	Dis Dis	e-N	oui		ſ			
Description	Matrix	Туре	# of Cont.		mpling e/Time	Preservative	Bottle #	Total Recoverable Metals: Hg, TI, Se, Zn	TCDD (and all congeners)	ت	TDS	Gross Alpha(900.0), Tritium (H-3) (906.0) Combined Radium 2. Radium 228 (904.0) 40, CS-137 (901.0 or	Chronic Toxicity	Total Dissolved Metals: Hg, Tl, Se, Zn	Nitrate-N, Nitrite-N	Ammonia-N (350.2)					
Outfail 008	W	1L Poly	1	2/26	10 0704	HNO3	2A	х									·				
Outfall 008 Dup	w	1L Poly	1	'	Ì	HNO ₃	2B	х													
Outfall 008	w	1L Amber	2			None	3A, 3B		х												
Outfall 008	w	500 mL Poly	2			None .	4A, 4B			х										+	
Outfall 008	w	500 mL Poly	1			None	5				х						[
Outfall 008	w	2.5 Gal Cube	1		5D	None	6A			· ·											11. <i>P</i> h
		500 ml Amber	1			None	6B					X -									Unfiltered and unpreserved analysis
Outfall 008-	W	-1-Gal-Poly	- 1.			None -	7					SD	-								Only test if first or second rain
Outfall 008	w	1L Poly	1			None	8							x				<u>-</u> +			events of the year Filter w/in 24hrs of receipt at lab
Outfall 008	w	500 mL Poly	1		V	None	9						<u></u>		x						
Outfall 008	w	500 mL Poly	1	2/28/10	0704	H₂SO₄	10							┼──┤		x					
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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 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.

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

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

Observations/Nonconformances

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

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

TestAmerica St. Louis

METHODS SUMMARY

F0C020466

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Radium-226 by GFPC	EPA 903.0 MOD	
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 RADIOCHEMISTRYPROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

SAMPLE SUMMARY

F0C020466

WO # SAMPLE# CLIENT SAMPLE ID	SAMPLED SAMP DATE TIME
LV7M2 001. ITB2837-02	02/28/10 07:04
NOTE (S) :	

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- 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: Work Order: Matrix:	F0C020466-00 LV7M2 WATER	1		Date Collec Date Receiv		/28/10 0704 /02/10 0915	
Parameter	Result	Qual	Total Uncert, (2 ₀ +/-)	RL	mde	Prep Date	Analysis Date
Gamma Cs-137 & Hi	ts by EPA 901.	1 MOD		pCi/L	Batch	# 0061272	Yld %
Cesium 137	-3	U	12	20	18	03/02/10	03/17/10
Potassium 40	-60	υ	410		250	03/02/10	03/17/10
Gross Alpha/Beta	EPA 900			pCi/L	Batch	# 0068099	Yld %
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 EP	A-905 MOD			pCi/L	Batch	# 0061262	Yld % 63
Strontium 90	0.13	ΰ	0,24	3.00	0.41	03/02/10	03/11/10
TRITIUM (Distill)	by EPA 906.0	MOD		pCi/L	Batch	# 0067136	Yld %
Tritium	100	υ	86	500	130	03/08/10	03/09/10
Total Uranium by	KPA ASTM 5174-	91		pCi/L	Batch	# 0067296	Yld %
Total Uranium	1,38		0.15	0.69	0.21	03/10/10	03/12/10
Radium 226 by EP	A 903.0 MOD			pCi/L	Batch	# 0061258	¥1d % 60
Radium (226)	0.65	J	0.23	1.00	0.24	03/02/10	03/18/10
Radium 228 by GFP	C EPA 904 MOD			pCi/L	Batch	# 0061259	¥ld % 57
Radium 228	-0.01	υ	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

Parameter	Result	Qual	Total Uncert. (2 g+/~)	RL	MDC		Prep Date	Lab Sample ID Analysis Date
Radium 226 by	EPA 903.0 MOD		pCi/L	Batch #	0061258	Yld %	102 1	F0C020000-258B
Radium (226)	0.079	U	0.096	1,00	0.15		03/02/10	03/18/10
Radium 228 by G	FPC EPA 904 MC	D	pCi/L	Batch #	0061259	Yld %	98 1	F0C020000-259B
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 1	F0C020000-262B
Strontium 90	0.15	U	0.22	3,00	0.37		03/02/10	03/11/10
Gamma Cs-137 &	Hits by EPA 90	1.1 MOD	pCi/L	Batch #	0061272	Yld %	J	F0C020000-272в
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 (Distil	1) by EPA 906.	0 MOD	pCi/L	Batch #	0067136	Yld %	1	F0C080000-136B
Tritium	163	J	99	500	130		03/08/10	03/09/10
Gross Alpha/Bet	a EPA 900		pCi/L	Batch #	0068099	Yld %		F0C090000-099B
Gross Alpha	0.66	υ	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	0 03/15/10
Total Uranium k	y KPA ASTM 517	4-91	pCi/L	Batch #	0067296	Yld %		F0C080000-296в
Total Uranium	0.315	J	0.039	0,693	0,21		03/10/10	03/12/10

NOTE (S)

Client Lot ID:

Matrix:

F0C020466

WATER

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.

F0C020466

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0C020466 Matrix: WATER

			Total				Lab	Sample ID
Parameter	Spike Amount	Result	Uncert. (2 σ+/-)		MDC	% Yld	% Rec	QC Control Limits
Gamma Cs-137 & Hits	by EPA 901.1	MOD	pCi/L	901.1	MOD		FOCO	20000-272C
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 M	OD	pCi/L	906.0	MOD		FOCO	80000-136C
Tritium	4520	4700	480		130		104	(85 - 112)
	Batch #:	0067136			Analysis Date:	03/09)/10	
Total Uranium by KPA	ASTM 5174-9	1	pCi/L	5174-	91		FOCO	80000-296C
Total Uranium	27.7	28.6	3,5		0.2		103	(90 - 120)
	Batch #:	0067296			Analysis Date:	03/12	2/10	
Total Uranium by KPA	ASTM 5174-9	1	pCi/L	5174-	91		FOCO	80000-296C
Total Uranium	5,54	5.62	0.58		0.21		101	(90 - 120)
	Batch #;	0067296			Analysis Date:	03/12	2/10	
Gross Alpha/Beta EPA	. 900	· · · · · · •	pCi/L	900.0	MOD	• • • • • • • • • •	FOCO	90000-099C
Gross Beta	68.0	63.9	5,4		0.8		94	(58 - 133)
	Batch #:	0068099			Analysis Date:	03/19	5/10	
Gross Alpha/Beta EPA	. 900		pCi/L	900.0	MOD		FOCO	90000-099C
Gross Alpha	49.4	51.5	5,8		1,0		104	(62 - 134)
	Batch #;	0068099			Analysis Date:	03/19	5/10	•

NOTE (S)

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client	Lot	ID:	F0C020466
Matrix:			WATER

				Total			Lab	Sample ID
Parameter	Spike Amount	Result		Uncert. (2 g +/-)	% Yld	% Rec	QC Control Limits	Precision
Radium 226 by EPA	903.0 MOD		pCi/L	903,0) MOD		FOCO	20000-258C
Radium (226) Spk 2	11,3 11,3	12.4 12.0		1.2 1,2	104 105	110 107	(68 - 136) (68 - 136)	3 %RPD
	Batch #:	0061258			Analysis	Date:	03/18/10	
Radium 228 by GFPC	EPA 904 MOD		pCi/L	904 b	10D		FOCO	20000-259C
Radium 228 Spk 2	6.37 6.37	6.04 6.00		0.73 0.71	99 103	95 94	(60 - 142) (60 - 142)	0.5 %RPD
SR-90 BY GFPC EPA	Batch #: -905 MOD	0061259	pCi/L	905 N	Analysis MOD	Dater		20000-262C
Strontium 90 Spk 2	6.79 6.79	6,99 6,53		0.80 0.76	77 77	103 96	(80 - 130) (80 - 130)	7 %RPD
	Batch #:	0061262			Analysis	Date:	03/11/10	

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

F0C020466

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id:	F0C020462	Date Sampled:	02/26/10
Matrix:	WATER	Date Received:	03/02/10

					.	QC Sample	e ID
Parameter	Spike Amount	Spike Result	Total Uncert, (2 ₀ +/-)	Spike Sampl Yld. Resul	01106101	%YLD %REC	QC Control Limits
Gross Alpha/Beta EPA 9	00		pCi/L	900.0 M	OD	F0C020462	2-001
Gross Alpha	49.4	47.1	5.5	2.1	1.2	91	(35 - 150)
	Batch #:	0068099	Ar	alysis Date:	03/14/10		
Gross Alpha/Beta EPA 9	00		pCi/L	900.0 M	OD	F0C020462	2-001
Gross Beta	68.0	74.2	6.2	1,50	0.79	107	(54 - 150)
	Batch #:	0068099	Ar	nalysis Date:	03/14/10		
TRITIUM (Distill) by E	PA 906.0 MO	D	pCi/L	906.0 M	OD	F0C02046	5-001
Tritium	4520	4260	450	130	92	92	(62 - 147)
	Batch #:	0067136	Ar	alysis 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.

