

APPENDIX G

Section 20

Outfall 006 – March 20 & 21, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Annual Outfall 006

Sampled: 03/21/11
Received: 03/21/11
Revised: 04/28/11 13:51

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, 5 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 6°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
Some analytes in this sample 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.

Revised report to include trichlorofluoromethane per client request.

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

LABORATORY ID

IUC2184-01
IUC2184-02
IUC2184-03

CLIENT ID

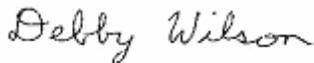
Outfall 006 (Grab)
Trip Blanks
Outfall 006 (Comp)

MATRIX

Water
Water
Water

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

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

CORRECTIVE ACTION REPORT

Department: Extractions

Date: 03/26/2011

Method: EPA 625

Matrix: Water

QC Batch: 11C3069

Identification and Definition of Problem:

The percent recovery for aniline in the LCSD was below laboratory acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the QC failure has not been determined.

Corrective Action Taken:

All results reported for aniline are potentially biased low and can be considered estimates only.

Quality Assurance Approval:



Dave Dawes

Date: 04/01/2011 05:53 PM

TestAmerica Irvine

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Project Manager

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-01 (Outfall 006 (Grab) - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	11C3362	0.28	0.50	ND	1	YKP	03/27/11	
Bromodichloromethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
Bromoform	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
Bromomethane	EPA 624	11C3362	0.42	1.0	ND	1	YKP	03/27/11	
Carbon tetrachloride	EPA 624	11C3362	0.28	0.50	ND	1	YKP	03/27/11	
Chlorobenzene	EPA 624	11C3362	0.36	0.50	ND	1	YKP	03/27/11	
Chloroethane	EPA 624	11C3362	0.40	1.0	ND	1	YKP	03/27/11	
Chloroform	EPA 624	11C3362	0.33	0.50	ND	1	YKP	03/27/11	
Chloromethane	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
Dibromochloromethane	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
1,2-Dichlorobenzene	EPA 624	11C3362	0.32	0.50	ND	1	YKP	03/27/11	
1,3-Dichlorobenzene	EPA 624	11C3362	0.35	0.50	ND	1	YKP	03/27/11	
1,4-Dichlorobenzene	EPA 624	11C3362	0.37	0.50	ND	1	YKP	03/27/11	
1,1-Dichloroethane	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
1,2-Dichloroethane	EPA 624	11C3362	0.28	0.50	ND	1	YKP	03/27/11	
1,1-Dichloroethene	EPA 624	11C3362	0.42	0.50	ND	1	YKP	03/27/11	
trans-1,2-Dichloroethene	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
1,2-Dichloropropane	EPA 624	11C3362	0.35	0.50	ND	1	YKP	03/27/11	
cis-1,3-Dichloropropene	EPA 624	11C3362	0.22	0.50	ND	1	YKP	03/27/11	
trans-1,3-Dichloropropene	EPA 624	11C3362	0.32	0.50	ND	1	YKP	03/27/11	
Ethylbenzene	EPA 624	11C3362	0.25	0.50	ND	1	YKP	03/27/11	
Methylene chloride	EPA 624	11C3362	0.95	1.0	ND	1	YKP	03/27/11	
1,1,2,2-Tetrachloroethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
Tetrachloroethene	EPA 624	11C3362	0.32	0.50	ND	1	YKP	03/27/11	
Toluene	EPA 624	11C3362	0.36	0.50	ND	1	YKP	03/27/11	
1,1,1-Trichloroethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
1,1,2-Trichloroethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
Trichloroethene	EPA 624	11C3362	0.26	0.50	ND	1	YKP	03/27/11	
Trichlorofluoromethane	EPA 624	11C3362	0.34	0.50	ND	1	GCM	03/27/11	
Vinyl chloride	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
Xylenes, Total	EPA 624	11C3362	0.90	1.5	ND	1	GCM	03/27/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					89 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					100 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					97 %				

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	11C3362	0.28	0.50	ND	1	YKP	03/27/11	
Bromodichloromethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
Bromoform	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
Bromomethane	EPA 624	11C3362	0.42	1.0	ND	1	YKP	03/27/11	
Carbon tetrachloride	EPA 624	11C3362	0.28	0.50	ND	1	YKP	03/27/11	
Chlorobenzene	EPA 624	11C3362	0.36	0.50	ND	1	YKP	03/27/11	
Chloroethane	EPA 624	11C3362	0.40	1.0	ND	1	YKP	03/27/11	
Chloroform	EPA 624	11C3362	0.33	0.50	ND	1	YKP	03/27/11	
Chloromethane	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
Dibromochloromethane	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
1,2-Dichlorobenzene	EPA 624	11C3362	0.32	0.50	ND	1	YKP	03/27/11	
1,3-Dichlorobenzene	EPA 624	11C3362	0.35	0.50	ND	1	YKP	03/27/11	
1,4-Dichlorobenzene	EPA 624	11C3362	0.37	0.50	ND	1	YKP	03/27/11	
1,1-Dichloroethane	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
1,2-Dichloroethane	EPA 624	11C3362	0.28	0.50	ND	1	YKP	03/27/11	
1,1-Dichloroethene	EPA 624	11C3362	0.42	0.50	ND	1	YKP	03/27/11	
trans-1,2-Dichloroethene	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
1,2-Dichloropropane	EPA 624	11C3362	0.35	0.50	ND	1	YKP	03/27/11	
cis-1,3-Dichloropropene	EPA 624	11C3362	0.22	0.50	ND	1	YKP	03/27/11	
trans-1,3-Dichloropropene	EPA 624	11C3362	0.32	0.50	ND	1	YKP	03/27/11	
Ethylbenzene	EPA 624	11C3362	0.25	0.50	ND	1	YKP	03/27/11	
Methylene chloride	EPA 624	11C3362	0.95	1.0	ND	1	YKP	03/27/11	
1,1,2,2-Tetrachloroethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
Tetrachloroethene	EPA 624	11C3362	0.32	0.50	ND	1	YKP	03/27/11	
Toluene	EPA 624	11C3362	0.36	0.50	ND	1	YKP	03/27/11	
1,1,1-Trichloroethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
1,1,2-Trichloroethane	EPA 624	11C3362	0.30	0.50	ND	1	YKP	03/27/11	
Trichloroethene	EPA 624	11C3362	0.26	0.50	ND	1	YKP	03/27/11	
Trichlorofluoromethane	EPA 624	11C3362	0.34	0.50	ND	1	GCM	03/27/11	
Vinyl chloride	EPA 624	11C3362	0.40	0.50	ND	1	YKP	03/27/11	
Xylenes, Total	EPA 624	11C3362	0.90	1.5	ND	1	GCM	03/27/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					89 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					99 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					97 %				

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-01 (Outfall 006 (Grab) - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	11C2844	4.0	5.0	ND	1	SS	03/22/11	
Acrylonitrile	EPA 624	11C2844	1.2	2.0	ND	1	SS	03/22/11	
2-Chloroethyl vinyl ether	EPA 624	11C2844	1.8	5.0	ND	1	SS	03/22/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					95 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					103 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					101 %				
Sample ID: IUC2184-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	11C2844	4.0	5.0	ND	1	SS	03/22/11	
Acrylonitrile	EPA 624	11C2844	1.2	2.0	ND	1	SS	03/22/11	
2-Chloroethyl vinyl ether	EPA 624	11C2844	1.8	5.0	ND	1	SS	03/22/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					92 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					102 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Acenaphthylene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Anthracene	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
Benzidine	EPA 625	11C3069	9.43	18.9	ND	0.943	LB	03/25/11	L6
Benzo(a)anthracene	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
Benzo(a)pyrene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Benzo(b)fluoranthene	EPA 625	11C3069	1.89	9.43	ND	0.943	LB	03/25/11	
Benzo(g,h,i)perylene	EPA 625	11C3069	3.77	9.43	ND	0.943	LB	03/25/11	
Benzo(k)fluoranthene	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
4-Bromophenyl phenyl ether	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Butyl benzyl phthalate	EPA 625	11C3069	3.77	18.9	ND	0.943	LB	03/25/11	
4-Chloro-3-methylphenol	EPA 625	11C3069	2.36	18.9	ND	0.943	LB	03/25/11	
Bis(2-chloroethoxy)methane	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Bis(2-chloroethyl)ether	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Bis(2-chloroisopropyl)ether	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
Bis(2-ethylhexyl)phthalate	EPA 625	11C3069	3.77	47.2	ND	0.943	LB	03/25/11	
2-Chloronaphthalene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
2-Chlorophenol	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
4-Chlorophenyl phenyl ether	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
Chrysene	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
Dibenz(a,h)anthracene	EPA 625	11C3069	2.83	18.9	ND	0.943	LB	03/25/11	
Di-n-butyl phthalate	EPA 625	11C3069	2.83	18.9	ND	0.943	LB	03/25/11	
1,2-Dichlorobenzene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
1,3-Dichlorobenzene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
1,4-Dichlorobenzene	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
3,3'-Dichlorobenzidine	EPA 625	11C3069	7.08	18.9	ND	0.943	LB	03/25/11	
2,4-Dichlorophenol	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
Diethyl phthalate	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
2,4-Dimethylphenol	EPA 625	11C3069	3.30	18.9	ND	0.943	LB	03/25/11	
Dimethyl phthalate	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
4,6-Dinitro-2-methylphenol	EPA 625	11C3069	3.77	18.9	ND	0.943	LB	03/25/11	
2,4-Dinitrophenol	EPA 625	11C3069	7.55	18.9	ND	0.943	LB	03/25/11	
2,4-Dinitrotoluene	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
2,6-Dinitrotoluene	EPA 625	11C3069	1.89	9.43	ND	0.943	LB	03/25/11	
Di-n-octyl phthalate	EPA 625	11C3069	3.30	18.9	ND	0.943	LB	03/25/11	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	11C3069	2.36	18.9	ND	0.943	LB	03/25/11	
Fluoranthene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Fluorene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Hexachlorobenzene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Hexachlorobutadiene	EPA 625	11C3069	3.77	9.43	ND	0.943	LB	03/25/11	
Hexachlorocyclopentadiene	EPA 625	11C3069	4.72	18.9	ND	0.943	LB	03/25/11	

TestAmerica Irvine

Debby Wilson
Project Manager

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Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: ug/l									
Hexachloroethane	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
Indeno(1,2,3-cd)pyrene	EPA 625	11C3069	3.30	18.9	ND	0.943	LB	03/25/11	
Isophorone	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Naphthalene	EPA 625	11C3069	2.83	9.43	ND	0.943	LB	03/25/11	
Nitrobenzene	EPA 625	11C3069	2.83	18.9	ND	0.943	LB	03/25/11	
2-Nitrophenol	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
4-Nitrophenol	EPA 625	11C3069	5.19	18.9	ND	0.943	LB	03/25/11	
N-Nitroso-di-n-propylamine	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
N-Nitrosodimethylamine	EPA 625	11C3069	2.36	18.9	ND	0.943	LB	03/25/11	
N-Nitrosodiphenylamine	EPA 625	11C3069	1.89	9.43	ND	0.943	LB	03/25/11	
Pentachlorophenol	EPA 625	11C3069	3.30	18.9	ND	0.943	LB	03/25/11	
Phenanthrene	EPA 625	11C3069	3.30	9.43	ND	0.943	LB	03/25/11	
Phenol	EPA 625	11C3069	1.89	9.43	ND	0.943	LB	03/25/11	
Pyrene	EPA 625	11C3069	3.77	9.43	ND	0.943	LB	03/25/11	
1,2,4-Trichlorobenzene	EPA 625	11C3069	2.36	9.43	ND	0.943	LB	03/25/11	
2,4,6-Trichlorophenol	EPA 625	11C3069	4.25	18.9	ND	0.943	LB	03/25/11	
Surrogate: 2,4,6-Tribromophenol (40-120%)					94 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					95 %				
Surrogate: 2-Fluorophenol (30-120%)					80 %				
Surrogate: Nitrobenzene-d5 (45-120%)					92 %				
Surrogate: Phenol-d6 (35-120%)					80 %				
Surrogate: Terphenyl-d14 (50-125%)					38 %				Z

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 Project Manager

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11

Received: 03/21/11

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: ug/l									
Chlorpyrifos	EPA 525.2	11C2905	0.010	1.0	ND	1	JM	03/24/11	
Diazinon	EPA 525.2	11C2905	0.10	0.25	ND	1	JM	03/24/11	
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					93 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					120 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					107 %				

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 Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	11C2988	0.0038	0.0047	ND	0.943	CN	03/23/11	C
4,4'-DDE	EPA 608	11C2988	0.0028	0.0047	ND	0.943	CN	03/23/11	C
4,4'-DDT	EPA 608	11C2988	0.0038	0.0094	ND	0.943	CN	03/23/11	
Aldrin	EPA 608	11C2988	0.0014	0.0047	ND	0.943	CN	03/23/11	C
alpha-BHC	EPA 608	11C2988	0.0024	0.0047	ND	0.943	CN	03/23/11	C
beta-BHC	EPA 608	11C2988	0.0038	0.0094	ND	0.943	CN	03/23/11	
delta-BHC	EPA 608	11C2988	0.0033	0.0047	ND	0.943	CN	03/23/11	C
Dieldrin	EPA 608	11C2988	0.0019	0.0047	ND	0.943	CN	03/23/11	C
Endosulfan I	EPA 608	11C2988	0.0019	0.0047	ND	0.943	CN	03/23/11	
Endosulfan II	EPA 608	11C2988	0.0028	0.0047	ND	0.943	CN	03/23/11	
Endosulfan sulfate	EPA 608	11C2988	0.0028	0.0094	ND	0.943	CN	03/23/11	C
Endrin	EPA 608	11C2988	0.0019	0.0047	ND	0.943	CN	03/23/11	C
Endrin aldehyde	EPA 608	11C2988	0.0019	0.0094	ND	0.943	CN	03/23/11	
gamma-BHC (Lindane)	EPA 608	11C2988	0.0028	0.019	ND	0.943	CN	03/23/11	C
Heptachlor	EPA 608	11C2988	0.0028	0.0094	ND	0.943	CN	03/23/11	C
Heptachlor epoxide	EPA 608	11C2988	0.0024	0.0047	ND	0.943	CN	03/23/11	
Chlordane	EPA 608	11C2988	0.075	0.094	ND	0.943	CN	03/23/11	
Toxaphene	EPA 608	11C2988	0.24	0.47	ND	0.943	CN	03/23/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					83 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					73 %				

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
Aroclor 1221	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
Aroclor 1232	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
Aroclor 1242	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
Aroclor 1248	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
Aroclor 1254	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
Aroclor 1260	EPA 608	11C2988	0.24	0.47	ND	0.943	JSM	03/23/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					91 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11

Received: 03/21/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-01 (Outfall 006 (Grab) - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C3550	1.3	4.8	ND	1	DA	03/28/11	

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)									
Reporting Units: mg/l									
Hardness (as CaCO3)	SM2340B	[CALC]		0.33	54	1	LL	03/23/11	
Boron	EPA 200.7	11C3037	0.020	0.050	0.025	1	LL	03/23/11	J
Calcium	EPA 200.7	11C3037	0.050	0.10	18	1	LL	03/23/11	
Iron	EPA 200.7	11C3037	0.015	0.040	3.3	1	LL	03/23/11	
Magnesium	EPA 200.7	11C3037	0.012	0.020	2.4	1	LL	03/23/11	
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)									
Reporting Units: ug/l									
Aluminum	EPA 200.7	11C3037	40	50	3900	1	LL	03/23/11	
Mercury	EPA 245.1	11C2939	0.10	0.20	ND	1	DB	03/23/11	
Arsenic	EPA 200.7	11C3239	7.0	10	ND	1	DP	03/24/11	
Antimony	EPA 200.8	11C2899	0.30	2.0	0.39	1	RDC	03/22/11	J
Beryllium	EPA 200.7	11C3239	0.90	2.0	ND	1	DP	03/24/11	
Chromium	EPA 200.7	11C3239	2.0	5.0	5.2	1	DP	03/24/11	
Nickel	EPA 200.7	11C3239	2.0	10	3.3	1	DP	03/24/11	J
Silver	EPA 200.7	11C3239	6.0	10	ND	1	DP	03/24/11	C
Cadmium	EPA 200.8	11C2899	0.10	1.0	ND	1	RDC	03/22/11	
Vanadium	EPA 200.7	11C3037	3.0	10	8.2	1	LL	03/25/11	J
Zinc	EPA 200.7	11C3239	6.0	20	15	1	DP	03/24/11	J
Copper	EPA 200.8	11C2899	0.500	2.00	4.34	1	RDC	03/22/11	
Lead	EPA 200.8	11C2899	0.20	1.0	2.3	1	RDC	03/22/11	
Selenium	EPA 200.8	11C2899	0.50	2.0	ND	1	RDC	03/22/11	
Thallium	EPA 200.8	11C2899	0.20	1.0	ND	1	RDC	03/22/11	

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Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]		0.33	47	1	DP	03/26/11	
Boron	EPA 200.7-Diss	11C3474	0.020	0.050	0.028	1	DP	03/26/11	J
Calcium	EPA 200.7-Diss	11C3474	0.050	0.10	16	1	DP	03/26/11	
Iron	EPA 200.7-Diss	11C3474	0.015	0.040	0.037	1	DP	03/26/11	J
Magnesium	EPA 200.7-Diss	11C3474	0.012	0.020	1.5	1	DP	03/26/11	

Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)

Reporting Units: ug/l

Aluminum	EPA 200.7-Diss	11C3474	40	50	55	1	DP	03/26/11	
Mercury	EPA 245.1-Diss	11C3083	0.10	0.20	ND	1	DB	03/23/11	
Arsenic	EPA 200.7-Diss	11C3474	7.0	10	ND	1	DP	03/26/11	
Antimony	EPA 200.8-Diss	11C3506	0.30	2.0	ND	1	RDC	03/28/11	
Beryllium	EPA 200.7-Diss	11C3474	0.90	2.0	ND	1	DP	03/26/11	
Chromium	EPA 200.7-Diss	11C3474	2.0	5.0	ND	1	DP	03/26/11	
Nickel	EPA 200.7-Diss	11C3474	2.0	10	ND	1	DP	03/26/11	
Silver	EPA 200.7-Diss	11C3474	6.0	10	ND	1	DP	03/26/11	
Cadmium	EPA 200.8-Diss	11C3506	0.10	1.0	ND	1	RDC	03/28/11	
Vanadium	EPA 200.7-Diss	11C3474	3.0	10	ND	1	DP	03/26/11	
Zinc	EPA 200.7-Diss	11C3474	6.0	20	ND	1	DP	03/26/11	
Copper	EPA 200.8-Diss	11C3506	0.500	2.00	1.92	1	RDC	03/28/11	J
Lead	EPA 200.8-Diss	11C3506	0.20	1.0	0.27	1	RDC	03/28/11	J
Selenium	EPA 200.8-Diss	11C3506	0.50	2.0	ND	1	RDC	03/28/11	
Thallium	EPA 200.8-Diss	11C3506	0.20	1.0	ND	1	RDC	03/28/11	

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

DISSOLVED INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-01 (Outfall 006 (Grab) - Water)									
Reporting Units: ug/l									
Chromium VI	EPA 218.6	11C2772	0.250	1.00	ND	1	SLA	03/21/11	

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Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)									
Reporting Units: mg/l									
Chloride	EPA 300.0	11C2884	0.30	0.50	7.5	1	NN	03/22/11	
Fluoride	SM 4500-F-C	11C2986	0.020	0.10	0.21	1	FZ	03/23/11	
Nitrate/Nitrite-N	EPA 300.0	11C2884	0.15	0.26	0.81	1	NN	03/22/11	
Sulfate	EPA 300.0	11C2884	0.30	0.50	3.8	1	NN	03/22/11	
Total Dissolved Solids	SM2540C	11C2823	1.0	10	140	1	MC	03/22/11	
Total Suspended Solids	SM 2540D	11C2949	1.0	10	37	1	DK1	03/22/11	
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11C2871	0.90	4.0	ND	1	mn	03/22/11	
Total Cyanide	SM4500CN-E	11C3437	2.2	5.0	ND	1	SLA	03/25/11	

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Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

COLIFORMS BY MULTIPLE TUBE FERMENTATION - MPN (SM9221/40 CFR 141.21(f)(6)(i))

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-01 (Outfall 006 (Grab) - Water)									
Reporting Units: MPN/100 ml									
Fecal Coliform	SM9221 A,B,C,E	11C2797	2.00	2.00	300	1	AK	03/24/11	
E. Coli	SM9221 A,B,C,E	11C2797	2.00	2.00	300	1	AK	03/24/11	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)									
Reporting Units: pCi/L									
Gross Alpha	900	8680	0.423	3	2.03	1	LS	03/31/11	Jb
Gross Beta	900	8680	0.856	4	10.9	1	LS	03/31/11	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11

Received: 03/21/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: pCi/L									
Cesium-137	901.1	8680	1.61	20	ND	1	LS	03/30/11	U
Potassium-40	901.1	8680	22.1	25	ND	1	LS	03/30/11	U

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: pCi/L									
Radium-226	903.1	8680	0.813	1	0.673	1	TM	04/05/11	U

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: pCi/L									
Radium-228	904	8680	0.593	1	-0.058	1	LD	04/07/11	U

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: pCi/L									
Strontium-90	905	8680	0.725	2	-0.24	1	EMB	04/01/11	U

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: pCi/L									
Tritium	906	8680	168	500	-86.9	1	WL	03/30/11	U

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11

Received: 03/21/11

ASTM-D5174

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: pCi/L									
Uranium, Total	D5174	8680	0.02	1	0.354	1	TAC	03/29/11	Jb

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water) - cont.									
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1083190	0.0000038	0.00005	5.1e-005	0.97	MO	03/25/11	
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1083190	0.0000044	0.00005	5.7e-005	0.97	MO	03/25/11	Q
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1083190	0.0000065	0.00005	ND	0.97	MO	03/25/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1083190	0.0000017	0.00005	ND	0.97	MO	03/25/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1083190	0.0000017	0.00005	2.2e-006	0.97	MO	03/25/11	J, Q
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1083190	0.0000016	0.00005	ND	0.97	MO	03/25/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1083190	0.0000016	0.00005	2.5e-006	0.97	MO	03/25/11	J, Q
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1083190	0.0000014	0.00005	2.5e-006	0.97	MO	03/25/11	J
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1083190	0.0000022	0.00005	ND	0.97	MO	03/25/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1083190	0.0000012	0.00005	ND	0.97	MO	03/25/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1083190	0.0000018	0.00005	ND	0.97	MO	03/25/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1083190	0.0000016	0.00005	1.3e-006	0.97	MO	03/25/11	J
2,3,4,7,8-PeCDF	EPA-5 1613B	1083190	0.0000019	0.00005	ND	0.97	MO	03/25/11	
2,3,7,8-TCDD	EPA-5 1613B	1083190	0.0000013	0.00001	ND	0.97	MO	03/25/11	
2,3,7,8-TCDF	EPA-5 1613B	1083190	0.0000016	0.00001	ND	0.97	MO	03/25/11	
OCDD	EPA-5 1613B	1083190	0.0000093	0.0001	0.00059	0.97	MO	03/25/11	B
OCDF	EPA-5 1613B	1083190	0.0000038	0.0001	5.5e-005	0.97	MO	03/25/11	J, Q
Total HpCDD	EPA-5 1613B	1083190	0.0000038	0.00005	0.00012	0.97	MO	03/25/11	
Total HpCDF	EPA-5 1613B	1083190	0.0000044	0.00005	8.8e-005	0.97	MO	03/25/11	J, Q
Total HxCDD	EPA-5 1613B	1083190	0.0000014	0.00005	1.5e-005	0.97	MO	03/25/11	J, Q
Total HxCDF	EPA-5 1613B	1083190	0.0000016	0.00005	3.4e-005	0.97	MO	03/25/11	J, Q
Total PeCDD	EPA-5 1613B	1083190	0.0000012	0.00005	ND	0.97	MO	03/25/11	
Total PeCDF	EPA-5 1613B	1083190	0.0000018	0.00005	ND	0.97	MO	03/25/11	
Total TCDD	EPA-5 1613B	1083190	0.0000013	0.00001	ND	0.97	MO	03/25/11	
Total TCDF	EPA-5 1613B	1083190	0.0000016	0.00001	ND	0.97	MO	03/25/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	40 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	41 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	38 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	47 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	44 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	43 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	47 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	45 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	44 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	38 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	47 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	38 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	41 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	43 %
Surrogate: 13C-OCDD (17-157%)	40 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	80 %

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Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 006 (Grab) (IUC2184-01) - Water					
EPA 218.6	1	03/21/2011 11:30	03/21/2011 14:32	03/21/2011 17:26	03/21/2011 17:47
EPA 624	3	03/21/2011 11:30	03/21/2011 14:32	03/22/2011 07:31	03/22/2011 12:20
SM9221 A,B,C,E	0	03/21/2011 11:30	03/21/2011 14:32	03/21/2011 15:06	03/24/2011 10:56
Sample ID: Trip Blanks (IUC2184-02) - Water					
EPA 624	3	03/21/2011 11:30	03/21/2011 14:32	03/22/2011 07:31	03/22/2011 12:48
Sample ID: Outfall 006 (Comp) (IUC2184-03) - Water					
EPA 300.0	2	03/21/2011 17:35	03/21/2011 14:32	03/22/2011 11:00	03/22/2011 12:04
EPA 525.2	1	03/21/2011 17:35	03/21/2011 14:32	03/22/2011 10:30	03/24/2011 17:38
Filtration	1	03/21/2011 17:35	03/21/2011 14:32	03/21/2011 23:30	03/21/2011 23:30

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3362 Extracted: 03/27/11											
Blank Analyzed: 03/27/2011 (11C3362-BLK1)											
Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	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							
1,1-Dichloroethane	ND	0.50	0.40	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	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							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	ND	1.0	0.95	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: 4-Bromofluorobenzene	22.0			ug/l	25.0		88	80-120			
Surrogate: Dibromofluoromethane	23.2			ug/l	25.0		93	80-120			
Surrogate: Toluene-d8	24.4			ug/l	25.0		97	80-120			

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Debby Wilson
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Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3362 Extracted: 03/27/11											
LCS Analyzed: 03/27/2011 (11C3362-BS1)											
Benzene	22.0	0.50	0.28	ug/l	25.0		88	70-120			
Bromodichloromethane	24.2	0.50	0.30	ug/l	25.0		97	70-135			
Bromoform	19.8	0.50	0.40	ug/l	25.0		79	55-130			
Bromomethane	21.8	1.0	0.42	ug/l	25.0		87	65-140			
Carbon tetrachloride	21.4	0.50	0.28	ug/l	25.0		86	65-140			
Chlorobenzene	22.8	0.50	0.36	ug/l	25.0		91	75-120			
Chloroethane	22.8	1.0	0.40	ug/l	25.0		91	60-140			
Chloroform	22.6	0.50	0.33	ug/l	25.0		91	70-130			
Chloromethane	19.3	0.50	0.40	ug/l	25.0		77	50-140			
Dibromochloromethane	20.8	0.50	0.40	ug/l	25.0		83	70-140			
1,2-Dichlorobenzene	23.6	0.50	0.32	ug/l	25.0		94	75-120			
1,3-Dichlorobenzene	23.5	0.50	0.35	ug/l	25.0		94	75-120			
1,4-Dichlorobenzene	23.0	0.50	0.37	ug/l	25.0		92	75-120			
1,1-Dichloroethane	22.0	0.50	0.40	ug/l	25.0		88	70-125			
1,2-Dichloroethane	23.1	0.50	0.28	ug/l	25.0		92	60-140			
1,1-Dichloroethene	21.6	0.50	0.42	ug/l	25.0		86	70-125			
trans-1,2-Dichloroethene	22.9	0.50	0.30	ug/l	25.0		92	70-125			
1,2-Dichloropropane	23.2	0.50	0.35	ug/l	25.0		93	70-125			
cis-1,3-Dichloropropene	24.1	0.50	0.22	ug/l	25.0		97	75-125			
trans-1,3-Dichloropropene	25.2	0.50	0.32	ug/l	25.0		101	70-125			
Ethylbenzene	23.8	0.50	0.25	ug/l	25.0		95	75-125			
Methylene chloride	19.6	1.0	0.95	ug/l	25.0		79	55-130			
1,1,2,2-Tetrachloroethane	25.0	0.50	0.30	ug/l	25.0		100	55-130			
Tetrachloroethene	22.5	0.50	0.32	ug/l	25.0		90	70-125			
Toluene	23.2	0.50	0.36	ug/l	25.0		93	70-120			
1,1,1-Trichloroethane	22.8	0.50	0.30	ug/l	25.0		91	65-135			
1,1,2-Trichloroethane	24.0	0.50	0.30	ug/l	25.0		96	70-125			
Trichloroethene	22.8	0.50	0.26	ug/l	25.0		91	70-125			
Trichlorofluoromethane	22.4	0.50	0.34	ug/l	25.0		90	65-145			
Vinyl chloride	19.7	0.50	0.40	ug/l	25.0		79	55-135			
Xylenes, Total	73.5	1.5	0.90	ug/l	75.0		98	70-125			
Surrogate: 4-Bromofluorobenzene	23.7			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	24.7			ug/l	25.0		99	80-120			
Surrogate: Toluene-d8	24.0			ug/l	25.0		96	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3362 Extracted: 03/27/11											
Matrix Spike Analyzed: 03/27/2011 (11C3362-MS1)						Source: IUC2140-01					
Benzene	23.0	0.50	0.28	ug/l	25.0	ND	92	65-125			
Bromodichloromethane	25.8	0.50	0.30	ug/l	25.0	ND	103	70-135			
Bromoform	19.7	0.50	0.40	ug/l	25.0	ND	79	55-135			
Bromomethane	22.0	1.0	0.42	ug/l	25.0	ND	88	55-145			
Carbon tetrachloride	22.5	0.50	0.28	ug/l	25.0	ND	90	65-140			
Chlorobenzene	23.8	0.50	0.36	ug/l	25.0	ND	95	75-125			
Chloroethane	23.3	1.0	0.40	ug/l	25.0	ND	93	55-140			
Chloroform	24.0	0.50	0.33	ug/l	25.0	ND	96	65-135			
Chloromethane	19.6	0.50	0.40	ug/l	25.0	ND	78	45-145			
Dibromochloromethane	21.8	0.50	0.40	ug/l	25.0	ND	87	65-140			
1,2-Dichlorobenzene	24.5	0.50	0.32	ug/l	25.0	ND	98	75-125			
1,3-Dichlorobenzene	24.5	0.50	0.35	ug/l	25.0	ND	98	75-125			
1,4-Dichlorobenzene	23.8	0.50	0.37	ug/l	25.0	ND	95	75-125			
1,1-Dichloroethane	23.2	0.50	0.40	ug/l	25.0	ND	93	65-130			
1,2-Dichloroethane	24.1	0.50	0.28	ug/l	25.0	ND	96	60-140			
1,1-Dichloroethene	21.9	0.50	0.42	ug/l	25.0	ND	88	60-130			
trans-1,2-Dichloroethene	23.7	0.50	0.30	ug/l	25.0	ND	95	65-130			
1,2-Dichloropropane	24.8	0.50	0.35	ug/l	25.0	ND	99	65-130			
cis-1,3-Dichloropropene	25.8	0.50	0.22	ug/l	25.0	ND	103	70-130			
trans-1,3-Dichloropropene	27.2	0.50	0.32	ug/l	25.0	ND	109	65-135			
Ethylbenzene	24.4	0.50	0.25	ug/l	25.0	ND	98	65-130			
Methylene chloride	20.7	1.0	0.95	ug/l	25.0	ND	83	50-135			
1,1,2,2-Tetrachloroethane	22.9	0.50	0.30	ug/l	25.0	ND	91	55-135			
Tetrachloroethene	23.0	0.50	0.32	ug/l	25.0	ND	92	65-130			
Toluene	24.6	0.50	0.36	ug/l	25.0	ND	98	70-125			
1,1,1-Trichloroethane	23.8	0.50	0.30	ug/l	25.0	ND	95	65-140			
1,1,2-Trichloroethane	24.4	0.50	0.30	ug/l	25.0	ND	98	65-130			
Trichloroethene	24.1	0.50	0.26	ug/l	25.0	ND	96	65-125			
Trichlorofluoromethane	23.0	0.50	0.34	ug/l	25.0	ND	92	60-145			
Vinyl chloride	20.4	0.50	0.40	ug/l	25.0	ND	81	45-140			
Xylenes, Total	76.2	1.5	0.90	ug/l	75.0	ND	102	60-130			
Surrogate: 4-Bromofluorobenzene	23.7			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	24.6			ug/l	25.0		98	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3362 Extracted: 03/27/11											
Matrix Spike Dup Analyzed: 03/27/2011 (11C3362-MSD1)						Source: IUC2140-01					
Benzene	22.2	0.50	0.28	ug/l	25.0	ND	89	65-125	3	20	
Bromodichloromethane	25.7	0.50	0.30	ug/l	25.0	ND	103	70-135	0.5	20	
Bromoform	19.0	0.50	0.40	ug/l	25.0	ND	76	55-135	4	25	
Bromomethane	21.9	1.0	0.42	ug/l	25.0	ND	88	55-145	0.7	25	
Carbon tetrachloride	22.3	0.50	0.28	ug/l	25.0	ND	89	65-140	1	25	
Chlorobenzene	23.7	0.50	0.36	ug/l	25.0	ND	95	75-125	0.2	20	
Chloroethane	22.3	1.0	0.40	ug/l	25.0	ND	89	55-140	4	25	
Chloroform	24.0	0.50	0.33	ug/l	25.0	ND	96	65-135	0.08	20	
Chloromethane	19.1	0.50	0.40	ug/l	25.0	ND	76	45-145	3	25	
Dibromochloromethane	21.8	0.50	0.40	ug/l	25.0	ND	87	65-140	0.09	25	
1,2-Dichlorobenzene	24.3	0.50	0.32	ug/l	25.0	ND	97	75-125	0.8	20	
1,3-Dichlorobenzene	24.5	0.50	0.35	ug/l	25.0	ND	98	75-125	0.04	20	
1,4-Dichlorobenzene	24.0	0.50	0.37	ug/l	25.0	ND	96	75-125	0.6	20	
1,1-Dichloroethane	23.1	0.50	0.40	ug/l	25.0	ND	92	65-130	0.5	20	
1,2-Dichloroethane	23.7	0.50	0.28	ug/l	25.0	ND	95	60-140	2	20	
1,1-Dichloroethene	21.8	0.50	0.42	ug/l	25.0	ND	87	60-130	0.6	20	
trans-1,2-Dichloroethene	23.5	0.50	0.30	ug/l	25.0	ND	94	65-130	0.6	20	
1,2-Dichloropropane	24.0	0.50	0.35	ug/l	25.0	ND	96	65-130	3	20	
cis-1,3-Dichloropropene	25.2	0.50	0.22	ug/l	25.0	ND	101	70-130	2	20	
trans-1,3-Dichloropropene	26.4	0.50	0.32	ug/l	25.0	ND	106	65-135	3	25	
Ethylbenzene	24.2	0.50	0.25	ug/l	25.0	ND	97	65-130	0.9	20	
Methylene chloride	20.2	1.0	0.95	ug/l	25.0	ND	81	50-135	2	20	
1,1,2,2-Tetrachloroethane	22.5	0.50	0.30	ug/l	25.0	ND	90	55-135	2	30	
Tetrachloroethene	22.7	0.50	0.32	ug/l	25.0	ND	91	65-130	1	20	
Toluene	24.0	0.50	0.36	ug/l	25.0	ND	96	70-125	3	20	
1,1,1-Trichloroethane	23.9	0.50	0.30	ug/l	25.0	ND	96	65-140	0.4	20	
1,1,2-Trichloroethane	23.6	0.50	0.30	ug/l	25.0	ND	95	65-130	3	25	
Trichloroethene	23.8	0.50	0.26	ug/l	25.0	ND	95	65-125	1	20	
Trichlorofluoromethane	22.9	0.50	0.34	ug/l	25.0	ND	92	60-145	0.3	25	
Vinyl chloride	20.3	0.50	0.40	ug/l	25.0	ND	81	45-140	0.05	30	
Xylenes, Total	75.4	1.5	0.90	ug/l	75.0	ND	101	60-130	1	20	
Surrogate: 4-Bromofluorobenzene	23.6			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	24.2			ug/l	25.0		97	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11