%RPD

4

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Client Lot ID: F0B230452 Date Sampled: 02/20/10 1349 Matrix: WATER Date Received: 02/23/10 0910 QC Sample ID Tota1 Total Uncert. Uncert. Spike SAMPLE SPIKE QC Control Spike Parameter vid Result % Yld %Rec Limits Result (20 +/-) Amount (2 0+/-) Total Uranium by KPA ASTM 5 pCi/L 5174-91 F0B230452-001 (62 - 150)27,7 28,1 3.4 0.677 J 0.074 99 Total Uranium 95 (62 - 150) Spk2 27.7 3.3 0.677 0.074 26.9 J Precision:

Analysis date:

03/12/10

Radiochemistry

NOTE(S)

Data are incomplete without the case narrative.

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

Batch #:

0067296

J Result is greater than sample detection limit but less than stated reporting F0C02044 for

DUPLICATE EVALUATION REPORT

Radiochemistry

	F0C02 WATER	-					Date Sampled Date Receive		/26/10 /02/10	
Parameter	SAMPL Resul		Total Uncert. (2 g +/-)	% Yld	DUPLIC Result	\TE	Total Uncert. (2 g+/-)	% ¥ld	QC Sample ID Precision	
Gamma Cs-137 & Hits	by EP	A 901.1	MOD	pCi/L	901	.1 MO	ם		F0C020462-001	
Cesium 137	-1.6	U	6.8		1,6	U	8.4		5730	% RPD
Potassium 40	-80	υ	440		~80	υ	3300		2	%RPD
		Batch #:	0061272	(Sample)	0061	.272 (1	Duplicate)			
TRITIUM (Distill) b	Y EPA	906.0 M	סס	pCi/L	906	,0 MO	D		F0C020462-001	
Tritium	49	ΰ	79		86	U	84		55	%RPD
		Batch #:	0067136	(Sample)	0067	136 (1	Duplicate)			
Gross Alpha/Beta EP.	A 900			pCi/L	900	.0 MO	D		F0C020462-001	
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)	0068	099 (1	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, v Result is less than the sample detection limit. F0C020466



SUBCONTRACT ORDER TestAmerica Irvine

ITB2837

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

Expires

Interlab Price Surch Comments

Units

Due

Analysis

·····			Sampled:	<u>02/28/10 07:04</u>		
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	p Ci/ 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 - Ou	it N/A	03/10/10	03/28/10 07:04	\$0.0 0	0%	
Radium 226-O	pCi/L	03/10/10	02/28/11 07:04	\$88.00	0%	Out St Louis, Boeing permit, DO NOT
Radium 228-0	pCi/L	03/10/10	02/28/11 07:04	\$84.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-0	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 FILTERI
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 Am	ber (I)				

2 17:00 10 Released By Date/Time

Date/Time

Received B car Received By

12:00 ime 15 2 \mathbf{Q}' Page 1 of 1 Date/ time

Released By F0C020466

			[Mago	TestAmerica S 157-1108	
TestAme	Enico	#(s):	FOCQ20	57400	el Fille F
THE LEADER IN ENVIRONM		·	<u> </u>		
CONDITION	UPON RECEIPT FORM	ىب ·	· · · · · · · · · · · · · · · · · · ·	IVS	
Client:		<u> </u>		464	
Quote No:			1		
COC/RFA No:	Below		304		1997 - 1997 -
Initiated By:	AB	Da	ute; 3~	2-10 Time: 9:15	
	<u>Shipr</u>	- <u>ping Inf</u>	formation		
	edE UPS DHL Courier Clie	nt Ot	her:		
Shipping # (s):*	07 -040			Sample Temperature (s);**	
1. yaria	a second second second		• .	A	
2.				_ 2. <u>Option</u> 7.	
3.					
4,	1				
	10	**San	apis must be receive	5. 10. 10° 1 at 4°C ± 2°C- If not, note contents below. Temperature	
	s correspond to Numbered Sample Temp lines	varian	ce does NOT affect	he following: Metals-Liquid or Rad tests- Liquid or Solids	
$\frac{1}{1} (Y) N$	for yes, "N" for no and "N/A" for not applicable): Are there custody seals present on the			A	
	cooler? Do custody seals on cooler appear to be	8.	Y	Are there custody seals present on bottles? Do custody seals on bottles appear to be	
2. Y N N/A	tampered with?	9.	YNNA	tampered with?	• • •
3. X N	Were contents of cooler frisked after opening, but before unpacking?	10.	YN NHÂ	Was sample received with proper pH ¹ ? (If not, make note below)	
4. (Y)N	Sample received with Chain of Custody?	11.	R M	Sample received in proper containers?	
5. Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	YNNA	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)	
6. Y G	Was sample received broken?	13.	Q N N/A	Wes Internal COC/Workshare received?	
7. Q_N	Is sample volume sufficient for	14.		Was pH taken by original TestAmerica lab?	
	analysis? ANL Sandja) sites, pH of ALL containers received 1		~		
Notes: COC-	ITB2701 - TAT3		per KC	· · · · · · · · · · · · · · · · · · ·	
	2902827	Ŧ	•		
· · · · · · · · · · · · · · · · · · ·	2837			10	
•			40.3	2.10	
·	0/829 Zolidrot	192	iverCOC-	of WS w/ COC	
	0(1))	,			
	2766		·	· · · · · · · · · · · · · · · · · · ·	
· · · · · · · · · · · · · · · · · · ·					
Corrective Action:					
Client Contact N	Name:	· · ·]	Informed by:		
Corrective Action: Client Contact N Sample(s) proce Sample(s) on ho	Name:		Informed by:		. •

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APPENDIX G

Section 33

Outfall 008 – March 7, 2010 MEC^X Data Validation Report THIS PAGE LEFT INTENTIONALLY BLANK



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: Contract Task Order:	Boeing SSFL NPDES 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, F0C090516- 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 $4^{\circ}C \pm 2^{\circ}C$. 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 TestAmercia-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.

Qualifie	r 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.
Ν	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.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
н	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
С	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.
В	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.
Е	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.
Μ	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
т	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

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.
Ρ	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.
*11, *111	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^{\times} Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613, and the National Functional Guidelines Chlorinated Dioxin/Furan Data Review (9/05).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for 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 r² 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 laboratoryestablished 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 determed 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 Let						vel: IV	
Lab Sample Name:	ITC0792-02	San	ple 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	В
Analysis Metho	od EPA 2	245.1						
Sample Name	Outfall 008 (C	COMPOS	ITE Matri	x Type:	Water	١	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	San	ple Date:	3/7/2010	11:38:00 AM	I		
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 Metho	od EPA 2	245.1-1	Diss					
Sample Name	Outfall 008 (C	COMPOS	ITE Matri	x Type:	Water	١	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	San	ple Date:	3/7/2010	11:38:00 AM	I		
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 Metho	od EPA	900.0 N	AOD					
Sample Name	Outfall 008 (C	COMPOS	ITE Matri	x Type:	WATER	١	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	San	ple Date:	3/7/2010	11:38:00 AM	I		
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	С
Gross Beta	12587-47-2	2.2	4	1.6	pCi/L	Jb	1	DNQ
Analysis Metho	od EPA	901.1 N	AOD					
Sample Name	Outfall 008 (C	COMPOS	ITE Matri	x Type:	WATER	۲	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	San	ple Date:	3/7/2010	11:38:00 AM	I		
		D 1/	рт	MDL	Result	Lab	Validation	Validation
Analyte	CAS No	Result Value	RL	MDL	Units	Qualifier	Qualifier	Notes
Analyte Cesium 137	CAS No 10045-97-3		KL 20	15				