Received: 03/21/11

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: 11C2844 Extracted: 03/22/11											
Blank Analyzed: 03/22/2011 (11C2844-BLK1)											
Acrolein	ND	5.0	4.0	ug/l							
Acrylonitrile	ND	2.0	1.2	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: 4-Bromofluorobenzene	24.6			ug/l	25.0		99	80-120			
Surrogate: Dibromofluoromethane	24.9			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
LCS Analyzed: 03/22/2011 (11C2844-BS1)											
2-Chloroethyl vinyl ether	24.7	5.0	1.8	ug/l	25.0		99	25-170			
Surrogate: 4-Bromofluorobenzene	23.7			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
Matrix Spike Analyzed: 03/22/2011 (11C2844-MS1)											
						Source: IUC1722-03					
2-Chloroethyl vinyl ether	2.10	5.0	1.8	ug/l	25.0	ND	8	25-170			MI3, J
Surrogate: 4-Bromofluorobenzene	25.1			ug/l	25.0		100	80-120			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	25.4			ug/l	25.0		102	80-120			
Matrix Spike Dup Analyzed: 03/22/2011 (11C2844-MSD1)											
						Source: IUC1722-03					
2-Chloroethyl vinyl ether	2.17	5.0	1.8	ug/l	25.0	ND	9	25-170	3	25	MI3, J
Surrogate: 4-Bromofluorobenzene	25.6			ug/l	25.0		102	80-120			
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3069 Extracted: 03/23/11											
Blank Analyzed: 03/25/2011 (11C3069-BLK1)											
Acenaphthene	ND	10.0	3.00	ug/l							
Acenaphthylene	ND	10.0	3.00	ug/l							
Anthracene	ND	10.0	2.50	ug/l							
Benzidine	ND	20.0	10.0	ug/l							
Benzo(a)anthracene	ND	10.0	2.50	ug/l							
Benzo(a)pyrene	ND	10.0	3.00	ug/l							
Benzo(b)fluoranthene	ND	10.0	2.00	ug/l							
Benzo(g,h,i)perylene	ND	10.0	4.00	ug/l							
Benzo(k)fluoranthene	ND	10.0	2.50	ug/l							
4-Bromophenyl phenyl ether	ND	10.0	3.00	ug/l							
Butyl benzyl phthalate	ND	20.0	4.00	ug/l							
4-Chloro-3-methylphenol	ND	20.0	2.50	ug/l							
Bis(2-chloroethoxy)methane	ND	10.0	3.00	ug/l							
Bis(2-chloroethyl)ether	ND	10.0	3.00	ug/l							
Bis(2-chloroisopropyl)ether	ND	10.0	2.50	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50.0	4.00	ug/l							
2-Chloronaphthalene	ND	10.0	3.00	ug/l							
2-Chlorophenol	ND	10.0	3.00	ug/l							
4-Chlorophenyl phenyl ether	ND	10.0	2.50	ug/l							
Chrysene	ND	10.0	2.50	ug/l							
Dibenz(a,h)anthracene	ND	20.0	3.00	ug/l							
Di-n-butyl phthalate	ND	20.0	3.00	ug/l							
1,2-Dichlorobenzene	ND	10.0	3.00	ug/l							
1,3-Dichlorobenzene	ND	10.0	3.00	ug/l							
1,4-Dichlorobenzene	ND	10.0	2.50	ug/l							
3,3'-Dichlorobenzidine	ND	20.0	7.50	ug/l							
2,4-Dichlorophenol	ND	10.0	3.50	ug/l							
Diethyl phthalate	ND	10.0	3.50	ug/l							
2,4-Dimethylphenol	ND	20.0	3.50	ug/l							
Dimethyl phthalate	ND	10.0	2.50	ug/l							
4,6-Dinitro-2-methylphenol	ND	20.0	4.00	ug/l							
2,4-Dinitrophenol	ND	20.0	8.00	ug/l							
2,4-Dinitrotoluene	ND	10.0	3.50	ug/l							
2,6-Dinitrotoluene	ND	10.0	2.00	ug/l							
Di-n-octyl phthalate	ND	20.0	3.50	ug/l							

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3069 Extracted: 03/23/11											
Blank Analyzed: 03/25/2011 (11C3069-BLK1)											
1,2-Diphenylhydrazine/Azobenzene	ND	20.0	2.50	ug/l							
Fluoranthene	ND	10.0	3.00	ug/l							
Fluorene	ND	10.0	3.00	ug/l							
Hexachlorobenzene	ND	10.0	3.00	ug/l							
Hexachlorobutadiene	ND	10.0	4.00	ug/l							
Hexachlorocyclopentadiene	ND	20.0	5.00	ug/l							
Hexachloroethane	ND	10.0	3.50	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20.0	3.50	ug/l							
Isophorone	ND	10.0	3.00	ug/l							
Naphthalene	ND	10.0	3.00	ug/l							
Nitrobenzene	ND	20.0	3.00	ug/l							
2-Nitrophenol	ND	10.0	3.50	ug/l							
4-Nitrophenol	ND	20.0	5.50	ug/l							
N-Nitroso-di-n-propylamine	ND	10.0	3.50	ug/l							
N-Nitrosodimethylamine	ND	20.0	2.50	ug/l							
N-Nitrosodiphenylamine	ND	10.0	2.00	ug/l							
Pentachlorophenol	ND	20.0	3.50	ug/l							
Phenanthrene	ND	10.0	3.50	ug/l							
Phenol	ND	10.0	2.00	ug/l							
Pyrene	ND	10.0	4.00	ug/l							
1,2,4-Trichlorobenzene	ND	10.0	2.50	ug/l							
2,4,6-Trichlorophenol	ND	20.0	4.50	ug/l							
Surrogate: 2,4,6-Tribromophenol	196			ug/l	200		98	40-120			
Surrogate: 2-Fluorobiphenyl	98.4			ug/l	100		98	50-120			
Surrogate: 2-Fluorophenol	150			ug/l	200		75	30-120			
Surrogate: Nitrobenzene-d5	98.7			ug/l	100		99	45-120			
Surrogate: Phenol-d6	152			ug/l	200		76	35-120			
Surrogate: Terphenyl-d14	108			ug/l	100		108	50-125			

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

Project ID: Annual Outfall 006

Report Number: IUC2184

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Received: 03/21/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3069 Extracted: 03/23/11											
LCS Analyzed: 03/25/2011 (11C3069-BS1)											MNR1
Acenaphthene	88.6	10.0	3.00	ug/l	100		89	60-120			
Acenaphthylene	103	10.0	3.00	ug/l	100		103	60-120			
Anthracene	97.2	10.0	2.50	ug/l	100		97	65-120			
Benidine	76.4	20.0	10.0	ug/l	100		76	30-160			
Benzo(a)anthracene	98.3	10.0	2.50	ug/l	100		98	65-120			
Benzo(a)pyrene	101	10.0	3.00	ug/l	100		101	55-130			
Benzo(b)fluoranthene	98.5	10.0	2.00	ug/l	100		99	55-125			
Benzo(g,h,i)perylene	110	10.0	4.00	ug/l	100		110	45-135			
Benzo(k)fluoranthene	98.6	10.0	2.50	ug/l	100		99	50-125			
4-Bromophenyl phenyl ether	97.9	10.0	3.00	ug/l	100		98	60-120			
Butyl benzyl phthalate	96.9	20.0	4.00	ug/l	100		97	55-130			
4-Chloro-3-methylphenol	103	20.0	2.50	ug/l	100		103	60-120			
Bis(2-chloroethoxy)methane	93.8	10.0	3.00	ug/l	100		94	55-120			
Bis(2-chloroethyl)ether	85.0	10.0	3.00	ug/l	100		85	50-120			
Bis(2-chloroisopropyl)ether	80.6	10.0	2.50	ug/l	100		81	45-120			
Bis(2-ethylhexyl)phthalate	95.8	50.0	4.00	ug/l	100		96	65-130			
2-Chloronaphthalene	90.2	10.0	3.00	ug/l	100		90	60-120			
2-Chlorophenol	79.1	10.0	3.00	ug/l	100		79	45-120			
4-Chlorophenyl phenyl ether	95.8	10.0	2.50	ug/l	100		96	65-120			
Chrysene	101	10.0	2.50	ug/l	100		101	65-120			
Dibenz(a,h)anthracene	105	20.0	3.00	ug/l	100		105	50-135			
Di-n-butyl phthalate	104	20.0	3.00	ug/l	100		104	60-125			
1,2-Dichlorobenzene	71.7	10.0	3.00	ug/l	100		72	40-120			
1,3-Dichlorobenzene	69.3	10.0	3.00	ug/l	100		69	35-120			
1,4-Dichlorobenzene	69.1	10.0	2.50	ug/l	100		69	35-120			
3,3'-Dichlorobenzidine	80.9	20.0	7.50	ug/l	100		81	45-135			
2,4-Dichlorophenol	91.6	10.0	3.50	ug/l	100		92	55-120			
Diethyl phthalate	106	10.0	3.50	ug/l	100		106	55-120			
2,4-Dimethylphenol	84.7	20.0	3.50	ug/l	100		85	40-120			
Dimethyl phthalate	101	10.0	2.50	ug/l	100		101	30-120			
4,6-Dinitro-2-methylphenol	92.8	20.0	4.00	ug/l	100		93	45-120			
2,4-Dinitrophenol	97.6	20.0	8.00	ug/l	100		98	40-120			
2,4-Dinitrotoluene	106	10.0	3.50	ug/l	100		106	65-120			
2,6-Dinitrotoluene	105	10.0	2.00	ug/l	100		105	65-120			
Di-n-octyl phthalate	104	20.0	3.50	ug/l	100		104	65-135			

TestAmerica Irvine

Debby Wilson
Project Manager

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Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3069 Extracted: 03/23/11											
LCS Analyzed: 03/25/2011 (11C3069-BS1)											MNR1
1,2-Diphenylhydrazine/Azobenzene	93.6	20.0	2.50	ug/l	100		94	60-120			
Fluoranthene	106	10.0	3.00	ug/l	100		106	60-120			
Fluorene	96.3	10.0	3.00	ug/l	100		96	65-120			
Hexachlorobenzene	99.5	10.0	3.00	ug/l	100		100	60-120			
Hexachlorobutadiene	79.7	10.0	4.00	ug/l	100		80	40-120			
Hexachlorocyclopentadiene	63.2	20.0	5.00	ug/l	100		63	25-120			
Hexachloroethane	67.7	10.0	3.50	ug/l	100		68	35-120			
Indeno(1,2,3-cd)pyrene	111	20.0	3.50	ug/l	100		111	45-135			
Isophorone	97.6	10.0	3.00	ug/l	100		98	50-120			
Naphthalene	86.3	10.0	3.00	ug/l	100		86	55-120			
Nitrobenzene	91.5	20.0	3.00	ug/l	100		91	55-120			
2-Nitrophenol	91.0	10.0	3.50	ug/l	100		91	50-120			
4-Nitrophenol	106	20.0	5.50	ug/l	100		106	45-120			
N-Nitroso-di-n-propylamine	80.4	10.0	3.50	ug/l	100		80	45-120			
N-Nitrosodimethylamine	84.2	20.0	2.50	ug/l	100		84	45-120			
N-Nitrosodiphenylamine	94.9	10.0	2.00	ug/l	100		95	60-120			
Pentachlorophenol	97.8	20.0	3.50	ug/l	100		98	24-121			
Phenanthrene	101	10.0	3.50	ug/l	100		101	65-120			
Phenol	72.1	10.0	2.00	ug/l	100		72	40-120			
Pyrene	90.7	10.0	4.00	ug/l	100		91	55-125			
1,2,4-Trichlorobenzene	82.3	10.0	2.50	ug/l	100		82	45-120			
2,4,6-Trichlorophenol	95.5	20.0	4.50	ug/l	100		96	55-120			
Surrogate: 2,4,6-Tribromophenol	187			ug/l	200		93	40-120			
Surrogate: 2-Fluorobiphenyl	91.1			ug/l	100		91	50-120			
Surrogate: 2-Fluorophenol	146			ug/l	200		73	30-120			
Surrogate: Nitrobenzene-d5	90.0			ug/l	100		90	45-120			
Surrogate: Phenol-d6	147			ug/l	200		73	35-120			
Surrogate: Terphenyl-d14	94.6			ug/l	100		95	50-125			

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3069 Extracted: 03/23/11											
LCS Dup Analyzed: 03/25/2011 (11C3069-BSD1)											
Acenaphthene	92.8	10.0	3.00	ug/l	100		93	60-120	5	20	
Acenaphthylene	105	10.0	3.00	ug/l	100		105	60-120	2	20	
Anthracene	98.5	10.0	2.50	ug/l	100		98	65-120	1	20	
Benizidine	ND	20.0	10.0	ug/l	100			30-160		35	L6
Benzo(a)anthracene	103	10.0	2.50	ug/l	100		103	65-120	5	20	
Benzo(a)pyrene	102	10.0	3.00	ug/l	100		102	55-130	1	25	
Benzo(b)fluoranthene	99.3	10.0	2.00	ug/l	100		99	55-125	0.8	25	
Benzo(g,h,i)perylene	119	10.0	4.00	ug/l	100		119	45-135	8	25	
Benzo(k)fluoranthene	103	10.0	2.50	ug/l	100		103	50-125	4	20	
4-Bromophenyl phenyl ether	101	10.0	3.00	ug/l	100		101	60-120	4	25	
Butyl benzyl phthalate	104	20.0	4.00	ug/l	100		104	55-130	7	20	
4-Chloro-3-methylphenol	103	20.0	2.50	ug/l	100		103	60-120	0.2	25	
Bis(2-chloroethoxy)methane	93.7	10.0	3.00	ug/l	100		94	55-120	0.1	20	
Bis(2-chloroethyl)ether	83.6	10.0	3.00	ug/l	100		84	50-120	2	20	
Bis(2-chloroisopropyl)ether	79.1	10.0	2.50	ug/l	100		79	45-120	2	20	
Bis(2-ethylhexyl)phthalate	105	50.0	4.00	ug/l	100		105	65-130	9	20	
2-Chloronaphthalene	92.7	10.0	3.00	ug/l	100		93	60-120	3	20	
2-Chlorophenol	78.6	10.0	3.00	ug/l	100		79	45-120	0.6	25	
4-Chlorophenyl phenyl ether	101	10.0	2.50	ug/l	100		101	65-120	5	20	
Chrysene	104	10.0	2.50	ug/l	100		104	65-120	3	20	
Dibenz(a,h)anthracene	107	20.0	3.00	ug/l	100		107	50-135	2	25	
Di-n-butyl phthalate	108	20.0	3.00	ug/l	100		108	60-125	4	20	
1,2-Dichlorobenzene	73.8	10.0	3.00	ug/l	100		74	40-120	3	25	
1,3-Dichlorobenzene	73.2	10.0	3.00	ug/l	100		73	35-120	5	25	
1,4-Dichlorobenzene	71.8	10.0	2.50	ug/l	100		72	35-120	4	25	
3,3'-Dichlorobenzidine	76.4	20.0	7.50	ug/l	100		76	45-135	6	25	
2,4-Dichlorophenol	93.9	10.0	3.50	ug/l	100		94	55-120	2	20	
Diethyl phthalate	110	10.0	3.50	ug/l	100		110	55-120	3	30	
2,4-Dimethylphenol	86.2	20.0	3.50	ug/l	100		86	40-120	2	25	
Dimethyl phthalate	103	10.0	2.50	ug/l	100		103	30-120	2	30	
4,6-Dinitro-2-methylphenol	95.7	20.0	4.00	ug/l	100		96	45-120	3	25	
2,4-Dinitrophenol	92.8	20.0	8.00	ug/l	100		93	40-120	5	25	
2,4-Dinitrotoluene	108	10.0	3.50	ug/l	100		108	65-120	2	20	
2,6-Dinitrotoluene	104	10.0	2.00	ug/l	100		104	65-120	0.7	20	
Di-n-octyl phthalate	111	20.0	3.50	ug/l	100		111	65-135	7	20	

TestAmerica Irvine

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Report Number: IUC2184

Sampled: 03/21/11
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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3069 Extracted: 03/23/11											
LCS Dup Analyzed: 03/25/2011 (11C3069-BSD1)											
1,2-Diphenylhydrazine/Azobenzene	97.8	20.0	2.50	ug/l	100		98	60-120	4	25	
Fluoranthene	111	10.0	3.00	ug/l	100		111	60-120	5	20	
Fluorene	100	10.0	3.00	ug/l	100		100	65-120	4	20	
Hexachlorobenzene	100	10.0	3.00	ug/l	100		100	60-120	0.9	20	
Hexachlorobutadiene	87.3	10.0	4.00	ug/l	100		87	40-120	9	25	
Hexachlorocyclopentadiene	62.7	20.0	5.00	ug/l	100		63	25-120	0.7	30	
Hexachloroethane	69.9	10.0	3.50	ug/l	100		70	35-120	3	25	
Indeno(1,2,3-cd)pyrene	112	20.0	3.50	ug/l	100		112	45-135	1	25	
Isophorone	98.4	10.0	3.00	ug/l	100		98	50-120	0.8	20	
Naphthalene	89.8	10.0	3.00	ug/l	100		90	55-120	4	20	
Nitrobenzene	91.1	20.0	3.00	ug/l	100		91	55-120	0.4	25	
2-Nitrophenol	95.2	10.0	3.50	ug/l	100		95	50-120	5	25	
4-Nitrophenol	91.8	20.0	5.50	ug/l	100		92	45-120	14	30	
N-Nitroso-di-n-propylamine	77.7	10.0	3.50	ug/l	100		78	45-120	3	20	
N-Nitrosodimethylamine	87.1	20.0	2.50	ug/l	100		87	45-120	3	20	
N-Nitrosodiphenylamine	93.4	10.0	2.00	ug/l	100		93	60-120	2	20	
Pentachlorophenol	99.8	20.0	3.50	ug/l	100		100	24-121	2	25	
Phenanthrene	104	10.0	3.50	ug/l	100		104	65-120	3	20	
Phenol	75.9	10.0	2.00	ug/l	100		76	40-120	5	25	
Pyrene	95.3	10.0	4.00	ug/l	100		95	55-125	5	25	
1,2,4-Trichlorobenzene	87.6	10.0	2.50	ug/l	100		88	45-120	6	20	
2,4,6-Trichlorophenol	99.6	20.0	4.50	ug/l	100		100	55-120	4	30	
Surrogate: 2,4,6-Tribromophenol	185			ug/l	200		92	40-120			
Surrogate: 2-Fluorobiphenyl	93.2			ug/l	100		93	50-120			
Surrogate: 2-Fluorophenol	148			ug/l	200		74	30-120			
Surrogate: Nitrobenzene-d5	90.5			ug/l	100		91	45-120			
Surrogate: Phenol-d6	143			ug/l	200		71	35-120			
Surrogate: Terphenyl-d14	99.2			ug/l	100		99	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: 11C2905 Extracted: 03/22/11											
Blank Analyzed: 03/24/2011 (11C2905-BLK1)											
Chlorpyrifos	ND	1.0	0.010	ug/l							
Diazinon	ND	0.25	0.10	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.86			ug/l	5.00		97	70-130			
Surrogate: Triphenylphosphate	5.54			ug/l	5.00		111	70-130			
Surrogate: Perylene-d12	4.96			ug/l	5.00		99	70-130			
LCS Analyzed: 03/24/2011 (11C2905-BS1)											
Chlorpyrifos	5.16	1.0	0.010	ug/l	5.00		103	70-130			MNR1
Diazinon	4.92	0.25	0.10	ug/l	5.00		98	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.79			ug/l	5.00		96	70-130			
Surrogate: Triphenylphosphate	5.55			ug/l	5.00		111	70-130			
Surrogate: Perylene-d12	5.25			ug/l	5.00		105	70-130			
LCS Dup Analyzed: 03/24/2011 (11C2905-BSD1)											
Chlorpyrifos	5.11	1.0	0.010	ug/l	5.00		102	70-130	1	30	
Diazinon	4.94	0.25	0.10	ug/l	5.00		99	70-130	0.3	30	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.56			ug/l	5.00		91	70-130			
Surrogate: Triphenylphosphate	5.49			ug/l	5.00		110	70-130			
Surrogate: Perylene-d12	5.37			ug/l	5.00		107	70-130			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2988 Extracted: 03/23/11											
Blank Analyzed: 03/23/2011 (11C2988-BLK1)											
4,4'-DDD	ND	0.0050	0.0040	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							
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							
Chlordane	ND	0.10	0.080	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.433			ug/l	0.500		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.371			ug/l	0.500		74	35-115			
LCS Analyzed: 03/23/2011 (11C2988-BS1)											
4,4'-DDD	0.442	0.0050	0.0040	ug/l	0.500		88	55-120			
4,4'-DDE	0.423	0.0050	0.0030	ug/l	0.500		85	50-120			
4,4'-DDT	0.467	0.010	0.0040	ug/l	0.500		93	55-120			
Aldrin	0.386	0.0050	0.0015	ug/l	0.500		77	40-115			
alpha-BHC	0.398	0.0050	0.0025	ug/l	0.500		80	45-115			
beta-BHC	0.387	0.010	0.0040	ug/l	0.500		77	55-115			
delta-BHC	0.420	0.0050	0.0035	ug/l	0.500		84	55-115			
Dieldrin	0.438	0.0050	0.0020	ug/l	0.500		88	55-115			
Endosulfan I	0.396	0.0050	0.0020	ug/l	0.500		79	55-115			
Endosulfan II	0.435	0.0050	0.0030	ug/l	0.500		87	55-120			
Endosulfan sulfate	0.439	0.010	0.0030	ug/l	0.500		88	60-120			
Endrin	0.412	0.0050	0.0020	ug/l	0.500		82	55-115			
Endrin aldehyde	0.441	0.010	0.0020	ug/l	0.500		88	50-120			
gamma-BHC (Lindane)	0.391	0.020	0.0030	ug/l	0.500		78	45-115			

MNR1

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2988 Extracted: 03/23/11											
LCS Analyzed: 03/23/2011 (11C2988-BS1)											MNR1
Heptachlor	0.380	0.010	0.0030	ug/l	0.500		76	45-115			
Heptachlor epoxide	0.385	0.0050	0.0025	ug/l	0.500		77	55-115			
Surrogate: Decachlorobiphenyl	0.446			ug/l	0.500		89	45-120			
Surrogate: Tetrachloro-m-xylene	0.383			ug/l	0.500		77	35-115			
LCS Dup Analyzed: 03/23/2011 (11C2988-BSD1)											
4,4'-DDD	0.435	0.0050	0.0040	ug/l	0.500		87	55-120	2	30	
4,4'-DDE	0.418	0.0050	0.0030	ug/l	0.500		84	50-120	1	30	
4,4'-DDT	0.461	0.010	0.0040	ug/l	0.500		92	55-120	1	30	
Aldrin	0.385	0.0050	0.0015	ug/l	0.500		77	40-115	0.2	30	
alpha-BHC	0.398	0.0050	0.0025	ug/l	0.500		80	45-115	0.1	30	
beta-BHC	0.382	0.010	0.0040	ug/l	0.500		76	55-115	1	30	
delta-BHC	0.417	0.0050	0.0035	ug/l	0.500		83	55-115	0.8	30	
Dieldrin	0.433	0.0050	0.0020	ug/l	0.500		87	55-115	1	30	
Endosulfan I	0.392	0.0050	0.0020	ug/l	0.500		78	55-115	1	30	
Endosulfan II	0.429	0.0050	0.0030	ug/l	0.500		86	55-120	2	30	
Endosulfan sulfate	0.430	0.010	0.0030	ug/l	0.500		86	60-120	2	30	
Endrin	0.407	0.0050	0.0020	ug/l	0.500		81	55-115	1	30	
Endrin aldehyde	0.434	0.010	0.0020	ug/l	0.500		87	50-120	1	30	
gamma-BHC (Lindane)	0.390	0.020	0.0030	ug/l	0.500		78	45-115	0.3	30	
Heptachlor	0.380	0.010	0.0030	ug/l	0.500		76	45-115	0.2	30	
Heptachlor epoxide	0.379	0.0050	0.0025	ug/l	0.500		76	55-115	1	30	
Surrogate: Decachlorobiphenyl	0.441			ug/l	0.500		88	45-120			
Surrogate: Tetrachloro-m-xylene	0.384			ug/l	0.500		77	35-115			

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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
Batch: 11C2988 Extracted: 03/23/11											
Blank Analyzed: 03/23/2011 (11C2988-BLK1)											
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.470			ug/l	0.500		94	45-120			
LCS Analyzed: 03/23/2011 (11C2988-BS2)											
Aroclor 1016	3.49	0.50	0.25	ug/l	4.00		87	50-115			MNR1
Aroclor 1260	3.42	0.50	0.25	ug/l	4.00		85	60-120			
Surrogate: Decachlorobiphenyl	0.509			ug/l	0.500		102	45-120			
LCS Dup Analyzed: 03/23/2011 (11C2988-BSD2)											
Aroclor 1016	3.46	0.50	0.25	ug/l	4.00		87	50-115	0.7	30	
Aroclor 1260	3.38	0.50	0.25	ug/l	4.00		84	60-120	1	25	
Surrogate: Decachlorobiphenyl	0.499			ug/l	0.500		100	45-120			

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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
<u>Batch: 11C3550 Extracted: 03/28/11</u>											
Blank Analyzed: 03/28/2011 (11C3550-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/28/2011 (11C3550-BS1)											
Hexane Extractable Material (Oil & Grease)	19.1	5.0	1.4	mg/l	20.0		96	78-114			MNR1
LCS Dup Analyzed: 03/28/2011 (11C3550-BSD1)											
Hexane Extractable Material (Oil & Grease)	18.7	5.0	1.4	mg/l	20.0		94	78-114	2	11	

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 11C2899 Extracted: 03/22/11											
Blank Analyzed: 03/22/2011 (11C2899-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 03/22/2011 (11C2899-BS1)											
Antimony	82.8	2.0	0.30	ug/l	80.0		104	85-115			
Cadmium	85.3	1.0	0.10	ug/l	80.0		107	85-115			
Copper	82.8	2.00	0.500	ug/l	80.0		104	85-115			
Lead	79.6	1.0	0.20	ug/l	80.0		100	85-115			
Selenium	82.8	2.0	0.50	ug/l	80.0		104	85-115			
Thallium	79.7	1.0	0.20	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 03/22/2011 (11C2899-MS1) Source: IUC2134-02											
Antimony	77.1	2.0	0.30	ug/l	80.0	ND	96	70-130			
Cadmium	77.7	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	85.0	2.00	0.500	ug/l	80.0	4.75	100	70-130			
Lead	73.0	1.0	0.20	ug/l	80.0	1.35	90	70-130			
Selenium	75.4	2.0	0.50	ug/l	80.0	ND	94	70-130			
Thallium	72.3	1.0	0.20	ug/l	80.0	ND	90	70-130			
Matrix Spike Analyzed: 03/22/2011 (11C2899-MS2) Source: IUC1965-02											
Antimony	82.3	2.0	0.30	ug/l	80.0	0.480	102	70-130			
Cadmium	77.9	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	84.2	2.00	0.500	ug/l	80.0	6.68	97	70-130			
Lead	70.4	1.0	0.20	ug/l	80.0	0.795	87	70-130			
Selenium	80.3	2.0	0.50	ug/l	80.0	2.49	97	70-130			
Thallium	70.4	1.0	0.20	ug/l	80.0	ND	88	70-130			

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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: 11C2899 Extracted: 03/22/11											
Matrix Spike Dup Analyzed: 03/22/2011 (11C2899-MSD1)						Source: IUC2134-02					
Antimony	77.2	2.0	0.30	ug/l	80.0	ND	96	70-130	0.1	20	
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	0.6	20	
Copper	86.2	2.00	0.500	ug/l	80.0	4.75	102	70-130	1	20	
Lead	72.3	1.0	0.20	ug/l	80.0	1.35	89	70-130	0.9	20	
Selenium	76.2	2.0	0.50	ug/l	80.0	ND	95	70-130	1	20	
Thallium	71.2	1.0	0.20	ug/l	80.0	ND	89	70-130	2	20	

Batch: 11C2939 Extracted: 03/22/11

Blank Analyzed: 03/23/2011 (11C2939-BLK1)

Mercury	ND	0.20	0.10	ug/l
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LCS Analyzed: 03/23/2011 (11C2939-BS1)

Mercury	7.89	0.20	0.10	ug/l	8.00	99	85-115
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Matrix Spike Analyzed: 03/23/2011 (11C2939-MS1)

Source: IUC2224-01

Mercury	7.87	0.20	0.10	ug/l	8.00	ND	98	70-130
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Matrix Spike Dup Analyzed: 03/23/2011 (11C2939-MSD1)

Source: IUC2224-01

Mercury	7.86	0.20	0.10	ug/l	8.00	ND	98	70-130	0.2	20
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Batch: 11C3037 Extracted: 03/23/11

Blank Analyzed: 03/23/2011 (11C3037-BLK1)

Aluminum	ND	50	40	ug/l
Boron	ND	0.050	0.020	mg/l
Calcium	ND	0.10	0.050	mg/l
Iron	ND	0.040	0.015	mg/l
Magnesium	ND	0.020	0.012	mg/l
Vanadium	ND	10	3.0	ug/l

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3037 Extracted: 03/23/11											
LCS Analyzed: 03/23/2011 (11C3037-BS1)											
Aluminum	512	50	40	ug/l	500		102	85-115			
Boron	0.547	0.050	0.020	mg/l	0.500		109	85-115			
Calcium	2.83	0.10	0.050	mg/l	2.50		113	85-115			
Iron	0.562	0.040	0.015	mg/l	0.500		112	85-115			
Magnesium	2.71	0.020	0.012	mg/l	2.50		108	85-115			
Vanadium	572	10	3.0	ug/l	500		114	85-115			
Matrix Spike Analyzed: 03/23/2011 (11C3037-MS1)						Source: IUC2108-02					
Aluminum	504	50	40	ug/l	500	ND	101	70-130			
Boron	0.535	0.050	0.020	mg/l	0.500	ND	107	70-130			
Calcium	2.81	0.10	0.050	mg/l	2.50	ND	112	70-130			
Iron	0.559	0.040	0.015	mg/l	0.500	ND	112	70-130			
Magnesium	2.67	0.020	0.012	mg/l	2.50	ND	107	70-130			
Vanadium	551	10	3.0	ug/l	500	ND	110	70-130			
Matrix Spike Analyzed: 03/23/2011 (11C3037-MS2)						Source: IUC1923-02					
Aluminum	531	50	40	ug/l	500	ND	106	70-130			
Boron	0.944	0.050	0.020	mg/l	0.500	0.412	106	70-130			
Calcium	4.51	0.10	0.050	mg/l	2.50	1.73	111	70-130			
Iron	0.558	0.040	0.015	mg/l	0.500	ND	112	70-130			
Magnesium	2.81	0.020	0.012	mg/l	2.50	0.149	107	70-130			
Vanadium	556	10	3.0	ug/l	500	ND	111	70-130			
Matrix Spike Dup Analyzed: 03/23/2011 (11C3037-MSD1)						Source: IUC2108-02					
Aluminum	525	50	40	ug/l	500	ND	105	70-130	4	20	
Boron	0.548	0.050	0.020	mg/l	0.500	ND	110	70-130	2	20	
Calcium	2.85	0.10	0.050	mg/l	2.50	ND	114	70-130	1	20	
Iron	0.567	0.040	0.015	mg/l	0.500	ND	113	70-130	1	20	
Magnesium	2.76	0.020	0.012	mg/l	2.50	ND	111	70-130	3	20	
Vanadium	563	10	3.0	ug/l	500	ND	113	70-130	2	20	

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3239 Extracted: 03/24/11											
Blank Analyzed: 03/24/2011 (11C3239-BLK1)											
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Chromium	ND	5.0	2.0	ug/l							
Nickel	ND	10	2.0	ug/l							
Silver	ND	10	6.0	ug/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 03/24/2011-03/25/2011 (11C3239-BS1)											
Arsenic	544	10	7.0	ug/l	500		109	85-115			
Beryllium	516	2.0	0.90	ug/l	500		103	85-115			
Chromium	545	5.0	2.0	ug/l	500		109	85-115			
Nickel	544	10	2.0	ug/l	500		109	85-115			
Silver	263	10	6.0	ug/l	250		105	85-115			
Zinc	541	20	6.0	ug/l	500		108	85-115			
Matrix Spike Analyzed: 03/24/2011 (11C3239-MS1) Source: IUC2091-01											
Arsenic	544	10	7.0	ug/l	500	ND	109	70-130			
Beryllium	522	2.0	0.90	ug/l	500	ND	104	70-130			
Chromium	536	5.0	2.0	ug/l	500	ND	107	70-130			
Nickel	527	10	2.0	ug/l	500	2.10	105	70-130			
Silver	289	10	6.0	ug/l	250	ND	116	70-130			
Zinc	538	20	6.0	ug/l	500	ND	108	70-130			
Matrix Spike Analyzed: 03/24/2011 (11C3239-MS2) Source: IUC2091-02											
Arsenic	539	10	7.0	ug/l	500	ND	108	70-130			
Beryllium	514	2.0	0.90	ug/l	500	ND	103	70-130			
Chromium	546	5.0	2.0	ug/l	500	ND	109	70-130			
Nickel	525	10	2.0	ug/l	500	ND	105	70-130			
Silver	287	10	6.0	ug/l	250	ND	115	70-130			
Zinc	528	20	6.0	ug/l	500	ND	106	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3239 Extracted: 03/24/11											
Matrix Spike Dup Analyzed: 03/24/2011 (11C3239-MSD1)						Source: IUC2091-01					
Arsenic	547	10	7.0	ug/l	500	ND	109	70-130	0.5	20	
Beryllium	523	2.0	0.90	ug/l	500	ND	105	70-130	0.3	20	
Chromium	537	5.0	2.0	ug/l	500	ND	107	70-130	0.2	20	
Nickel	522	10	2.0	ug/l	500	2.10	104	70-130	0.9	20	
Silver	286	10	6.0	ug/l	250	ND	114	70-130	1	20	
Zinc	537	20	6.0	ug/l	500	ND	107	70-130	0.2	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
<u>Batch: 11C3083 Extracted: 03/23/11</u>											
Blank Analyzed: 03/23/2011 (11C3083-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/23/2011 (11C3083-BS1)											
Mercury	7.87	0.20	0.10	ug/l	8.00		98	85-115			
Matrix Spike Analyzed: 03/23/2011 (11C3083-MS1)											
						Source: IUC2139-03					
Mercury	7.77	0.20	0.10	ug/l	8.00	ND	97	70-130			
Matrix Spike Dup Analyzed: 03/23/2011 (11C3083-MSD1)											
						Source: IUC2139-03					
Mercury	7.76	0.20	0.10	ug/l	8.00	ND	97	70-130	0.2	20	
<u>Batch: 11C3474 Extracted: 03/25/11</u>											
Blank Analyzed: 03/26/2011 (11C3474-BLK1)											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
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	11.1	20	6.0	ug/l							J

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3474 Extracted: 03/25/11											
LCS Analyzed: 03/26/2011 (11C3474-BS1)											
Aluminum	470	50	40	ug/l	500		94	85-115			
Arsenic	516	10	7.0	ug/l	500		103	85-115			
Beryllium	520	2.0	0.90	ug/l	500		104	85-115			
Boron	0.515	0.050	0.020	mg/l	0.500		103	85-115			
Calcium	2.67	0.10	0.050	mg/l	2.50		107	85-115			
Chromium	526	5.0	2.0	ug/l	500		105	85-115			
Iron	0.530	0.040	0.015	mg/l	0.500		106	85-115			
Magnesium	2.48	0.020	0.012	mg/l	2.50		99	85-115			
Nickel	509	10	2.0	ug/l	500		102	85-115			
Silver	255	10	6.0	ug/l	250		102	85-115			
Vanadium	521	10	3.0	ug/l	500		104	85-115			
Zinc	505	20	6.0	ug/l	500		101	85-115			

Matrix Spike Analyzed: 03/26/2011-03/28/2011 (11C3474-MS1)

Source: IUC2140-03

Aluminum	549	50	40	ug/l	500	ND	110	70-130			
Arsenic	524	10	7.0	ug/l	500	ND	105	70-130			
Beryllium	519	2.0	0.90	ug/l	500	ND	104	70-130			
Boron	0.404	0.050	0.020	mg/l	0.500	0.0550	70	70-130			
Calcium	30.5	0.10	0.050	mg/l	2.50	28.6	76	70-130			MHA
Chromium	520	5.0	2.0	ug/l	500	ND	104	70-130			
Iron	0.577	0.040	0.015	mg/l	0.500	0.0583	104	70-130			
Magnesium	8.32	0.020	0.012	mg/l	2.50	5.78	102	70-130			
Nickel	505	10	2.0	ug/l	500	ND	101	70-130			
Silver	253	10	6.0	ug/l	250	ND	101	70-130			
Vanadium	530	10	3.0	ug/l	500	ND	106	70-130			
Zinc	509	20	6.0	ug/l	500	7.18	100	70-130			

Matrix Spike Dup Analyzed: 03/26/2011 (11C3474-MSD1)

Source: IUC2140-03

Aluminum	523	50	40	ug/l	500	ND	105	70-130	5	20	
Arsenic	538	10	7.0	ug/l	500	ND	108	70-130	3	20	
Beryllium	535	2.0	0.90	ug/l	500	ND	107	70-130	3	20	
Boron	0.586	0.050	0.020	mg/l	0.500	0.0550	106	70-130	37	20	R
Calcium	31.4	0.10	0.050	mg/l	2.50	28.6	111	70-130	3	20	MHA
Chromium	534	5.0	2.0	ug/l	500	ND	107	70-130	3	20	
Iron	0.594	0.040	0.015	mg/l	0.500	0.0583	107	70-130	3	20	
Magnesium	8.38	0.020	0.012	mg/l	2.50	5.78	104	70-130	0.7	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3474 Extracted: 03/25/11											
Matrix Spike Dup Analyzed: 03/26/2011 (11C3474-MSD1)						Source: IUC2140-03					
Nickel	531	10	2.0	ug/l	500	ND	106	70-130	5	20	
Silver	263	10	6.0	ug/l	250	ND	105	70-130	4	20	
Vanadium	558	10	3.0	ug/l	500	ND	112	70-130	5	20	
Zinc	531	20	6.0	ug/l	500	7.18	105	70-130	4	20	

Batch: 11C3506 Extracted: 03/26/11

Blank Analyzed: 03/28/2011 (11C3506-BLK1)

Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							

LCS Analyzed: 03/28/2011 (11C3506-BS1)

Antimony	80.1	2.0	0.30	ug/l	80.0		100	85-115			
Cadmium	79.3	1.0	0.10	ug/l	80.0		99	85-115			
Copper	84.1	2.00	0.500	ug/l	80.0		105	85-115			
Lead	78.6	1.0	0.20	ug/l	80.0		98	85-115			
Selenium	79.7	2.0	0.50	ug/l	80.0		100	85-115			
Thallium	78.5	1.0	0.20	ug/l	80.0		98	85-115			

Matrix Spike Analyzed: 03/28/2011 (11C3506-MS1)

Source: IUC2142-02

Antimony	78.6	2.0	0.30	ug/l	80.0	0.723	97	70-130			
Cadmium	77.2	1.0	0.10	ug/l	80.0	ND	96	70-130			
Copper	83.9	2.00	0.500	ug/l	80.0	1.96	102	70-130			
Lead	76.8	1.0	0.20	ug/l	80.0	0.555	95	70-130			
Selenium	74.2	2.0	0.50	ug/l	80.0	ND	93	70-130			
Thallium	74.8	1.0	0.20	ug/l	80.0	ND	94	70-130			

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3506 Extracted: 03/26/11											
Matrix Spike Analyzed: 03/28/2011 (11C3506-MS2)						Source: IUC2141-02					
Antimony	78.7	2.0	0.30	ug/l	80.0	ND	98	70-130			
Cadmium	77.0	1.0	0.10	ug/l	80.0	ND	96	70-130			
Copper	83.9	2.00	0.500	ug/l	80.0	2.04	102	70-130			
Lead	76.2	1.0	0.20	ug/l	80.0	ND	95	70-130			
Selenium	73.3	2.0	0.50	ug/l	80.0	ND	92	70-130			
Thallium	75.5	1.0	0.20	ug/l	80.0	ND	94	70-130			
Matrix Spike Dup Analyzed: 03/28/2011 (11C3506-MSD1)						Source: IUC2142-02					
Antimony	79.8	2.0	0.30	ug/l	80.0	0.723	99	70-130	2	20	
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	1	20	
Copper	84.8	2.00	0.500	ug/l	80.0	1.96	104	70-130	1	20	
Lead	76.6	1.0	0.20	ug/l	80.0	0.555	95	70-130	0.3	20	
Selenium	73.5	2.0	0.50	ug/l	80.0	ND	92	70-130	1	20	
Thallium	75.2	1.0	0.20	ug/l	80.0	ND	94	70-130	0.5	20	

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DISSOLVED INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2772 Extracted: 03/21/11											
Blank Analyzed: 03/21/2011 (11C2772-BLK1)											
Chromium VI	ND	1.00	0.250	ug/l							
LCS Analyzed: 03/21/2011 (11C2772-BS1)											
Chromium VI	47.4	1.00	0.250	ug/l	50.0		95	90-110			
Matrix Spike Analyzed: 03/21/2011 (11C2772-MS1)											
						Source: IUC2184-01					
Chromium VI	49.0	1.00	0.250	ug/l	50.0	ND	98	90-110			
Matrix Spike Dup Analyzed: 03/21/2011 (11C2772-MSD1)											
						Source: IUC2184-01					
Chromium VI	49.4	1.00	0.250	ug/l	50.0	ND	99	90-110	0.7	10	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C2823 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2823-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/22/2011 (11C2823-BS1)											
Total Dissolved Solids	998	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/22/2011 (11C2823-DUP1)											
Total Dissolved Solids	509	10	1.0	mg/l		513			0.8	10	
<u>Batch: 11C2871 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2871-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/22/2011 (11C2871-BS1)											
Perchlorate	26.0	4.0	0.90	ug/l	25.0		104	85-115			
Matrix Spike Analyzed: 03/22/2011 (11C2871-MS1)											
Perchlorate	26.1	4.0	0.90	ug/l	25.0	ND	104	80-120			
Matrix Spike Dup Analyzed: 03/22/2011 (11C2871-MSD1)											
Perchlorate	26.3	4.0	0.90	ug/l	25.0	ND	105	80-120	0.6	20	
<u>Batch: 11C2884 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2884-BLK1)											
Chloride	ND	0.50	0.30	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.30	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2884 Extracted: 03/22/11											
LCS Analyzed: 03/22/2011 (11C2884-BS1)											
Chloride	4.94	0.50	0.30	mg/l	5.00		99	90-110			M-3
Sulfate	9.96	0.50	0.30	mg/l	10.0		100	90-110			
Matrix Spike Analyzed: 03/22/2011 (11C2884-MS1)											
						Source: IUC2181-03					
Chloride	7.84	0.50	0.30	mg/l	5.00	3.16	94	80-120			
Sulfate	13.8	0.50	0.30	mg/l	10.0	4.18	96	80-120			
Matrix Spike Analyzed: 03/22/2011 (11C2884-MS2)											
						Source: IUC2320-01					
Sulfate	48.2	1.0	0.60	mg/l	10.0	38.8	95	80-120			
Matrix Spike Dup Analyzed: 03/22/2011 (11C2884-MSD1)											
						Source: IUC2181-03					
Chloride	8.21	0.50	0.30	mg/l	5.00	3.16	101	80-120	5	20	
Sulfate	14.3	0.50	0.30	mg/l	10.0	4.18	101	80-120	4	20	
Batch: 11C2949 Extracted: 03/22/11											
Blank Analyzed: 03/22/2011 (11C2949-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/22/2011 (11C2949-BS1)											
Total Suspended Solids	1000	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/22/2011 (11C2949-DUP1)											
						Source: IUC2184-03					
Total Suspended Solids	36.0	10	1.0	mg/l		37.0			3	10	
Batch: 11C2986 Extracted: 03/23/11											
Blank Analyzed: 03/23/2011 (11C2986-BLK1)											
Fluoride	ND	0.10	0.020	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C2986 Extracted: 03/23/11</u>											
LCS Analyzed: 03/23/2011 (11C2986-BS1)											
Fluoride	1.07	0.10	0.020	mg/l	1.00		107	90-110			
Matrix Spike Analyzed: 03/23/2011 (11C2986-MS1)											
Fluoride	1.29	0.10	0.020	mg/l	1.00	0.336	95	80-120			
Matrix Spike Dup Analyzed: 03/23/2011 (11C2986-MSD1)											
Fluoride	1.33	0.10	0.020	mg/l	1.00	0.336	99	80-120	3	20	
<u>Batch: 11C3437 Extracted: 03/25/11</u>											
Blank Analyzed: 03/25/2011 (11C3437-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/25/2011 (11C3437-BS1)											
Total Cyanide	194	5.0	2.2	ug/l	196		99	90-110			
Matrix Spike Analyzed: 03/25/2011 (11C3437-MS1)											
Total Cyanide	199	5.0	2.2	ug/l	196	ND	101	70-115			
Matrix Spike Dup Analyzed: 03/25/2011 (11C3437-MSD1)											
Total Cyanide	201	5.0	2.2	ug/l	196	ND	102	70-115	0.9	15	

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900

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 03/31/11											
LCS Analyzed: 03/31/2011 (S103143-02)											
Gross Alpha	122	3	1.21	pCi/L	101		121	70-130			
Gross Beta	83.8	4	3.06	pCi/L	87.1		96	70-130			
Blank Analyzed: 03/31/2011 (S103143-03)											
Gross Alpha	0.261	3	1.85	pCi/L				-			U
Gross Beta	-0.333	4	2.4	pCi/L				-			U
Duplicate Analyzed: 03/31/2011 (S103143-04)											
Gross Alpha	1.94	3	0.434	pCi/L				-	15		Jb
Gross Beta	6.74	4	0.831	pCi/L				-	8		

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METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 03/24/11											
LCS Analyzed: 03/31/2011 (S103143-02)						Source:					
Cobalt-60	123	10	2.5	pCi/L	124		99	80-120			
Cesium-137	118	20	3.18	pCi/L	110		107	80-120			
Blank Analyzed: 03/31/2011 (S103143-03)						Source:					
Cesium-137	ND	20	2.34	pCi/L				-			U
Potassium-40	ND	25	47.4	pCi/L				-			U
Duplicate Analyzed: 03/31/2011 (S103143-04)						Source:					
Cesium-134	ND	20	3.68	pCi/L				-	0		U
Cesium-137	ND	20	1.17	pCi/L				-	0		U
Potassium-40	ND	25	15.8	pCi/L				-	0		U

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METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 04/05/11											
LCS Analyzed: 04/05/2011 (S103143-02)											
Radium-226	49	1	0.859	pCi/L	55.7		88	80-120			
Blank Analyzed: 04/05/2011 (S103143-03)											
Radium-226	0.031	1	0.8	pCi/L				-			U
Duplicate Analyzed: 04/05/2011 (S103143-04)											
Radium-226	0.283	1	0.711	pCi/L				-	0		U

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904

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 04/07/11											
LCS Analyzed: 04/07/2011 (S103143-02)											
Radium-228	3.92	1	0.432	pCi/L	5.01		78	60-140			
Blank Analyzed: 04/07/2011 (S103143-03)											
Radium-228	-0.153	1	0.434	pCi/L							U
Duplicate Analyzed: 04/07/2011 (S103143-04)											
Radium-228	0.235	1	0.402	pCi/L					0		U

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METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 04/01/11											
LCS Analyzed: 04/01/2011 (S103143-02)											
Strontium-90	19.7	2	0.576	pCi/L	17.4		113	80-120			
Blank Analyzed: 04/01/2011 (S103143-03)											
Strontium-90	0.045	2	0.468	pCi/L				-			U
Duplicate Analyzed: 04/01/2011 (S103143-04)											
Strontium-90	0.078	2	0.717	pCi/L				-	0		U

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METHOD BLANK/QC DATA

906

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 03/30/11											
LCS Analyzed: 03/30/2011 (S103143-02)											
Tritium	2150	500	166	pCi/L	2350		91	80-120			
Blank Analyzed: 03/30/2011 (S103143-03)											
Tritium	-30.1	500	163	pCi/L				-			U
Duplicate Analyzed: 03/30/2011 (S103143-04)											
Tritium	-10.9	500	168	pCi/L				-	0		U

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METHOD BLANK/QC DATA

ASTM-D5174

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8680 Extracted: 03/29/11											
LCS Analyzed: 03/29/2011 (S103143-02)											
Uranium, Total	55.3	1	0.205	pCi/L	56.5		98	80-120			
Blank Analyzed: 03/29/2011 (S103143-03)											
Uranium, Total	ND	1	0.02	pCi/L				-			U
Duplicate Analyzed: 03/29/2011 (S103143-04)											
Uranium, Total	0.292	1	0.02	pCi/L				-	9		Jb

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 1083190 Extracted: 03/24/11											
Blank Analyzed: 03/25/2011 (G1C240000190B)						Source:					
1,2,3,4,6,7,8-HpCDD	ND	0.00005	0.0000013	ug/L				-			
1,2,3,4,6,7,8-HpCDF	ND	0.00005	0.00000066	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.00000096	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.00000068	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.00000062	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.00000065	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.00000033	ug/L				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	0.00000058	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.00000043	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.00000091	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.00000087	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000032	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000009	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.00000052	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.00000012	ug/L				-			
OCDD	2.2e-006	0.0001	0.00000019	ug/L				-			J
OCDF	ND	0.0001	0.00000021	ug/L				-			
Total HpCDD	ND	0.00005	0.00000013	ug/L				-			
Total HpCDF	ND	0.00005	0.00000066	ug/L				-			
Total HxCDD	ND	0.00005	0.00000058	ug/L				-			
Total HxCDF	ND	0.00005	0.00000032	ug/L				-			
Total PeCDD	ND	0.00005	0.00000091	ug/L				-			
Total PeCDF	ND	0.00005	0.00000087	ug/L				-			
Total TCDD	ND	0.00001	0.00000052	ug/L				-			
Total TCDF	ND	0.00001	0.00000012	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	0.0011			ug/L	0.002		57	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.001			ug/L	0.002		52	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0011			ug/L	0.002		55	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0011			ug/L	0.002		55	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0013			ug/L	0.002		64	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0013			ug/L	0.002		65	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0012			ug/L	0.002		61	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0013			ug/L	0.002		65	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0011			ug/L	0.002		53	24-185			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1083190 Extracted: 03/24/11											
Blank Analyzed: 03/25/2011 (G1C240000190B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0013			ug/L	0.002		65	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0011			ug/L	0.002		56	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0011			ug/L	0.002		53	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0012			ug/L	0.002		58	24-169			
Surrogate: 13C-OCDD	0.0024			ug/L	0.004		61	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00066			ug/L	0.0008		82	35-197			
LCS Analyzed: 03/25/2011 (G1C240000190C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00107	0.00005	0.0000086	ug/L	0.001		107	70-140			
1,2,3,4,6,7,8-HpCDF	0.00109	0.00005	0.0000018	ug/L	0.001		109	82-122			
1,2,3,4,7,8,9-HpCDF	0.00114	0.00005	0.0000027	ug/L	0.001		114	78-138			
1,2,3,4,7,8-HxCDD	0.00109	0.00005	0.00000078	ug/L	0.001		109	70-164			
1,2,3,4,7,8-HxCDF	0.00107	0.00005	0.00000053	ug/L	0.001		107	72-134			
1,2,3,6,7,8-HxCDD	0.0011	0.00005	0.00000071	ug/L	0.001		110	76-134			
1,2,3,6,7,8-HxCDF	0.0011	0.00005	0.00000048	ug/L	0.001		110	84-130			
1,2,3,7,8,9-HxCDD	0.00121	0.00005	0.00000065	ug/L	0.001		121	64-162			
1,2,3,7,8,9-HxCDF	0.00111	0.00005	0.00000064	ug/L	0.001		111	78-130			
1,2,3,7,8-PeCDD	0.000988	0.00005	0.00000025	ug/L	0.001		99	70-142			
1,2,3,7,8-PeCDF	0.00112	0.00005	0.00000034	ug/L	0.001		112	80-134			
2,3,4,6,7,8-HxCDF	0.0011	0.00005	0.00000047	ug/L	0.001		110	70-156			
2,3,4,7,8-PeCDF	0.00109	0.00005	0.00000036	ug/L	0.001		109	68-160			
2,3,7,8-TCDD	0.000219	0.00001	0.00000014	ug/L	0.0002		110	67-158			
2,3,7,8-TCDF	0.000263	0.00001	0.00000015	ug/L	0.0002		132	75-158			
OCDD	0.00207	0.0001	0.00000014	ug/L	0.002		103	78-144			B
OCDF	0.00204	0.0001	0.00000011	ug/L	0.002		102	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.000957			ug/L	0.002		48	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.000967			ug/L	0.002		48	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.000872			ug/L	0.002		44	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.000944			ug/L	0.002		47	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00102			ug/L	0.002		51	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00111			ug/L	0.002		56	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00109			ug/L	0.002		55	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00104			ug/L	0.002		52	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00111			ug/L	0.002		56	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00095			ug/L	0.002		48	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0011			ug/L	0.002		55	22-176			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11

Received: 03/21/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1083190 Extracted: 03/24/11											
LCS Analyzed: 03/25/2011 (G1C240000190C)											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.000997			ug/L	0.002		50	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.000983			ug/L	0.002		49	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00103			ug/L	0.002		51	22-152			
Surrogate: 13C-OCDD	0.00197			ug/L	0.004		49	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000667			ug/L	0.0008		83	31-191			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

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
IUC2184-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.19	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
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Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC2184-03	Antimony-200.8	Antimony	ug/l	0.39	2.0	6
IUC2184-03	Boron-200.7	Boron	mg/l	0.025	0.050	1
IUC2184-03	Cadmium-200.8	Cadmium	ug/l	0.071	1.0	4
IUC2184-03	Chloride - 300.0	Chloride	mg/l	7.54	0.50	150
IUC2184-03	Copper-200.8	Copper	ug/l	4.34	2.00	14
IUC2184-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	0	5.0	9500
IUC2184-03	Fluoride SM4500F,C	Fluoride	mg/l	0.21	0.10	1.6
IUC2184-03	Lead-200.8	Lead	ug/l	2.31	1.0	5.2
IUC2184-03	Mercury - 245.1	Mercury	ug/l	0	0.20	0.13
IUC2184-03	Nickel-200.7	Nickel	ug/l	3.33	10	100
IUC2184-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.81	0.26	10
IUC2184-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
IUC2184-03	Sulfate-300.0	Sulfate	mg/l	3.77	0.50	250
IUC2184-03	TDS - SM2540C	Total Dissolved Solids	mg/l	142	10	850
IUC2184-03	Thallium-200.8	Thallium	ug/l	0.031	1.0	2

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

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.
- J** Estimated result. Result is less than the reporting limit.
- Jb** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- L6** Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
- M13** The sample spiked had a pH of less than 2. 2-Chloroethylvinylether degrades under acidic conditions.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the 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).
- R** The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
- U** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
- Z** Due to sample matrix effects, the surrogate recovery was below the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

ADDITIONAL COMMENTS

For 1,2-Diphenylhydrazine:

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

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
 Received: 03/21/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 218.6	Water	X	X
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 525.2	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM 4500-F-C	Water	X	N/A
SM2340B-Diss	Water		
SM2340B	Water	X	N/A
SM2540C	Water	X	N/A
SM4500CN-E	Water	X	N/A
SM9221 A,B,C,E	Water		

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr
 Samples: IUC2184-01

Analysis Performed: Level 4 Data Package
 Samples: IUC2184-01

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUC2184-03

Analysis Performed: Gross Alpha
Samples: IUC2184-03

Analysis Performed: Gross Beta
Samples: IUC2184-03

Analysis Performed: Level 4 Data Package
Samples: IUC2184-03

Analysis Performed: Radium, Combined
Samples: IUC2184-03

Analysis Performed: Strontium 90
Samples: IUC2184-03

Analysis Performed: Tritium
Samples: IUC2184-03

Analysis Performed: Uranium, Combined
Samples: IUC2184-03

Method Performed: 900
Samples: IUC2184-03

Method Performed: 901.1
Samples: IUC2184-03

Method Performed: 903.1
Samples: IUC2184-03

Method Performed: 904
Samples: IUC2184-03

Method Performed: 905
Samples: IUC2184-03

Method Performed: 906
Samples: IUC2184-03

Method Performed: D5174
Samples: IUC2184-03

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 006

Report Number: IUC2184

Sampled: 03/21/11
Received: 03/21/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B

Samples: IUC2184-03

TestAmerica Irvine

Debby Wilson
Project Manager

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007				Project: Boeing-SSFL NPDES Annual Outfall 006 COMPOSITE - HIGH Stormwater at FSDF-2			ANALYSIS REQUIRED										Comments
Test America Contact: Debby Wilson				Project Manager: Bronwyn Kelly			Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, B, V, Ti, Fe, Al, + PP, Hardness as CaCO ₃										
Sampler: RICK BANBA				Phone Number: (626) 568-6691			TCDD (and all congeners)										
Fax Number: (626) 568-6515				Sample Description			Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N, F, Perchlorate										Chronic Toxicity
Sample Matrix				Container Type			TDS, TSS										
# of Cont.				Sampling Date/Time			Pesticides/PCBs, Chlorpyrifos, Diazinon + PP										
Preservative				Bottle #			Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)										
Outfall 006				W 1L Poly 1			SVOCs (625) + PP										
Outfall 006 Dup				W 1L Poly 1			Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Ti, Fe, Al, + PP, Hardness as CaCO ₃										
Outfall 006				W 1L Amber 2			Cyanide										
Outfall 006				W 500 mL Poly 2													
Outfall 006				W 500 mL Poly 2													
Outfall 006				W 1L Amber 2													
Outfall 006				W 2.5 Gal Cube 1													
Outfall 006				W 500 mL Amber 1													
Outfall 006				W 1L Amber 2													
Outfall 006				W 1 Gal Poly 1													
Outfall 006				W 1L Poly 1													
Outfall 006				W 500 mL Poly 1													

Unfiltered and unpreserved analysis

Only test if first or second rain events of the year

Filter w/in 24hrs of receipt at lab

0.0
3/22/11
8:25

COC Page 2 of 2 list the Composite Samples for Outfall 006 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 006 for the same event.

Relinquished By <i>Rick Banba</i>	Date/Time: 3-21-2011 18:30	Received By <i>Espain Figueroa</i>	Date/Time: 3-21-11 19:30	Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: _____ 48 Hour: _____ 5 Day: <input checked="" type="checkbox"/> Normal: _____ Sample Integrity: (Check) 3.4 Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>
Relinquished By <i>Espain Figueroa</i>	Date/Time: 3-21-11 22:15	Received By <i>[Signature]</i>	Date/Time: 3/21/11 22:15	

LABORATORY REPORT



"dedicated to providing quality aquatic toxicity testing"

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

Date: March 27, 2011

Client: Test America – Irvine
17461 Derian Ave., Suite 100
Irvine, CA 92614
Attn: Debby Wilson

Laboratory No.: A-11032207-001
Sample ID.: IUC2184-01

Sample Control: The sample was received by ATL in a chilled state, within the recommended hold time and with the chain of custody record attached.

Date Sampled: 03/21/11
Date Received: 03/22/11
Temp. Received: 2.4°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 03/22/11 to 03/26/11

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

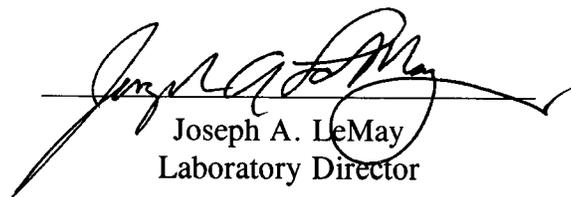
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).

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

Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IUC2184-01	100% Survival (TUa = 0.0)

Quality Control: Reviewed and approved by:



Joseph A. LeMay
Laboratory Director

FATHEAD MINNOW PERCENT SURVIVAL TEST

EPA Method 2000.0



Lab No.: A-11032207-001
 Client/ID: TestAmerica IUC2184-01

Start Date: 03/22/2011

TEST SUMMARY

Species: *Pimephales promelas*.
 Age: 14 (1-14) days.
 Regulations: NPDES.
 Test solution volume: 250 ml.
 Feeding: prior to renewal at 48 hrs.
 Number of replicates: 2.
 Control 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 No.: RT-110301.

TEST DATA

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.2	9.1	8.0	0	0	J 1100
	100%	20.8	9.6	7.3	0	0	
24 Hr	Control	20.3	8.4	7.9	0	0	J 1100
	100%	20.1	8.2	7.8	0	0	
48 Hr	Control	19.8	8.2	7.8	0	0	J 1030
	100%	19.7	8.5	7.8	0	0	
Renewal	Control	20.1	8.7	7.9	0	0	J 1030
	100%	19.7	9.2	7.5	0	0	
72 Hr	Control	20.0	8.7	7.8	0	0	J 1130
	100%	19.9	7.9	7.6	0	0	
96 Hr	Control	20.3	7.9	7.7	0	0	J 1130
	100%	20.3	7.2	7.6	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.3; Conductivity: 180 umho; Temp: 2.4°C;
 DO: 9.9 mg/l; Alkalinity: 72 mg/l; Hardness: 76 mg/l; NH₃-N: 0.2 mg/l.
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No
 Control: Alkalinity: 68 mg/l; Hardness: 96 mg/l; Conductivity: 339 umho.
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.
 Dissolved Oxygen (DO) readings in mg/l O₂.

RESULTS

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

Subcontract Order - TestAmerica Irvine (IUC2184)

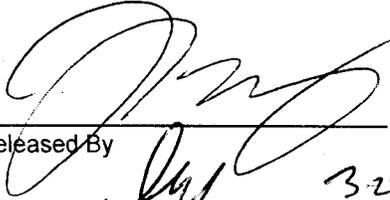
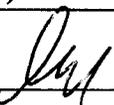
SENDING LABORATORY:

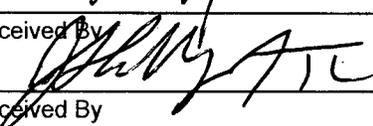
TestAmerica Irvine
 17461 Derian Avenue, Suite 100
 Irvine, CA 92614
 Phone: (949) 261-1022
 Fax: (949) 260-3297
 Project Manager: Debby Wilson

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB
 4350 Transport Street, Unit 107
 Ventura, CA 93003
 Phone: (805) 650-0546
 Fax: (805) 650-0756
 Project Location: California
 Receipt Temperature: 22.4 °C Ice: (Y) / N

Analysis	Units	Due	Expires	Comments
Sample ID: IUC2184-01 (Outfall 006 (Grab) - Water)				
			Sampled: 03/21/11 11:30	
Bioassay-Acute 96hr	% Survival	03/28/11	03/22/11 23:30	FH minnow, EPA/821-R02-012, Sub to Aquatic testing
Level 4 Data Package - Out	N/A	03/28/11	04/18/11 11:30	
<i>Containers Supplied:</i>				
1 gal Poly (L)				


 Released By _____ Date/Time 3-22-11 7:00

 Released By _____ Date/Time 3-22-11 10:55


 Received By _____ Date/Time 3-22-11 7:00

 Received By _____ Date/Time 3-22-11 10:55



***REFERENCE
TOXICANT
DATA***

**FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS**



QA/QC Batch No.: RT-110301

TEST SUMMARY

Species: *Pimephales promelas*.

Age: 10 days old.

Regulations: NPDES.

Test chamber volume: 250 ml.

Feeding: Prior to renewal at 48 hrs.

Temperature: 20 +/- 1°C.

Number of replicates: 2.

Dilution water: MHSF.

Source: In-lab culture.

Test type: Static-Renewal.

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

Endpoints: LC50 at 96 hrs.

Test chamber: 600 ml beakers.

Aeration: None.

Number of organisms per chamber: 10.

Photoperiod: 16/8 hrs light/dark.

TEST DATA

Date/Time:	INITIAL			24 Hr					48 Hr				
	<u>3-1-11 1000</u>			<u>3-2-11 0930</u>					<u>3-3-11 1000</u>				
	<u>[Signature]</u>			<u>[Signature]</u>					<u>[Signature]</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	20.2	9.1	8.1	20.1	8.3	7.9	0	0	20.3	8.3	7.9	0	0
1.0 mg/l	20.2	9.2	8.1	20.1	8.1	7.9	0	0	20.4	7.8	7.8	0	0
2.0 mg/l	20.2	9.3	8.0	20.0	8.4	7.9	0	0	20.4	7.9	7.8	0	0
4.0 mg/l	20.2	9.2	8.1	19.9	8.3	7.9	2	0	20.4	7.7	7.7	0	3
8.0 mg/l	20.2	9.2	8.1	19.9	8.2	7.8	10	10	-	-	-	-	-

Date/Time:	RENEWAL			72 Hr					96 Hr				
	<u>3-3-11 1000</u>			<u>3-4-11 1000</u>					<u>3-5-11 1030</u>				
	<u>[Signature]</u>			<u>[Signature]</u>					<u>[Signature]</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	20.5	8.3	8.0	20.6	8.0	7.8	0	0	20.4	7.6	7.8	0	0
1.0 mg/l	20.5	8.4	8.0	20.5	8.1	7.8	0	0	20.3	8.3	7.9	0	0
2.0 mg/l	20.5	8.6	8.0	20.4	8.1	7.8	0	0	20.3	8.4	7.9	0	0
4.0 mg/l	20.5	8.7	8.0	20.4	8.1	7.8	0	0	20.3	8.4	7.9	0	1
8.0 mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments: Control: Alkalinity: 70 mg/l; Hardness: 92 mg/l; Conductivity: 349 umho.
 SDS: Alkalinity: 71 mg/l; Hardness: 92 mg/l; Conductivity: 340 umho.

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

Yes (response curve normal)

No (dose interrupted indicated or non-normal)

Acute Fish Test-96 Hr Survival

Start Date: 3/1/2011 10:00 Test ID: RT110301 Sample ID: REF-Ref Toxicant
 End Date: 3/5/2011 10:30 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate
 Sample Date: 3/1/2011 Protocol: ACUTE-EPA-821-R-02-012 Test Species: PP-Pimephales promelas

Comments:

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	0.8000	0.6000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root					N	Number Resp	Total Number
			Mean	Min	Max	CV%				
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	0.7000	0.7000	0.9966	0.8861	1.1071	15.685	2	6	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20	

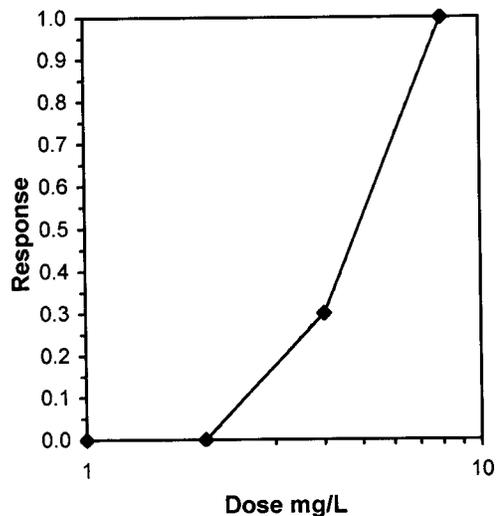
Auxiliary Tests

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

Statistic Critical Skew Kurt

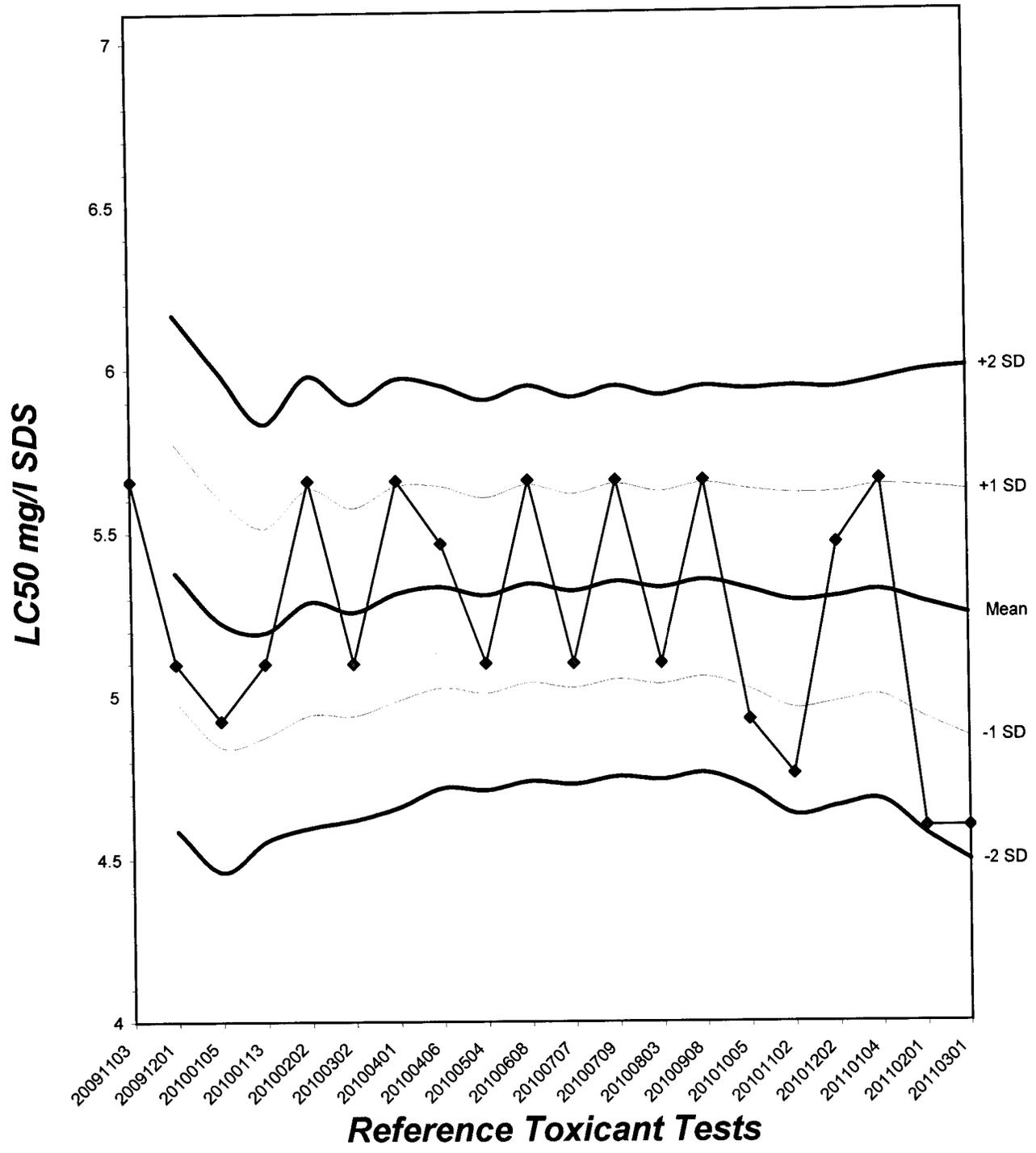
Trimmed Spearman-Kärber

Trim Level	EC50	95% CL	
0.0%	4.5948	3.9863	5.2961
5.0%	4.6576	3.9704	5.4637
10.0%	4.7177	3.9185	5.6800
20.0%	4.8227	3.6460	6.3792
Auto-0.0%	4.5948	3.9863	5.2961



Fathead Minnow Acute Laboratory Control Chart

CV% = 7.19



TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT110301

SOURCE: In-Lab Culture

DATE HATCHED: 2-19-11

APPROXIMATE QUANTITY: 300

GENERAL APPEARANCE: good

MORTALITIES 48 HOURS PRIOR TO
TO USE IN TESTING: 0

DATE USED IN LAB: 3/1/11

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.: 20.2 °C

pH: 8.1

Ammonia: 0.1 mg/l NH₃-N

DO: 9.1 mg/l

Alkalinity: 20 mg/l

Hardness: 92 mg/l

READINGS RECORDED BY: [Signature]

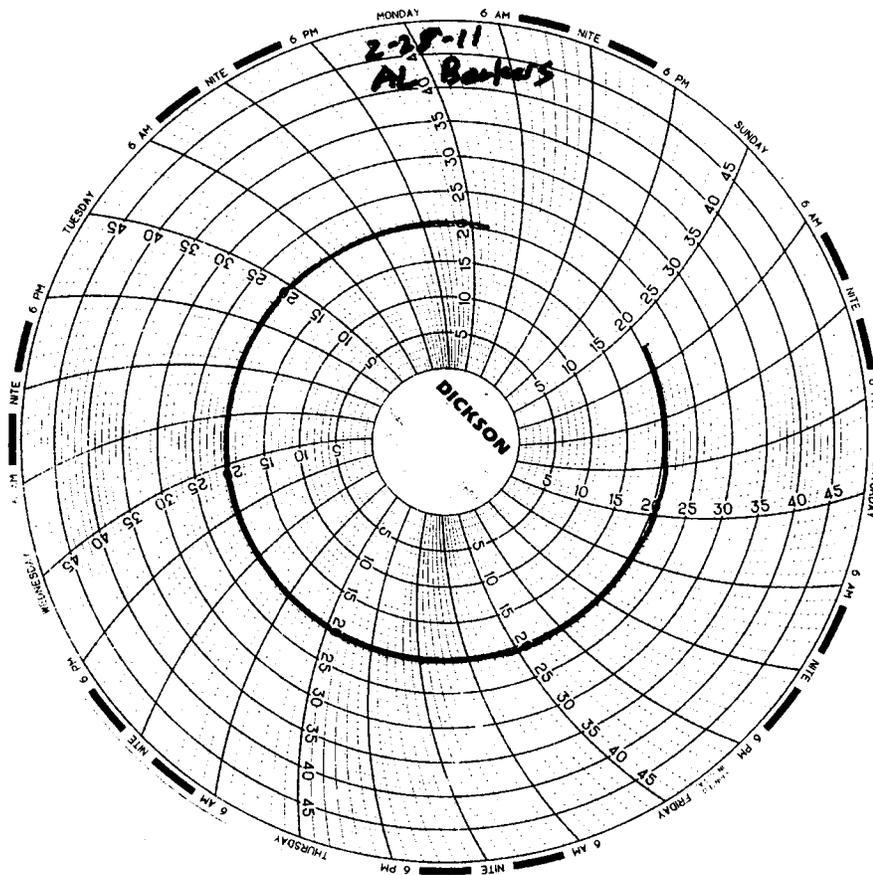
DATE: 3-2-11

Test Temperature Chart

Test No: *RT-110301*

Date Tested: *03/01/11 to 03/05/11*

Acceptable Range: *20 +/- 1°C*





EBERLINE

SERVICES

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Richmond, California 94804-3849
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Toll Free (800) 841-5487
www.eberlineservices.com

April 13, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUC2184
Eberline Analytical Report S103142-8680
Sample Delivery Group 8680**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for one water sample received under Test America Job No. IUC2184. The sample was received on March 23, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8680 consists of the analytical results and supporting documentation for one water sample. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Sample IUC2184-03 was analyzed in a common prep batch with other outfall samples from this project. The QC samples from that common prep batch were assigned to SDG 8681 and are also reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 **Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 **Strontium-90 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 **Radium-226 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.5 **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.6 **Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 **Gamma Spectroscopy** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0 Case Narrative Certification Statement

"I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



N. Joseph Verville
Client Services Manager

4/13/11

Date

E B E R L I N E A N A L Y T I C A L
SDG 8680

SDG 8680
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2181

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
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Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
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Method Blanks	.	.	.	8
Lab Control Samples	.	.	.	9
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Method Summaries	.	.	.	12
Report Guides	.	.	.	20
End of Section	.	.	.	34

UB

Prepared by _____

N. Joseph Verville

Reviewed by _____

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680

Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.