Thursday, April 15, 2010

Sample Name	Outfall 008 (C	COMPOSI	TE Matri	х Туре:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	Sam	ple 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	1	C, DNQ
Analysis Metho	od EPA 9	904 MC	D					
Sample Name	Outfall 008 (C	COMPOSI	TE Matri	x Type:	WATER	۷	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	Sam	ple 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 Metho	od EPA 9	905 MC	D					
Sample Name	Outfall 008 (C	COMPOSI	TE Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITC0792-02	Sam	ple 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
Strontium 90 Analysis Metho		0.42 006.0 M		1.5	pCi/L	U	IJ	*Ш
		906.0 N	10D		pCi/L WATER	-	UJ /alidation Le	
Analysis Metho	od EPA 9	006.0 M	10D	х Туре:	1	V		
Analysis Metho Sample Name	Od EPA 9	006.0 M	10D TE Matri	х Туре:	WATER	V	⁷ alidation Le	

Analysis Method EPA 903.0 MOD

Sample Name	Outfall 008 (C	V	alidation Le	vel: IV				
Lab Sample Name:	ITC0792-02	ple Date:	le 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	В
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	4e-006	0.0000009	ug/L	J, Q, Ba	U	В
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	В
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000002	ug/L	J, Ba	U	В
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	В
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	В
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	В
OCDF	39001-02-0	ND	0.0001	0.0000013	ug/L	J, Ba	U	В
Total HpCDD	37871-00-4	ND	1e-005	0.0000021	ug/L	J, Q, Ba	U	В
Total HpCDF	38998-75-3	9.9e-006	9.9e-006	0.0000009	ug/L	J, Q, Ba	1	B, DNQ, *II
Total HxCDD	34465-46-8	4.1e-006	4.1e-006	0.0000014	ug/L	J, Q, Ba	1	B, DNQ, *II
Total HxCDF	55684-94-1	8.3e-006	8.3e-006	0.0000002	ug/L	J, Q, Ba	J	B, DNQ, *II
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

Analysis Method EPA-5 1613B

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APPENDIX G

Section 34

Outfall 008 – March 7, 2010 Test America Analytical Laboratory Report THIS PAGE LEFT INTENTIONALLY BLANK

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project: Routine Outfall 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	CLIENT ID	MATRIX
ITC0792-01	Outfall 008 (GRAB)	Water



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly 17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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:

Debby Wilson

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager



THE LEADER IN ENVIRONMENTAL TESTING

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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

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)				Sample	d: 03/07/1	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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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

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

Debby Wilson For Heather Clark Project Manager



THE LEADER IN ENVIRONMENTAL TESTING

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

DISSOLVED METALS

Report Number: ITC0792

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0792-02 (Outfall 008 (COMPOSITE) - Wat	er)			Sample	d: 03/07/1	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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THE LEADER IN ENVIRONMENTAL TESTING

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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 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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THE LEADER IN ENVIRONMENTAL TESTING

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Project ID: Routine Outfall 008

EPA-5 1613B

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

Report Number: ITC0792

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

EI A-5 1015D										
		D / I		Reporting	-	Dilution	Date	Date	Data	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers	
Sample ID: ITC0792-02 (Outfall 008	Sampled: 03/07/10									
Reporting Units: ug/L										
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	76166			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		0.00000092		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		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		1.8e-006	1.01	03/17/10	03/19/10	J, Q, Ba	
1,2,3,4,7,8-HxCDF	EPA-5 1613B		0.00000023		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		2.3e-006	1.01	03/17/10	03/19/10	J	
1,2,3,6,7,8-HxCDF	EPA-5 1613B		0.00000022		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		0.00000026		9.2e-007	1.01	03/17/10	03/19/10	J, Q, Ba	
1,2,3,7,8-PeCDD	EPA-5 1613B	76166	0.00000093	3 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	4 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	0.0000007	0.00005	1.8e-006	1.01	03/17/10	03/19/10	J	
2,3,7,8-TCDD	EPA-5 1613B	76166	0.00000002	2 0.00001	ND	1.01	03/17/10	03/19/10		
2,3,7,8-TCDF	EPA-5 1613B	76166	0.00000055	5 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	0.00000092	2 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	0.0000002	0.00005	8.3e-006	1.01	03/17/10	03/19/10	J, Q, Ba	
Total PeCDD	EPA-5 1613B	76166	0.00000093	3 0.00005	4.1e-006	1.01	03/17/10	03/19/10	J, Q	
Total PeCDF	EPA-5 1613B	76166	0.00000055	5 0.00005	3.4e-006	1.01	03/17/10	03/19/10	J	
Total TCDD	EPA-5 1613B	76166	0.00000002	2 0.00001	ND	1.01	03/17/10	03/19/10		
Total TCDF	EPA-5 1613B	76166	0.00000055	5 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 (35-1	197%)				93 %					

TestAmerica Irvine

Debby Wilson For Heather Clark Project Manager



THE LEADER IN ENVIRONMENTAL TESTING

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

MWH-Pasadena/BoeingProject ID:Routine Outfall 008618 Michillinda Avenue, Suite 200Sampled:03/07/10Arcadia, CA 91007Report Number:ITC0792Received:03/08/10Attention:Bronwyn KellySampled: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	

TestAmerica Irvine 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

EPA 900.0 MOD												
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers			
Sample ID: ITC0792-02 (Outfall 008	(COMPOSITE) - Wate	er)			Sample	ed: 03/07/1	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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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

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) - Wate	er)			Sample	ed: 03/07/1	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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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly

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) - Wate	er)			Sample	ed: 03/07/1	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		

Project ID: Routine Outfall 008



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

MWH-Pasadena/BoeingProject ID:Routine Outfall 008618 Michillinda Avenue, Suite 200Arcadia, CA 91007Report Number:ITC0792Attention:Bronwyn KellyITC0792

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) - Wat	er)			Sample	ed: 03/07/1	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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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly

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) - Wat	er)			Sample	ed: 03/07/1	10				
Reporting Units: pCi/L											
Strontium 90	EPA 905 MOD	69104	1.5	3	0.42	1	03/10/10	03/20/10	U		

Project ID: Routine Outfall 008



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

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) - Wate	er)			Sample	ed: 03/07/1	10				
Reporting Units: pCi/L											
Tritium	EPA 906.0 MOD	77060	150	500	-54	1	03/18/10	03/24/10	U		

Project ID: Routine Outfall 008



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 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) - Wate	er			
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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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

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	<u>)</u>										
Blank Analyzed: 03/16/2010 (10C1956-B Hexane Extractable Material (Oil &	S LK1) ND	5.0	1.4	mg/l							
Grease) LCS Analyzed: 03/16/2010 (10C1956-BS	1)										MNR1
Hexane Extractable Material (Oil & Grease)	19.7	5.0	1.4	mg/l	20.0		98	78-114			
LCS Dup Analyzed: 03/16/2010 (10C195	6-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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Report Number: ITC0792

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
•				emis	Lever	nesun	/undee	Linnes	NI D	Linit	Quanners
Batch: 10C1320 Extracted: 03/10/1	<u>0</u>										
Blank Analyzed: 03/11/2010-03/12/2010	(10C1320-B	LK1)									
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-BS	1)									
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 (10C	1320-MS1)			Sou	irce: ITC	0790-03				
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 (10C	1320-MS2)			Sou	irce: ITC	0791-03				
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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Report Number: ITC0792

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	<u>)</u>										
Matrix Spike Dup Analyzed: 03/11/2010	-03/12/2010 (1	0C1320-MS	D1)		Sou	rce: ITC	0790-03				
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	<u>)</u>										
Blank Analyzed: 03/16/2010 (10C2010-B	LK1)										
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/16/2010 (10C2010-BS	1)										
Mercury	8.36	0.20	0.10	ug/l	8.00		105	85-115			
Matrix Spike Analyzed: 03/16/2010 (100	2010-MS1)				Sou	rce: ITC	1476-01				
Mercury	8.41	0.20	0.10	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/16/2010	(10C2010-MS	SD1)			Sou	rce: ITC	1476-01				
Mercury	8.38	0.20	0.10	ug/l	8.00	ND	105	70-130	0.5	20	

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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1740 Extracted: 03/14/1	<u>0</u>										
Blank Analyzed: 03/16/2010 (10C1740-1	RLK1)										
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-B				C							
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		103	85-115			
Copper	82.0	2.0	0.50	ug/l	80.0		101	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 (100	C1740-MS1)			-	Sou	irce: ITC	1128-01				
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 (100	C1740-MS2)				Sou	ırce: ITC	1128-02				
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