Contract IUC2181

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-RG

Version 3.06

Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC2181

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

EBERLINE ANALYTICAL

SDG 8680

Client Test America, Inc.

Contract IUC2181

SDG 8680
Contact N. Joseph Verville

LAB SAMPLE SUMMARY

LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S103142-01	IUC2184-03	Boeing - SSFL	WATER			IUC2184	03/21/11 17:35
S103143-02	Lab Control Sample		WATER				
S103143-03	Method Blank		WATER				
S103143-04	Duplicate (S103143-01)	Boeing - SSFL	WATER				03/20/11 21:35

LAB SUMMARY

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SUMMARY DATA SECTION

Page 3

Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LS

Version 3.06

Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2181

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8680	IUC2184	IUC2184-03	WATER		10.0 L		03/23/11 2		S103142-01	8680-001
8681		Method Blank	WATER						S103143-03	8681-003
		Lab Control Sample	WATER						S103143-02	8681-002
		Duplicate (S103143-01)	WATER		10.0 L		03/23/11 3		S103143-04	8681-004

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680
 Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
 Contract IUC2181

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI- FIERS
			BATCH	2σ %	CLIENT	MORE	RE BLANK	LCS	
Beta Counting									
AC	WATER	Radium-228 in Water	7281-071	10.4	1		1	1	1/0/1
SR	WATER	Strontium-90 in Water	7281-071	10.4	1		1	1	1/0/1
Gas Proportional Counting									
80A	WATER	Gross Alpha in Water	7281-071	20.6	1		1	1	1/0/1
80B	WATER	Gross Beta in Water	7281-071	11.0	1		1	1	1/0/1
Gamma Spectroscopy									
GAM	WATER	Gamma Emitters in Water	7281-071	7.0	1		1	1	1/0/1
Kinetic Phosphorimetry, ug									
U_T	WATER	Uranium, Total	7281-071		1		1	1	1/0/1
Liquid Scintillation Counting									
H	WATER	Tritium in Water	7281-071	10.0	1		1	1	1/0/1
Radon Counting									
RA	WATER	Radium-226 in Water	7281-071	16.4	1		1	1	1/0/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
 In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-PBS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

LAB WORK SUMMARY

SDG 8680
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2181

LAB SAMPLE	CLIENT SAMPLE ID				SUF-					
COLLECTED	LOCATION	MATRIX			FIX	ANALYZED	REVIEWED	BY	METHOD	
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST						
S103142-01	IUC2184-03		8680-001	80A/80		03/31/11	04/01/11	KWP	Gross Alpha in Water	
03/21/11	Boeing - SSFL	WATER	8680-001	80B/80		03/31/11	04/01/11	KWP	Gross Beta in Water	
03/23/11	IUC2184		8680-001	AC		04/07/11	04/11/11	BW	Radium-228 in Water	
			8680-001	GAM		03/30/11	04/04/11	MWT	Gamma Emitters in Water	
			8680-001	H		03/30/11	04/04/11	BW	Tritium in Water	
			8680-001	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8680-001	SR		04/01/11	04/08/11	KWP	Strontium-90 in Water	
			8680-001	U_T		03/29/11	03/29/11	BW	Uranium, Total	
S103143-02	Lab Control Sample		8681-002	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
		WATER	8681-002	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
			8681-002	AC		04/07/11	04/08/11	MWT	Radium-228 in Water	
			8681-002	GAM		03/31/11	04/04/11	MWT	Gamma Emitters in Water	
			8681-002	H		03/30/11	04/04/11	BW	Tritium in Water	
			8681-002	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8681-002	SR		04/01/11	04/08/11	MWT	Strontium-90 in Water	
			8681-002	U_T		03/29/11	03/29/11	BW	Uranium, Total	
S103143-03	Method Blank		8681-003	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
		WATER	8681-003	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
			8681-003	AC		04/07/11	04/08/11	MWT	Radium-228 in Water	
			8681-003	GAM		03/31/11	04/04/11	MWT	Gamma Emitters in Water	
			8681-003	H		03/30/11	04/04/11	BW	Tritium in Water	
			8681-003	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8681-003	SR		04/01/11	04/08/11	MWT	Strontium-90 in Water	
			8681-003	U_T		03/29/11	03/29/11	BW	Uranium, Total	
S103143-04	Duplicate (S103143-01)		8681-004	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
03/20/11	Boeing - SSFL	WATER	8681-004	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
03/23/11			8681-004	AC		04/07/11	04/08/11	MWT	Radium-228 in Water	
			8681-004	GAM		03/31/11	04/04/11	MWT	Gamma Emitters in Water	
			8681-004	H		03/30/11	04/04/11	BW	Tritium in Water	
			8681-004	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8681-004	SR		04/01/11	04/08/11	MWT	Strontium-90 in Water	
			8681-004	U_T		03/29/11	03/29/11	BW	Uranium, Total	

WORK SUMMARY

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SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

WORK SUMMARY, cont.

SDG 8680
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2181

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	1			1	1	1	4
80B/80		Gross Beta in Water	900.0	1			1	1	1	4
AC		Radium-228 in Water	904.0	1			1	1	1	4
GAM		Gamma Emitters in Water	901.1	1			1	1	1	4
H		Tritium in Water	906.0	1			1	1	1	4
RA		Radium-226 in Water	903.1	1			1	1	1	4
SR		Strontium-90 in Water	905.0	1			1	1	1	4
U_T		Uranium, Total	D5174	1			1	1	1	4
TOTALS				8			8	8	8	32

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

8681-004

IUC2187-03

DUPLICATE

<u>SDG 8680</u>		<u>Client Test America, Inc.</u>
<u>Contact N. Joseph Verville</u>		<u>Contract IUC2181</u>
DUPLICATE	ORIGINAL	
Lab sample id <u>S103143-04</u>	Lab sample id <u>S103143-01</u>	Client sample id <u>IUC2187-03</u>
Dept sample id <u>8681-004</u>	Dept sample id <u>8681-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
	Received <u>03/23/11</u>	Collected/Volume <u>03/20/11 21:35</u> <u>10.0 L</u>
		Chain of custody id <u>IUC2187</u>

ANALYTE	DUPLICATE		MDA		RDL		QUALI-		ORIGINAL		MDA		QUALI-		RPD		3σ		DER	
	pCi/L	2σ ERR (COUNT)	pCi/L	pCi/L	pCi/L	FIERS	TEST	pCi/L	2σ ERR (COUNT)	pCi/L	FIERS	%	TOT	σ						
Gross Alpha	1.94	0.48	0.434	3.00	J	80A	2.26	0.46	0.276	J	15	65	0.7							
Gross Beta	6.74	0.70	0.831	4.00		80B	6.22	0.70	0.866		8	33	0.7							
Tritium	-10.9	99	168	500	U	H	-77.2	96	167	U	-		1.0							
Radium-226	0.283	0.42	0.711	1.00	U	RA	0.350	0.34	0.544	U	-		0.2							
Radium-228	0.235	0.38	0.402	1.00	U	AC	0.229	0.32	0.420	U	-		0							
Strontium-90	0.078	0.32	0.717	2.00	U	SR	-0.018	0.26	0.625	U	-		0.5							
Uranium, Total	0.292	0.034	0.020	1.00	J	U_T	0.321	0.18	0.020	J	9	90	0.3							
Potassium-40	U		15.8	25.0	U	GAM	U		58.4	U	-		1.4							
Cesium-134	U		3.68	20.0	U	GAM	U			J	0	213	0							
Cesium-137	U		1.17	20.0	U	GAM	U		3.25	U	-		1.2							

QC-DUP#1 77926

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-DUP
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

8680-001

IUC2184-03

DATA SHEET

SDG <u>8680</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC2181</u>
Lab sample id <u>S103142-01</u>	Client sample id <u>IUC2184-03</u>
Dept sample id <u>8680-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/23/11</u>	Collected/Volume <u>03/21/11 17:35</u> <u>10.0 L</u>
	Chain of custody id <u>IUC2184</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	2.03	0.52	0.423	3.00	J	80A
Gross Beta	12587472	10.9	0.81	0.856	4.00		80B
Tritium	10028178	-86.9	97	168	500	U	H
Radium-226	13982633	0.673	0.52	0.813	1.00	U	RA
Radium-228	15262201	-0.058	0.67	0.593	1.00	U	AC
Strontium-90	10098972	-0.240	0.25	0.725	2.00	U	SR
Uranium, Total		0.354	0.042	0.020	1.00	J	U_T
Potassium-40	13966002	U		22.1	25.0	U	GAM
Cesium-137	10045973	U		1.61	20.0	U	GAM

DATA SHEETS

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SUMMARY DATA SECTION

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Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>04/12/11</u>

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

Test AC Matrix WATER
 SDG 8680
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2181

RESULTS

LAB RAW SUP-
 SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Radium-228

Preparation batch 7281-071

S103142-01	8680-001	IUC2184-03	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW SUP-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-071 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg. 71

S103142-01	IUC2184-03	0.593	1.80			90	150		17	04/07/11	04/07	GRB-224
S103143-02	Lab Control Sample	0.432	1.80			80	150			04/07/11	04/07	GRB-230
S103143-03	Method Blank	0.434	1.80			89	150			04/07/11	04/07	GRB-231
S103143-04	Duplicate (S103143-01)	0.402	1.80			88	150		18	04/07/11	04/07	GRB-232

Nominal values and limits from method 1.00 1.80 30-105 50 180

PROCEDURES REFERENCE 904.0
 DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD MDA 0.465 ± 0.173
 FOR 4 SAMPLES YIELD 87 ± 9

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER
BETA COUNTING

Test SR Matrix WATER
SDG 8680
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2181

RESULTS

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **PLANCHET** **CLIENT SAMPLE ID** **Strontium-90**

Preparation batch 7281-071

S103142-01	8680-001	IUC2184-03	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method **RDLs (pCi/L)** **2.00**

METHOD PERFORMANCE

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **CLIENT SAMPLE ID** **MDA** **ALIQ** **PREP** **DILU-** **YIELD** **EFF** **COUNT** **FWHM** **DRIFT** **DAYS** **ANAL-**
pCi/L **L** **FAC** **TION** **%** **%** **min** **keV** **KeV** **HELD** **PREPARED** **YZED** **DETECTOR**

Preparation batch 7281-071 **2σ prep error 10.4 %** **Reference Lab Notebook No. 7281 pg. 71**

S103142-01	IUC2184-03	0.725	0.500	79	50	11	04/01/11	04/01	GRB-228
S103143-02	Lab Control Sample	0.576	0.500	94	50		04/01/11	04/01	GRB-232
S103143-03	Method Blank	0.468	0.500	85	100		04/01/11	04/01	GRB-231
S103143-04	Duplicate (S103143-01)	0.717	0.500	83	50	12	04/01/11	04/01	GRB-204

Nominal values and limits from method **2.00** **0.500** **30-105** **50** **180**

PROCEDURES **REFERENCE** **905.0**
DWP-380 **Strontium in Drinking Water, rev 8**

AVERAGES ± 2 SD **MDA** 0.622 ± 0.246
FOR 4 SAMPLES **YIELD** 85 ± 13

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER
 SDG 8680
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2181

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha	
Preparation batch 7281-071					
S103142-01	80	8680-001	IUC2184-03	2.03	J
S103143-02	80	8681-002	Lab Control Sample	ok	
S103143-03	80	8681-003	Method Blank	U	
S103143-04	80	8681-004	Duplicate (S103143-01)	ok	J

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR
Preparation batch 7281-071 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg. 71														
S103142-01	80	IUC2184-03	0.423	0.300			41	400			10	03/31/11	03/31	GRB-112
S103143-02	80	Lab Control Sample	1.21	0.100			60	400				03/31/11	03/31	GRB-103
S103143-03	80	Method Blank	1.85	0.100			60	400				03/31/11	03/31	GRB-104
S103143-04	80	Duplicate (S103143-01)	0.434	0.300			26	400			11	03/31/11	03/31	GRB-109

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 0.979 ± 1.38
 FOR 4 SAMPLES RESIDUE 47 ± 33

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER

SDG 8680

Contact N. Joseph Verville

Client Test America, Inc.

Contract IUC2181

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7281-071				
S103142-01	80	8680-001	IUC2184-03	10.9
S103143-02	80	8681-002	Lab Control Sample	ok
S103143-03	80	8681-003	Method Blank	U
S103143-04	80	8681-004	Duplicate (S103143-01)	ok

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR
Preparation batch 7281-071 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg. 71														
S103142-01	80	IUC2184-03	0.856	0.300			41	400			10	03/31/11	03/31	GRB-112
S103143-02	80	Lab Control Sample	3.06	0.100			60	400				03/31/11	03/31	GRB-103
S103143-03	80	Method Blank	2.40	0.100			60	400				03/31/11	03/31	GRB-104
S103143-04	80	Duplicate (S103143-01)	0.831	0.300			26	400			11	03/31/11	03/31	GRB-109

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
DWP-121 Gross Alpha and Gross Beta in Drinking Water,
rev 10

AVERAGES ± 2 SD MDA 1.79 ± 2.24
FOR 4 SAMPLES RESIDUE 47 ± 33

METHOD SUMMARIES

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SUMMARY DATA SECTION

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Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LMS

Version 3.06

Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8680
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2181

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137

Preparation batch 7281-071					
S103142-01		8680-001	IUC2184-03		U
S103143-02		8681-002	Lab Control Sample	ok	ok
S103143-03		8681-003	Method Blank		U
S103143-04		8681-004	Duplicate (S103143-01)	-	U

Nominal values and limits from method	RDLs (pCi/L)	10.0	20.0
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METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-071		2σ prep error 7.0 %	Reference Lab Notebook No. 7281 pg. 71													
S103142-01		IUC2184-03		2.00									9	03/24/11	03/30	01,03,00
S103143-02		Lab Control Sample		2.00										03/24/11	03/31	MB,08,00
S103143-03		Method Blank		2.00										03/24/11	03/31	MB,05,00
S103143-04		Duplicate (S103143-01)		2.00									11	03/24/11	03/31	MB,08,00

Nominal values and limits from method	6.00	2.00	400	180
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PROCEDURES	REFERENCE	901.1
	DWP-100	Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-LMS</u>
Version	<u>3.06</u>
Report date	<u>04/12/11</u>

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8680
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2181

RESULTS

LAB	RAW	SUF-		Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-071				
S103142-01		8680-001	IUC2184-03	0.354 J
S103143-02		8681-002	Lab Control Sample	ok
S103143-03		8681-003	Method Blank	U
S103143-04		8681-004	Duplicate (S103143-01)	ok J

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-			
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR		
Preparation batch 7281-071			2σ prep error		Reference Lab Notebook No. 7281 pg. 71											
S103142-01		IUC2184-03	0.020	0.0200								8	03/29/11	03/29	KPA-001	
S103143-02		Lab Control Sample	0.205	0.0200									03/29/11	03/29	KPA-001	
S103143-03		Method Blank	0.020	0.0200									03/29/11	03/29	KPA-001	
S103143-04		Duplicate (S103143-01)	0.020	0.0200									9	03/29/11	03/29	KPA-001

Nominal values and limits from method 1.00 0.0200 180

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.066 ± 0.185
 FOR 4 SAMPLES YIELD _____ ± _____

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

LAB METHOD SUMMARY

RADIUM-226 IN WATER
RADON COUNTING

Test RA Matrix WATER
SDG 8680
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2181

RESULTS

LAB RAW SUF-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Radium-226

Preparation batch 7281-071

S103142-01	8680-001	IUC2184-03	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR

Preparation batch 7281-071 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg. 71

S103142-01	IUC2184-03	0.813	0.100	100	<u>90</u>	15	04/05/11	04/05	RN-013
S103143-02	Lab Control Sample	0.859	0.100	100	<u>90</u>		04/05/11	04/05	RN-009
S103143-03	Method Blank	0.800	0.100	100	<u>90</u>		04/05/11	04/05	RN-010
S103143-04	Duplicate (S103143-01)	0.711	0.100	100	<u>90</u>	16	04/05/11	04/05	RN-015

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.796 ± 0.124
FOR 4 SAMPLES YIELD 100 ± 0

METHOD SUMMARIES

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
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EBERLINE ANALYTICAL

SDG 8680

SDG 8680
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC2181

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680

Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.

Contract IUC2181

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-RG

Version 3.06

Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC2181

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC2181

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

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 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

SDG 8680
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2181

GUIDE, cont.

DATA SHEET

J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.

B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.

Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.

For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.

L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.

H Similar to 'L' except the recovery was high.

P The RESULT is 'preliminary'.

X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.

2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8680

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Contact N. Joseph Verville

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Client Test America, Inc.
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DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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REPORT GUIDE

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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

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DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

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MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

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REPORT GUIDE

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

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correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
- * Count times are underlined if less than the nominal value

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specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

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METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

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Subcontract Order - TestAmerica Irvine (IUC2184)

8680

SENDING LABORATORY:

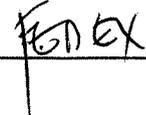
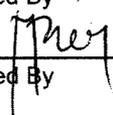
TestAmerica Irvine
 17461 Derian Avenue, Suite 100
 Irvine, CA 92614
 Phone: (949) 261-1022
 Fax: (949) 260-3297
 Project Manager: Debby Wilson

RECEIVING LABORATORY:

Eberline Services
 2030 Wright Avenue
 Richmond, CA 94804
 Phone : (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: _____ °C

Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IUC2184-03 (Outfall 006 (Comp) - Water)				
			Sampled: 03/21/11 17:35	
Gamma Spec-O	mg/kg	03/28/11	03/20/12 17:35	Out eberline, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/28/11	09/17/11 17:35	Out eberline Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/28/11	09/17/11 17:35	Out eberline, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	03/28/11	04/18/11 17:35	
Radium, Combined-O	pCi/L	03/28/11	03/20/12 17:35	Out eberline, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/28/11	03/20/12 17:35	Out eberline Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/28/11	03/20/12 17:35	Out eberline Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/28/11	03/20/12 17:35	Out eberline Boeing permit, DO NOT FILTER!
<i>Containers Supplied:</i>				
2.5 gal Poly (K)	500 mL Amber (L)			

 Released By	3/22/11 17:00 Date/Time	 Received By	3/22/11 17:00 Date/Time
 Released By	_____ Date/Time	 Received By	6/23/11 09:20 Date/Time



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA
 Date/Time received 03/23/11 0930 CoC No. IUC2184
 Container I.D. No. ICE CHEST Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes No [] N/A []
2. Custody seals on shipping container dated & signed? Yes No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A
5. Packing material is: Wet [] Dry
6. Number of samples in shipping container: 1 Sample Matrix W
7. Number of containers per sample: 2 (Or see CoC _____)
8. Samples are in correct container Yes No []
9. Paperwork agrees with samples? Yes No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels
11. Samples are: In good condition Leaking [] Broken Container [] Missing []
12. Samples are: Preserved Not preserved pH <2 / N/A Preservative HNO3
13. Describe any anomalies: _____

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____
 15. Inspected by [Signature] Date: 03/23/11 Time: 1030

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe
<u>IUC2184</u>	<u>460</u>						

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. 100482 Calibration date 24 SEP 10

APPENDIX G

Section 21

Outfall 008 – January 3, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUA0087

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: IUA0087
 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)	IUA0087-02	S101022-01, G1A060494-001	Water	1/3/2011 12:38:00 PM	245.1, 245.1-Diss, 900, 901.1, 903.1, 904, 905, 906,1613B, SM 2540D, D5174

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at Eberline above the temperature limit at 7.3°C; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at TestAmerica-Irvine and TestAmerica-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. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at Eberline and TestAmerica-West Sacramento. As the samples were delivered to TestAmerica-Irvine by courier, no custody seals were required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: February 21, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two 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 1,2,3,4,6,7,8-HpCDD, total HpCDD, OCDD, and OCDF. Total HpCDD and OCDF were reported as EMPCs; however, the reviewer considered it appropriate to use the EMPCs to qualify sample results. Detected sample results for these compounds were qualified as

nondetected, “U,” at the level of contamination, including total HpCDD as both peaks comprising the sample total were present in the method blank.

- Blank Spikes and Laboratory Control Samples: LCS 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 in the sample 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 sample results. Any EMPCs previously qualified as method blank contamination were not further qualified as EMPCs. Any detects reported 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: February 16, 2011

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

- Holding Times: The analytical holding time, 28 days for mercury, was met.
- Tuning: Not applicable to this analysis.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and the initial and continuing calibration recoveries were within 85-115% for mercury. CRA recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- 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.
- 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: February 16, 2011

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. The 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 detector efficiency was less than 20%; therefore, gross alpha detected in the sample 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. The chemical yield for strontium was 38.5%; therefore, nondetected strontium in the sample was qualified as estimated, "UJ." The 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.

- Blanks: There were no analytes detected in the method blanks.
- Blank Spikes and Laboratory Control Samples: The recoveries 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. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

A notation in the sample preparation logbook indicated that the aliquots for radium-226, radium-228, and strontium were filtered and that the filter was digested and added to the aliquot.

- 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: February 16, 2011

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *Standard Method 2540D*, and the *National Functional Guidelines for Inorganic Data Review (7102)*.

- Holding Times: The analytical holding time, seven days from collection, was met.
- Calibration: The balance calibration logs were acceptable.
- Blanks: The method blanks had no detects.
- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG. The RPD was within the laboratory-established control limit.
- 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 IUA0087

Analysis Method 8660

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

Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total		0.592	1	0.016	pCi/L	Jb	J	DNQ

Analysis Method 900

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

Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	1.85	3	0.511	pCi/L	Jb	J	C, DNQ
Gross Beta	12587472	2.49	4	0.852	pCi/L	Jb	J	DNQ

Analysis Method 901.1

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

Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.3	pCi/L	U	U	
Potassium-40	13966002	ND	25	15.7	pCi/L	U	U	

Analysis Method 903.1

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

Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.656	1	0.632	pCi/L	Jb	J	DNQ

Analysis Method 904

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

Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.156	1	0.483	pCi/L	U	U	

Analysis Method 905

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUA0087-02	Sample Date:	1/3/2011 12:38:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	-0.49	2	2.38	pCi/L	U	UJ	C

Analysis Method 906

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUA0087-02	Sample Date:	1/3/2011 12:38:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	-98.3	500	265	pCi/L	U	U	

Analysis Method EPA 245.1

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUA0087-02	Sample Date:	1/3/2011 12:38:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 245.1-Diss

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUA0087-02	Sample Date:	1/3/2011 12:38:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

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	0.0000014	ug/L	J, B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000012	ug/L		U	
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000022	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000011	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000008	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.000001	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000008	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000009	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000011	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000021	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000016	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000007	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000017	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000011	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000023	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000025	ug/L	J, B	U	B
OCDF	39001-02-0	ND	0.0001	0.0000014	ug/L		U	
Total HpCDD	37871-00-4	ND	0.00005	0.0000014	ug/L	J, B	U	B
Total HpCDF	38998-75-3	ND	0.00005	0.0000012	ug/L		U	
Total HxCDD	34465-46-8	ND	0.00005	0.0000009	ug/L		U	
Total HxCDF	55684-94-1	ND	0.00005	0.0000007	ug/L		U	
Total PeCDD	36088-22-9	ND	0.00005	0.0000021	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000016	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000011	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000023	ug/L		U	

Analysis Method SM 2540D

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUA0087-02 **Sample Date:** 1/3/2011 12:38:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	14	10	1.0	mg/l			

APPENDIX G

Section 22

Outfall 008 – January 3, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Routine Outfall 008 2010
Routine Outfall 008

Sampled: 01/03/11-01/05/11
Received: 01/03/11
Issued: 02/23/11 19:53

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 2°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

Two analytes in the Method Blank associated with this sample have been qualified with a "Q" flag due to the ion abundance ratios being outside of criteria. The analytes have been reported as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio for these analytes

Revised report to correct Uranium result for IUA0087-02.

LABORATORY ID

IUA0087-01
IUA0087-02
IUA0087-03

CLIENT ID

Outfall 008 (Grab)
Outfall 008 (Composite)
TRIP BLANK

MATRIX

Water
Water
Water

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

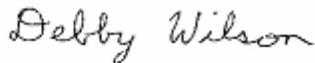
LABORATORY ID

CLIENT ID

MATRIX

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

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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IUA0087 <Page 2 of 35>

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-01 (Outfall 008 (Grab) - Water)					Sampled: 01/03/11				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11A1479	1.3	4.7	ND	1	DA	01/14/11	

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Project Manager

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Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: ug/l									
Mercury	EPA 245.1	11A0567	0.10	0.20	ND	1	DB	01/07/11	
Antimony	EPA 200.8	11A0916	0.30	2.0	0.44	1	RDC	01/11/11	Ja
Cadmium	EPA 200.8	11A0916	0.10	1.0	ND	1	RDC	01/11/11	
Zinc	EPA 200.7	11A0348	6.00	20.0	22.2	1	LL	01/10/11	
Copper	EPA 200.8	11A0916	0.500	2.00	2.42	1	RDC	01/11/11	
Lead	EPA 200.8	11A0916	0.20	1.0	0.83	1	RDC	01/11/11	Ja
Selenium	EPA 200.8	11A0916	0.50	2.0	0.58	1	RDC	01/11/11	Ja
Thallium	EPA 200.8	11A0916	0.20	1.0	ND	1	RDC	01/11/11	

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 Project Manager

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 01/03/11				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11A0572	0.10	0.20	ND	1	DB	01/07/11	
Antimony	EPA 200.8-Diss	11A1040	0.30	2.0	ND	1	RDC	01/12/11	
Cadmium	EPA 200.8-Diss	11A1040	0.10	1.0	ND	1	RDC	01/12/11	
Zinc	EPA 200.7-Diss	11A1039	6.00	20.0	ND	1	DP	01/12/11	
Copper	EPA 200.8-Diss	11A1040	0.500	2.00	1.70	1	RDC	01/12/11	Ja
Lead	EPA 200.8-Diss	11A1040	0.20	1.0	ND	1	RDC	01/12/11	
Selenium	EPA 200.8-Diss	11A1040	0.50	2.0	ND	1	RDC	01/12/11	
Thallium	EPA 200.8-Diss	11A1040	0.20	1.0	ND	1	RDC	01/12/11	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 01/03/11				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11A0408	0.500	0.500	ND	1	TMK	01/05/11	
Chloride	EPA 300.0	11A0205	0.25	0.50	12	1	NN	01/04/11	
Nitrate-N	EPA 300.0	11A0205	0.060	0.11	0.59	1	NN	01/04/11	
Nitrite-N	EPA 300.0	11A0205	0.090	0.15	ND	1	NN	01/04/11	
Nitrate/Nitrite-N	EPA 300.0	11A0205	0.15	0.26	0.59	1	NN	01/04/11	
Sulfate	EPA 300.0	11A0205	0.20	0.50	12	1	NN	01/04/11	
Total Dissolved Solids	SM2540C	11A0304	1.0	10	200	1	MC	01/05/11	
Total Suspended Solids	SM 2540D	11A0627	1.0	10	14	1	DK	01/06/11	
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11A0307	0.90	4.0	ND	1	MN	01/05/11	
Total Cyanide	SM4500CN-E	11A0416	2.2	5.0	ND	1	HH	01/05/11	

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 Project Manager

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

8660

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 01/03/11				
Reporting Units: pCi/L									
Uranium, Total	8660	8660		1	0.592	1	CSS	02/01/11	Jb

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

8660

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-03 (TRIP BLANK - Water)					Sampled: 01/05/11				
Reporting Units: pCi/L									
Uranium, Total	8660	8660		1	ND	1	CSS	02/01/11	U

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MWH-Pasadena/Boeing
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Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: pCi/L									
Gross Alpha	900	8660		3	1.85	1	MH	01/17/11	Jb
Gross Beta	900	8660		4	2.49	1	MH	01/17/11	Jb
Sample ID: IUA0087-03 (TRIP BLANK - Water)					Sampled: 01/05/11				
Reporting Units: pCi/L									
Gross Alpha	900	8660		3	0.032	1	MH	01/21/11	U
Gross Beta	900	8660		4	-0.088	1	MH	01/21/11	U

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8660		20	ND	1	LS	01/14/11	U
Potassium-40	901.1	8660		25	ND	1	LS	01/14/11	U
Sample ID: IUA0087-03 (TRIP BLANK - Water)					Sampled: 01/05/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8660		20	ND	1	LS	01/20/11	U
Potassium-40	901.1	8660		25	ND	1	LS	01/20/11	U

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IUA0087 <Page 10 of 35>

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: pCi/L									
Radium-226	903.1	8660		1	0.656	1	ASM	01/27/11	Jb
Sample ID: IUA0087-03 (TRIP BLANK - Water)					Sampled: 01/05/11				
Reporting Units: pCi/L									
Radium-226	903.1	8660		1	-0.015	1	ASM	01/27/11	U

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 Project Manager

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: pCi/L									
Radium-228	904	8660		1	0.156	1	ASM	01/26/11	U
Sample ID: IUA0087-03 (TRIP BLANK - Water)					Sampled: 01/05/11				
Reporting Units: pCi/L									
Radium-228	904	8660		1	-0.101	1	ASM	01/26/11	U

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Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: pCi/L									
Strontium-90	905	8660		2	-0.49	1	TSC	01/26/11	U
Sample ID: IUA0087-03 (TRIP BLANK - Water)					Sampled: 01/05/11				
Reporting Units: pCi/L									
Strontium-90	905	8660		2	-0.75	1	TSC	01/26/11	U

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Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water)					Sampled: 01/03/11				
Reporting Units: pCi/L									
Tritium	906	8660		500	-98.3	1	JO	01/24/11	U

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Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 01/03/11				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1011254	0.0000014	0.00005	2.3e-006	1	LH	01/12/11	J, B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1011254	0.0000012	0.00005	ND	1	LH	01/12/11	
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1011254	0.0000022	0.00005	ND	1	LH	01/12/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1011254	0.0000011	0.00005	ND	1	LH	01/12/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1011254	0.00000087	0.00005	ND	1	LH	01/12/11	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1011254	0.000001	0.00005	ND	1	LH	01/12/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1011254	0.00000081	0.00005	ND	1	LH	01/12/11	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1011254	0.00000096	0.00005	ND	1	LH	01/12/11	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1011254	0.0000011	0.00005	ND	1	LH	01/12/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1011254	0.0000021	0.00005	ND	1	LH	01/12/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1011254	0.0000016	0.00005	ND	1	LH	01/12/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1011254	0.00000079	0.00005	ND	1	LH	01/12/11	
2,3,4,7,8-PeCDF	EPA-5 1613B	1011254	0.0000017	0.00005	ND	1	LH	01/12/11	
2,3,7,8-TCDD	EPA-5 1613B	1011254	0.0000011	0.00001	ND	1	LH	01/12/11	
2,3,7,8-TCDF	EPA-5 1613B	1011254	0.0000023	0.00001	ND	1	LH	01/12/11	
OCDD	EPA-5 1613B	1011254	0.0000025	0.0001	1e-005	1	LH	01/12/11	J, B
OCDF	EPA-5 1613B	1011254	0.0000014	0.0001	ND	1	LH	01/12/11	
Total HpCDD	EPA-5 1613B	1011254	0.0000014	0.00005	5.2e-006	1	LH	01/12/11	J, B
Total HpCDF	EPA-5 1613B	1011254	0.0000012	0.00005	ND	1	LH	01/12/11	
Total HxCDD	EPA-5 1613B	1011254	0.00000096	0.00005	ND	1	LH	01/12/11	
Total HxCDF	EPA-5 1613B	1011254	0.00000079	0.00005	ND	1	LH	01/12/11	
Total PeCDD	EPA-5 1613B	1011254	0.0000021	0.00005	ND	1	LH	01/12/11	
Total PeCDF	EPA-5 1613B	1011254	0.0000016	0.00005	ND	1	LH	01/12/11	
Total TCDD	EPA-5 1613B	1011254	0.0000011	0.00001	ND	1	LH	01/12/11	
Total TCDF	EPA-5 1613B	1011254	0.0000023	0.00001	ND	1	LH	01/12/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	75 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	99 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	78 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	101 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	109 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	91 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	102 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	97 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	75 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	80 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	103 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	83 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	81 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	90 %
Surrogate: 13C-OCDD (17-157%)	77 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	89 %

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Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

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) (IUA0087-02) - Water					
EPA 300.0	2	01/03/2011 12:38	01/03/2011 17:50	01/04/2011 13:00	01/04/2011 20:10
Filtration	1	01/03/2011 12:38	01/03/2011 17:50	01/04/2011 23:45	01/04/2011 23:45

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A1479 Extracted: 01/14/11										
Blank Analyzed: 01/14/2011 (11A1479-BLK1)										
Hexane Extractable Material (Oil & Grease)	ND	5.0	mg/l							
LCS Analyzed: 01/14/2011 (11A1479-BS1)										
Hexane Extractable Material (Oil & Grease)	18.7	5.0	mg/l	20.0		94	78-114			MNR1
LCS Dup Analyzed: 01/14/2011 (11A1479-BSD1)										
Hexane Extractable Material (Oil & Grease)	19.0	5.0	mg/l	20.0		95	78-114	2	11	

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 Received: 01/03/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0348 Extracted: 01/05/11										
Blank Analyzed: 01/10/2011 (11A0348-BLK1)										
Zinc	14.0	20.0	ug/l							Ja
LCS Analyzed: 01/10/2011 (11A0348-BS1)										
Zinc	517	20.0	ug/l	500		103	85-115			
Matrix Spike Analyzed: 01/10/2011 (11A0348-MS1)										
Zinc	518	20.0	ug/l	500	ND	104	70-130			
Matrix Spike Analyzed: 01/10/2011 (11A0348-MS2)										
Zinc	591	20.0	ug/l	500	79.3	102	70-130			
Matrix Spike Dup Analyzed: 01/10/2011 (11A0348-MSD1)										
Zinc	550	20.0	ug/l	500	ND	110	70-130	6	20	
Batch: 11A0567 Extracted: 01/06/11										
Blank Analyzed: 01/07/2011 (11A0567-BLK1)										
Mercury	ND	0.20	ug/l							
LCS Analyzed: 01/07/2011 (11A0567-BS1)										
Mercury	8.08	0.20	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 01/07/2011 (11A0567-MS1)										
Mercury	7.99	0.20	ug/l	8.00	ND	100	70-130			
Matrix Spike Dup Analyzed: 01/07/2011 (11A0567-MSD1)										
Mercury	8.07	0.20	ug/l	8.00	ND	101	70-130	1	20	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0916 Extracted: 01/10/11										
Blank Analyzed: 01/11/2011 (11A0916-BLK1)										
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.00	ug/l							
Lead	ND	1.0	ug/l							
Selenium	ND	2.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 01/11/2011 (11A0916-BS1)										
Antimony	83.5	2.0	ug/l	80.0		104	85-115			
Cadmium	83.5	1.0	ug/l	80.0		104	85-115			
Copper	85.1	2.00	ug/l	80.0		106	85-115			
Lead	81.6	1.0	ug/l	80.0		102	85-115			
Selenium	81.8	2.0	ug/l	80.0		102	85-115			
Thallium	82.9	1.0	ug/l	80.0		104	85-115			
Matrix Spike Analyzed: 01/11/2011 (11A0916-MS1) Source: IUA0642-04										
Antimony	85.4	2.0	ug/l	80.0	1.28	105	70-130			
Cadmium	79.9	1.0	ug/l	80.0	0.269	99	70-130			
Copper	80.6	2.00	ug/l	80.0	10.6	87	70-130			
Lead	81.1	1.0	ug/l	80.0	1.15	100	70-130			
Selenium	153	2.0	ug/l	80.0	63.5	111	70-130			
Thallium	81.4	1.0	ug/l	80.0	ND	102	70-130			
Matrix Spike Analyzed: 01/11/2011 (11A0916-MS2) Source: IUA0604-03										
Antimony	88.1	2.0	ug/l	80.0	ND	110	70-130			
Cadmium	82.8	1.0	ug/l	80.0	ND	104	70-130			
Copper	80.1	2.00	ug/l	80.0	2.61	97	70-130			
Lead	83.8	1.0	ug/l	80.0	ND	105	70-130			
Selenium	84.7	2.0	ug/l	80.0	ND	106	70-130			
Thallium	85.1	1.0	ug/l	80.0	ND	106	70-130			

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Sampled: 01/03/11-01/05/11
 Received: 01/03/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0916 Extracted: 01/10/11										
Matrix Spike Dup Analyzed: 01/11/2011 (11A0916-MSD1)					Source: IUA0642-04					
Antimony	86.6	2.0	ug/l	80.0	1.28	107	70-130	1	20	
Cadmium	81.0	1.0	ug/l	80.0	0.269	101	70-130	1	20	
Copper	81.9	2.00	ug/l	80.0	10.6	89	70-130	2	20	
Lead	81.3	1.0	ug/l	80.0	1.15	100	70-130	0.3	20	
Selenium	152	2.0	ug/l	80.0	63.5	110	70-130	0.5	20	
Thallium	81.1	1.0	ug/l	80.0	ND	101	70-130	0.3	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0572 Extracted: 01/06/11										
Blank Analyzed: 01/07/2011 (11A0572-BLK1)										
Mercury	ND	0.20	ug/l							
LCS Analyzed: 01/07/2011 (11A0572-BS1)										
Mercury	8.05	0.20	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 01/07/2011 (11A0572-MS1)										
Mercury	8.04	0.20	ug/l	8.00	ND	101	70-130			
Matrix Spike Dup Analyzed: 01/07/2011 (11A0572-MSD1)										
Mercury	8.04	0.20	ug/l	8.00	ND	100	70-130	0.02	20	
Batch: 11A1039 Extracted: 01/11/11										
Blank Analyzed: 01/12/2011 (11A1039-BLK1)										
Zinc	ND	20.0	ug/l							
LCS Analyzed: 01/12/2011 (11A1039-BS1)										
Zinc	531	20.0	ug/l	500		106	85-115			
Matrix Spike Analyzed: 01/12/2011 (11A1039-MS1)										
Zinc	511	20.0	ug/l	500	ND	102	70-130			
Matrix Spike Analyzed: 01/12/2011 (11A1039-MS2)										
Zinc	505	20.0	ug/l	500	ND	101	70-130			
Matrix Spike Dup Analyzed: 01/12/2011 (11A1039-MSD1)										
Zinc	518	20.0	ug/l	500	ND	104	70-130	1	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A1040 Extracted: 01/11/11										
Blank Analyzed: 01/12/2011 (11A1040-BLK1)										
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.00	ug/l							
Lead	ND	1.0	ug/l							
Selenium	ND	2.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 01/12/2011 (11A1040-BS1)										
Antimony	81.0	2.0	ug/l	80.0		101	85-115			
Cadmium	77.7	1.0	ug/l	80.0		97	85-115			
Copper	82.8	2.00	ug/l	80.0		104	85-115			
Lead	85.6	1.0	ug/l	80.0		107	85-115			
Selenium	76.0	2.0	ug/l	80.0		95	85-115			
Thallium	84.7	1.0	ug/l	80.0		106	85-115			
Matrix Spike Analyzed: 01/12/2011 (11A1040-MS1) Source: IUA0617-01										
Antimony	82.3	2.0	ug/l	80.0	ND	103	70-130			
Cadmium	76.6	1.0	ug/l	80.0	ND	96	70-130			
Copper	82.5	2.00	ug/l	80.0	1.56	101	70-130			
Lead	82.9	1.0	ug/l	80.0	ND	104	70-130			
Selenium	74.7	2.0	ug/l	80.0	ND	93	70-130			
Thallium	80.9	1.0	ug/l	80.0	ND	101	70-130			
Matrix Spike Analyzed: 01/12/2011 (11A1040-MS2) Source: IUA0500-02										
Antimony	79.8	2.0	ug/l	80.0	ND	100	70-130			
Cadmium	74.4	1.0	ug/l	80.0	ND	93	70-130			
Copper	82.2	2.00	ug/l	80.0	1.69	101	70-130			
Lead	80.7	1.0	ug/l	80.0	ND	101	70-130			
Selenium	76.9	2.0	ug/l	80.0	1.60	94	70-130			
Thallium	79.7	1.0	ug/l	80.0	ND	100	70-130			

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A1040 Extracted: 01/11/11										
Matrix Spike Dup Analyzed: 01/12/2011 (11A1040-MSD1)					Source: IUA0617-01					
Antimony	82.9	2.0	ug/l	80.0	ND	104	70-130	0.8	20	
Cadmium	76.3	1.0	ug/l	80.0	ND	95	70-130	0.5	20	
Copper	82.9	2.00	ug/l	80.0	1.56	102	70-130	0.5	20	
Lead	80.6	1.0	ug/l	80.0	ND	101	70-130	3	20	
Selenium	75.0	2.0	ug/l	80.0	ND	94	70-130	0.5	20	
Thallium	79.0	1.0	ug/l	80.0	ND	99	70-130	2	20	

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Sampled: 01/03/11-01/05/11
Received: 01/03/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0205 Extracted: 01/04/11										
Blank Analyzed: 01/04/2011 (11A0205-BLK1)										
Chloride	ND	0.50	mg/l							
Nitrate-N	ND	0.11	mg/l							
Nitrite-N	ND	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.26	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 01/04/2011 (11A0205-BS1)										
Chloride	4.80	0.50	mg/l	5.00		96	90-110			
Nitrate-N	1.13	0.11	mg/l	1.13		100	90-110			
Nitrite-N	1.52	0.15	mg/l	1.52		100	90-110			
Sulfate	9.62	0.50	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 01/04/2011 (11A0205-MS1) Source: IUA0064-01										
Chloride	142	5.0	mg/l	50.0	99.5	85	80-120			
Nitrate-N	10.7	1.1	mg/l	11.3	0.785	88	80-120			
Nitrite-N	17.0	1.5	mg/l	15.2	ND	112	80-120			
Sulfate	122	5.0	mg/l	100	29.1	93	80-120			
Matrix Spike Dup Analyzed: 01/04/2011 (11A0205-MSD1) Source: IUA0064-01										
Chloride	144	5.0	mg/l	50.0	99.5	88	80-120	1	20	
Nitrate-N	11.2	1.1	mg/l	11.3	0.785	92	80-120	4	20	
Nitrite-N	17.4	1.5	mg/l	15.2	ND	115	80-120	2	20	
Sulfate	123	5.0	mg/l	100	29.1	94	80-120	0.3	20	
Batch: 11A0304 Extracted: 01/05/11										
Blank Analyzed: 01/05/2011 (11A0304-BLK1)										
Total Dissolved Solids	ND	10	mg/l							

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Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0304 Extracted: 01/05/11										
LCS Analyzed: 01/05/2011 (11A0304-BS1)										
Total Dissolved Solids	1010	10	mg/l	1000		101	90-110			
Duplicate Analyzed: 01/05/2011 (11A0304-DUP1)										
Total Dissolved Solids	1830	20	mg/l		1830			0	10	
Source: IUA0204-01										
Batch: 11A0307 Extracted: 01/05/11										
Blank Analyzed: 01/05/2011 (11A0307-BLK1)										
Perchlorate	ND	4.0	ug/l							
LCS Analyzed: 01/05/2011 (11A0307-BS1)										
Perchlorate	27.4	4.0	ug/l	25.0		110	85-115			
Matrix Spike Analyzed: 01/05/2011 (11A0307-MS1)										
Perchlorate	32.4	4.0	ug/l	25.0	4.82	110	80-120			
Source: IUA0209-02										
Matrix Spike Dup Analyzed: 01/05/2011 (11A0307-MSD1)										
Perchlorate	33.2	4.0	ug/l	25.0	4.82	113	80-120	2	20	
Source: IUA0209-02										
Batch: 11A0408 Extracted: 01/05/11										
Blank Analyzed: 01/05/2011 (11A0408-BLK1)										
Ammonia-N (Distilled)	ND	0.500	mg/l							
LCS Analyzed: 01/05/2011 (11A0408-BS1)										
Ammonia-N (Distilled)	9.80	0.500	mg/l	10.0		98	80-115			

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 Routine Outfall 008
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 Received: 01/03/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0408 Extracted: 01/05/11										
Matrix Spike Analyzed: 01/05/2011 (11A0408-MS1)					Source: IUA0081-03					
Ammonia-N (Distilled)	9.52	0.500	mg/l	10.0	ND	95	70-120			
Matrix Spike Dup Analyzed: 01/05/2011 (11A0408-MSD1)					Source: IUA0081-03					
Ammonia-N (Distilled)	9.52	0.500	mg/l	10.0	ND	95	70-120	0	15	
Batch: 11A0416 Extracted: 01/05/11										
Blank Analyzed: 01/05/2011 (11A0416-BLK1)										
Total Cyanide	ND	5.0	ug/l							
LCS Analyzed: 01/05/2011 (11A0416-BS1)										
Total Cyanide	191	5.0	ug/l	200		96	90-110			
Matrix Spike Analyzed: 01/05/2011 (11A0416-MS1)					Source: IUA0191-01					
Total Cyanide	162	5.0	ug/l	200	ND	81	70-115			
Matrix Spike Dup Analyzed: 01/05/2011 (11A0416-MSD1)					Source: IUA0191-01					
Total Cyanide	181	5.0	ug/l	200	ND	91	70-115	11	15	
Batch: 11A0627 Extracted: 01/06/11										
Blank Analyzed: 01/06/2011 (11A0627-BLK1)										
Total Suspended Solids	ND	10	mg/l							
LCS Analyzed: 01/06/2011 (11A0627-BS1)										
Total Suspended Solids	992	10	mg/l	1000		99	85-115			

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Received: 01/03/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11A0627 Extracted: 01/06/11										
Duplicate Analyzed: 01/06/2011 (11A0627-DUP1)										
Total Suspended Solids	14.0	10	mg/l		14.0			0	10	

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IUA0087 <Page 27 of 35>

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
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Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1011254 Extracted: 01/11/11										
Blank Analyzed: 01/13/2011 (G1A110000254B)					Source:					
1,2,3,4,6,7,8-HpCDD	1.4e-006	0.00005	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	ND	0.00005	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	ug/L				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	ug/L				-			
OCDD	4.8e-006	0.0001	ug/L				-			J
OCDF	1.2e-006	0.0001	ug/L				-			J, Q
Total HpCDD	2.6e-006	0.00005	ug/L				-			J, Q
Total HpCDF	ND	0.00005	ug/L				-			
Total HxCDD	ND	0.00005	ug/L				-			
Total HxCDF	ND	0.00005	ug/L				-			
Total PeCDD	ND	0.00005	ug/L				-			
Total PeCDF	ND	0.00005	ug/L				-			
Total TCDD	ND	0.00001	ug/L				-			
Total TCDF	ND	0.00001	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018		ug/L	0.002		91	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0016		ug/L	0.002		81	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0017		ug/L	0.002		86	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0016		ug/L	0.002		82	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0015		ug/L	0.002		77	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0018		ug/L	0.002		92	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0016		ug/L	0.002		81	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0016		ug/L	0.002		80	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0021		ug/L	0.002		103	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0021		ug/L	0.002		103	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0016		ug/L	0.002		81	28-136			

TestAmerica Irvine

Debby Wilson
Project Manager

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618 Michillinda Avenue, Suite 200
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Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUA0087

Sampled: 01/03/11-01/05/11
Received: 01/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1011254 Extracted: 01/11/11										
Blank Analyzed: 01/13/2011 (G1A11000254B)					Source:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.002		ug/L	0.002		99	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0018		ug/L	0.002		91	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0017		ug/L	0.002		83	24-169			
Surrogate: 13C-OCDD	0.0034		ug/L	0.004		84	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00078		ug/L	0.0008		98	35-197			
LCS Analyzed: 01/13/2011 (G1A11000254C)					Source:					
1,2,3,4,6,7,8-HpCDD	0.000908	0.00005	ug/L	0.001		91	70-140			B
1,2,3,4,6,7,8-HpCDF	0.000999	0.00005	ug/L	0.001		100	82-122			
1,2,3,4,7,8,9-HpCDF	0.000996	0.00005	ug/L	0.001		100	78-138			
1,2,3,4,7,8-HxCDD	0.000983	0.00005	ug/L	0.001		98	70-164			
1,2,3,4,7,8-HxCDF	0.000904	0.00005	ug/L	0.001		90	72-134			
1,2,3,6,7,8-HxCDD	0.000855	0.00005	ug/L	0.001		85	76-134			
1,2,3,6,7,8-HxCDF	0.000899	0.00005	ug/L	0.001		90	84-130			
1,2,3,7,8,9-HxCDD	0.000916	0.00005	ug/L	0.001		92	64-162			
1,2,3,7,8,9-HxCDF	0.000903	0.00005	ug/L	0.001		90	78-130			
1,2,3,7,8-PeCDD	0.000976	0.00005	ug/L	0.001		98	70-142			
1,2,3,7,8-PeCDF	0.000857	0.00005	ug/L	0.001		86	80-134			
2,3,4,6,7,8-HxCDF	0.000909	0.00005	ug/L	0.001		91	70-156			
2,3,4,7,8-PeCDF	0.000868	0.00005	ug/L	0.001		87	68-160			
2,3,7,8-TCDD	0.000185	0.00001	ug/L	0.0002		92	67-158			
2,3,7,8-TCDF	0.000167	0.00001	ug/L	0.0002		84	75-158			
OCDD	0.00167	0.0001	ug/L	0.002		84	78-144			B
OCDF	0.00159	0.0001	ug/L	0.002		80	63-170			B
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0019		ug/L	0.002		95	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0017		ug/L	0.002		85	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0018		ug/L	0.002		90	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00179		ug/L	0.002		89	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00164		ug/L	0.002		82	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00201		ug/L	0.002		100	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00172		ug/L	0.002		86	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00164		ug/L	0.002		82	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0021		ug/L	0.002		105	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00207		ug/L	0.002		104	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0017		ug/L	0.002		85	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00204		ug/L	0.002		102	13-328			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUA0087

Sampled: 01/03/11-01/05/11
 Received: 01/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1011254 Extracted: 01/11/11										
LCS Analyzed: 01/13/2011 (G1A110000254C)										
Surrogate: 13C-2,3,7,8-TCDD	0.00179		ug/L	0.002		90	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00167		ug/L	0.002		83	22-152			
Surrogate: 13C-OCDD	0.00354		ug/L	0.004		89	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000811		ug/L	0.0008		101	31-191			

TestAmerica Irvine

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 Project Manager

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 Received: 01/03/11

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
IUA0087-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.095	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
IUA0087-02	Ammonia-N, Titr 4500NH3-C (w/di:Ammonia-N (Distilled)		mg/l	0	0.500	10.1
IUA0087-02	Antimony-200.8	Antimony	ug/l	0.44	2.0	6
IUA0087-02	Cadmium-200.8	Cadmium	ug/l	0.022	1.0	3.1
IUA0087-02	Chloride - 300.0	Chloride	mg/l	12	0.50	150
IUA0087-02	Copper-200.8	Copper	ug/l	2.42	2.00	14
IUA0087-02	Lead-200.8	Lead	ug/l	0.83	1.0	5.2
IUA0087-02	Mercury - 245.1	Mercury	ug/l	0.021	0.20	0.13
IUA0087-02	Nitrate-N, 300.0	Nitrate-N	mg/l	0.59	0.11	8
IUA0087-02	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUA0087-02	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.59	0.26	8
IUA0087-02	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
IUA0087-02	Selenium-200.8	Selenium	ug/l	0.58	2.0	5
IUA0087-02	Sulfate-300.0	Sulfate	mg/l	12	0.50	300
IUA0087-02	TDS - SM2540C	Total Dissolved Solids	mg/l	200	10	950
IUA0087-02	Thallium-200.8	Thallium	ug/l	0.044	1.0	2
IUA0087-02	Zinc-200.7	Zinc	ug/l	22	20.0	159

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
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TestAmerica Irvine

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 Project Manager

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DATA QUALIFIERS AND DEFINITIONS

- B** 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** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- 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** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the 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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IUA0087 <Page 32 of 35>

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Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2540C	Water	X	
SM4500CN-E	Water	X	X
SM4500NH3-C	Water	X	X

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
Project Manager

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Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Gross Alpha
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Gross Beta
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Level 4 Data Package
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Radium, Combined
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Strontium 90
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Tritium
Samples: IUA0087-02, IUA0087-03

Analysis Performed: Uranium, Combined
Samples: IUA0087-02, IUA0087-03

TestAmerica Irvine

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TestAmerica Buffalo

10 Hazelwood Drive, Suite 106 - Amherst, NY 14228

Method Performed: 8660
Samples: IUA0087-02, IUA0087-03

Method Performed: 900
Samples: IUA0087-02, IUA0087-03

Method Performed: 901.1
Samples: IUA0087-02, IUA0087-03

Method Performed: 903.1
Samples: IUA0087-02, IUA0087-03

Method Performed: 904
Samples: IUA0087-02, IUA0087-03

Method Performed: 905
Samples: IUA0087-02, IUA0087-03

Method Performed: 906
Samples: IUA0087-02

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: IUA0087-02

TestAmerica Irvine

Debby Wilson
Project Manager

7-19-2010

CHAIN OF CUSTODY FORM

1041461

IUA 0087

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson							Project: Boeing-SSFL NPDES Routine Outfall 008 COMPOSITE HIGH Stormwater at Happy Valley							ANALYSIS REQUIRED											
Project Manager: Bronwyn Kelly Sampler: Rick BANAGA							Phone Number: (626) 568-6691 Fax Number: (626) 568-6515							Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Ti, Se, Zn TCDD (and all congeners) Cl ⁻ , SO ₄ ⁻ , NO ₃ ⁻ +NO ₂ ⁻ , Perchlorate TDS, TSS Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Ti, Se, Zn Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1) Organic Toxicity Nitrate-N, Nitrite-N Ammonia-N (350.2) Cyanide	Comments										
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Ti, Se, Zn	TCDD (and all congeners)	Cl ⁻ , SO ₄ ⁻ , NO ₃ ⁻ +NO ₂ ⁻ , Perchlorate	TDS, TSS	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Ti, Se, Zn	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Organic Toxicity			Nitrate-N, Nitrite-N	Ammonia-N (350.2)	Cyanide							
Outfall 008	W	1L Poly	1	1-3-2011 12:38	HNO ₃	2A	X																		
Outfall 008 Dup	W	1L Poly	1		HNO ₃	2B	X																		
Outfall 008	W	1L Amber	2		None	3A, 3B		X																	
Outfall 008	W	500 mL Poly	2		None	4A, 4B			X																
Outfall 008	W	500 mL Poly	1		None	5				X															
Outfall 008	W	1L Poly	1		None	6					X								Filter w/in 24hrs of receipt at lab						
Outfall 008	W	2.5 Gal Cube	1	1-3-2011 12:38	None	7A						X								Unfiltered and unpreserved analysis					
		500 mL Amber	1		None	7B																			
Outfall 008	W	500 mL Poly	1	1-3-2011 12:38	None	8	X													Only test if first or second rain events of the year					
Outfall 008	W	500 mL Poly	1	1-3-2011 12:38	None	9										X									
Outfall 008	W	500 mL Poly	1		H ₂ SO ₄	10											X								
Outfall 008	W	500 mL Poly	1	1-3-2011 12:38	NaOH	11										X									
COC Page 2 of 2 list the Composite Samples for Outfall 008 for this storm event.																									
These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.																									
Relinquished By: <i>Rick Banaga</i> Date/Time: 1-4-2011 14:00							Received By: <i>Max O'Connell</i> Date/Time: 1-4-11 14:00							Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: _____ 48 Hour: _____ 5 Day: _____ Normal: <input checked="" type="checkbox"/>											
Relinquished By: <i>Max O'Connell</i> Date/Time: 1-4-11 16:25							Received By: <i>Subarna</i> Date/Time: 1/4/11 16:25							Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>											
Relinquished By: _____ Date/Time: _____							Received By: _____ Date/Time: _____							Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>											

02:01
1/11/11
19:30

041106 3.8

CHAIN OF CUSTODY FORM

TUA0089

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 008 GRAB Stormwater at Happy Valley		ANALYSIS REQUIRED																			
Test America Contact: Debby Wilson		Project Manager: Bronwyn Kelly		Field readings: (Log in and include in report Temp and pH) Temp °F = 42 ⁰ pH = 7.6 Time of readings = 08:00 Comments																			
Sampler: <i>Rick BANAAG</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515																					
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)																
Outfall 008	W	1L Amber	2	<i>1-3-2011</i> <i>08:00</i>	HCl	1A, 1B	X																
These Samples are the Grab Portion of Outfall 008 for this storm event. Composite samples will follow and are to be added to this work order.																							
Relinquished By: <i>[Signature]</i>				Date/Time: <i>1-3-2011</i> <i>13:00</i>				Received By: <i>[Signature]</i>				Date/Time: <i>1-3-11</i> <i>13:00</i>				Turn-around time: (Check)							
												24 Hour: _____				72 Hour: _____				10 Day: _____			
												48 Hour: _____				5 Day: _____				Normal: <input checked="" type="checkbox"/>			
Relinquished By: <i>[Signature]</i>				Date/Time: <i>1-3-11</i> <i>17:50</i>				Received By: <i>[Signature]</i>				Date/Time: <i>1/3/11</i> <i>17:50</i>				Sample Integrity: (Check)							
												Intact: <input checked="" type="checkbox"/>				On Ice: <input checked="" type="checkbox"/>							
Relinquished By: _____				Date/Time: _____				Received By: _____				Date/Time: _____				Data Requirements: (Check)							
												No Level IV: _____				All Level IV: _____				NPDES Level IV: <input checked="" type="checkbox"/>			

MS
01/04/11
11:30

031102 25



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February 18, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUA0087
Eberline Analytical Report S101022-8660
Sample Delivery Group 8660**

Dear Ms. Wilson:

Enclosed is a revised Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUA0087; the total uranium result for sample IUA0087-02 was corrected. The samples were received on January 6, 2011. Results were originally reported on February 7, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: *Level IV CLP-like Data Package CD*

1.0 General Comments

Sample delivery group 8660 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volume.

2.0 Quality Control

For efficiency of analysis, samples IUA0087-02 and IUA0087-03 were analyzed in a common prep batch with other TA samples. The QC samples from that common prep batch were assigned to SDG 8658 and are reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 **Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 **Strontium-90 Analysis** - The Sr-90 MDA for sample IUA0087-02 (2.38 pCi/L) and sample IUA0087-03 (2.28 pCi/L) was greater than the required detection limit of 2.00 pCi/L. No other problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 **Radium-226 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.5 **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.6 **Total Uranium Analysis** - No problems were encountered during the processing of the samples. The original result for sample IUA0087-02 was incorrect due to a manual entry error in Eberline's radiometrics database; the error was corrected and the report revised to the corrected result. All quality control sample results were within required control limits.
- 4.7 **Gamma Spectroscopy** – The K-40 MDA for the sample IUA0087-03 (29.6 pCi/L) was greater than the required detection limit of 25 pCi/L. No other problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0 Case Narrative Certification Statement

"I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



N. Joseph Verville
Client Services Manager

2/18/11

Date

EBERLINE ANALYTICAL
SDG 8660

SDG 8660
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUA0087

S U M M A R Y D A T A S E C T I O N

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VB

Prepared by

Reviewed by

N. Joseph Verville

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUA0087

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
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Version Ver 1.0
Form DVD-RG
Version 3.06
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EBERLINE ANALYTICAL

SDG 8660

SDG 8660
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUA0087

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
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EBERLINE ANALYTICAL

SDG 8660

LAB SAMPLE SUMMARY

SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S101015-03	Lab Control Sample		WATER				
S101015-04	Method Blank		WATER				
S101015-05	Duplicate (S101015-01)	Boeing - SSFL	WATER				01/03/11 11:20
S101022-01	IUA0087-02	Boeing - SSFL	WATER			IUA0087	01/03/11 12:38
S101022-02	IUA0087-03 (TRIP BLANK)	Boeing - SSFL	WATER			IUA0087	01/05/11 12:45

LAB SUMMARY

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SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
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 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
 Contact N. Joseph Verville

QC SUMMARY

Client Test America, Inc.
 Contract IUA0087

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8658		Method Blank	WATER						S101015-04	8658-004
		Lab Control Sample	WATER						S101015-03	8658-003
		Duplicate (S101015-01)	WATER		10.0 L		01/05/11	2	S101015-05	8658-005
8660	IUA0087	IUA0087-02	WATER		10.0 L		01/06/11	3	S101022-01	8660-001
		IUA0087-03 (TRIP BLANK)	WATER		10.0 L		01/06/11	1	S101022-02	8660-002

QC SUMMARY

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SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
 Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
 Contract IUA0087

TEST	MATRIX	METHOD	PREPARATION ERROR			PLANCHETS ANALYZED			QUALIFIERS
			BATCH	2σ %	CLIENT MORE	RE BLANK	LCS DUP/ORIG	MS/ORIG	
Beta Counting									
AC	WATER	Radium-228 in Water	7221-041	10.4	2	1	1	1/0/1	
SR	WATER	Strontium-90 in Water	7221-041	10.4	2	1	1	1/0/1	
Gas Proportional Counting									
80A	WATER	Gross Alpha in Water	7221-041	20.6	2	1	1	1/0/1	
80B	WATER	Gross Beta in Water	7221-041	11.0	2	1	1	1/0/1	
Gamma Spectroscopy									
GAM	WATER	Gamma Emitters in Water	7221-041	7.0	2	1	1	1/0/1	
Kinetic Phosphorimetry, ug									
U_T	WATER	Uranium, Total	7221-041		2	1	1	1/0/1	
Liquid Scintillation Counting									
H	WATER	Tritium in Water	7221-041	10.0	1	1	1	1/0/1	
Radon Counting									
RA	WATER	Radium-226 in Water	7221-041	16.4	2	1	1	1/0/1	

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
 In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-PBS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

LAB WORK SUMMARY

SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX		SUF-						
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S101015-03	Lab Control Sample	WATER	8658-003	80A/80		01/17/11	02/04/11	BW	Gross Alpha in Water	
			8658-003	80B/80		01/17/11	02/04/11	BW	Gross Beta in Water	
			8658-003	AC		01/26/11	02/04/11	BW	Radium-228 in Water	
			8658-003	GAM		01/14/11	01/24/11	MWT	Gamma Emitters in Water	
			8658-003	H		01/24/11	01/26/11	BW	Tritium in Water	
			8658-003	RA		01/27/11	01/28/11	BW	Radium-226 in Water	
			8658-003	SR		01/26/11	02/04/11	BW	Strontium-90 in Water	
			8658-003	U_T		02/01/11	02/03/11	BW	Uranium, Total	
S101015-04	Method Blank	WATER	8658-004	80A/80		01/17/11	02/04/11	BW	Gross Alpha in Water	
			8658-004	80B/80		01/17/11	02/04/11	BW	Gross Beta in Water	
			8658-004	AC		01/26/11	02/04/11	BW	Radium-228 in Water	
			8658-004	GAM		01/14/11	01/24/11	MWT	Gamma Emitters in Water	
			8658-004	H		01/24/11	01/26/11	BW	Tritium in Water	
			8658-004	RA		01/27/11	01/28/11	BW	Radium-226 in Water	
			8658-004	SR		01/26/11	02/04/11	BW	Strontium-90 in Water	
			8658-004	U_T		02/01/11	02/03/11	BW	Uranium, Total	
S101015-05	Duplicate (S101015-01) 01/03/11 Boeing - SSFL 01/05/11	WATER	8658-005	80A/80		01/17/11	02/04/11	BW	Gross Alpha in Water	
			8658-005	80B/80		01/17/11	02/04/11	BW	Gross Beta in Water	
			8658-005	AC		01/26/11	02/04/11	BW	Radium-228 in Water	
			8658-005	GAM		01/15/11	01/24/11	MWT	Gamma Emitters in Water	
			8658-005	H		01/24/11	01/26/11	BW	Tritium in Water	
			8658-005	RA		01/27/11	01/28/11	BW	Radium-226 in Water	
			8658-005	SR		01/26/11	02/04/11	BW	Strontium-90 in Water	
			8658-005	U_T		02/01/11	02/03/11	BW	Uranium, Total	
S101022-01	IUA0087-02 01/03/11 Boeing - SSFL 01/06/11 IUA0087	WATER	8660-001	80A/80		01/17/11	02/04/11	BW	Gross Alpha in Water	
			8660-001	80B/80		01/17/11	02/04/11	BW	Gross Beta in Water	
			8660-001	AC		01/26/11	02/04/11	BW	Radium-228 in Water	
			8660-001	GAM		01/14/11	01/24/11	MWT	Gamma Emitters in Water	
			8660-001	H		01/24/11	01/26/11	BW	Tritium in Water	
			8660-001	RA		01/27/11	01/28/11	BW	Radium-226 in Water	
			8660-001	SR		01/26/11	02/04/11	BW	Strontium-90 in Water	
			8660-001	U_T		02/01/11	02/03/11	BW	Uranium, Total	

WORK SUMMARY

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SUMMARY DATA SECTION

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Lab id EAS
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 Version Ver 1.0
 Form DVD-LWS
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EBERLINE ANALYTICAL

SDG 8660

WORK SUMMARY, cont.

SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX		SUF-						
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S101022-02	IUA0087-03 (TRIP BLANK)		8660-002	80A/80		01/21/11	02/04/11	BW	Gross Alpha in Water	
01/05/11	Boeing - SSFL	WATER	8660-002	80B/80		01/21/11	02/04/11	BW	Gross Beta in Water	
01/06/11	IUA0087		8660-002	AC		01/26/11	02/04/11	BW	Radium-228 in Water	
			8660-002	GAM		01/20/11	01/24/11	MWT	Gamma Emitters in Water	
			8660-002	RA		01/27/11	01/28/11	BW	Radium-226 in Water	
			8660-002	SR		01/26/11	02/04/11	BW	Strontium-90 in Water	
			8660-002	U_T		02/01/11	02/03/11	BW	Uranium, Total	

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	2			1	1	1	5
80B/80		Gross Beta in Water	900.0	2			1	1	1	5
AC		Radium-228 in Water	904.0	2			1	1	1	5
GAM		Gamma Emitters in Water	901.1	2			1	1	1	5
H		Tritium in Water	906.0	1			1	1	1	4
RA		Radium-226 in Water	903.1	2			1	1	1	5
SR		Strontium-90 in Water	905.0	2			1	1	1	5
U_T		Uranium, Total	D5174	2			1	1	1	5
TOTALS				15			8	8	8	39

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

8658-004

Method Blank

METHOD BLANK

SDG <u>8660</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUA0087</u>
Lab sample id <u>S101015-04</u>	Client sample id <u>Method Blank</u>
Dept sample id <u>8658-004</u>	Material/Matrix <u>WATER</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALIFIERS	TEST
Gross Alpha	12587461	0.122	0.30	0.620	3.00	U	80A
Gross Beta	12587472	0.089	0.57	0.952	4.00	U	80B
Tritium	10028178	4.53	160	269	500	U	H
Radium-226	13982633	-0.022	0.34	0.630	1.00	U	RA
Radium-228	15262201	-0.112	0.20	0.448	1.00	U	AC
Strontium-90	10098972	-0.096	0.76	1.81	2.00	U	SR
Uranium, Total		0	0.007	0.016	1.00	U	U_T
Potassium-40	13966002	U		23.8	25.0	U	GAM
Cesium-137	10045973	U		1.10	20.0	U	GAM

QC-BLANK #76761

EBERLINE ANALYTICAL

SDG 8660

8658-005

IUA0079-02

DUPLICATE

SDG <u>8660</u> Contact <u>N. Joseph Verville</u> DUPLICATE Lab sample id <u>S101015-05</u> Dept sample id <u>8658-005</u>	ORIGINAL Lab sample id <u>S101015-01</u> Dept sample id <u>8658-001</u> Received <u>01/05/11</u>	Client <u>Test America, Inc.</u> Contract <u>IUA0087</u> Client sample id <u>IUA0079-02</u> Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u> Collected/Volume <u>01/03/11 11:20</u> <u>10.0 L</u> Chain of custody id <u>IUA0079</u>
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ANALYTE	DUPLICATE	2σ ERR	MDA	RDL	QUALI-	ORIGINAL	2σ ERR	MDA	QUALI-	RPD	3σ	DER	
	pCi/L	(COUNT)	pCi/L	pCi/L	FIERS		TEST	pCi/L	(COUNT)	pCi/L	FIERS	%	TOT
Gross Alpha	0.592	0.26	0.292	3.00	J	80A	0.929	0.34	0.378	J	44	96	1.4
Gross Beta	2.03	0.54	0.785	4.00	J	80B	1.22	0.58	0.891	J	50	77	1.9
Tritium	-54.4	150	269	500	U	H	-84.0	150	263	U	-	-	0.3
Radium-226	0.426	0.39	0.616	1.00	U	RA	0.441	0.44	0.715	U	-	-	0.1
Radium-228	-0.069	0.23	0.501	1.00	U	AC	0.186	0.21	0.433	U	-	-	1.6
Strontium-90	-0.142	0.64	1.58	2.00	U	SR	-0.020	0.44	1.03	U	-	-	0.3
Uranium, Total	0.102	0.013	0.016	1.00	J	U_T	0.092	0.012	0.016	J	10	27	1.1
Potassium-40	U		19.1	25.0	U	GAM	U		23.9	U	-	-	0.3
Cesium-137	U		1.63	20.0	U	GAM	U		1.19	U	-	-	0.4

QC-DUP#1 76762

E B E R L I N E A N A L Y T I C A L
SDG 8660

8660-001

IUA0087-02

D A T A S H E E T

SDG <u>8660</u> Contact <u>N. Joseph Verville</u>	Client <u>Test America, Inc.</u> Contract <u>IUA0087</u>
Lab sample id <u>S101022-01</u> Dept sample id <u>8660-001</u> Received <u>01/06/11</u>	Client sample id <u>IUA0087-02</u> Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u> Collected/Volume <u>01/03/11 12:38</u> <u>10.0 L</u> Chain of custody id <u>IUA0087</u>

ANALYTE	CAS NO	RESULT pCi/L	2 σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	1.85	0.54	0.511	3.00	J	80A
Gross Beta	12587472	2.49	0.60	0.852	4.00	J	80B
Tritium	10028178	-98.3	150	265	500	U	H
Radium-226	13982633	0.656	0.42	0.632	1.00	J	RA
Radium-228	15262201	0.156	0.23	0.483	1.00	U	AC
Strontium-90	10098972	-0.490	0.93	<u>2.38</u>	2.00	U	SR
Uranium, Total		0.592	0.064	0.016	1.00	J	U_T
Potassium-40	13966002	U		15.7	25.0	U	GAM
Cesium-137	10045973	U		1.30	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>02/18/11</u>

EBERLINE ANALYTICAL

SDG 8660

8660-002

IUA0087-03 (TRIP BLANK)

DATA SHEET

SDG <u>8660</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUA0087</u>
Lab sample id <u>S101022-02</u>	Client sample id <u>IUA0087-03 (TRIP BLANK)</u>
Dept sample id <u>8660-002</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>01/06/11</u>	Collected/Volume <u>01/05/11 12:45</u> <u>10.0 L</u>
	Chain of custody id <u>IUA0087</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	0.032	0.18	0.323	3.00	U	80A
Gross Beta	12587472	-0.088	0.51	0.857	4.00	U	80B
Radium-226	13982633	-0.015	0.40	0.728	1.00	U	RA
Radium-228	15262201	-0.101	0.19	0.444	1.00	U	AC
Strontium-90	10098972	-0.750	0.76	<u>2.20</u>	2.00	U	SR
Uranium, Total		0	0.007	0.016	1.00	U	U_T
Potassium-40	13966002	U		<u>29.6</u>	25.0	U	GAM
Cesium-137	10045973	U		1.47	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>02/18/11</u>

EBERLINE ANALYTICAL

SDG 8660

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER

BETA COUNTING

Test SR Matrix WATER
 SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

RESULTS

LAB RAW SUP-
 SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Strontium-90

Preparation batch 7221-041

S101015-03	8658-003	Lab Control Sample	ok
S101015-04	8658-004	Method Blank	U
S101015-05	8658-005	Duplicate (S101015-01)	- U
S101022-01	8660-001	IUA0087-02	U
S101022-02	8660-002	IUA0087-03 (TRIP BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 2.00

METHOD PERFORMANCE

LAB	RAW SUP-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR

Preparation batch 7221-041 2σ prep error 10.4 % Reference Lab Notebook No. 7221 p.41

S101015-03	Lab Control Sample	1.04	0.500				61	50				01/19/11	01/26	GRB-222
S101015-04	Method Blank	1.81	0.500				52	50				01/19/11	01/26	GRB-231
S101015-05	Duplicate (S101015-01)	1.58	0.500				56	50	23	01/19/11	01/26	01/19/11	01/26	GRB-232
S101022-01	IUA0087-02	<u>2.38</u>	0.500				38	50	23	01/19/11	01/26	01/19/11	01/26	GRB-229
S101022-02	IUA0087-03 (TRIP BLANK)	<u>2.20</u>	0.500				39	50	21	01/19/11	01/26	01/19/11	01/26	GRB-230

Nominal values and limits from method 2.00 0.500 30-105 50 180

PROCEDURES REFERENCE 905.0
 DWP-380 Strontium in Drinking Water, rev 8

AVERAGES ± 2 SD MDA 1.80 ± 1.06
 FOR 5 SAMPLES YIELD 49 ± 21

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 14

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER
 SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha	
Preparation batch 7221-041					
S101015-03	80	8658-003	Lab Control Sample	ok	
S101015-04	80	8658-004	Method Blank	U	
S101015-05	80	8658-005	Duplicate (S101015-01)	ok	J
S101022-01	80	8660-001	IUA0087-02	1.85	J
S101022-02	80	8660-002	IUA0087-03 (TRIP BLANK)	U	