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

METHOD BLANK/QC DATA

DISSOLVED METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10C1740 Extracted: 03/14/10											
M-4-1- S-: L. D A L d. 02/1//2010	(10C1740 MG	D1)			C	rce: ITC	1100 01				
Matrix Spike Dup Analyzed: 03/16/2010		· ·								• •	
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	<u> </u>										
Blank Analyzed: 03/16/2010 (10C2011-B	LK1)										
Mercury	ND	0.20	0.10	ug/l							
Wereury	ND	0.20	0.10	ug/1							
LCS Analyzed: 03/16/2010 (10C2011-BS	1)										
Mercury	8.65	0.20	0.10	ug/l	8.00		108	85-115			
Matrix Spike Analyzed: 03/16/2010 (10C	2011-MS1)				Sou	rce: ITC	128-01				
Mercury	8.49	0.20	0.10	ug/l	8.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 03/16/2010	(10C2011-MS	D1)			Sou	rce: ITC	128-01				
Mercury	8.36	0.20	0.10	ug/l	8.00	ND	104	70-130	2	20	

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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
Batch: 10C0921 Extracted: 03/08/10											
	-										
Blank Analyzed: 03/08/2010 (10C0921-B	L K1)										
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-BS))										
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 (10C	0921-MS1)				Sou	rce: ITC	0793-02				
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 (10C	0921-MS2)				Sou	rce: ITC	0878-02				
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-M	(SD1)			Sou	rce: ITC	0793-02				
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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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
Batch: 10C1047 Extracted: 03/09/10	<u>)</u>										
Blank Analyzed: 03/09/2010 (10C1047-B Perchlorate	LK1) ND	4.0	0.90	ug/l							
		4.0	0.90	ug/l							
LCS Analyzed: 03/09/2010 (10C1047-BS Perchlorate	1) 24.0	4.0	0.90	ug/l	25.0		96	85-115			
Matrix Spike Analyzed: 03/09/2010 (10C	1047-MS1)				Sou	rce: ITC	0877-01				
Perchlorate	30.3	4.0	0.90	ug/l	25.0	6.15	97	80-120			
Matrix Spike Dup Analyzed: 03/09/2010	(10C1047-MS	D1)			Sou	rce: ITC	0877-01				
Perchlorate	30.6	4.0	0.90	ug/l	25.0	6.15	98	80-120	0.7	20	
Batch: 10C1299 Extracted: 03/10/10	<u>)</u>										
Blank Analyzed: 03/10/2010 (10C1299-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
LCS Analyzed: 03/10/2010 (10C1299-BS	1)										
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/10/2010 (10C	(1299-MS1)				Sou	rce: ITC	0421-01				
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-MS	D1)			Sou	rce: ITC	0421-01				
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120	0	15	
Batch: 10C1348 Extracted: 03/11/10	<u>)</u>										
Blank Analyzed: 03/11/2010 (10C1348-B	LK1)										
Total Dissolved Solids	ND	10	1.0	mg/l							

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager



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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1348 Extracted: 03/11/10)									
LCS Analyzed: 03/11/2010 (10C1348-BS	1)									
Total Dissolved Solids	998	10	1.0	mg/l	1000	100	90-110			
Duplicate Analyzed: 03/11/2010 (10C134	18-DUP1)				Sou	rce: ITC0719-01				
Total Dissolved Solids	293	10	1.0	mg/l		290		1	10	



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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-5 1613B

AnalyteResultLimitMDLUnitsLevelResult%RECLimitsRPDLimitQualifiersBatch: 76166 Extracted: 03/17/10Blank Analyzed: 03/18/2010 (GOC170001-66B)Subsection <td< th=""></td<>
Blank Analyzed: 03/18/2010 (G0C170000166B) Source: 1,2,3,4,6,7,8-HpCDD 1.1e-005 0.00005 0.00002 ug/L - J, Q 1,2,3,4,6,7,8-HpCDF 1.5e-006 0.00005 0.0000059 ug/L - J, Q 1,2,3,4,7,8-HpCDF ND 0.00005 0.000001 ug/L - J, Q 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 0.0005 0.000003 ug/L - J, Q 1,2,3,6,7,8-HxCDF 9.6e-007 0.0005 0.000003 ug/L - J, Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.0005 0.000009 ug/L - J, Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.0005 0.0000079 ug/L - J, Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.0000079 ug/L - J, Q 1,2,3,7,8-PeCDF ND 0.0005 0.0000022 ug/L - J, Q
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 0.0000059 ug/L - J,Q 1,2,3,4,7,8,9-HpCDF ND 0.00005 0.0000011 ug/L - J,Q 1,2,3,4,7,8-HpCDF ND 0.00005 0.0000011 ug/L - J 1,2,3,4,7,8-HxCDD 1.2e-006 0.00005 0.000003 ug/L - J,Q 1,2,3,4,7,8-HxCDF 9.6e-007 0.00005 0.000003 ug/L - J,Q 1,2,3,6,7,8-HxCDF 9.6e-007 0.00005 0.000009 ug/L - J,Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.00005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 2.5e-007 0.0005 0.0000079 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.0000032 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.0000032 ug/L - J,Q 1,2,3,7,8-PeCDF ND 0.
1,2,3,4,6,7,8-HpCDF 1.5e-006 0.00005 0.0000059 ug/L - J,Q 1,2,3,4,7,8,9-HpCDF ND 0.00005 0.000001 ug/L - J 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 0.0005 0.000003 ug/L - J,Q 1,2,3,6,7,8-HxCDF 9.6e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,6,7,8-HxCDF 9.6e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 2.5e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.000003 ug/L - J,Q 1,2,3,7,8-PeCDD ND 0.0005 0.000005 ug/L - - J,Q 1,2,3,7,8-PeCDF ND 0
1,2,3,4,7,8,9-HpCDF ND 0.00005 0.000011 ug/L - 1,2,3,4,7,8-HxCDD 1.2e-006 0.00005 0.000003 ug/L - J 1,2,3,4,7,8-HxCDF 9.6e-007 0.00005 0.000003 ug/L - J,Q 1,2,3,6,7,8-HxCDD ND 0.00005 0.000009 ug/L - J,Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 2.5e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.000009 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.000003 ug/L - J,Q 1,2,3,7,8-PeCDF ND 0.0005 0.000032 ug/L - J,Q 1,2,3,7,8-PeCDF ND 0.0005 0.000052 ug/L - J,Q 1,2,3,7,8-PeCDF ND 0.0005 0.000052 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 0.000003 ug/L - J, Q 1,2,3,6,7,8-HxCDD ND 0.00005 0.000009 ug/L - J, Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.00005 0.000009 ug/L - J, Q 1,2,3,7,8,9-HxCDF 2.5e-007 0.00005 0.0000079 ug/L - J, Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000079 ug/L - J 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J, Q 1,2,3,7,8-PeCDD ND 0.00005 0.0000032 ug/L - J, Q 1,2,3,7,8-PeCDF ND 0.00005 0.0000052 ug/L - J, Q 1,2,3,7,8-PeCDF ND 0.00005 0.0000052 ug/L - -
1,2,3,4,7,8-HxCDF 9.6e-007 0.00005 0.000003 ug/L - J,Q 1,2,3,6,7,8-HxCDD ND 0.00005 0.000009 ug/L - - J,Q 1,2,3,6,7,8-HxCDF 2.5e-007 0.0005 0.0000028 ug/L - J,Q 1,2,3,7,8,9-HxCDD 1.3e-006 0.0005 0.0000079 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.000002 ug/L - J,Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.0005 0.000002 ug/L - J,Q 1,2,3,7,8-PeCDD ND 0.0005 0.0000072 ug/L - J,Q 1,2,3,7,8-PeCDF ND 0.0005 0.0000052 ug/L - - 1,2,3,7,8-PeCDF ND 0.00005 0.0000052 ug/L - -
1,2,3,6,7,8-HxCDD ND 0.00005 0.000009 ug/L - 1,2,3,6,7,8-HxCDF 2.5e-007 0.00005 0.0000028 ug/L - J,Q 1,2,3,7,8,9-HxCDD 1.3e-006 0.00005 0.0000079 ug/L - J 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J,Q 1,2,3,7,8-PeCDD ND 0.00005 0.0000072 ug/L - J,Q 1,2,3,7,8-PeCDF ND 0.00005 0.0000052 ug/L - -
1,2,3,6,7,8-HxCDF 2.5e-007 0.00005 0.0000028 ug/L - J, Q 1,2,3,7,8,9-HxCDD 1.3e-006 0.00005 0.0000079 ug/L - J 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J, Q 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J, Q 1,2,3,7,8-PeCDD ND 0.00005 0.0000072 ug/L - J, Q 1,2,3,7,8-PeCDF ND 0.00005 0.0000052 ug/L - -
1,2,3,7,8,9-HxCDD 1.3e-006 0.00005 0.0000079 ug/L - J 1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J,Q 1,2,3,7,8-PeCDD ND 0.00005 0.0000052 ug/L - - 1,2,3,7,8-PeCDF ND 0.00005 0.0000052 ug/L - -
1,2,3,7,8,9-HxCDF 3.5e-007 0.00005 0.0000032 ug/L - J, Q 1,2,3,7,8-PeCDD ND 0.00005 0.00000072 ug/L - - J, Q 1,2,3,7,8-PeCDF ND 0.00005 0.00000052 ug/L - - -
1,2,3,7,8-PeCDDND0.000050.0000072ug/L-1,2,3,7,8-PeCDFND0.000050.0000052ug/L-
1,2,3,7,8-PeCDF ND 0.00005 0.0000052 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 0.0000053 ug/L -
2,3,7,8-TCDF ND 0.00001 0.0000056 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 0.00002 ug/L - J, Q
Total HpCDF 4.4e-006 0.00005 0.000008 ug/L - J, Q
Total HxCDD 5.9e-006 0.00005 0.0000089 ug/L - J
Total HxCDF 1.9e-006 0.00005 0.0000029 ug/L - J, Q
Total PeCDD ND 0.00005 0.0000072 ug/L -
Total PeCDF ND 0.00005 0.0000052 ug/L -
Total TCDD ND 0.00001 0.0000053 ug/L -
Total TCDF ND 0.00001 0.0000056 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



MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly 17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Project ID: Routine Outfall 008

Report Number: ITC0792

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

METHOD BLANK/QC DATA

EPA-5 1613B

		Reporting	_		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 76166 Extracted: 03/17/10											
Blank Analyzed: 03/18/2010 (G0C1700	00166B)				Sou	rce:					
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 (G0C17000	0166C)				Sou	rce:					
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	0.0000078	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			

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0.000752

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

Surrogate: 37Cl4-2,3,7,8-TCDD

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31-191

Project ID: Routine Outfall 008

Report Number: ITC0792

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

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte Batch: 76166 Extracted: 03/17/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Analyzed: 03/18/2010 (G0C170000	166C)				Sou	rce:					
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			

ug/L 0.000800



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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

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	(F0B23045200	1D)			Sou	rce: F0B2	23045200	1			
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 (F0E	3230452001S)				Sou	rce: F0B2	23045200	1			
Total Uranium	28.1	0.7	0.2	pCi/L	27.7	0.677	99	62-150			
Blank Analyzed: 03/12/2010 (F0C080000	296B)				Sou	rce:					
Total Uranium	0.315	0.693	0.21	pCi/L				-			Jb
LCS Analyzed: 03/12/2010 (F0C0800002	96C)				Sou	rce:					
Total Uranium	5.62	0.69	0.21	pCi/L	5.54		101	90-120			



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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 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 70220 Extracted: 03/11/10											
Matrix Spike Analyzed: 03/14/2010 (F00	C090509001S)				Sou	rce: F0C)9050900	1			
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 (F0C090	0509001X)				Sou	rce: F0C)9050900	1			
Gross Alpha	1.9	3	2.1	pCi/L		0.3		-			U
Gross Beta	4.8	4	2.1	pCi/L		3.9		-			
Blank Analyzed: 03/14/2010 (F0C110000	0220B)				Sou	rce:					
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 (F0C1100002	20C)				Sou	rce:					
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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Report Number: ITC0792

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 (F0C09	0509001X)				Sou	rce: F0C	09050900	1			
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 (F0C10000	0127B)				Sou	rce:					
Cesium 137	1.9	20	14	pCi/L				-			U
Potassium 40	12	NA	210	pCi/L				-			U
LCS Analyzed: 03/21/2010 (F0C100000	127C)				Sou	rce:					
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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Report Number: ITC0792

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

METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte Batch: 69101 Extracted: 03/10/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 04/02/2010 (F0C10000 Radium (226)	0101B) 0.025	1	0.051	pCi/L	Sou	rce:		-			U
LCS Analyzed: 04/02/2010 (F0C100000 Radium (226)	101C) 10.6	1	0.05	pCi/L	Sou 11.3	rce:	94	68-136			
LCS Dup Analyzed: 04/02/2010 (F0C10 Radium (226)	0000101L) 10.1	1	0.05	pCi/L	Sou 11.3	rce:	89	68-136	6	40	



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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 (F0C10000	0102B)				Sou	rce:					
Radium 228	0.19	1	0.39	pCi/L				-			U
LCS Analyzed: 03/19/2010 (F0C100000	102C)				Sou	rce:					
Radium 228	7.41	1	0.36	pCi/L	6.37		116	60-142			
LCS Dup Analyzed: 03/19/2010 (F0C10	0000102L)				Sou	rce:					
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 Batch: 69104 Extracted: 03/10/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 03/20/2010 (F0C10000) Strontium 90	0.01	3	0.43	pCi/L	Sou	rce:		-			U
LCS Analyzed: 03/20/2010 (F0C100000) Strontium 90	04C) 6.64	3	0.4	pCi/L	Sou 6.79	rce:	98	80-130			
LCS Dup Analyzed: 03/20/2010 (F0C10) Strontium 90	0000104L) 6.75	3	0.39	pCi/L	Sou 6.79	rce:	99	80-130	2	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 906.0 MOD

Analyte Batch: 77060 Extracted: 03/18/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Duplicate Analyzed: 03/23/2010 (F0C090)509001X)				Sou	rce: F0C(09050900	1			
Tritium	-26	500	150	pCi/L		34		-			U
Matrix Spike Analyzed: 03/24/2010 (F00	C090512001S)				Sou	rce: F0C(09051200	1			
Tritium	4170	500	150	pCi/L	4510	-17	93	62-147			
Blank Analyzed: 03/23/2010 (F0C180000	060B)				Sou	rce:					
Tritium	83	500	150	pCi/L				-			U
LCS Analyzed: 03/23/2010 (F0C1800000		Sou	rce:								
Tritium	4450	500	150	pCi/L	4510		99	85-112			



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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

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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	0.0 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

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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

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



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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

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 1664A	Water	Х	Х
EPA 200.8-Diss	Water	Х	Х
EPA 200.8	Water	Х	Х
EPA 245.1-Diss	Water	Х	Х
EPA 245.1	Water	Х	Х
EPA 300.0	Water	Х	Х
EPA 314.0	Water	Х	Х
SM2540C	Water	Х	
SM4500NH3-C	Water	Х	Х

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

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THE LEADER IN ENVIRONMENTAL TESTING

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

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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

CHAIN OF CUSTODY FORM

Page 1 of 2

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Client Name/A	ddress:			Project:				<u> </u>			_			ΑΝΔΙ		REQU			L		
MWH-ArcadiaBoeing-SSFL NPDES618 Michillinda Ave, Suite 200Routine Outfall 008Arcadia, CA 91007GRABTest America Contact: Joseph DoakStormwater at Happy Valle					у	EM)									·					Field readings: Temp °F = 5 -1	
Sampler: E We IKev (62 (62)			(626) 568-669 ⁻ Fax Number: (626) 568-6515	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		I Grease (1664-HEM)														pH = S, ⊖ Time of readings = ⊘%S∂	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil &														Comments
Outfall 008	w	1L Amber	2	3/7/10-0830	HCI	1A, 1B	X		ļ				£					ļ		_	
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elinguished By	Th		es ar	e the Grab Por me:		fall 008 for Received By	this s	torm	event.	Comp Date/Tim		sampl	es will			are to			o this v	work o	order.
Zn	1	IL_		17/10	605	SMA	TΓ Δ	10		3/-	7/10	13	óð					72 Hour: 5 Day:			10 Day: Normal:
telinquished By	Na	m	Date/Til		115	Received By	\mathcal{Y}^{4}	/		Date/Tim		3/	7/1 415	5		ntegrity: (Check)	On lçe:	X		· .
Relinquished By			Date/Tri) 237/1		From E Pec Fri	s lge/	1	Puer	Pate/Tilm					Data Rec No Level	uirement	s: (Cheo	k) All Level	IV:		
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Test America Version 6/29/09