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR
Preparation batch 7221-041 2σ prep error 20.6 % Reference Lab Notebook No. 7221 p.41													
S101015-03	80	Lab Control Sample	0.581	0.250			62	400				01/17/11	01/17 GRB-103
S101015-04	80	Method Blank	0.620	0.250			61	400				01/17/11	01/17 GRB-104
S101015-05	80	Duplicate (S101015-01)	0.292	0.300			0	400				14 01/17/11	01/17 GRB-109
S101022-01	80	IUA0087-02	0.511	0.300			54	400				14 01/17/11	01/17 GRB-112
S101022-02	80	IUA0087-03 (TRIP BLANK)	0.323	0.300			0	400				16 01/20/11	01/21 GRB-105

Nominal values and limits from method 3.00 0.250 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 0.465 ± 0.299
 FOR 5 SAMPLES RESIDUE 35 ± 65

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
 SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST	FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7221-041					
S101015-03	80		8658-003	Lab Control Sample	ok
S101015-04	80		8658-004	Method Blank	U
S101015-05	80		8658-005	Duplicate (S101015-01)	ok J
S101022-01	80		8660-001	IUA0087-02	2.49 J
S101022-02	80		8660-002	IUA0087-03 (TRIP BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST	FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7221-041 2σ prep error 11.0 % Reference Lab Notebook No. 7221 p.41																
S101015-03	80		Lab Control Sample	1.23	0.250			62		400				01/17/11	01/17	GRB-103
S101015-04	80		Method Blank	0.952	0.250			61		400				01/17/11	01/17	GRB-104
S101015-05	80		Duplicate (S101015-01)	0.785	0.300			0		400			14	01/17/11	01/17	GRB-109
S101022-01	80		IUA0087-02	0.852	0.300			54		400			14	01/17/11	01/17	GRB-112
S101022-02	80		IUA0087-03 (TRIP BLANK)	0.857	0.300			0		400			16	01/20/11	01/21	GRB-105

Nominal values and limits from method 4.00 0.250 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 0.935 ± 0.350
 FOR 5 SAMPLES RESIDUE 35 ± 65

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8660
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUA0087

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137

Preparation batch 7221-041

S101015-03	8658-003	Lab Control Sample	ok	ok
S101015-04	8658-004	Method Blank		U
S101015-05	8658-005	Duplicate (S101015-01)		- U
S101022-01	8660-001	IUA0087-02		U
S101022-02	8660-002	IUA0087-03 (TRIP BLANK)		U

Nominal values and limits from method	RDLs (pCi/L)	10.0	20.0
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METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7221-041 2σ prep error 7.0 % Reference Lab Notebook No. 7221 p.41

S101015-03	Lab Control Sample		2.00					907					01/13/11	01/14	MB,05,00
S101015-04	Method Blank		2.00					907					01/13/11	01/14	01,02,00
S101015-05	Duplicate (S101015-01)		2.00					401		12	01/13/11	01/15	01/13/11	01/15	MB,08,00
S101022-01	IUA0087-02		2.00					633		11	01/13/11	01/14	01/13/11	01/14	MB,08,00
S101022-02	IUA0087-03 (TRIP BLANK)		2.00					564		15	01/13/11	01/20	01/13/11	01/20	01,02,00

Nominal values and limits from method	6.00	2.00	400	180
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PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

RESULTS

LAB	RAW	SUF-		Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7221-041				
S101015-03		8658-003	Lab Control Sample	ok
S101015-04		8658-004	Method Blank	U
S101015-05		8658-005	Duplicate (S101015-01)	ok J
S101022-01		8660-001	IUA0087-02	0.592 J
S101022-02		8660-002	IUA0087-03 (TRIP BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7221-041			2σ prep error		Reference Lab Notebook No. 7221 p.41										
S101015-03		Lab Control Sample	0.160	0.0200								02/01/11	02/01	KPA-001	
S101015-04		Method Blank	0.016	0.0200								02/01/11	02/01	KPA-001	
S101015-05		Duplicate (S101015-01)	0.016	0.0200					29	02/01/11	02/01	02/01	02/01	KPA-001	
S101022-01		IUA0087-02	0.016	0.0200					29	02/01/11	02/01	02/01	02/01	KPA-001	
S101022-02		IUA0087-03 (TRIP BLANK)	0.016	0.0200					27	02/01/11	02/01	02/01	02/01	KPA-001	

Nominal values and limits from method 1.00 0.0200 180

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.045 ± 0.129
 FOR 5 SAMPLES YIELD _____ ± _____

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

LAB METHOD SUMMARY

RADIUM-226 IN WATER

RADON COUNTING

Test RA Matrix WATER
 SDG 8660
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUA0087

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226
Preparation batch 7221-041				
S101015-03		8658-003	Lab Control Sample	ok
S101015-04		8658-004	Method Blank	U
S101015-05		8658-005	Duplicate (S101015-01)	- U
S101022-01		8660-001	IUA0087-02	0.656 J
S101022-02		8660-002	IUA0087-03 (TRIP BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7221-041 2σ prep error 16.4 % Reference Lab Notebook No. 7221 p.41															
S101015-03		Lab Control Sample	0.815	0.100			100	106				01/27/11	01/27	RN-009	
S101015-04		Method Blank	0.630	0.100			100	106				01/27/11	01/27	RN-010	
S101015-05		Duplicate (S101015-01)	0.616	0.100			100	106			24	01/27/11	01/27	RN-013	
S101022-01		IUA0087-02	0.632	0.100			100	106			24	01/27/11	01/27	RN-016	
S101022-02		IUA0087-03 (TRIP BLANK)	0.728	0.100			100	120			22	01/27/11	01/27	RN-016	

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
 DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.684 ± 0.171
 FOR 5 SAMPLES YIELD 100 ± 0

METHOD SUMMARIES

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SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUA0087

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUA0087

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUA0087

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 02/18/11

EBERLINE ANALYTICAL

SDG 8660

SDG 8660
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUA0087

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

REPORT GUIDES

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SUMMARY DATA SECTION

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Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
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J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.

B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.

Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.

For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.

L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.

H Similar to 'L' except the recovery was high.

P The RESULT is 'preliminary'.

X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.

2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

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may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

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DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

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MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

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METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

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correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
- * Count times are underlined if less than the nominal value

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specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

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No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

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SUBCONTRACT ORDER

TestAmerica Irvine

IUA0087

8660

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services
2030 Wright Avenue
Richmond, CA 94804
Phone : (510) 235-2633
Fax: (510) 235-0438
Project Location: California
Receipt Temperature: 7.3 °C

Ice: (Y) / N

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

Table with 4 columns: Analysis, Units, Expires, Comments. Contains data for Sample ID: IUA0087-02 (Outfall 008 (Composite) - Water) with various chemical analyses and their expiration dates.

Containers Supplied:
2.5 gal Poly (I) HNO3 500 mL Amber (J)

Table with 4 columns: Analysis, Units, Expires, Comments. Contains data for Sample ID: IUA0087-03 (TRIP BLANK - Water) with various chemical analyses and their expiration dates.

Containers Supplied:
2.5 gal Poly (A) HNO3

Released By / Date/Time and Received By / Date/Time sections with handwritten signatures and dates.



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA
 Date/Time received 01/06/11 09:20 CoC No. 1UA0087
 Container I.D. No. ICE CREST Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes [] No [] N/A []
2. Custody seals on shipping container dated & signed? Yes [] No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A []
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A []
5. Packing material is: Wet [] Dry []
6. Number of samples in shipping container: 2 Sample Matrix W
7. Number of containers per sample: _____ (Or see CoC)
8. Samples are in correct container Yes [] No []
9. Paperwork agrees with samples? Yes [] No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels []
11. Samples are: In good condition [] Leaking [] Broken Container [] Missing []
12. Samples are: Preserved [] Not preserved [] pH <2 / N/A Preservative _____
13. Describe any anomalies:

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____
15. Inspected by [Signature] Date: 01/06/11 Time: 1315

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>1UA0087</u>	<u>260</u>						

Ion Chamber Ser. No. _____
 Alpha Meter Ser. No. _____
 Beta/Gamma Meter Ser. No. 100482

Calibration date _____
 Calibration date _____
 Calibration date 24 SEP 10

APPENDIX G

Section 23

Outfall 008 – February 26, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUB2816

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: IUB2816
 Project Manager: B. Kelly
 Matrix: Water
 QC Level: IV
 No. of Samples: 2
 No. of Reanalyses/Dilutions: 1
 Laboratory: TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 008 (Grab)	IUB2816-01	N/A	Water	2/26/10 09:45	218.6
Outfall 008 (Composite)	IUB2816-03	G1C010514-001, 143468-03	Water	2/26/10 08:42	100.2, 200.7, 200.7 (Diss), 245.1, 245.1 (Diss), 314.0, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B-Diss, SM2540D, ASTM 5174

II. Sample Management

No anomalies were observed regarding sample management. The samples were received above the temperature limit at Eberline; however, 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 Eberline and TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine, no custody seals were required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 100.2—Asbestos

Reviewed By: P. Meeks

Date Reviewed: March 31, 2011

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Method 100.2*, and the *National Functional Guidelines for Inorganic Data Review (10/2004)*.

- Holding Times: As the sample was received at the laboratory beyond the 48-hour filtration holding time, the sample was ozonated and then filtered upon receipt. As the sample was not filtered within 48-hours of collection, the nondetected asbestos result was qualified as estimated, "UJ." There is no analysis holding time; however, the sample was analyzed within 5 days of collection.
- Calibration: Calibration logs were acceptable.
- Blanks: A method blank was analyzed with the site sample. Asbestos was not detected in the method blank.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: The sample result was verified against the raw data. No transcription errors were noted. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

B. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: April 1, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two 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 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8,9-HxCDD, and OCDD. Any sample detects for those isomers were qualified as nondetected, "U," at the level of contamination. Total HxCDD was not detected in the sample. The results for total HpCDD and HpCDF were qualified as nondetected, "U," as the totals consisted only of the same peaks present in the method blank.

- Blank Spikes and Laboratory Control Samples: LCS 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 in the sample 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 individual isomers reported as EMPCs were previously qualified as method blank contamination and were not further qualified as EMPCs. Reportable totals containing EMPCs were qualified as estimated, "J." Any detects reported 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.

C. EPA METHODS 200.7, and 245.1—Metals and Mercury

Reviewed By: P. Meeks

Date Reviewed: March 31, 2011

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 200.7, 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP metals and 28 days for mercury, were met.
- Tuning: Not applicable to these analyses.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP metals

and 85-115% for mercury. The CRDL/CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no applicable detects.
- Interference Check Samples: Recoveries were within 80-120% for all 200.7 analyses.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy for the methods was evaluated based on the LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to these analyses.
- 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.

Boron was detected marginally above the MDL in the dissolved sample but was not detected in the reported total sample.

- 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 — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 7, 2011

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. The 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 detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as estimated, "J." All remaining detector efficiencies were acceptable.

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.

- **Blanks:** There were no analytes detected in the method blanks.
- **Blank Spikes and Laboratory Control Samples:** The strontium recovery was nominally above the control limit; however, strontium was not detected in the sample. The remaining recoveries 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. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

A notation in the preparation logs indicated that a portion of the aliquots for this sample were filtered and that the filtrate was dissolved and added to the sample aliquot.

- 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.

E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 31, 2011

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 120.1, 180.1, and 314.0*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times were met.
- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥ 0.995 . All initial and continuing calibration recoveries were within 90-110%. Perchlorate ICP-MA and ICCS recoveries were within 80-120% and 75-125%, respectively.
- Blanks: Hexavalent chromium was detected in the ICB marginally below the MDL at 0.24 $\mu\text{g/L}$ (MDL = 0.25 $\mu\text{g/L}$) and marginally above the MDL in the sample at 0.26 $\mu\text{g/L}$. As the instrument detected a hexavalent chromium peak in the ICB, it was the reviewer's professional opinion that the result should be applied to the sample result; therefore, hexavalent chromium detected in the sample was qualified as nondetected, "U," at the reporting limit. The remaining Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- **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 IUB2816

Analysis Method 900

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

Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	3.52	3	0.41	pCi/L		J	C
Gross Beta	12587472	5.15	4	0.829	pCi/L			

Analysis Method 901.1

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

Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.46	pCi/L	U	U	
Potassium-40	13966002	ND	25	24	pCi/L	U	U	

Analysis Method 903.1

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

Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.1	1	0.547	pCi/L	U	U	

Analysis Method 904

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

Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.343	1	0.418	pCi/L	U	U	

Analysis Method 905

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

Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	-0.423	2	1.1	pCi/L	U	U	

Analysis Method 906

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	-28.6	500	170	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	0.838	1	0.022	pCi/L	Jb	J	DNQ

Analysis Method EPA 200.7

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	4700	50	40	ug/l			
Arsenic	7440-38-2	ND	10	7.0	ug/l		U	
Beryllium	7440-41-7	ND	2.0	0.90	ug/l		U	
Boron	7440-42-8	0.073	0.050	0.020	mg/l			
Calcium	7440-70-2	25	0.10	0.050	mg/l	B-1		
Chromium	7440-47-3	6.9	5.0	2.0	ug/l			
Iron	7439-89-6	6.0	0.040	0.015	mg/l			
Magnesium	7439-95-4	4.9	0.020	0.012	mg/l			
Nickel	7440-02-0	5.0	10	2.0	ug/l	J	J	DNQ
Silver	7440-22-4	ND	10	6.0	ug/l		U	
Vanadium	7440-62-2	12	10	3.0	ug/l			
Zinc	7440-66-6	28.4	20.0	6.00	ug/l			

Analysis Method EPA 200.7-Diss

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	56	50	40	ug/l			
Arsenic	7440-38-2	ND	10	7.0	ug/l		U	
Beryllium	7440-41-7	ND	2.0	0.90	ug/l		U	
Boron	7440-42-8	0.084	0.050	0.020	mg/l			
Calcium	7440-70-2	24	0.10	0.050	mg/l			
Chromium	7440-47-3	ND	5.0	2.0	ug/l		U	
Iron	7439-89-6	0.027	0.040	0.015	mg/l	J	J	DNQ
Magnesium	7439-95-4	3.5	0.020	0.012	mg/l			
Nickel	7440-02-0	ND	10	2.0	ug/l		U	
Silver	7440-22-4	ND	10	6.0	ug/l		U	
Vanadium	7440-62-2	ND	10	3.0	ug/l		U	
Zinc	7440-66-6	25.9	20.0	6.00	ug/l			

Analysis Method EPA 218.6

Sample Name Outfall 008 (Grab) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-01 **Sample Date:** 2/26/2011 9:45:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chromium VI	18540-29-9	ND	1.00	0.250	ug/l	J	U	B

Analysis Method EPA 245.1

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

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

Analysis Method EPA 245.1-Diss

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

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

Analysis Method EPA 314.0

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	2.4	4.0	0.90	ug/l	J	J	DNQ

Analysis Method EPA-5 1613B

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.000051	0.0000018	ug/L	J, Q, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.000051	0.0000015	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000051	0.0000024	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000051	0.0000028	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.000051	0.0000021	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.000051	0.0000025	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000051	0.0000019	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000051	0.0000022	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000051	0.0000028	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000051	0.0000058	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000051	0.0000069	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000051	0.0000019	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000051	0.0000071	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000024	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000031	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000071	ug/L	J, Ba	U	B
OCDF	39001-02-0	4.9e-006	0.0001	0.0000048	ug/L	J	J	DNQ
Total HpCDD	37871-00-4	ND	0.000051	0.0000018	ug/L	J, Q, Ba	U	B
Total HpCDF	38998-75-3	ND	0.000051	0.0000019	ug/L	J, Q, Ba	U	B
Total HxCDD	34465-46-8	ND	0.000051	0.0000022	ug/L		U	
Total HxCDF	55684-94-1	ND	0.000051	0.0000019	ug/L		U	
Total PeCDD	36088-22-9	ND	0.000051	0.0000058	ug/L		U	
Total PeCDF	30402-15-4	ND	0.000051	0.0000069	ug/L		U	
Total TCDD	41903-57-5	6.6e-006	0.00001	0.0000024	ug/L	J, Q	J	DNQ, *III
Total TCDF	55722-27-5	ND	0.00001	0.0000031	ug/L		U	

Analysis Method SM 2540D

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	68	10	1.0	mg/l			

Analysis Method SM2340B

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness (as CaCO3)	NA	83	0.33	0.17	mg/l			

Analysis Method SM2340B-Diss

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2816-03 **Sample Date:** 2/26/2011 8:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	NA	74	0.33	0.17	mg/l			

APPENDIX G

Section 24

Outfall 008 – February 26, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Annual Outfall 008

Sampled: 02/26/11
Received: 02/26/11
Issued: 04/04/11 14:16

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
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.

LABORATORY ID	CLIENT ID	MATRIX
IUB2816-01	Outfall 008 (Grab)	Water
IUB2816-02	Trip Blanks	Water
IUB2816-03	Outfall 008 (Composite)	Water
IUB2816-04	Trip Blanks	Water

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

Reviewed By:

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

Debby Wilson

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-01 (Outfall 008 (Grab) - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	11C1594	0.28	0.50	ND	1	LB	03/11/11	
Bromodichloromethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
Bromoform	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
Bromomethane	EPA 624	11C1594	0.42	1.0	ND	1	LB	03/11/11	
Carbon tetrachloride	EPA 624	11C1594	0.28	0.50	ND	1	LB	03/11/11	
Chlorobenzene	EPA 624	11C1594	0.36	0.50	ND	1	LB	03/11/11	
Chloroethane	EPA 624	11C1594	0.40	1.0	ND	1	LB	03/11/11	
Chloroform	EPA 624	11C1594	0.33	0.50	ND	1	LB	03/11/11	
Chloromethane	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
Dibromochloromethane	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
1,2-Dichlorobenzene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
1,3-Dichlorobenzene	EPA 624	11C1594	0.35	0.50	ND	1	LB	03/11/11	
1,4-Dichlorobenzene	EPA 624	11C1594	0.37	0.50	ND	1	LB	03/11/11	
1,1-Dichloroethane	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
1,2-Dichloroethane	EPA 624	11C1594	0.28	0.50	ND	1	LB	03/11/11	
1,1-Dichloroethene	EPA 624	11C1594	0.42	0.50	ND	1	LB	03/11/11	
trans-1,2-Dichloroethene	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
1,2-Dichloropropane	EPA 624	11C1594	0.35	0.50	ND	1	LB	03/11/11	
cis-1,3-Dichloropropene	EPA 624	11C1594	0.22	0.50	ND	1	LB	03/11/11	
trans-1,3-Dichloropropene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
Ethylbenzene	EPA 624	11C1594	0.25	0.50	ND	1	LB	03/11/11	
Methylene chloride	EPA 624	11C1594	0.95	1.0	ND	1	LB	03/11/11	
1,1,2,2-Tetrachloroethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
Tetrachloroethene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
Toluene	EPA 624	11C1594	0.36	0.50	ND	1	LB	03/11/11	
1,1,1-Trichloroethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
1,1,2-Trichloroethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
Trichloroethene	EPA 624	11C1594	0.26	0.50	ND	1	LB	03/11/11	
Trichlorofluoromethane	EPA 624	11C1594	0.34	0.50	ND	1	LB	03/11/11	
Vinyl chloride	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
Xylenes, Total	EPA 624	11C1594	0.90	1.5	ND	1	LB	03/11/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					108 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					113 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					113 %				

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	11C1594	0.28	0.50	ND	1	LB	03/11/11	
Bromodichloromethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
Bromoform	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
Bromomethane	EPA 624	11C1594	0.42	1.0	ND	1	LB	03/11/11	
Carbon tetrachloride	EPA 624	11C1594	0.28	0.50	ND	1	LB	03/11/11	
Chlorobenzene	EPA 624	11C1594	0.36	0.50	ND	1	LB	03/11/11	
Chloroethane	EPA 624	11C1594	0.40	1.0	ND	1	LB	03/11/11	
Chloroform	EPA 624	11C1594	0.33	0.50	ND	1	LB	03/11/11	
Chloromethane	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
Dibromochloromethane	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
1,2-Dichlorobenzene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
1,3-Dichlorobenzene	EPA 624	11C1594	0.35	0.50	ND	1	LB	03/11/11	
1,4-Dichlorobenzene	EPA 624	11C1594	0.37	0.50	ND	1	LB	03/11/11	
1,1-Dichloroethane	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
1,2-Dichloroethane	EPA 624	11C1594	0.28	0.50	ND	1	LB	03/11/11	
1,1-Dichloroethene	EPA 624	11C1594	0.42	0.50	ND	1	LB	03/11/11	
cis-1,2-Dichloroethene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
trans-1,2-Dichloroethene	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
1,2-Dichloropropane	EPA 624	11C1594	0.35	0.50	ND	1	LB	03/11/11	
cis-1,3-Dichloropropene	EPA 624	11C1594	0.22	0.50	ND	1	LB	03/11/11	
trans-1,3-Dichloropropene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
Ethylbenzene	EPA 624	11C1594	0.25	0.50	ND	1	LB	03/11/11	
Methylene chloride	EPA 624	11C1594	0.95	1.0	ND	1	LB	03/11/11	
1,1,2,2-Tetrachloroethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
Tetrachloroethene	EPA 624	11C1594	0.32	0.50	ND	1	LB	03/11/11	
Toluene	EPA 624	11C1594	0.36	0.50	ND	1	LB	03/11/11	
1,1,1-Trichloroethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
1,1,2-Trichloroethane	EPA 624	11C1594	0.30	0.50	ND	1	LB	03/11/11	
Trichloroethene	EPA 624	11C1594	0.26	0.50	ND	1	LB	03/11/11	
Trichlorofluoromethane	EPA 624	11C1594	0.34	0.50	ND	1	LB	03/11/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11C1594	0.50	5.0	ND	1	LB	03/11/11	
Vinyl chloride	EPA 624	11C1594	0.40	0.50	ND	1	LB	03/11/11	
Xylenes, Total	EPA 624	11C1594	0.90	1.5	ND	1	LB	03/11/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>106 %</i>				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>111 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>111 %</i>				

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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: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-01 (Outfall 008 (Grab) - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	11B3452	4.0	5.0	ND	1	NA	02/27/11	
Acrylonitrile	EPA 624	11B3452	1.2	2.0	ND	1	NA	02/27/11	
2-Chloroethyl vinyl ether	EPA 624	11B3452	1.8	5.0	ND	1	NA	02/27/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					101 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					101 %				
Sample ID: IUB2816-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	11B3452	4.0	5.0	ND	1	NA	02/27/11	
Acrylonitrile	EPA 624	11B3452	1.2	2.0	ND	1	NA	02/27/11	
2-Chloroethyl vinyl ether	EPA 624	11B3452	1.8	5.0	ND	1	NA	02/27/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					103 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03RE1 (Outfall 008 (Composite) - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Acenaphthylene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Anthracene	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
Benzidine	EPA 625	11C0747	9.62	19.2	ND	0.962	up	03/07/11	
Benzo(a)anthracene	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
Benzo(a)pyrene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Benzo(b)fluoranthene	EPA 625	11C0747	1.92	9.62	ND	0.962	up	03/07/11	
Benzo(g,h,i)perylene	EPA 625	11C0747	3.85	9.62	ND	0.962	up	03/07/11	
Benzo(k)fluoranthene	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
4-Bromophenyl phenyl ether	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Butyl benzyl phthalate	EPA 625	11C0747	3.85	19.2	ND	0.962	up	03/07/11	
4-Chloro-3-methylphenol	EPA 625	11C0747	2.40	19.2	ND	0.962	up	03/07/11	
Bis(2-chloroethoxy)methane	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Bis(2-chloroethyl)ether	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Bis(2-chloroisopropyl)ether	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	C
Bis(2-ethylhexyl)phthalate	EPA 625	11C0747	3.85	48.1	ND	0.962	up	03/07/11	
2-Chloronaphthalene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
2-Chlorophenol	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
4-Chlorophenyl phenyl ether	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
Chrysene	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
Dibenz(a,h)anthracene	EPA 625	11C0747	2.88	19.2	ND	0.962	up	03/07/11	
Di-n-butyl phthalate	EPA 625	11C0747	2.88	19.2	ND	0.962	up	03/07/11	
1,2-Dichlorobenzene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
1,3-Dichlorobenzene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
1,4-Dichlorobenzene	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
3,3'-Dichlorobenzidine	EPA 625	11C0747	7.21	19.2	ND	0.962	up	03/07/11	
2,4-Dichlorophenol	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
Diethyl phthalate	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
2,4-Dimethylphenol	EPA 625	11C0747	3.37	19.2	ND	0.962	up	03/07/11	
Dimethyl phthalate	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
4,6-Dinitro-2-methylphenol	EPA 625	11C0747	3.85	19.2	ND	0.962	up	03/07/11	
2,4-Dinitrophenol	EPA 625	11C0747	7.69	19.2	ND	0.962	up	03/07/11	
2,4-Dinitrotoluene	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
2,6-Dinitrotoluene	EPA 625	11C0747	1.92	9.62	ND	0.962	up	03/07/11	
Di-n-octyl phthalate	EPA 625	11C0747	3.37	19.2	ND	0.962	up	03/07/11	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	11C0747	2.40	19.2	ND	0.962	up	03/07/11	
Fluoranthene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Fluorene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Hexachlorobenzene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Hexachlorobutadiene	EPA 625	11C0747	3.85	9.62	ND	0.962	up	03/07/11	
Hexachlorocyclopentadiene	EPA 625	11C0747	4.81	19.2	ND	0.962	up	03/07/11	

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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: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03RE1 (Outfall 008 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Hexachloroethane	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
Indeno(1,2,3-cd)pyrene	EPA 625	11C0747	3.37	19.2	ND	0.962	up	03/07/11	
Isophorone	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Naphthalene	EPA 625	11C0747	2.88	9.62	ND	0.962	up	03/07/11	
Nitrobenzene	EPA 625	11C0747	2.88	19.2	ND	0.962	up	03/07/11	
2-Nitrophenol	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
4-Nitrophenol	EPA 625	11C0747	5.29	19.2	ND	0.962	up	03/07/11	
N-Nitroso-di-n-propylamine	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
N-Nitrosodimethylamine	EPA 625	11C0747	2.40	19.2	ND	0.962	up	03/07/11	
N-Nitrosodiphenylamine	EPA 625	11C0747	1.92	9.62	ND	0.962	up	03/07/11	
Pentachlorophenol	EPA 625	11C0747	3.37	19.2	ND	0.962	up	03/07/11	
Phenanthrene	EPA 625	11C0747	3.37	9.62	ND	0.962	up	03/07/11	
Phenol	EPA 625	11C0747	1.92	9.62	ND	0.962	up	03/07/11	
Pyrene	EPA 625	11C0747	3.85	9.62	ND	0.962	up	03/07/11	
1,2,4-Trichlorobenzene	EPA 625	11C0747	2.40	9.62	ND	0.962	up	03/07/11	
2,4,6-Trichlorophenol	EPA 625	11C0747	4.33	19.2	ND	0.962	up	03/07/11	
Surrogate: 2,4,6-Tribromophenol (40-120%)					51 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					70 %				
Surrogate: 2-Fluorophenol (30-120%)					24 %				Z
Surrogate: Nitrobenzene-d5 (45-120%)					65 %				
Surrogate: Phenol-d6 (35-120%)					26 %				Z
Surrogate: Terphenyl-d14 (50-125%)					23 %				Z

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 618 Michillinda Avenue, Suite 200
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Chlorpyrifos	EPA 525.2	11B3468	0.010	1.0	ND	1	JM	03/02/11	
Diazinon	EPA 525.2	11B3468	0.10	0.25	ND	1	JM	03/02/11	
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					94 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					119 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					90 %				

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water) - cont.									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	11C0141	0.0038	0.0048	ND	0.962	CN	03/11/11	C
4,4'-DDE	EPA 608	11C0141	0.0029	0.0048	ND	0.962	CN	03/11/11	
4,4'-DDT	EPA 608	11C0141	0.0038	0.0096	ND	0.962	CN	03/11/11	C5
Aldrin	EPA 608	11C0141	0.0014	0.0048	ND	0.962	CN	03/11/11	
alpha-BHC	EPA 608	11C0141	0.0024	0.0048	ND	0.962	CN	03/11/11	
beta-BHC	EPA 608	11C0141	0.0038	0.0096	ND	0.962	CN	03/11/11	
delta-BHC	EPA 608	11C0141	0.0034	0.0048	ND	0.962	CN	03/11/11	
Dieldrin	EPA 608	11C0141	0.0019	0.0048	ND	0.962	CN	03/11/11	
Endosulfan I	EPA 608	11C0141	0.0019	0.0048	ND	0.962	CN	03/11/11	
Endosulfan II	EPA 608	11C0141	0.0029	0.0048	ND	0.962	CN	03/11/11	
Endosulfan sulfate	EPA 608	11C0141	0.0029	0.0096	ND	0.962	CN	03/11/11	
Endrin	EPA 608	11C0141	0.0019	0.0048	ND	0.962	CN	03/11/11	
Endrin aldehyde	EPA 608	11C0141	0.0019	0.0096	ND	0.962	CN	03/11/11	
gamma-BHC (Lindane)	EPA 608	11C0141	0.0029	0.019	ND	0.962	CN	03/11/11	
Heptachlor	EPA 608	11C0141	0.0029	0.0096	ND	0.962	CN	03/11/11	
Heptachlor epoxide	EPA 608	11C0141	0.0024	0.0048	ND	0.962	CN	03/11/11	
Chlordane	EPA 608	11C0141	0.077	0.096	ND	0.962	CN	03/11/11	
Toxaphene	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/11/11	
Surrogate: Decachlorobiphenyl (45-120%)					39 %				Z
Surrogate: Tetrachloro-m-xylene (35-115%)					54 %				

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
Aroclor 1221	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
Aroclor 1232	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
Aroclor 1242	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
Aroclor 1248	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
Aroclor 1254	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
Aroclor 1260	EPA 608	11C0141	0.24	0.48	ND	0.962	CN	03/03/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					32 %		Z5		

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-01 (Outfall 008 (Grab) - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C1560	1.3	4.7	ND	1	DA	03/11/11	

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MWH-Pasadena/Boeing
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Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: mg/l									
Hardness (as CaCO3)	SM2340B	[CALC]		0.33	83	1	DT	03/08/11	
Boron	EPA 200.7	11C0647	0.020	0.050	0.073	1	DT	03/08/11	
Calcium	EPA 200.7	11C0647	0.050	0.10	25	1	DT	03/08/11	B-1
Iron	EPA 200.7	11C0647	0.015	0.040	6.0	1	DT	03/08/11	
Magnesium	EPA 200.7	11C0647	0.012	0.020	4.9	1	DT	03/08/11	
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: ug/l									
Aluminum	EPA 200.7	11C0647	40	50	4700	1	LL	03/14/11	
Mercury	EPA 245.1	11C0579	0.10	0.20	ND	1	DB	03/04/11	
Arsenic	EPA 200.7	11C0647	7.0	10	ND	1	DT	03/08/11	
Antimony	EPA 200.8	11C0773	0.30	2.0	0.42	1	RDC	03/07/11	B, J
Beryllium	EPA 200.7	11C0647	0.90	2.0	ND	1	DT	03/08/11	
Chromium	EPA 200.7	11C0647	2.0	5.0	6.9	1	DT	03/08/11	
Nickel	EPA 200.7	11C0647	2.0	10	5.0	1	DT	03/08/11	J
Silver	EPA 200.7	11C0647	6.0	10	ND	1	DT	03/08/11	
Cadmium	EPA 200.8	11C0773	0.10	1.0	0.46	1	RDC	03/07/11	B, J
Vanadium	EPA 200.7	11C0647	3.0	10	12	1	DT	03/08/11	
Zinc	EPA 200.7	11C0647	6.00	20.0	28.4	1	DT	03/08/11	
Copper	EPA 200.8	11C0773	0.500	2.00	9.33	1	RDC	03/07/11	
Lead	EPA 200.8	11C0773	0.20	1.0	3.8	1	RDC	03/07/11	
Selenium	EPA 200.8	11C0773	0.50	2.0	ND	1	RDC	03/07/11	
Thallium	EPA 200.8	11C0773	0.20	1.0	ND	1	RDC	03/07/11	

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Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]		0.33	74	1	DP	03/09/11	
Boron	EPA 200.7-Diss	11B3548	0.020	0.050	0.084	1	LL	03/09/11	
Calcium	EPA 200.7-Diss	11B3548	0.050	0.10	24	1	DP	03/09/11	
Iron	EPA 200.7-Diss	11B3548	0.015	0.040	0.027	1	DP	03/09/11	J
Magnesium	EPA 200.7-Diss	11B3548	0.012	0.020	3.5	1	DP	03/09/11	

Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)

Reporting Units: ug/l

Aluminum	EPA 200.7-Diss	11B3548	40	50	56	1	LL	03/09/11	
Mercury	EPA 245.1-Diss	11C0168	0.10	0.20	ND	1	DB	03/02/11	
Arsenic	EPA 200.7-Diss	11B3548	7.0	10	ND	1	DP	03/09/11	
Antimony	EPA 200.8-Diss	11C0285	0.30	2.0	0.42	1	RDC	03/03/11	J
Beryllium	EPA 200.7-Diss	11B3548	0.90	2.0	ND	1	LL	03/09/11	
Chromium	EPA 200.7-Diss	11B3548	2.0	5.0	ND	1	LL	03/09/11	
Nickel	EPA 200.7-Diss	11B3548	2.0	10	ND	1	DP	03/09/11	
Silver	EPA 200.7-Diss	11B3548	6.0	10	ND	1	LL	03/09/11	
Cadmium	EPA 200.8-Diss	11C0285	0.10	1.0	ND	1	RDC	03/03/11	
Vanadium	EPA 200.7-Diss	11B3548	3.0	10	ND	1	LL	03/09/11	
Zinc	EPA 200.7-Diss	11B3548	6.00	20.0	25.9	1	DP	03/09/11	
Copper	EPA 200.8-Diss	11C0285	0.500	2.00	1.47	1	RDC	03/03/11	J
Lead	EPA 200.8-Diss	11C0285	0.20	1.0	ND	1	RDC	03/03/11	
Selenium	EPA 200.8-Diss	11C0285	0.50	2.0	ND	1	RDC	03/03/11	
Thallium	EPA 200.8-Diss	11C0285	0.20	1.0	ND	1	RDC	03/03/11	

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Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

DISSOLVED INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-01 (Outfall 008 (Grab) - Water)									
Reporting Units: ug/l									
Chromium VI	EPA 218.6	11B3425	0.250	1.00	0.264	1	EL	02/26/11	J

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11C0150	0.500	0.500	ND	1	TMK	03/01/11	
Chloride	EPA 300.0	11B3465	0.30	0.50	7.0	1	KS	02/27/11	
Fluoride	SM 4500-F-C	11C0005	0.020	0.10	0.25	1	FZ	03/01/11	
Nitrate-N	EPA 300.0	11B3465	0.060	0.11	0.71	1	KS	02/27/11	
Nitrite-N	EPA 300.0	11B3465	0.090	0.15	ND	1	KS	02/27/11	
Nitrate/Nitrite-N	EPA 300.0	11B3465	0.15	0.26	0.71	1	KS	02/27/11	
Sulfate	EPA 300.0	11B3465	0.30	0.50	6.1	1	KS	02/27/11	
Total Dissolved Solids	SM2540C	11C0204	1.0	10	200	1	MC	03/02/11	
Total Suspended Solids	SM 2540D	11C0554	1.0	10	68	1	DC	03/03/11	

Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)

Reporting Units: ug/l

Perchlorate	EPA 314.0	11C0021	0.90	4.0	2.4	1	mn	03/01/11	J
Total Cyanide	SM4500CN-E	11C0158	2.2	5.0	ND	1	HH	03/01/11	

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

COLIFORMS BY MULTIPLE TUBE FERMENTATION - MPN (SM9221/40 CFR 141.21(f)(6)(i))

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-01 (Outfall 008 (Grab) - Water)									
Reporting Units: MPN/100 ml									
Fecal Coliform	SM9221 A,B,C,E	11B3420	2.00	2.00	170	1	AK	03/01/11	
E. Coli	SM9221 A,B,C,E	11B3420	2.00	2.00	170	1	AK	03/01/11	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

8666

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Uranium, Total	8666	8666		1	0.838	1	TSC	03/15/11	Jb
Sample ID: IUB2816-04 (Trip Blanks - Water)									
Reporting Units: pCi/L									
Uranium, Total	8666	8666		1	ND	1	TSC	03/15/11	U

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Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Gross Alpha	900	8666		3	3.52	1	LS	03/14/11	
Gross Beta	900	8666		4	5.15	1	LS	03/14/11	
Sample ID: IUB2816-04 (Trip Blanks - Water)									
Reporting Units: pCi/L									
Gross Alpha	900	8666		3	-0.097	1	LS	03/14/11	U
Gross Beta	900	8666		4	-0.236	1	LS	03/14/11	U

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Cesium-137	901.1	8666		20	ND	1	LS	03/08/11	U
Potassium-40	901.1	8666		25	ND	1	LS	03/08/11	U
Sample ID: IUB2816-04 (Trip Blanks - Water)									
Reporting Units: pCi/L									
Cesium-137	901.1	8666		20	ND	1	LS	03/08/11	U
Potassium-40	901.1	8666		25	ND	1	LS	03/08/11	U

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Radium-226	903.1	8666		1	0.1	1	ASM	03/19/11	U
Sample ID: IUB2816-04 (Trip Blanks - Water)									
Reporting Units: pCi/L									
Radium-226	903.1	8666		1	-0.015	1	ASM	03/19/11	U

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Radium-228	904	8666		1	0.343	1	ASM	03/18/11	U
Sample ID: IUB2816-04 (Trip Blanks - Water)									
Reporting Units: pCi/L									
Radium-228	904	8666		1	0.017	1	ASM	03/18/11	U

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Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Strontium-90	905	8666		2	-0.423	1	ASM	03/16/11	U
Sample ID: IUB2816-04 (Trip Blanks - Water)									
Reporting Units: pCi/L									
Strontium-90	905	8666		2	0.134	1	ASM	03/16/11	U

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Tritium	906	8666		500	-28.6	1	WL	03/22/11	U

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water) - cont.									
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1062414	0.0000018	0.000051	4.6e-006	1.02	SY	03/07/11	J, Q, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1062414	0.0000015	0.000051	2.4e-006	1.02	SY	03/07/11	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1062414	0.0000024	0.000051	ND	1.02	SY	03/07/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1062414	0.0000028	0.000051	ND	1.02	SY	03/07/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1062414	0.0000021	0.000051	ND	1.02	SY	03/07/11	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1062414	0.0000025	0.000051	ND	1.02	SY	03/07/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1062414	0.0000019	0.000051	ND	1.02	SY	03/07/11	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1062414	0.0000022	0.000051	ND	1.02	SY	03/07/11	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1062414	0.0000028	0.000051	ND	1.02	SY	03/07/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1062414	0.0000058	0.000051	ND	1.02	SY	03/07/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1062414	0.0000069	0.000051	ND	1.02	SY	03/07/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1062414	0.0000019	0.000051	ND	1.02	SY	03/07/11	
2,3,4,7,8-PeCDF	EPA-5 1613B	1062414	0.0000071	0.000051	ND	1.02	SY	03/07/11	
2,3,7,8-TCDD	EPA-5 1613B	1062414	0.0000024	0.00001	ND	1.02	SY	03/07/11	
2,3,7,8-TCDF	EPA-5 1613B	1062414	0.0000031	0.00001	ND	1.02	SY	03/07/11	
OCDD	EPA-5 1613B	1062414	0.0000071	0.0001	4.7e-005	1.02	SY	03/07/11	J, Ba
OCDF	EPA-5 1613B	1062414	0.0000048	0.0001	4.9e-006	1.02	SY	03/07/11	J
Total HpCDD	EPA-5 1613B	1062414	0.0000018	0.000051	1.2e-005	1.02	SY	03/07/11	J, Q, Ba
Total HpCDF	EPA-5 1613B	1062414	0.0000019	0.000051	2.4e-006	1.02	SY	03/07/11	J, Q, Ba
Total HxCDD	EPA-5 1613B	1062414	0.0000022	0.000051	ND	1.02	SY	03/07/11	
Total HxCDF	EPA-5 1613B	1062414	0.0000019	0.000051	ND	1.02	SY	03/07/11	
Total PeCDD	EPA-5 1613B	1062414	0.0000058	0.000051	ND	1.02	SY	03/07/11	
Total PeCDF	EPA-5 1613B	1062414	0.0000069	0.000051	ND	1.02	SY	03/07/11	
Total TCDD	EPA-5 1613B	1062414	0.0000024	0.00001	6.6e-006	1.02	SY	03/07/11	J, Q
Total TCDF	EPA-5 1613B	1062414	0.0000031	0.00001	ND	1.02	SY	03/07/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	88 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	109 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	103 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	92 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	104 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	87 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	107 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	102 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	62 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	70 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	115 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	75 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	65 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	71 %
Surrogate: 13C-OCDD (17-157%)	76 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	87 %

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

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) (IUB2816-01) - Water					
EPA 218.6	1	02/26/2011 09:45	02/26/2011 14:40	02/26/2011 17:30	02/26/2011 19:57
EPA 624	3	02/26/2011 09:45	02/26/2011 14:40	02/27/2011 09:24	02/27/2011 18:40
SM9221 A,B,C,E	0	02/26/2011 09:45	02/26/2011 14:40	02/26/2011 15:00	03/01/2011 11:25
Sample ID: Trip Blanks (IUB2816-02) - Water					
EPA 624	3	02/26/2011 09:45	02/26/2011 14:40	02/27/2011 09:24	02/27/2011 18:11
Sample ID: Outfall 008 (Composite) (IUB2816-03) - Water					
EPA 300.0	2	02/26/2011 08:42	02/26/2011 14:40	02/27/2011 16:15	02/27/2011 16:38
EPA 525.2	1	02/26/2011 08:42	02/26/2011 14:40	02/27/2011 17:19	03/02/2011 02:07
Filtration	1	02/26/2011 08:42	02/26/2011 14:40	02/27/2011 20:30	02/27/2011 20:30

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1594 Extracted: 03/11/11											
Blank Analyzed: 03/11/2011 (11C1594-BLK1)											
Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	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							
1,1-Dichloroethane	ND	0.50	0.40	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	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							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	ND	1.0	0.95	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: 4-Bromofluorobenzene	26.0			ug/l	25.0		104	80-120			
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	27.7			ug/l	25.0		111	80-120			

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Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1594 Extracted: 03/11/11											
LCS Analyzed: 03/11/2011 (11C1594-BS1)											
Benzene	22.7	0.50	0.28	ug/l	25.0		91	70-120			
Bromodichloromethane	26.6	0.50	0.30	ug/l	25.0		106	70-135			
Bromoform	20.2	0.50	0.40	ug/l	25.0		81	55-130			
Bromomethane	21.4	1.0	0.42	ug/l	25.0		86	65-140			
Carbon tetrachloride	25.2	0.50	0.28	ug/l	25.0		101	65-140			
Chlorobenzene	23.5	0.50	0.36	ug/l	25.0		94	75-120			
Chloroethane	23.1	1.0	0.40	ug/l	25.0		92	60-140			
Chloroform	24.6	0.50	0.33	ug/l	25.0		98	70-130			
Chloromethane	22.0	0.50	0.40	ug/l	25.0		88	50-140			
Dibromochloromethane	21.7	0.50	0.40	ug/l	25.0		87	70-140			
1,2-Dichlorobenzene	25.4	0.50	0.32	ug/l	25.0		102	75-120			
1,3-Dichlorobenzene	24.8	0.50	0.35	ug/l	25.0		99	75-120			
1,4-Dichlorobenzene	24.4	0.50	0.37	ug/l	25.0		98	75-120			
1,1-Dichloroethane	23.5	0.50	0.40	ug/l	25.0		94	70-125			
1,2-Dichloroethane	26.1	0.50	0.28	ug/l	25.0		104	60-140			
1,1-Dichloroethene	22.5	0.50	0.42	ug/l	25.0		90	70-125			
trans-1,2-Dichloroethene	23.2	0.50	0.30	ug/l	25.0		93	70-125			
1,2-Dichloropropane	24.2	0.50	0.35	ug/l	25.0		97	70-125			
cis-1,3-Dichloropropene	25.1	0.50	0.22	ug/l	25.0		100	75-125			
trans-1,3-Dichloropropene	22.6	0.50	0.32	ug/l	25.0		90	70-125			
Ethylbenzene	24.6	0.50	0.25	ug/l	25.0		98	75-125			
Methylene chloride	20.9	1.0	0.95	ug/l	25.0		84	55-130			
1,1,2,2-Tetrachloroethane	24.4	0.50	0.30	ug/l	25.0		98	55-130			
Tetrachloroethene	22.9	0.50	0.32	ug/l	25.0		92	70-125			
Toluene	24.8	0.50	0.36	ug/l	25.0		99	70-120			
1,1,1-Trichloroethane	25.7	0.50	0.30	ug/l	25.0		103	65-135			
1,1,2-Trichloroethane	24.7	0.50	0.30	ug/l	25.0		99	70-125			
Trichloroethene	24.5	0.50	0.26	ug/l	25.0		98	70-125			
Trichlorofluoromethane	24.6	0.50	0.34	ug/l	25.0		98	65-145			
Vinyl chloride	21.1	0.50	0.40	ug/l	25.0		84	55-135			
Xylenes, Total	75.8	1.5	0.90	ug/l	75.0		101	70-125			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.8			ug/l	25.0		111	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1594 Extracted: 03/11/11											
Matrix Spike Analyzed: 03/11/2011 (11C1594-MS1)						Source: IUB2816-01					
Benzene	27.6	0.50	0.28	ug/l	25.0	ND	110	65-125			
Bromodichloromethane	33.7	0.50	0.30	ug/l	25.0	ND	135	70-135			
Bromoform	24.1	0.50	0.40	ug/l	25.0	ND	96	55-135			
Bromomethane	25.8	1.0	0.42	ug/l	25.0	ND	103	55-145			
Carbon tetrachloride	29.3	0.50	0.28	ug/l	25.0	ND	117	65-140			
Chlorobenzene	28.6	0.50	0.36	ug/l	25.0	ND	114	75-125			
Chloroethane	27.3	1.0	0.40	ug/l	25.0	ND	109	55-140			
Chloroform	31.0	0.50	0.33	ug/l	25.0	ND	124	65-135			
Chloromethane	26.6	0.50	0.40	ug/l	25.0	ND	106	45-145			
Dibromochloromethane	26.2	0.50	0.40	ug/l	25.0	ND	105	65-140			
1,2-Dichlorobenzene	30.3	0.50	0.32	ug/l	25.0	ND	121	75-125			
1,3-Dichlorobenzene	29.7	0.50	0.35	ug/l	25.0	ND	119	75-125			
1,4-Dichlorobenzene	29.2	0.50	0.37	ug/l	25.0	ND	117	75-125			
1,1-Dichloroethane	29.3	0.50	0.40	ug/l	25.0	ND	117	65-130			
1,2-Dichloroethane	31.8	0.50	0.28	ug/l	25.0	ND	127	60-140			
1,1-Dichloroethene	25.5	0.50	0.42	ug/l	25.0	ND	102	60-130			
trans-1,2-Dichloroethene	28.2	0.50	0.30	ug/l	25.0	ND	113	65-130			
1,2-Dichloropropane	30.4	0.50	0.35	ug/l	25.0	ND	121	65-130			
cis-1,3-Dichloropropene	31.2	0.50	0.22	ug/l	25.0	ND	125	70-130			
trans-1,3-Dichloropropene	28.7	0.50	0.32	ug/l	25.0	ND	115	65-135			
Ethylbenzene	29.2	0.50	0.25	ug/l	25.0	ND	117	65-130			
Methylene chloride	26.3	1.0	0.95	ug/l	25.0	ND	105	50-135			
1,1,2,2-Tetrachloroethane	26.7	0.50	0.30	ug/l	25.0	ND	107	55-135			
Tetrachloroethene	26.5	0.50	0.32	ug/l	25.0	ND	106	65-130			
Toluene	30.1	0.50	0.36	ug/l	25.0	ND	120	70-125			
1,1,1-Trichloroethane	30.7	0.50	0.30	ug/l	25.0	ND	123	65-140			
1,1,2-Trichloroethane	29.6	0.50	0.30	ug/l	25.0	ND	119	65-130			
Trichloroethene	28.4	0.50	0.26	ug/l	25.0	ND	114	65-125			
Trichlorofluoromethane	28.6	0.50	0.34	ug/l	25.0	ND	114	60-145			
Vinyl chloride	25.6	0.50	0.40	ug/l	25.0	ND	103	45-140			
Xylenes, Total	90.1	1.5	0.90	ug/l	75.0	ND	120	60-130			
Surrogate: 4-Bromofluorobenzene	27.4			ug/l	25.0		110	80-120			
Surrogate: Dibromofluoromethane	29.0			ug/l	25.0		116	80-120			
Surrogate: Toluene-d8	28.1			ug/l	25.0		112	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

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618 Michillinda Avenue, Suite 200
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Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1594 Extracted: 03/11/11											
Matrix Spike Dup Analyzed: 03/11/2011 (11C1594-MSD1)						Source: IUB2816-01					
Benzene	26.0	0.50	0.28	ug/l	25.0	ND	104	65-125	6	20	
Bromodichloromethane	32.0	0.50	0.30	ug/l	25.0	ND	128	70-135	5	20	
Bromoform	23.7	0.50	0.40	ug/l	25.0	ND	95	55-135	2	25	
Bromomethane	24.3	1.0	0.42	ug/l	25.0	ND	97	55-145	6	25	
Carbon tetrachloride	27.9	0.50	0.28	ug/l	25.0	ND	111	65-140	5	25	
Chlorobenzene	27.0	0.50	0.36	ug/l	25.0	ND	108	75-125	6	20	
Chloroethane	25.8	1.0	0.40	ug/l	25.0	ND	103	55-140	6	25	
Chloroform	29.1	0.50	0.33	ug/l	25.0	ND	116	65-135	6	20	
Chloromethane	25.2	0.50	0.40	ug/l	25.0	ND	101	45-145	5	25	
Dibromochloromethane	25.4	0.50	0.40	ug/l	25.0	ND	102	65-140	3	25	
1,2-Dichlorobenzene	28.6	0.50	0.32	ug/l	25.0	ND	115	75-125	6	20	
1,3-Dichlorobenzene	28.0	0.50	0.35	ug/l	25.0	ND	112	75-125	6	20	
1,4-Dichlorobenzene	27.6	0.50	0.37	ug/l	25.0	ND	111	75-125	5	20	
1,1-Dichloroethane	27.7	0.50	0.40	ug/l	25.0	ND	111	65-130	6	20	
1,2-Dichloroethane	30.5	0.50	0.28	ug/l	25.0	ND	122	60-140	4	20	
1,1-Dichloroethene	24.2	0.50	0.42	ug/l	25.0	ND	97	60-130	5	20	
trans-1,2-Dichloroethene	26.6	0.50	0.30	ug/l	25.0	ND	107	65-130	6	20	
1,2-Dichloropropane	28.8	0.50	0.35	ug/l	25.0	ND	115	65-130	5	20	
cis-1,3-Dichloropropene	29.8	0.50	0.22	ug/l	25.0	ND	119	70-130	5	20	
trans-1,3-Dichloropropene	27.3	0.50	0.32	ug/l	25.0	ND	109	65-135	5	25	
Ethylbenzene	27.1	0.50	0.25	ug/l	25.0	ND	109	65-130	7	20	
Methylene chloride	24.9	1.0	0.95	ug/l	25.0	ND	100	50-135	5	20	
1,1,2,2-Tetrachloroethane	25.6	0.50	0.30	ug/l	25.0	ND	102	55-135	4	30	
Tetrachloroethene	25.0	0.50	0.32	ug/l	25.0	ND	100	65-130	6	20	
Toluene	28.2	0.50	0.36	ug/l	25.0	ND	113	70-125	7	20	
1,1,1-Trichloroethane	29.2	0.50	0.30	ug/l	25.0	ND	117	65-140	5	20	
1,1,2-Trichloroethane	28.6	0.50	0.30	ug/l	25.0	ND	114	65-130	4	25	
Trichloroethene	27.5	0.50	0.26	ug/l	25.0	ND	110	65-125	3	20	
Trichlorofluoromethane	26.9	0.50	0.34	ug/l	25.0	ND	108	60-145	6	25	
Vinyl chloride	23.9	0.50	0.40	ug/l	25.0	ND	96	45-140	7	30	
Xylenes, Total	83.6	1.5	0.90	ug/l	75.0	ND	111	60-130	8	20	
Surrogate: 4-Bromofluorobenzene	27.5			ug/l	25.0		110	80-120			
Surrogate: Dibromofluoromethane	29.1			ug/l	25.0		116	80-120			
Surrogate: Toluene-d8	27.9			ug/l	25.0		112	80-120			

TestAmerica Irvine

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Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

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: 11B3452 Extracted: 02/27/11											
Blank Analyzed: 02/27/2011 (11B3452-BLK1)											
Acrolein	ND	5.0	4.0	ug/l							
Acrylonitrile	ND	2.0	1.2	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: 4-Bromofluorobenzene	24.0			ug/l	25.0		96	80-120			
Surrogate: Dibromofluoromethane	23.5			ug/l	25.0		94	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
LCS Analyzed: 02/27/2011 (11B3452-BS1)											
2-Chloroethyl vinyl ether	25.4	5.0	1.8	ug/l	25.0		102	25-170			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
Surrogate: Dibromofluoromethane	24.3			ug/l	25.0		97	80-120			
Surrogate: Toluene-d8	25.3			ug/l	25.0		101	80-120			
Matrix Spike Analyzed: 02/27/2011 (11B3452-MS1) Source: IUB1996-01											
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170			M13
Surrogate: 4-Bromofluorobenzene	24.0			ug/l	25.0		96	80-120			
Surrogate: Dibromofluoromethane	24.3			ug/l	25.0		97	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Matrix Spike Dup Analyzed: 02/27/2011 (11B3452-MSD1) Source: IUB1996-01											
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170		25	M13
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
Surrogate: Dibromofluoromethane	24.6			ug/l	25.0		98	80-120			
Surrogate: Toluene-d8	25.3			ug/l	25.0		101	80-120			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0747 Extracted: 03/05/11											
Blank Analyzed: 03/07/2011 (11C0747-BLK1)											
Acenaphthene	ND	10.0	3.00	ug/l							
Acenaphthylene	ND	10.0	3.00	ug/l							
Anthracene	ND	10.0	2.50	ug/l							
Benzidine	ND	20.0	10.0	ug/l							
Benzo(a)anthracene	ND	10.0	2.50	ug/l							
Benzo(a)pyrene	ND	10.0	3.00	ug/l							
Benzo(b)fluoranthene	ND	10.0	2.00	ug/l							
Benzo(g,h,i)perylene	ND	10.0	4.00	ug/l							
Benzo(k)fluoranthene	ND	10.0	2.50	ug/l							
4-Bromophenyl phenyl ether	ND	10.0	3.00	ug/l							
Butyl benzyl phthalate	ND	20.0	4.00	ug/l							
4-Chloro-3-methylphenol	ND	20.0	2.50	ug/l							
Bis(2-chloroethoxy)methane	ND	10.0	3.00	ug/l							
Bis(2-chloroethyl)ether	ND	10.0	3.00	ug/l							
Bis(2-chloroisopropyl)ether	ND	10.0	2.50	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50.0	4.00	ug/l							
2-Chloronaphthalene	ND	10.0	3.00	ug/l							
2-Chlorophenol	ND	10.0	3.00	ug/l							
4-Chlorophenyl phenyl ether	ND	10.0	2.50	ug/l							
Chrysene	ND	10.0	2.50	ug/l							
Dibenz(a,h)anthracene	ND	20.0	3.00	ug/l							
Di-n-butyl phthalate	ND	20.0	3.00	ug/l							
1,2-Dichlorobenzene	ND	10.0	3.00	ug/l							
1,3-Dichlorobenzene	ND	10.0	3.00	ug/l							
1,4-Dichlorobenzene	ND	10.0	2.50	ug/l							
3,3'-Dichlorobenzidine	ND	20.0	7.50	ug/l							
2,4-Dichlorophenol	ND	10.0	3.50	ug/l							
Diethyl phthalate	ND	10.0	3.50	ug/l							
2,4-Dimethylphenol	ND	20.0	3.50	ug/l							
Dimethyl phthalate	ND	10.0	2.50	ug/l							
4,6-Dinitro-2-methylphenol	ND	20.0	4.00	ug/l							
2,4-Dinitrophenol	ND	20.0	8.00	ug/l							
2,4-Dinitrotoluene	ND	10.0	3.50	ug/l							
2,6-Dinitrotoluene	ND	10.0	2.00	ug/l							
Di-n-octyl phthalate	ND	20.0	3.50	ug/l							

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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: 11C0747 Extracted: 03/05/11											
Blank Analyzed: 03/07/2011 (11C0747-BLK1)											
1,2-Diphenylhydrazine/Azobenzene	ND	20.0	2.50	ug/l							
Fluoranthene	ND	10.0	3.00	ug/l							
Fluorene	ND	10.0	3.00	ug/l							
Hexachlorobenzene	ND	10.0	3.00	ug/l							
Hexachlorobutadiene	ND	10.0	4.00	ug/l							
Hexachlorocyclopentadiene	ND	20.0	5.00	ug/l							
Hexachloroethane	ND	10.0	3.50	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20.0	3.50	ug/l							
Isophorone	ND	10.0	3.00	ug/l							
Naphthalene	ND	10.0	3.00	ug/l							
Nitrobenzene	ND	20.0	3.00	ug/l							
2-Nitrophenol	ND	10.0	3.50	ug/l							
4-Nitrophenol	ND	20.0	5.50	ug/l							
N-Nitroso-di-n-propylamine	ND	10.0	3.50	ug/l							
N-Nitrosodimethylamine	ND	20.0	2.50	ug/l							
N-Nitrosodiphenylamine	ND	10.0	2.00	ug/l							
Pentachlorophenol	ND	20.0	3.50	ug/l							
Phenanthrene	ND	10.0	3.50	ug/l							
Phenol	ND	10.0	2.00	ug/l							
Pyrene	ND	10.0	4.00	ug/l							
1,2,4-Trichlorobenzene	ND	10.0	2.50	ug/l							
2,4,6-Trichlorophenol	ND	20.0	4.50	ug/l							
Surrogate: 2,4,6-Tribromophenol	183			ug/l	200		92	40-120			
Surrogate: 2-Fluorobiphenyl	86.3			ug/l	100		86	50-120			
Surrogate: 2-Fluorophenol	125			ug/l	200		62	30-120			
Surrogate: Nitrobenzene-d5	84.9			ug/l	100		85	45-120			
Surrogate: Phenol-d6	141			ug/l	200		71	35-120			
Surrogate: Terphenyl-d14	88.7			ug/l	100		89	50-125			

TestAmerica Irvine

Debby Wilson
Project Manager

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

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Sampled: 02/26/11
Received: 02/26/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0747 Extracted: 03/05/11											
LCS Analyzed: 03/07/2011 (11C0747-BS1)											
Acenaphthene	94.2	10.0	3.00	ug/l	100		94	60-120			MNR1
Acenaphthylene	93.5	10.0	3.00	ug/l	100		94	60-120			
Anthracene	100	10.0	2.50	ug/l	100		100	65-120			
Benidine	ND	20.0	10.0	ug/l	100			30-160			L6
Benzo(a)anthracene	92.6	10.0	2.50	ug/l	100		93	65-120			
Benzo(a)pyrene	99.7	10.0	3.00	ug/l	100		100	55-130			
Benzo(b)fluoranthene	86.7	10.0	2.00	ug/l	100		87	55-125			
Benzo(g,h,i)perylene	104	10.0	4.00	ug/l	100		104	45-135			
Benzo(k)fluoranthene	105	10.0	2.50	ug/l	100		105	50-125			
4-Bromophenyl phenyl ether	98.3	10.0	3.00	ug/l	100		98	60-120			
Butyl benzyl phthalate	96.0	20.0	4.00	ug/l	100		96	55-130			
4-Chloro-3-methylphenol	89.7	20.0	2.50	ug/l	100		90	60-120			
Bis(2-chloroethoxy)methane	91.6	10.0	3.00	ug/l	100		92	55-120			
Bis(2-chloroethyl)ether	89.8	10.0	3.00	ug/l	100		90	50-120			
Bis(2-chloroisopropyl)ether	105	10.0	2.50	ug/l	100		105	45-120			
Bis(2-ethylhexyl)phthalate	84.1	50.0	4.00	ug/l	100		84	65-130			
2-Chloronaphthalene	92.1	10.0	3.00	ug/l	100		92	60-120			
2-Chlorophenol	75.2	10.0	3.00	ug/l	100		75	45-120			
4-Chlorophenyl phenyl ether	97.7	10.0	2.50	ug/l	100		98	65-120			
Chrysene	96.2	10.0	2.50	ug/l	100		96	65-120			
Dibenz(a,h)anthracene	113	20.0	3.00	ug/l	100		113	50-135			
Di-n-butyl phthalate	99.7	20.0	3.00	ug/l	100		100	60-125			
1,2-Dichlorobenzene	65.9	10.0	3.00	ug/l	100		66	40-120			
1,3-Dichlorobenzene	91.8	10.0	3.00	ug/l	100		92	35-120			
1,4-Dichlorobenzene	63.8	10.0	2.50	ug/l	100		64	35-120			
3,3'-Dichlorobenzidine	54.5	20.0	7.50	ug/l	100		54	45-135			
2,4-Dichlorophenol	83.3	10.0	3.50	ug/l	100		83	55-120			
Diethyl phthalate	94.4	10.0	3.50	ug/l	100		94	55-120			
2,4-Dimethylphenol	80.2	20.0	3.50	ug/l	100		80	40-120			
Dimethyl phthalate	90.9	10.0	2.50	ug/l	100		91	30-120			
4,6-Dinitro-2-methylphenol	76.3	20.0	4.00	ug/l	100		76	45-120			
2,4-Dinitrophenol	58.6	20.0	8.00	ug/l	100		59	40-120			
2,4-Dinitrotoluene	91.2	10.0	3.50	ug/l	100		91	65-120			
2,6-Dinitrotoluene	90.4	10.0	2.00	ug/l	100		90	65-120			
Di-n-octyl phthalate	86.3	20.0	3.50	ug/l	100		86	65-135			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0747 Extracted: 03/05/11											
LCS Analyzed: 03/07/2011 (11C0747-BS1)											MNR1
1,2-Diphenylhydrazine/Azobenzene	99.2	20.0	2.50	ug/l	100		99	60-120			
Fluoranthene	102	10.0	3.00	ug/l	100		102	60-120			
Fluorene	95.1	10.0	3.00	ug/l	100		95	65-120			
Hexachlorobenzene	99.4	10.0	3.00	ug/l	100		99	60-120			
Hexachlorobutadiene	68.0	10.0	4.00	ug/l	100		68	40-120			
Hexachlorocyclopentadiene	68.1	20.0	5.00	ug/l	100		68	25-120			
Hexachloroethane	56.5	10.0	3.50	ug/l	100		56	35-120			
Indeno(1,2,3-cd)pyrene	102	20.0	3.50	ug/l	100		102	45-135			
Isophorone	95.9	10.0	3.00	ug/l	100		96	50-120			
Naphthalene	85.0	10.0	3.00	ug/l	100		85	55-120			
Nitrobenzene	93.7	20.0	3.00	ug/l	100		94	55-120			
2-Nitrophenol	81.5	10.0	3.50	ug/l	100		82	50-120			
4-Nitrophenol	89.2	20.0	5.50	ug/l	100		89	45-120			
N-Nitroso-di-n-propylamine	91.6	10.0	3.50	ug/l	100		92	45-120			
N-Nitrosodimethylamine	87.1	20.0	2.50	ug/l	100		87	45-120			
N-Nitrosodiphenylamine	91.5	10.0	2.00	ug/l	100		92	60-120			
Pentachlorophenol	80.9	20.0	3.50	ug/l	100		81	24-121			
Phenanthrene	98.5	10.0	3.50	ug/l	100		99	65-120			
Phenol	75.9	10.0	2.00	ug/l	100		76	40-120			
Pyrene	85.1	10.0	4.00	ug/l	100		85	55-125			
1,2,4-Trichlorobenzene	74.4	10.0	2.50	ug/l	100		74	45-120			
2,4,6-Trichlorophenol	95.7	20.0	4.50	ug/l	100		96	55-120			
Surrogate: 2,4,6-Tribromophenol	192			ug/l	200		96	40-120			
Surrogate: 2-Fluorobiphenyl	95.7			ug/l	100		96	50-120			
Surrogate: 2-Fluorophenol	134			ug/l	200		67	30-120			
Surrogate: Nitrobenzene-d5	88.4			ug/l	100		88	45-120			
Surrogate: Phenol-d6	145			ug/l	200		73	35-120			
Surrogate: Terphenyl-d14	90.2			ug/l	100		90	50-125			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0747 Extracted: 03/05/11											
LCS Dup Analyzed: 03/07/2011 (11C0747-BSD1)											
Acenaphthene	79.3	10.0	3.00	ug/l	100	79	60-120	17	20		
Acenaphthylene	80.0	10.0	3.00	ug/l	100	80	60-120	16	20		
Anthracene	90.1	10.0	2.50	ug/l	100	90	65-120	10	20		
Benizidine	94.2	20.0	10.0	ug/l	100	94	30-160		35		
Benzo(a)anthracene	86.6	10.0	2.50	ug/l	100	87	65-120	7	20		
Benzo(a)pyrene	89.3	10.0	3.00	ug/l	100	89	55-130	11	25		
Benzo(b)fluoranthene	77.8	10.0	2.00	ug/l	100	78	55-125	11	25		
Benzo(g,h,i)perylene	89.2	10.0	4.00	ug/l	100	89	45-135	15	25		
Benzo(k)fluoranthene	89.7	10.0	2.50	ug/l	100	90	50-125	15	20		
4-Bromophenyl phenyl ether	89.5	10.0	3.00	ug/l	100	90	60-120	9	25		
Butyl benzyl phthalate	88.7	20.0	4.00	ug/l	100	89	55-130	8	20		
4-Chloro-3-methylphenol	76.0	20.0	2.50	ug/l	100	76	60-120	17	25		
Bis(2-chloroethoxy)methane	79.5	10.0	3.00	ug/l	100	79	55-120	14	20		
Bis(2-chloroethyl)ether	74.6	10.0	3.00	ug/l	100	75	50-120	19	20		
Bis(2-chloroisopropyl)ether	87.4	10.0	2.50	ug/l	100	87	45-120	18	20		
Bis(2-ethylhexyl)phthalate	76.6	50.0	4.00	ug/l	100	77	65-130	9	20		
2-Chloronaphthalene	76.5	10.0	3.00	ug/l	100	76	60-120	19	20		
2-Chlorophenol	60.8	10.0	3.00	ug/l	100	61	45-120	21	25		
4-Chlorophenyl phenyl ether	82.1	10.0	2.50	ug/l	100	82	65-120	17	20		
Chrysene	88.4	10.0	2.50	ug/l	100	88	65-120	8	20		
Dibenz(a,h)anthracene	97.1	20.0	3.00	ug/l	100	97	50-135	15	25		
Di-n-butyl phthalate	91.2	20.0	3.00	ug/l	100	91	60-125	9	20		
1,2-Dichlorobenzene	53.8	10.0	3.00	ug/l	100	54	40-120	20	25		
1,3-Dichlorobenzene	85.2	10.0	3.00	ug/l	100	85	35-120	7	25		
1,4-Dichlorobenzene	51.9	10.0	2.50	ug/l	100	52	35-120	21	25		
3,3'-Dichlorobenzidine	74.6	20.0	7.50	ug/l	100	75	45-135	31	25		R-7
2,4-Dichlorophenol	67.0	10.0	3.50	ug/l	100	67	55-120	22	20		R-7
Diethyl phthalate	85.7	10.0	3.50	ug/l	100	86	55-120	10	30		
2,4-Dimethylphenol	64.4	20.0	3.50	ug/l	100	64	40-120	22	25		
Dimethyl phthalate	80.9	10.0	2.50	ug/l	100	81	30-120	12	30		
4,6-Dinitro-2-methylphenol	75.1	20.0	4.00	ug/l	100	75	45-120	2	25		
2,4-Dinitrophenol	60.2	20.0	8.00	ug/l	100	60	40-120	3	25		
2,4-Dinitrotoluene	84.2	10.0	3.50	ug/l	100	84	65-120	8	20		
2,6-Dinitrotoluene	81.5	10.0	2.00	ug/l	100	82	65-120	10	20		
Di-n-octyl phthalate	80.4	20.0	3.50	ug/l	100	80	65-135	7	20		

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Debby Wilson
Project Manager

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Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0747 Extracted: 03/05/11											
LCS Dup Analyzed: 03/07/2011 (11C0747-BSD1)											
1,2-Diphenylhydrazine/Azobenzene	86.6	20.0	2.50	ug/l	100		87	60-120	14	25	
Fluoranthene	90.7	10.0	3.00	ug/l	100		91	60-120	11	20	
Fluorene	82.0	10.0	3.00	ug/l	100		82	65-120	15	20	
Hexachlorobenzene	89.9	10.0	3.00	ug/l	100		90	60-120	10	20	
Hexachlorobutadiene	55.4	10.0	4.00	ug/l	100		55	40-120	20	25	
Hexachlorocyclopentadiene	58.8	20.0	5.00	ug/l	100		59	25-120	15	30	
Hexachloroethane	47.6	10.0	3.50	ug/l	100		48	35-120	17	25	
Indeno(1,2,3-cd)pyrene	89.6	20.0	3.50	ug/l	100		90	45-135	13	25	
Isophorone	80.8	10.0	3.00	ug/l	100		81	50-120	17	20	
Naphthalene	67.4	10.0	3.00	ug/l	100		67	55-120	23	20	R-7
Nitrobenzene	76.5	20.0	3.00	ug/l	100		76	55-120	20	25	
2-Nitrophenol	68.2	10.0	3.50	ug/l	100		68	50-120	18	25	
4-Nitrophenol	78.0	20.0	5.50	ug/l	100		78	45-120	13	30	
N-Nitroso-di-n-propylamine	80.9	10.0	3.50	ug/l	100		81	45-120	12	20	
N-Nitrosodimethylamine	72.3	20.0	2.50	ug/l	100		72	45-120	19	20	
N-Nitrosodiphenylamine	89.0	10.0	2.00	ug/l	100		89	60-120	3	20	
Pentachlorophenol	78.1	20.0	3.50	ug/l	100		78	24-121	4	25	
Phenanthrene	89.2	10.0	3.50	ug/l	100		89	65-120	10	20	
Phenol	67.2	10.0	2.00	ug/l	100		67	40-120	12	25	
Pyrene	79.7	10.0	4.00	ug/l	100		80	55-125	7	25	
1,2,4-Trichlorobenzene	59.4	10.0	2.50	ug/l	100		59	45-120	23	20	R-7
2,4,6-Trichlorophenol	79.8	20.0	4.50	ug/l	100		80	55-120	18	30	
Surrogate: 2,4,6-Tribromophenol	176			ug/l	200		88	40-120			
Surrogate: 2-Fluorobiphenyl	79.2			ug/l	100		79	50-120			
Surrogate: 2-Fluorophenol	104			ug/l	200		52	30-120			
Surrogate: Nitrobenzene-d5	73.3			ug/l	100		73	45-120			
Surrogate: Phenol-d6	118			ug/l	200		59	35-120			
Surrogate: Terphenyl-d14	84.5			ug/l	100		84	50-125			

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Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

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: 11B3468 Extracted: 02/27/11											
Blank Analyzed: 03/01/2011 (11B3468-BLK1)											
Chlorpyrifos	ND	1.0	0.010	ug/l							
Diazinon	ND	0.25	0.10	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.51			ug/l	5.00		90	70-130			
Surrogate: Triphenylphosphate	6.10			ug/l	5.00		122	70-130			
Surrogate: Perylene-d12	4.54			ug/l	5.00		91	70-130			
LCS Analyzed: 03/02/2011 (11B3468-BS1)											
Chlorpyrifos	5.41	1.0	0.010	ug/l	5.00		108	70-130			MNR1
Diazinon	5.67	0.25	0.10	ug/l	5.00		113	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.47			ug/l	5.00		89	70-130			
Surrogate: Triphenylphosphate	5.44			ug/l	5.00		109	70-130			
Surrogate: Perylene-d12	4.66			ug/l	5.00		93	70-130			
LCS Dup Analyzed: 03/02/2011 (11B3468-BSD1)											
Chlorpyrifos	4.90	1.0	0.010	ug/l	5.00		98	70-130	10	30	
Diazinon	5.64	0.25	0.10	ug/l	5.00		113	70-130	0.5	30	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.38			ug/l	5.00		108	70-130			
Surrogate: Triphenylphosphate	5.29			ug/l	5.00		106	70-130			
Surrogate: Perylene-d12	4.73			ug/l	5.00		95	70-130			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0141 Extracted: 03/01/11											
Blank Analyzed: 03/11/2011 (11C0141-BLK1)											
4,4'-DDD	ND	0.0050	0.0040	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							
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							
Chlordane	ND	0.10	0.080	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.340			ug/l	0.500		68	45-120			
Surrogate: Tetrachloro-m-xylene	0.323			ug/l	0.500		65	35-115			

LCS Analyzed: 03/11/2011 (11C0141-BS1)