CHAIN OF CUSTODY FORM

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Client Name/A	ddress			Projec	ᠥ	·····					_		ᠯ		L VOIO	000						
MWH-Arcad					g-SSFL I	NPDES		<u> </u>	I		1		+			REQL	лкер					
618 Michillinda		uite 200			ne Outfa			Ър,				, tai										
Arcadia, CA 9					POSITE			Ğ				0.0), To		, Pb,								
				Storm	water at	Happy Vall	ey	Ğ		rate		0), Gross Beta(900.0), .0), Sr-90 (905.0), Total n 226 (903.0 or 903.1) & .0), Uranium (908.0), K-) or 901.1)		Cu,								
Test America	Contact:	: Joseph Do	bak							암		. (905 acts		Cd,								
				ľ				is:	(s)	Perc		903 1.1) (903 1.1)		Sb,								
								Metals: Sb,	enel	z		ည် လို ရိုက်		als:						Co	omments	
· · · ·				Project Manager: Bronwyn Kelly					e s	congeners)	102		.0), 6.0), 4.0) 0.	4	Meta	z	.2)					
				(626) 5	568-669	1		Recoverable I, Se, Zn	ŭ E	948		(900) 901 (90) 901 (90)	icit.	ed a	rite-	(350.						
Sampler: 5	DIA	N,		Fax N	umber:			ecove Se, Z	(and all	2 2		528 () 37 () 37 ()	Å.	solv 2 ZI	, Zit	Ž,						
	_				568-651	5		, See) (a	04,		Alt Alt S-1: S-1: S-1:	- Dig	l, Si	e-N	onia						
Sample Description	Sample Matrix	Container Type	# of Cont.		npling e/Time	Preservative	Bottle #	Total F Hg, TI	TCDD	CI-, SO4, NO3+NO2-N, Perchlorate	TDS	Gross Alpha(900.0), G Tritium (H-3) (906.0), S Combined Radium 228 Radium 228 (904.0), L 40, CS-137 (901.0 or 9	Chronic Toxicity	Total Dissolved Metals: Hg, Tl, Se, Zn	Nitrate-N, Nitrite-N	Ammonia-N				10	w Flow	
Outfall 008	W	1L Poly	1	3/7/10	-1138	HNO ₃	2A	х														
Outfall 008 Dup	W	1L Poly	1	1		HNO₃	2B	х					Τ									
Outfall 008	w	1L Amber	2			None	3A, 3B		х													
Outfall 008	w	500 mL Poly	2			None	4A, 4B			X												
Outfall 008	w	500 mL Poly	1			None	5			1	x											
Outfall 008	w	2.5 Gal Cube	1			None	6A					, v								Unfiltered and unpresen	d and unpreserved	
Cultar 000	**	500 ml Amber	1] [None	6B			1		X	T							analysis		
Outfall 008	w	1 Gal Poly	-1		~	None	7						X								first or second i	
Outfall 008	w	1L Poly	1			None	8							x							Ahrs of receipt at	
Outfall 008	w	500 mL Poly	1			None	9	1							х							
Outfall 008	w	500 mL Poly	1		7.	H₂SO₄	10	1								х					-	
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					CC	C Page 2	of 2 are t	he con	nposi	te sai	mples	for Outfall 00	8 foi	r this si	torm e	vent.	L		I			
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TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITC0792

MWH-Pasadena Boeing

Lot #: F0C090516

Kathleen Robb

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

TESTAMERICA LABORATORIES, INC.

n 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.

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.

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

F0C090516

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

F0C090516

WO # SAMPLE# CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
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.		<u>. </u>

- 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: Work Order: Matrix:	F0C090516-00 LWFXD WATER	1		Date Collec Date Receiv	00	/07/10 1138 /09/10 0915	
Parameter	Result	Qual	Total Uncert. (2 g+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & H	its by EPA 901.	L 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 E	PA-905 MOD			pCi/L	Batch	# 0069104	¥ld % 24
Strontium 90	0.42	U	0.90	3.00	1,5	03/10/10	03/20/10
TRITIUM (Distill)) by EPA 906.0 1	40D		pCi/L	Batch	# 0077060	Yld %
Tritium	-54	U	66	500	150	03/18/10	03/24/10
Total Uranium by	KPA ASTM 5174-9	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 E	PA 903.0 MOD			pCi/L	Batch	# 0069101	¥ld % 83
Radium (226)	0.104	J	0.048	1.00	0.050	03/10/10	04/02/10
Radium 228 by GF	PC 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:	F0C090516
Matrix:		WATER

Parameter	Result	Qual	Total Uncert. (2 c+/-)	RL	MDC		Prep Date	Lab Sample ID Analysis Date
Total Uranium 1	by KPA ASTM 51	74-91	pCi/L	Batch #	0067296	¥ld %	I	OC080000-296B
Total Uranium	0.315	J	0.039	0.693	0.21		03/10/10	03/12/10
Radium 226 by	EPA 903.0 MOD		pCi/L	Batch #	0069101	Yld %	105 1	70C100000-101B
Radium (226)	0.025	U	0.031	1.00	0.051		03/10/10	04/02/10
Radium 228 by (GFPC EPA 904 M	OD	pCi/L	Batch #	0069102	Yld %	91 I	70C100000-102B
Radium 228	0.19	U	0.24	1.00	0.39		03/10/10	03/19/10
SR-90 BY GFPC	EPA-905 MOD		pCi/L	Batch #	0069104	Yld %	83 1	70C100000-104B
Strontium 90	0.01	U	0.24	3.00	0.43		03/10/10	03/20/10
Gamma Cs-137 &	Hits by EPA 9	01.1 MOD	pCi/L	Batch #	0069127	Yld %	I	FOC100000-127B
Cesium 137	1.9	U	7.6	20.0	14		03/10/10	03/21/10
Potassium 40	12	U	93		210		03/10/10	03/21/10
Gross Alpha/Be	ta EPA 900		pCi/L	Batch #	0070220	Yld %	I	F0C110000-220B
Gross Alpha	-0.16	U	0.35	3.00	0.79		03/11/10	03/14/10
Gross Beta	0.37	U	0.91	4.00	1.5		03/11/10	03/14/10
TRITIUM (Disti	11) by EPA 906	.0 MOD	pCi/L	Batch #	0077060	Yld %	I	FOC180000-060B
Tritium	83	U	94	500	150		03/18/10	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.

F0C090516

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0C090516 Matrix: WATER

			Total		Lal	o Sample ID
Parameter	Spike Amount	Result	Uncert. (2 σ+/-)	MDC	% Yld % Rec	QC Control Limits
Total Uranium by	KPA ASTM 5174-9	1	pCi/L	5174-91	FOC	080000-2960
Total Uranium	27.7	28.6	3.5	0.2	103	(90 - 120)
	Batch #:	0067296		Analysis Date	e: 03/12/10	
Total Uranium by	KPA ASTM 5174-9	1.	pCi/L	5174-91	FOC	080000-2960
Total Uranium	5.54	5,62	0.58	0.21	101	(90 - 120)
	Batch #:	0067296		Analysis Date	∍: 03/12/10	
Gamma Cs-137 & Hi	ts by EPA 901.1	MOD	pCi/L	901.1 MOD	FOC	100000-127C
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	a: 03/21/10	
Gross Alpha/Beta	EPA 900		pCi/L	900.0 MOD	FOC	110000-220C
Gross Alpha	49.4	31.9	3.8	0.8	64	(62 - 134)
	Batch #:	0070220		Analysis Date	e: 03/14/10	
Gross Alpha/Beta	EPA 900		pCi/L	900.0 MOD	FOC	110000-220C
Gross Beta	67.9	53.0	. 4,7	1.5	78	(58 - 133)
	Batch #:	0070220		Analysis Date	e: 03/14/10	
TRITIUM (Distill)	by EPA 906.0 M	OD	pCi/L	906.0 MOD	FOC	180000-060C
Tritium	4510	4450	470	150	99	(85 - 112)
	Batch #:	0077060		Analysis Dat	⊒: 03/23/10	

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot	ID:	F0C090516
Matrix:		WATER

					Total			Lab	Sample ID
Parameter		Spike Amount	Result		Uncert. (2 σ+/-)	% ¥ld	% Rec	QC Control Limits	Precision
Radium 226 by	EPA	903.0 MOD		pCi/L	903.0) MOD		F0C1	.00000-101C
Radium (226)	Spk 2	11.3 11.3	10.6 10.1		0.92 0.87	106 101	94 89	(68 - 136) (68 - 136)	6 %RPD
		Batch #:	0069101			Analysi	s Date:	04/02/10	
Radium 228 by	GFPC	EPA 904 MOD		pCi/L	904 Þ	10D		F0C1	.00000-102C
Radium 228	Spk 2	6.37 6.37	7.41 7.87		0.83 0.90	99 85	116 124	(60 - 142) (60 - 142)	6 %RPD
		Batch #:	0069102			Analysi	s Date:	03/19/10	
SR-90 BY GFPC	EPA-	-905 MOD		pCi/L	905 N	10D		F0C1	.00000-104C
Strontium 90	Spk 2	6.79 6.79	6.64 6.75		0.80 0.80	87 90	98 99	(80 - 130) (80 - 130)	2 %rpd
		Batch #:	0069104			Analysi	s 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:	F0C090512	Date Sampled:	03/07/10
Matrix:	WATER	Date Received:	03/09/10

			Total		Total	QC Sample	e ID
Parameter	Spike Amount	Spike Result	Uncert, (2σ +/-)	Spike Samp Yld. Resu	le Uncert.	%YLD %REC	QC Control Limits
TRITIUM (Distill) by ER	PA 906.0 MC	D	pCi/L	906.0	MOD	F0C09051	2-001
Tritium	4510	4170	440	-17	74	93	(62 - 147)
	Batch #:	0077060	An	alysis Date:	03/24/10		
Gross Alpha/Beta EPA 90	0		pCi/L	900.0	MOD	F0C09050	9-001
Gross Alpha	59.9	47.4	6.6	0.3	1,1	79	(35 - 150)
	Batch #:	0070220	An	alysis Date:	03/14/10		
Gross Alpha/Beta EPA 90	0		pCi/L	900.0	MOD	F0C090509-001	
Gross Beta	82.4	87.0	7.4	3.9	1.4	101	(54 - 150)
	Batch #:	0070220	An	alysis 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

Client Lot ID: F0B230452 Date Sampled: 02/20/10 1349 Matrix: WATER Date Received: 02/23/10 0910 QC Sample ID Total Total Spike SAMPLE Uncert, Uncert. Spike SPIKE QC Control Parameter Result Yld % Yld *Rec Amount Result (2 o+/-) (2 o +/-) Limits Total Uranium by KPA ASTM 5 5174-91 pCi/L F0B230452-001 27.7 28,1 3.4 0.677 0.074 99 J (62 - 150)Total Uranium 95 Spk2 27.7 26.9 3.3 (62 - 150)0,677 0.074 J Precision: 4 %RPD

Analysis date:

03/12/10

Radiochemistry

NOTE (S) Data are incomplete without the case narrative.

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

Batch #:

0067296

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID:	F0C090516	Date Sampled:	03/07/10
Matrix:	WATER	Date Received:	03/09/10

			Total			Total	Q	C Sample ID	
Parameter	SAMPLE Result		Uncert. (2σ+/-)	% Yld	DUPLICATE Result	Uncert. (2 σ+/-)	% Yld	Precisio	on
Gamma Cs-137 & Hits	by EPA	901.1	MOD	pCi/L	901.1 MOD		FO	c090509-00	1
Cesium 137	4.5	U	9.4		-0.3 U	7.3		232	%RPD
Potassium 40	-50	U	360		-50 U	200		8	%RPD
	I	Batch #:	0069127	(Sample)	0069127 (Du	uplicate)			
Gross Alpha/Beta EB	A 900			pCi/L	900.0 MOD		F.04	2090509-00	1
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
	1	Batch #:	0070220	(Sample)	0070220 (Du	uplicate)			
TRITIUM (Distill) b	Y EPA 9	06.0 MC	מ	pCi/L	906.0 MOD		FO	C090509-00	1
Tritium	34	σ	87		-26 U	72		1480	%RPD
	1	Batch #:	0077060	(Sample)	0077060 (Du	uplicate)			

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. F0C090516

SUBCONTRACT ORDER **TestAmerica** Irvine 342

ITC079

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 S	Surch	Comments
Sample ID: ITC0792-02 (C	Outfall 008 (CO	MPOSITE) - W	ater) Sampleo	: 03/07/10 11:38	3	
EDD + Level 4	N/A	03/17/10	04/04/10 11:38		0%	Excel EDD email to pm,Include Std log
Gamma Spec-O	mg/kg	03/17/10	03/07/11 11:38	\$\$200.00	50%	
Gross Alpha-O	pCi/L	03/17/10	09/03/10 11:38	\$90.00	50%	
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 226-0	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%	
Containers Supplied:						
2.5 gal Poly (H)	500 mL Am	ber (I)				

Released B Released By F0C090516

10 Date/Time

Date/Time

Receive

3/8/10 1700 Date/Time 3.9.188

Date/Time

Received By

age 1 of 1 12 of 14

System Contraction <	NFUDES Number Number<		Project		CH CH	AIN OF (Р С	CUSTODY FORM		ALYSIS				Page 2 of 2
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F0C090516

of 14 13

TëstAmerica St. Louis

Simple Television Status Status CONDITION UPON RECEPT FORM S12 S14 Cites: The devised S12 Owner No: Galaxies S12 Owner No: Galaxies S12 Shipping # (c): Sate	Single Singl		TestAmerica St. Louis
The Linguise Discription Register R	The Back investment decimal internet 2121,534 CONDITION UPON RECERT FORM Client: 312 Quote No: \$50,91,171,035 Quote No: \$50,91,171,035 Govern No: 342 Initiated By: 342 Shipping (fo)* Sample Information Shipping (fo)* Sample Information Shipping (fo)* Courier Client Other: Multiple Packages: 2 67,17,23,4578 6. 1. 4 9. 3. 4. 9. 5. 9. 4. 9. 3. 5. 9. 4. 9. 3. 6. 1. Sample Tempergiane (s)** 7. 3. 4. 9. 3. 4. 9. 3. 4. 9. 5. 10. **Sample route to condera 44 C ± 2*C. Tron, note condera bible. Temperature value of solid a flat set - Liquid or Solid a f	TestAmerica	Lot #(s): FOC 090 509, 523
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342 Date:	342 Date: 3.9.10 Time: 9915 Shipping Information A general state of the shipping Information A general state of the shipping Information **Sample must be received at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * front, note waffen table, respective at C2 ¥C * fr		520
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Shipping # (p):* UPS DHL Courier Client Other:	Shipper: EGD UPS DHL Courier Client Other: Multiple Packages: N 1: M287 2133 6.578 6. 1. Generative (s)* 2:		
Shipping if (p): 1. <u>4/287</u> <u>2133</u> <u>6598</u> 6. 1. <u>6576</u> 7. 2. 7. 3. 6. 4. 9. 5. 1. <u>6576</u> 7. 2. 7. 3. 6. 4. 9. 5. 10. 5.	Shipping # (s): 1. <u>4/287</u> 2133 45578 6. 1. <u>arrWWWk</u> 2. <u>66716</u> 7. 2. 7. 2. 7. 3. <u>6587</u> 8. <u>9. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.</u>		
1. <u>H287</u> 2. 7. 2. 7. 3. <u>H587</u> 8. 3. <u>R</u> . 9. 5. 10. 5. 10. 5. 10. 5. 10. 5. 10. 5. 10. 7. Winnheed stipping lines correspond to Numbered Sample Temp lines **Sample must be received at 4°C ± 2°C. If not, note workings bedry. Temperature variance does NOT affect the following: Metal-Liquid et Bail upit-Liquid er Solids Condition (Croler ** for yes, "Yf for no and "NA" for not applicable: **Sample must be received at 4°C ± 2°C. If not, note workings bedry. Temperature variance does NOT affect the following: Metal-Liquid et Bail upit-Liquid er Solids Condition (Croler ** for yes, "Yf for no and "NA" for not applicable: **Sample must be received at 4°C ± 2°C. If not, note workings bedry. Temperature variance does NOT affect the following: Metal-Liquid et Bail upit-Liquid er Solids Condition (Croler ** for yes, "Yf for no and "NA" for not applicable: ***Sample must be received with for not applicable: 1. N N A de containers of cooler fpisked after 10. Y Sample received with for not custody match and coustody match and coustody match and be below? </td <td>1. 4287 2.33 4576 6. 1. 4. 7. 3. 4.587 8. 3. 4. 9. 7. 4. 9. 3. 4. 9. 9. 9. 5. 10. 5. 10. 5. 10. 5. 10. **Numbered attripting lites correspond to Numbered Sample Temp lites **Sample must be received at 47.2 °C.1 'not, note confirm tockly. Temperature' variance does NOT affect the following: Metale Liquid or Solids Condition (Circle 'Y' for yes, "Y' for not angolicably: **Sample must be received at 47.2 °C.1 'not, note confirm tockly. Temperature' variance does NOT affect the following: Metale Liquid or Solids Condition (Circle 'Y' for yes, "Y' for not angolicably: **Sample roceived with? Do custody seals present on bottles? 2. Y N/A Do custody seals on bottles? Were contents of cooler frisked after 10. Y N @W assesses on bottles? 3. Do subdy seals on cooler appear to be sample received with? 10. Y N @W assesses on bottles? Y if not, nate containers? 4. Do custody seals on bottles? 10. Y N @W assesses on bottles appear to be tocknown on the containers? 5. D</td> <td></td> <td></td>	1. 4287 2.33 4576 6. 1. 4. 7. 3. 4.587 8. 3. 4. 9. 7. 4. 9. 3. 4. 9. 9. 9. 5. 10. 5. 10. 5. 10. 5. 10. **Numbered attripting lites correspond to Numbered Sample Temp lites **Sample must be received at 47.2 °C.1 'not, note confirm tockly. Temperature' variance does NOT affect the following: Metale Liquid or Solids Condition (Circle 'Y' for yes, "Y' for not angolicably: **Sample must be received at 47.2 °C.1 'not, note confirm tockly. Temperature' variance does NOT affect the following: Metale Liquid or Solids Condition (Circle 'Y' for yes, "Y' for not angolicably: **Sample roceived with? Do custody seals present on bottles? 2. Y N/A Do custody seals on bottles? Were contents of cooler frisked after 10. Y N @W assesses on bottles? 3. Do subdy seals on cooler appear to be sample received with? 10. Y N @W assesses on bottles? Y if not, nate containers? 4. Do custody seals on bottles? 10. Y N @W assesses on bottles appear to be tocknown on the containers? 5. D		
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4. 9. 4. 9. 5. 10. 5. 10. *Numbered ahipping lines correspond to Numbered Sample Temp lines **Sample must be received at 4°C ± 2°C · I' not, note confine below. Temperature variance does NOT affect the following: Metals Liquid e Rat terp: Liquid or Solids Condition (Cricle ''y' for yet, 'N' for no and YN/A' for not applicable). Are there custody seals present on the exceeded at 4°C ± 2°C · I' not, note confine below. Temperature variance does NOT affect the following: Metals Liquid e Rat terp: Liquid or Solids 2. Y (N) NA Do custody seals on cooler appear to be 9. Y N (SD) Are there custody seals present on bottles? 2. Y (N) NA Do custody seals on cooler appear to be 9. Y N (SD) Are there custody seals present on bottles? 3. Do custody seals on cooler appear to be 9. Y N (SD) Must asymple roceived with proper pHI'? (If not, make note below) 4. (P) N Custody? 11. (D) N Sample roceived in proper containers? 5. (P) N N/A Does the Chain of Custody match sample roceived in proper containers? (If Y on, note sample ID's helgen? 6. Y (M) Was sample roceived broken? 13. (N) N/A Was lattern by original TestAmerica lab? ''For DBCAL (Pinex, LAN, Swridi) site, pli of ALL containere received mustis varifi	4. 9. 4. 9. 5. 10. 5. 10. **Sample nust be received at 4°C ± 2°C. Hrow, note somethic bitw. Temperature variance deals NOT affect the following: Membel-Judie Rad tept-Liquid or Solids Condition (Crock °Y' for yes, 'N' for no and "NA" for not explicible): Are there custody seals present on the cooler? 1. N Are there custody seals on cooler appeart to be given to no bottles? 2. N/NA Do custody seals on cooler frisked affer to be given to no bottles? 3. N Were contents of cooler frisked affer to be given to be custody seals on bottles appear to be tampered with? 3. N Were contents of cooler frisked affer to be given to be containers? 5. N Sample received with Chain of Custody match as anyte in the containers? 5. N N/A Does the Chain of Custody match as anyte in the container(s)? 6. Y (N) As as ample received broken? 13. N 7. N/A Bas ample received broken? 14. Y N/A 7. N Is as ample to olume sufficient for tak match as to verified, EXCEPT VOA, TOX and solit. ToX and solit. Notes: Tor Colspan="2" Tor Colspan=	1	
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APPENDIX G

Section 35

Outfall 008 – March 25, 2010

MECX 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, F0C270425- 001	Water	3/25/2010	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.

Qualifie	r 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.
Ν	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.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
н	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
С	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.
В	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.
Е	Not applicable.	Duplicates showed poor agreement.
Ι	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
А	Not applicable.	ICP Serial Dilution %D were not within control limits.
Μ	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
Т	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

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.
Ρ	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.
*11, *111	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^{\times} Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613, and the National Functional Guidelines Chlorinated Dioxin/Furan Data Review (9/05).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for all 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.

5

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 r² 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 laboratoryestablished 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 Matrix Type: WATER Sample Name Outfall 008 Validation Level: IV ITC2505-01 Sample Date: 3/25/2010 9:50:00 AM Lab Sample Name: Analyte CAS No Result RL MDL Result Lab Validation Validation Value Units Qualifier **Oualifier** Notes Total Uranium 7440-61-1 1.61 0.68 0.21 pCi/L H J EPA 245.1 Analysis Method Sample Name Outfall 008 Matrix Type: Water Validation Level: IV Sample Date: 3/25/2010 9:50:00 AM ITC2505-01 Lab Sample Name: Result RL Analyte CAS No MDL Result Lab Validation Validation Value Units **Oualifier** Qualifier Notes 7439-97-6 ND U Mercury 0.20 0.10 ug/l EPA 245.1-Diss Analysis Method Outfall 008 Matrix Type: Water Validation Level: IV Sample Name ITC2505-01 Sample Date: 3/25/2010 9:50:00 AM Lab Sample Name: MDL CAS No Result RL Result Lab Analyte Validation Validation Oualifier Value Units Qualifier Notes Mercury 7439-97-6 0.16 0.20 0.10 ug/l Ja J DNO Analysis Method EPA 900.0 MOD Matrix Type: WATER Validation Level: IV Sample Name Outfall 008 ITC2505-01 Sample Date: 3/25/2010 9:50:00 AM Lab Sample Name: Analyte CAS No Result RL MDL Result Lab Validation Validation Value Units Qualifier Qualifier Notes Gross Alpha 12587-46-1 2.5 3 2.5 pCi/L U UJ H,C 4 Gross Beta 12587-47-2 4.4 1.3 Н pCi/L J EPA 901.1 MOD Analysis Method Matrix Type: WATER Validation Level: IV Sample Name Outfall 008 ITC2505-01 Sample Date: 3/25/2010 9:50:00 AM Lab Sample Name:

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	

Monday, May 03, 2010

Sample Name	Outfall 008		Matr	ix Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITC2505-01	Sam	ple Date:	3/25/2010) 9:50:00 AM	I		
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	1	C,DNQ
Analysis Metho	od EPA 9	904 MC	DD					
Sample Name	Outfall 008		Matr	ix Type:	WATER	۷	alidation Le	vel: IV
Lab Sample Name:	ITC2505-01	Sam	ple Date:	3/25/2010) 9:50:00 AM	Ι		
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 Metho	od EPA 9	905 MC	DD					
Sample Name	Outfall 008		Matrix Type: WATER Validation Level: IV					
Lab Sample Name:	ITC2505-01	Sam	ple Date:	3/25/2010) 9:50:00 AM	I		
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 Metho	od EPA 9	906.0 N	10D					
						_	7 10 1 / 0 T	wels IV
Sample Name	Outfall 008		Matr	ix Type:	WATER	```	alidation Le	vel: 1v
	Outfall 008 ITC2505-01	Sam		••	WATER) 9:50:00 AM		alidation Le	vei: Iv
Sample Name		Sam Result Value		••			Validation Le Validation Qualifier	

Analysis Method EPA 903.0 MOD

Sample Name	Outfall 008Matrix Type:WATERValidation Level:IV								
Lab Sample Name:	ITC2505-01	Sample Date: 3/25/2010 9:50:00 AM				1			
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	В	
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000003	ug/L	J, B	U	В	
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	В	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000003	ug/L	J, B	U	В	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000002	ug/L	J, B	U	В	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.0000054	0.0000003	ug/L	J, Q, B	U	В	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000002	ug/L	J, B	U	В	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000003	ug/L	J, B	U	В	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.0000052	0.0000007	ug/L	J, Q, B	U	В	
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	В	
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	В	
OCDF	39001-02-0	ND	0.0001	0.0000006	ug/L	J, B	U	В	
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, *II	
Total HxCDF	55684-94-1	ND	0.000026	0.0000002	ug/L	J, Q, B	U	В	
Total PeCDD	36088-22-9	0.000007	0.0000078	0.0000007	ug/L	J, Q, B	J	B, DNQ, *II	
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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