MNR1

4,4'-DDD	0.388	0.0050	0.0040	ug/l	0.500		78	55-120			
4,4'-DDE	0.374	0.0050	0.0030	ug/l	0.500		75	50-120			
4,4'-DDT	0.397	0.010	0.0040	ug/l	0.500		79	55-120			
Aldrin	0.332	0.0050	0.0015	ug/l	0.500		66	40-115			
alpha-BHC	0.354	0.0050	0.0025	ug/l	0.500		71	45-115			
beta-BHC	0.338	0.010	0.0040	ug/l	0.500		68	55-115			
delta-BHC	0.391	0.0050	0.0035	ug/l	0.500		78	55-115			
Dieldrin	0.387	0.0050	0.0020	ug/l	0.500		77	55-115			
Endosulfan I	0.364	0.0050	0.0020	ug/l	0.500		73	55-115			
Endosulfan II	0.391	0.0050	0.0030	ug/l	0.500		78	55-120			
Endosulfan sulfate	0.412	0.010	0.0030	ug/l	0.500		82	60-120			
Endrin	0.406	0.0050	0.0020	ug/l	0.500		81	55-115			
Endrin aldehyde	0.356	0.010	0.0020	ug/l	0.500		71	50-120			
gamma-BHC (Lindane)	0.358	0.020	0.0030	ug/l	0.500		72	45-115			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0141 Extracted: 03/01/11											
LCS Analyzed: 03/11/2011 (11C0141-BS1)											
Heptachlor	0.331	0.010	0.0030	ug/l	0.500		66	45-115			MNR1
Heptachlor epoxide	0.360	0.0050	0.0025	ug/l	0.500		72	55-115			
Surrogate: Decachlorobiphenyl	0.319			ug/l	0.500		64	45-120			
Surrogate: Tetrachloro-m-xylene	0.296			ug/l	0.500		59	35-115			
LCS Dup Analyzed: 03/11/2011 (11C0141-BSD1)											
4,4'-DDD	0.429	0.0050	0.0040	ug/l	0.500		86	55-120	10	30	
4,4'-DDE	0.422	0.0050	0.0030	ug/l	0.500		84	50-120	12	30	
4,4'-DDT	0.455	0.010	0.0040	ug/l	0.500		91	55-120	14	30	
Aldrin	0.387	0.0050	0.0015	ug/l	0.500		77	40-115	15	30	
alpha-BHC	0.403	0.0050	0.0025	ug/l	0.500		81	45-115	13	30	
beta-BHC	0.376	0.010	0.0040	ug/l	0.500		75	55-115	11	30	
delta-BHC	0.435	0.0050	0.0035	ug/l	0.500		87	55-115	11	30	
Dieldrin	0.432	0.0050	0.0020	ug/l	0.500		86	55-115	11	30	
Endosulfan I	0.407	0.0050	0.0020	ug/l	0.500		81	55-115	11	30	
Endosulfan II	0.430	0.0050	0.0030	ug/l	0.500		86	55-120	9	30	
Endosulfan sulfate	0.460	0.010	0.0030	ug/l	0.500		92	60-120	11	30	
Endrin	0.455	0.0050	0.0020	ug/l	0.500		91	55-115	11	30	
Endrin aldehyde	0.397	0.010	0.0020	ug/l	0.500		79	50-120	11	30	
gamma-BHC (Lindane)	0.408	0.020	0.0030	ug/l	0.500		82	45-115	13	30	
Heptachlor	0.377	0.010	0.0030	ug/l	0.500		75	45-115	13	30	
Heptachlor epoxide	0.405	0.0050	0.0025	ug/l	0.500		81	55-115	12	30	
Surrogate: Decachlorobiphenyl	0.402			ug/l	0.500		80	45-120			
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			

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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
Batch: 11C0141 Extracted: 03/01/11											
Blank Analyzed: 03/02/2011 (11C0141-BLK1)											
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.254			ug/l	0.500		51	45-120			
LCS Analyzed: 03/03/2011 (11C0141-BS2)											
Aroclor 1016	3.21	0.50	0.25	ug/l	4.00		80	50-115			MNR1
Aroclor 1260	2.66	0.50	0.25	ug/l	4.00		67	60-120			
Surrogate: Decachlorobiphenyl	0.278			ug/l	0.500		56	45-120			
LCS Dup Analyzed: 03/03/2011 (11C0141-BSD2)											
Aroclor 1016	3.21	0.50	0.25	ug/l	4.00		80	50-115	0.1	30	
Aroclor 1260	2.65	0.50	0.25	ug/l	4.00		66	60-120	0.5	25	
Surrogate: Decachlorobiphenyl	0.279			ug/l	0.500		56	45-120			

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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
<u>Batch: 11C1560 Extracted: 03/11/11</u>											
Blank Analyzed: 03/11/2011 (11C1560-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/11/2011 (11C1560-BS1)											
Hexane Extractable Material (Oil & Grease)	18.7	5.0	1.4	mg/l	20.0		94	78-114			MNR1
LCS Dup Analyzed: 03/11/2011 (11C1560-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.0	5.0	1.4	mg/l	20.0		95	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0579 Extracted: 03/03/11</u>											
Blank Analyzed: 03/04/2011 (11C0579-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/04/2011 (11C0579-BS1)											
Mercury	8.17	0.20	0.10	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 03/04/2011 (11C0579-MS1)											
						Source: IUC0246-01					
Mercury	8.11	0.20	0.10	ug/l	8.00	ND	101	70-130			
Matrix Spike Dup Analyzed: 03/04/2011 (11C0579-MSD1)											
						Source: IUC0246-01					
Mercury	7.62	0.20	0.10	ug/l	8.00	ND	95	70-130	6	20	
<u>Batch: 11C0647 Extracted: 03/04/11</u>											
Blank Analyzed: 03/07/2011-03/08/2011 (11C0647-BLK1)											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
Calcium	0.0635	0.10	0.050	mg/l							J
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	20.0	6.00	ug/l							

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0647 Extracted: 03/04/11											
LCS Analyzed: 03/07/2011-03/08/2011 (11C0647-BS1)											
Aluminum	535	50	40	ug/l	500		107	85-115			
Arsenic	560	10	7.0	ug/l	500		112	85-115			
Beryllium	549	2.0	0.90	ug/l	500		110	85-115			
Boron	0.562	0.050	0.020	mg/l	0.500		112	85-115			
Calcium	2.70	0.10	0.050	mg/l	2.50		108	85-115			
Chromium	563	5.0	2.0	ug/l	500		113	85-115			
Iron	0.559	0.040	0.015	mg/l	0.500		112	85-115			
Magnesium	2.88	0.020	0.012	mg/l	2.50		115	85-115			
Nickel	549	10	2.0	ug/l	500		110	85-115			
Silver	271	10	6.0	ug/l	250		108	85-115			
Vanadium	538	10	3.0	ug/l	500		108	85-115			
Zinc	548	20.0	6.00	ug/l	500		110	85-115			

Matrix Spike Analyzed: 03/07/2011-03/08/2011 (11C0647-MS1)

Source: IUC0168-01

Aluminum	1030	50	40	ug/l	500	351	137	70-130			MI
Arsenic	559	10	7.0	ug/l	500	ND	112	70-130			
Beryllium	547	2.0	0.90	ug/l	500	ND	109	70-130			
Boron	0.596	0.050	0.020	mg/l	0.500	0.0401	111	70-130			
Calcium	36.0	0.10	0.050	mg/l	2.50	32.0	161	70-130			MHA
Chromium	575	5.0	2.0	ug/l	500	21.8	111	70-130			
Iron	1.12	0.040	0.015	mg/l	0.500	0.512	122	70-130			
Magnesium	9.49	0.020	0.012	mg/l	2.50	6.35	125	70-130			
Nickel	526	10	2.0	ug/l	500	ND	105	70-130			
Silver	242	10	6.0	ug/l	250	ND	97	70-130			
Vanadium	547	10	3.0	ug/l	500	16.8	106	70-130			
Zinc	544	20.0	6.00	ug/l	500	ND	109	70-130			

Matrix Spike Analyzed: 03/07/2011-03/08/2011 (11C0647-MS2)

Source: IUC0168-04

Aluminum	661	50	40	ug/l	500	118	109	70-130			
Arsenic	515	10	7.0	ug/l	500	ND	103	70-130			
Beryllium	500	2.0	0.90	ug/l	500	ND	100	70-130			
Boron	0.550	0.050	0.020	mg/l	0.500	0.0360	103	70-130			
Calcium	36.7	0.10	0.050	mg/l	2.50	32.8	154	70-130			MHA
Chromium	525	5.0	2.0	ug/l	500	19.9	101	70-130			
Iron	0.619	0.040	0.015	mg/l	0.500	0.119	100	70-130			
Magnesium	8.53	0.020	0.012	mg/l	2.50	5.97	102	70-130			

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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: 11C0647 Extracted: 03/04/11											
Matrix Spike Analyzed: 03/07/2011-03/08/2011 (11C0647-MS2)						Source: IUC0168-04					
Nickel	481	10	2.0	ug/l	500	ND	96	70-130			
Silver	238	10	6.0	ug/l	250	ND	95	70-130			
Vanadium	503	10	3.0	ug/l	500	15.5	98	70-130			
Zinc	494	20.0	6.00	ug/l	500	ND	99	70-130			
Matrix Spike Dup Analyzed: 03/07/2011-03/08/2011 (11C0647-MSD1)						Source: IUC0168-01					
Aluminum	1010	50	40	ug/l	500	351	133	70-130	2	20	MI
Arsenic	509	10	7.0	ug/l	500	ND	102	70-130	9	20	
Beryllium	498	2.0	0.90	ug/l	500	ND	100	70-130	9	20	
Boron	0.543	0.050	0.020	mg/l	0.500	0.0401	101	70-130	9	20	
Calcium	36.4	0.10	0.050	mg/l	2.50	32.0	174	70-130	0.9	20	MHA
Chromium	517	5.0	2.0	ug/l	500	21.8	99	70-130	11	20	
Iron	1.01	0.040	0.015	mg/l	0.500	0.512	100	70-130	10	20	
Magnesium	8.61	0.020	0.012	mg/l	2.50	6.35	90	70-130	10	20	
Nickel	479	10	2.0	ug/l	500	ND	96	70-130	9	20	
Silver	217	10	6.0	ug/l	250	ND	87	70-130	11	20	
Vanadium	500	10	3.0	ug/l	500	16.8	97	70-130	9	20	
Zinc	494	20.0	6.00	ug/l	500	ND	99	70-130	10	20	

Batch: 11C0773 Extracted: 03/06/11

Blank Analyzed: 03/07/2011 (11C0773-BLK1)

Antimony	0.386	2.0	0.30	ug/l							J
Cadmium	0.102	1.0	0.10	ug/l							J
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							

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0773 Extracted: 03/06/11											
LCS Analyzed: 03/07/2011 (11C0773-BS1)											
Antimony	84.2	2.0	0.30	ug/l	80.0		105	85-115			
Cadmium	80.4	1.0	0.10	ug/l	80.0		100	85-115			
Copper	81.5	2.00	0.500	ug/l	80.0		102	85-115			
Lead	79.2	1.0	0.20	ug/l	80.0		99	85-115			
Selenium	82.8	2.0	0.50	ug/l	80.0		103	85-115			
Thallium	81.8	1.0	0.20	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 03/07/2011 (11C0773-MS1) Source: IUC0221-01											
Antimony	87.5	2.0	0.30	ug/l	80.0	0.548	109	70-130			
Cadmium	79.3	1.0	0.10	ug/l	80.0	0.145	99	70-130			
Copper	84.9	2.00	0.500	ug/l	80.0	5.13	100	70-130			
Lead	72.1	1.0	0.20	ug/l	80.0	ND	90	70-130			
Selenium	85.5	2.0	0.50	ug/l	80.0	1.71	105	70-130			
Thallium	74.5	1.0	0.20	ug/l	80.0	ND	93	70-130			
Matrix Spike Analyzed: 03/07/2011 (11C0773-MS2) Source: IUC0178-01											
Antimony	86.6	2.0	0.30	ug/l	80.0	1.83	106	70-130			
Cadmium	82.5	1.0	0.10	ug/l	80.0	0.621	102	70-130			
Copper	105	2.00	0.500	ug/l	80.0	23.2	103	70-130			
Lead	76.7	1.0	0.20	ug/l	80.0	0.678	95	70-130			
Selenium	82.3	2.0	0.50	ug/l	80.0	ND	103	70-130			
Thallium	78.3	1.0	0.20	ug/l	80.0	ND	98	70-130			
Matrix Spike Dup Analyzed: 03/07/2011 (11C0773-MSD1) Source: IUC0221-01											
Antimony	85.9	2.0	0.30	ug/l	80.0	0.548	107	70-130	2	20	
Cadmium	77.5	1.0	0.10	ug/l	80.0	0.145	97	70-130	2	20	
Copper	84.1	2.00	0.500	ug/l	80.0	5.13	99	70-130	1	20	
Lead	72.3	1.0	0.20	ug/l	80.0	ND	90	70-130	0.3	20	
Selenium	84.4	2.0	0.50	ug/l	80.0	1.71	103	70-130	1	20	
Thallium	74.9	1.0	0.20	ug/l	80.0	ND	94	70-130	0.5	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: 11B3548 Extracted: 02/28/11											
Blank Analyzed: 03/02/2011-03/03/2011 (11B3548-BLK1)											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
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	20.0	6.00	ug/l							

LCS Analyzed: 03/02/2011-03/03/2011 (11B3548-BS1)

Aluminum	478	50	40	ug/l	500		96	85-115			
Arsenic	507	10	7.0	ug/l	500		101	85-115			
Beryllium	511	2.0	0.90	ug/l	500		102	85-115			
Boron	0.525	0.050	0.020	mg/l	0.500		105	85-115			
Calcium	2.57	0.10	0.050	mg/l	2.50		103	85-115			
Chromium	517	5.0	2.0	ug/l	500		103	85-115			
Iron	0.510	0.040	0.015	mg/l	0.500		102	85-115			
Magnesium	2.61	0.020	0.012	mg/l	2.50		104	85-115			
Nickel	499	10	2.0	ug/l	500		100	85-115			
Silver	246	10	6.0	ug/l	250		99	85-115			
Vanadium	506	10	3.0	ug/l	500		101	85-115			
Zinc	507	20.0	6.00	ug/l	500		101	85-115			

Matrix Spike Analyzed: 03/02/2011-03/03/2011 (11B3548-MS1)

Source: IUB2647-01

Aluminum	498	50	40	ug/l	500	ND	100	70-130			
Arsenic	508	10	7.0	ug/l	500	ND	102	70-130			
Beryllium	508	2.0	0.90	ug/l	500	ND	102	70-130			
Boron	0.545	0.050	0.020	mg/l	0.500	0.0313	103	70-130			
Calcium	68.4	0.10	0.050	mg/l	2.50	67.0	53	70-130			MHA
Chromium	516	5.0	2.0	ug/l	500	3.31	102	70-130			
Iron	0.501	0.040	0.015	mg/l	0.500	ND	100	70-130			
Magnesium	12.3	0.020	0.012	mg/l	2.50	9.87	97	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: 11B3548 Extracted: 02/28/11											
Matrix Spike Analyzed: 03/02/2011-03/03/2011 (11B3548-MS1)						Source: IUB2647-01					
Nickel	473	10	2.0	ug/l	500	ND	95	70-130			
Silver	248	10	6.0	ug/l	250	ND	99	70-130			
Vanadium	502	10	3.0	ug/l	500	5.00	99	70-130			
Zinc	496	20.0	6.00	ug/l	500	ND	99	70-130			
Matrix Spike Analyzed: 03/03/2011-03/07/2011 (11B3548-MS2)						Source: IUB2630-01					
Aluminum	498	100	80	ug/l	500	ND	100	70-130			
Arsenic	499	20	14	ug/l	500	ND	100	70-130			
Beryllium	490	4.0	1.8	ug/l	500	ND	98	70-130			
Boron	0.602	0.10	0.040	mg/l	0.500	0.120	96	70-130			
Calcium	621	0.20	0.10	mg/l	2.50	681	-2390	70-130			MHA
Chromium	475	10	4.0	ug/l	500	ND	95	70-130			
Iron	0.431	0.080	0.030	mg/l	0.500	ND	86	70-130			
Magnesium	104	0.040	0.024	mg/l	2.50	109	-198	70-130			MHA
Nickel	464	20	4.0	ug/l	500	13.0	90	70-130			
Silver	167	20	12	ug/l	250	ND	67	70-130			M2
Vanadium	489	20	6.0	ug/l	500	ND	98	70-130			
Zinc	461	40.0	12.0	ug/l	500	ND	92	70-130			
Matrix Spike Dup Analyzed: 03/02/2011-03/03/2011 (11B3548-MSD1)						Source: IUB2647-01					
Aluminum	495	50	40	ug/l	500	ND	99	70-130	0.5	20	
Arsenic	503	10	7.0	ug/l	500	ND	101	70-130	0.8	20	
Beryllium	504	2.0	0.90	ug/l	500	ND	101	70-130	0.9	20	
Boron	0.544	0.050	0.020	mg/l	0.500	0.0313	102	70-130	0.3	20	
Calcium	69.2	0.10	0.050	mg/l	2.50	67.0	87	70-130	1	20	MHA
Chromium	509	5.0	2.0	ug/l	500	3.31	101	70-130	1	20	
Iron	0.500	0.040	0.015	mg/l	0.500	ND	100	70-130	0.3	20	
Magnesium	12.3	0.020	0.012	mg/l	2.50	9.87	97	70-130	0.002	20	
Nickel	467	10	2.0	ug/l	500	ND	93	70-130	1	20	
Silver	244	10	6.0	ug/l	250	ND	98	70-130	1	20	
Vanadium	500	10	3.0	ug/l	500	5.00	99	70-130	0.4	20	
Zinc	492	20.0	6.00	ug/l	500	ND	98	70-130	0.8	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0168 Extracted: 03/01/11</u>											
Blank Analyzed: 03/02/2011 (11C0168-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/02/2011 (11C0168-BS1)											
Mercury	7.30	0.20	0.10	ug/l	8.00		91	85-115			
Matrix Spike Analyzed: 03/02/2011 (11C0168-MS1)											
						Source: IUB2647-01					
Mercury	7.27	0.20	0.10	ug/l	8.00	ND	91	70-130			
Matrix Spike Dup Analyzed: 03/02/2011 (11C0168-MSD1)											
						Source: IUB2647-01					
Mercury	7.31	0.20	0.10	ug/l	8.00	ND	91	70-130	0.4	20	
<u>Batch: 11C0285 Extracted: 03/02/11</u>											
Blank Analyzed: 03/03/2011 (11C0285-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 03/03/2011 (11C0285-BS1)											
Antimony	86.7	2.0	0.30	ug/l	80.0		108	85-115			
Cadmium	81.9	1.0	0.10	ug/l	80.0		102	85-115			
Copper	80.2	2.00	0.500	ug/l	80.0		100	85-115			
Lead	82.5	1.0	0.20	ug/l	80.0		103	85-115			
Selenium	80.8	2.0	0.50	ug/l	80.0		101	85-115			
Thallium	79.3	1.0	0.20	ug/l	80.0		99	85-115			

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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: 11C0285 Extracted: 03/02/11											
Matrix Spike Analyzed: 03/03/2011 (11C0285-MS1)						Source: IUB2862-01					
Antimony	88.0	2.0	0.30	ug/l	80.0	0.480	109	70-130			
Cadmium	80.4	1.0	0.10	ug/l	80.0	ND	101	70-130			
Copper	79.3	2.00	0.500	ug/l	80.0	ND	99	70-130			
Lead	77.4	1.0	0.20	ug/l	80.0	ND	97	70-130			
Selenium	80.9	2.0	0.50	ug/l	80.0	ND	101	70-130			
Thallium	74.6	1.0	0.20	ug/l	80.0	ND	93	70-130			
Matrix Spike Analyzed: 03/03/2011 (11C0285-MS2)						Source: IUB2647-01					
Antimony	87.7	2.0	0.30	ug/l	80.0	0.505	109	70-130			
Cadmium	80.1	1.0	0.10	ug/l	80.0	ND	100	70-130			
Copper	79.0	2.00	0.500	ug/l	80.0	ND	99	70-130			
Lead	78.3	1.0	0.20	ug/l	80.0	ND	98	70-130			
Selenium	79.1	2.0	0.50	ug/l	80.0	ND	99	70-130			
Thallium	74.8	1.0	0.20	ug/l	80.0	ND	94	70-130			
Matrix Spike Dup Analyzed: 03/03/2011 (11C0285-MSD1)						Source: IUB2862-01					
Antimony	88.4	2.0	0.30	ug/l	80.0	0.480	110	70-130	0.4	20	
Cadmium	80.5	1.0	0.10	ug/l	80.0	ND	101	70-130	0.04	20	
Copper	78.4	2.00	0.500	ug/l	80.0	ND	98	70-130	1	20	
Lead	78.6	1.0	0.20	ug/l	80.0	ND	98	70-130	1	20	
Selenium	80.6	2.0	0.50	ug/l	80.0	ND	101	70-130	0.3	20	
Thallium	75.0	1.0	0.20	ug/l	80.0	ND	94	70-130	0.6	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: 11B3425 Extracted: 02/26/11											
Blank Analyzed: 02/26/2011 (11B3425-BLK1)											
Chromium VI	ND	1.00	0.250	ug/l							
LCS Analyzed: 02/26/2011 (11B3425-BS1)											
Chromium VI	49.8	1.00	0.250	ug/l	50.0		100	90-110			
Matrix Spike Analyzed: 02/26/2011 (11B3425-MS1)											
						Source: IUB2814-01					
Chromium VI	49.2	1.00	0.250	ug/l	50.0	ND	98	90-110			
Matrix Spike Dup Analyzed: 02/26/2011 (11B3425-MSD1)											
						Source: IUB2814-01					
Chromium VI	48.9	1.00	0.250	ug/l	50.0	ND	98	90-110	0.7	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: 11B3465 Extracted: 02/27/11											
Blank Analyzed: 02/27/2011 (11B3465-BLK1)											
Chloride	ND	0.50	0.30	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	0.30	mg/l							
LCS Analyzed: 02/27/2011 (11B3465-BS1)											
Chloride	4.57	0.50	0.30	mg/l	5.00		91	90-110			
Nitrate-N	1.09	0.11	0.060	mg/l	1.13		97	90-110			
Nitrite-N	1.44	0.15	0.090	mg/l	1.52		95	90-110			
Sulfate	9.78	0.50	0.30	mg/l	10.0		98	90-110			
Matrix Spike Analyzed: 02/27/2011 (11B3465-MS1) Source: IUB2814-03											
Chloride	18.0	0.50	0.30	mg/l	5.00	12.6	109	80-120			
Nitrate-N	1.64	0.11	0.060	mg/l	1.13	0.561	96	80-120			
Nitrite-N	1.52	0.15	0.090	mg/l	1.52	ND	100	80-120			
Sulfate	16.2	0.50	0.30	mg/l	10.0	6.25	99	80-120			
Matrix Spike Dup Analyzed: 02/27/2011 (11B3465-MSD1) Source: IUB2814-03											
Chloride	17.7	0.50	0.30	mg/l	5.00	12.6	103	80-120	2	20	
Nitrate-N	1.62	0.11	0.060	mg/l	1.13	0.561	94	80-120	1	20	
Nitrite-N	1.51	0.15	0.090	mg/l	1.52	ND	99	80-120	0.9	20	
Sulfate	15.9	0.50	0.30	mg/l	10.0	6.25	96	80-120	2	20	

Batch: 11C0005 Extracted: 03/01/11

Blank Analyzed: 03/01/2011 (11C0005-BLK1)

Fluoride	ND	0.10	0.020	mg/l
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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0005 Extracted: 03/01/11</u>											
LCS Analyzed: 03/01/2011 (11C0005-BS1)											
Fluoride	1.01	0.10	0.020	mg/l	1.00		101	90-110			
Matrix Spike Analyzed: 03/01/2011 (11C0005-MS1) Source: IUB2874-01											
Fluoride	1.12	0.10	0.020	mg/l	1.00	0.144	98	80-120			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0005-MSD1) Source: IUB2874-01											
Fluoride	1.13	0.10	0.020	mg/l	1.00	0.144	99	80-120	0.8	20	
<u>Batch: 11C0021 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0021-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/01/2011 (11C0021-BS1)											
Perchlorate	26.1	4.0	0.90	ug/l	25.0		105	85-115			
Matrix Spike Analyzed: 03/01/2011 (11C0021-MS1) Source: IUB2737-03											
Perchlorate	29.7	4.0	0.90	ug/l	25.0	3.55	105	80-120			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0021-MSD1) Source: IUB2737-03											
Perchlorate	29.8	4.0	0.90	ug/l	25.0	3.55	105	80-120	0.5	20	
<u>Batch: 11C0150 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0150-BLK1)											
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0150 Extracted: 03/01/11</u>											
LCS Analyzed: 03/01/2011 (11C0150-BS1)											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/01/2011 (11C0150-MS1) Source: IUB2621-03											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0150-MSD1) Source: IUB2621-03											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120	0	15	
<u>Batch: 11C0158 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0158-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/01/2011 (11C0158-BS1)											
Total Cyanide	196	5.0	2.2	ug/l	196		100	90-110			
Matrix Spike Analyzed: 03/01/2011 (11C0158-MS1) Source: IUB2819-03											
Total Cyanide	201	5.0	2.2	ug/l	196	ND	102	70-115			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0158-MSD1) Source: IUB2819-03											
Total Cyanide	199	5.0	2.2	ug/l	196	ND	101	70-115	0.9	15	
<u>Batch: 11C0204 Extracted: 03/02/11</u>											
Blank Analyzed: 03/02/2011 (11C0204-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0204 Extracted: 03/02/11											
LCS Analyzed: 03/02/2011 (11C0204-BS1)											
Total Dissolved Solids	1020	10	1.0	mg/l	1000		102	90-110			
Duplicate Analyzed: 03/02/2011 (11C0204-DUP1)											
Total Dissolved Solids	365	10	1.0	mg/l		Source: IUB2750-01 352			4	10	
Batch: 11C0554 Extracted: 03/03/11											
Blank Analyzed: 03/03/2011 (11C0554-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/03/2011 (11C0554-BS1)											
Total Suspended Solids	999	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/03/2011 (11C0554-DUP1)											
Total Suspended Solids	68.0	10	1.0	mg/l		Source: IUB2816-03 68.0			0	10	

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8666

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/15/11											
LCS Analyzed: 03/15/2011 (S103013-03)											
Uranium, Total	53.9	1	N/A	pCi/L	56.5		95	80-120			
Blank Analyzed: 03/15/2011 (S103013-04)											
Uranium, Total	ND	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/15/2011 (S103013-05)											
Uranium, Total	0.574	1	N/A	pCi/L				-	7		Jb

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METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/11/11											
LCS Analyzed: 03/14/2011 (S103013-03)											
Gross Alpha	107	3	N/A	pCi/L	101		106	70-130			
Gross Beta	86.8	4	N/A	pCi/L	87.2		100	70-130			
Blank Analyzed: 03/14/2011 (S103013-04)											
Gross Alpha	0.089	3	N/A	pCi/L				-			U
Gross Beta	0.136	4	N/A	pCi/L				-			U
Duplicate Analyzed: 03/14/2011 (S103013-05)											
Gross Alpha	1.44	3	N/A	pCi/L				-	32		Jb
Gross Beta	3.86	4	N/A	pCi/L				-	12		Jb

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METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/03/11											
LCS Analyzed: 03/08/2011 (S103013-03)						Source:					
Cobalt-60	123	10	N/A	pCi/L	126		98	80-120			
Cesium-137	116	20	N/A	pCi/L	110		106	80-120			
Blank Analyzed: 03/08/2011 (S103013-04)						Source:					
Cesium-137	ND	20	N/A	pCi/L				-			U
Potassium-40	ND	25	N/A	pCi/L				-			U
Duplicate Analyzed: 03/10/2011 (S103013-05)						Source:					
Cesium-137	ND	20	N/A	pCi/L				-	0		U
Potassium-40	ND	25	N/A	pCi/L				-	0		U

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METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/25/11											
LCS Analyzed: 03/25/2011 (S103013-03)											
Radium-226	59.5	1	N/A	pCi/L	55.7		107	80-120			
Blank Analyzed: 03/19/2011 (S103013-04)											
Radium-226	0.156	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/19/2011 (S103013-05)											
Radium-226	0.467	1	N/A	pCi/L				-	0		U

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METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/18/11											
LCS Analyzed: 03/18/2011 (S103013-03)											
Radium-228	16.1	1	N/A	pCi/L	15.1		107	60-140			
Blank Analyzed: 03/18/2011 (S103013-04)											
Radium-228	-0.11	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/18/2011 (S103013-05)											
Radium-228	0.062	1	N/A	pCi/L				-	0		U

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METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/15/11											
LCS Analyzed: 03/16/2011 (S103013-03)											
Strontium-90	20.3	2	N/A	pCi/L	17.4		117	80-120			
Blank Analyzed: 03/16/2011 (S103013-04)											
Strontium-90	-0.258	2	N/A	pCi/L				-			U
Duplicate Analyzed: 03/16/2011 (S103013-05)											
Strontium-90	-0.199	2	N/A	pCi/L				-	0		U

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906

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8666 Extracted: 03/19/11											
LCS Analyzed: 03/22/2011 (S103013-03)											
Tritium	2780	500	N/A	pCi/L	2940		95	80-120			
Blank Analyzed: 03/22/2011 (S103013-04)											
Tritium	-28	500	N/A	pCi/L							U
Duplicate Analyzed: 03/22/2011 (S103013-05)											
Tritium	-42.1	500	N/A	pCi/L					0		U

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 1062414 Extracted: 03/03/11

Blank Analyzed: 03/07/2011 (G1C030000414B)

Source:

1,2,3,4,6,7,8-HpCDD	3.5e-006	0.00005	0.0000023	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	3e-006	0.00005	0.0000019	ug/L				-			J
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000031	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.0000027	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.0000026	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000023	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.0000023	ug/L				-			
1,2,3,7,8,9-HxCDD	2.8e-006	0.00005	0.000002	ug/L				-			J, Q
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000033	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.0000069	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000091	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.0000022	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000098	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000026	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.0000039	ug/L				-			
OCDD	8.9e-006	0.0001	0.0000075	ug/L				-			J, Q
OCDF	ND	0.0001	0.0000049	ug/L				-			
Total HpCDD	5.7e-006	0.00005	0.0000023	ug/L				-			J
Total HpCDF	3e-006	0.00005	0.0000024	ug/L				-			J
Total HxCDD	2.8e-006	0.00005	0.0000023	ug/L				-			J, Q
Total HxCDF	ND	0.00005	0.0000022	ug/L				-			
Total PeCDD	ND	0.00005	0.0000069	ug/L				-			
Total PeCDF	ND	0.00005	0.0000046	ug/L				-			
Total TCDD	ND	0.00001	0.0000026	ug/L				-			
Total TCDF	ND	0.00001	0.0000039	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018			ug/L	0.002		91	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0023			ug/L	0.002		116	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0021			ug/L	0.002		107	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0018			ug/L	0.002		91	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.002			ug/L	0.002		102	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.002			ug/L	0.002		99	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0023			ug/L	0.002		115	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0022			ug/L	0.002		112	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0013			ug/L	0.002		66	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0015			ug/L	0.002		78	24-185			

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1062414 Extracted: 03/03/11											
Blank Analyzed: 03/07/2011 (G1C030000414B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0024			ug/L	0.002		118	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0016			ug/L	0.002		79	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0015			ug/L	0.002		77	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0016			ug/L	0.002		81	24-169			
Surrogate: 13C-OCDD	0.0031			ug/L	0.004		78	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00072			ug/L	0.0008		90	35-197			
LCS Analyzed: 03/07/2011 (G1C030000414C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00114	0.00005	0.0000076	ug/L	0.001		114	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00104	0.00005	0.0000068	ug/L	0.001		104	82-122			Ba
1,2,3,4,7,8,9-HpCDF	0.00105	0.00005	0.00001	ug/L	0.001		105	78-138			
1,2,3,4,7,8-HxCDD	0.0012	0.00005	0.0000026	ug/L	0.001		120	70-164			
1,2,3,4,7,8-HxCDF	0.00113	0.00005	0.0000023	ug/L	0.001		113	72-134			
1,2,3,6,7,8-HxCDD	0.00116	0.00005	0.0000024	ug/L	0.001		116	76-134			
1,2,3,6,7,8-HxCDF	0.00112	0.00005	0.000002	ug/L	0.001		112	84-130			
1,2,3,7,8,9-HxCDD	0.00115	0.00005	0.0000021	ug/L	0.001		115	64-162			Ba
1,2,3,7,8,9-HxCDF	0.00121	0.00005	0.000003	ug/L	0.001		121	78-130			
1,2,3,7,8-PeCDD	0.00118	0.00005	0.0000068	ug/L	0.001		118	70-142			
1,2,3,7,8-PeCDF	0.00109	0.00005	0.000013	ug/L	0.001		109	80-134			
2,3,4,6,7,8-HxCDF	0.0011	0.00005	0.0000021	ug/L	0.001		110	70-156			
2,3,4,7,8-PeCDF	0.0011	0.00005	0.000014	ug/L	0.001		110	68-160			
2,3,7,8-TCDD	0.000221	0.00001	0.0000029	ug/L	0.0002		110	67-158			
2,3,7,8-TCDF	0.000186	0.00001	0.0000039	ug/L	0.0002		93	75-158			
OCDD	0.00235	0.0001	0.000013	ug/L	0.002		117	78-144			Ba
OCDF	0.00281	0.0001	0.0000071	ug/L	0.002		140	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00202			ug/L	0.002		101	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00245			ug/L	0.002		123	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00228			ug/L	0.002		114	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00178			ug/L	0.002		89	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00228			ug/L	0.002		114	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00201			ug/L	0.002		100	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00234			ug/L	0.002		117	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00221			ug/L	0.002		111	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00127			ug/L	0.002		64	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00156			ug/L	0.002		78	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00243			ug/L	0.002		122	22-176			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1062414 Extracted: 03/03/11											
LCS Analyzed: 03/07/2011 (G1C030000414C)											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00156			ug/L	0.002		78	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.0015			ug/L	0.002		75	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00161			ug/L	0.002		80	22-152			
Surrogate: 13C-OCDD	0.00345			ug/L	0.004		86	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000689			ug/L	0.0008		86	31-191			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

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
IUB2816-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.095	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
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Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2816-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.500	10.1
IUB2816-03	Antimony-200.8	Antimony	ug/l	0.42	2.0	6
IUB2816-03	Boron-200.7	Boron	mg/l	0.073	0.050	1
IUB2816-03	Cadmium-200.8	Cadmium	ug/l	0.46	1.0	3.1
IUB2816-03	Chloride - 300.0	Chloride	mg/l	6.99	0.50	150
IUB2816-03	Copper-200.8	Copper	ug/l	9.33	2.00	14
IUB2816-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	-4	5.0	9.5
IUB2816-03	Fluoride SM4500F,C	Fluoride	mg/l	0.25	0.10	1.6
IUB2816-03	Lead-200.8	Lead	ug/l	3.83	1.0	5.2
IUB2816-03	Mercury - 245.1	Mercury	ug/l	0	0.20	0.13
IUB2816-03	Nickel-200.7	Nickel	ug/l	5.03	10	100
IUB2816-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.71	0.11	8
IUB2816-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUB2816-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.71	0.26	8
IUB2816-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	2.44	4.0	6
IUB2816-03	Selenium-200.8	Selenium	ug/l	0.34	2.0	5
IUB2816-03	Sulfate-300.0	Sulfate	mg/l	6.15	0.50	300
IUB2816-03	TDS - SM2540C	Total Dissolved Solids	mg/l	199	10	950
IUB2816-03	Thallium-200.8	Thallium	ug/l	0.11	1.0	2
IUB2816-03	Zinc-200.7	Zinc	ug/l	28	20.0	159

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11

Received: 02/26/11

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
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Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- B-1** Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the 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.
- C5** Calibration Verification recovery was below the method control limit for this analyte. An additional check standard was analyzed at the reporting limit to ensure instrument sensitivity at the reporting limit. Samples ND.
- J** Estimated result. Result is less than the reporting limit.
- Jb** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- L6** Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M13** The sample spiked had a pH of less than 2. 2-Chloroethylvinylether degrades under acidic conditions.
- 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).
- R-7** LCS/LCSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- U** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
- Z** Due to sample matrix effects, the surrogate recovery was below the acceptance limits.
- Z5** Due to sample matrix effects, the surrogate recovery was outside acceptance limits. Secondary surrogate recovery was within the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

ADDITIONAL COMMENTS

For 1,2-Diphenylhydrazine:

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

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
 Received: 02/26/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 218.6	Water	X	X
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 525.2	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM 4500-F-C	Water	X	N/A
SM2340B-Diss	Water		
SM2340B	Water	X	N/A
SM2540C	Water	X	N/A
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM9221 A,B,C,E	Water		

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr

Samples: IUB2816-01

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUB2816-03, IUB2816-04

Analysis Performed: Gross Alpha
Samples: IUB2816-03, IUB2816-04

Analysis Performed: Gross Beta
Samples: IUB2816-03, IUB2816-04

Analysis Performed: Radium, Combined
Samples: IUB2816-03, IUB2816-04

Analysis Performed: Strontium 90
Samples: IUB2816-03, IUB2816-04

Analysis Performed: Tritium
Samples: IUB2816-03

Analysis Performed: Uranium, Combined
Samples: IUB2816-03, IUB2816-04

EMS-SUB California Cert #1119

117 W. Bellevue Drive - Pasadena, CA 91105

Analysis Performed: Asbestos-TEM (100.2 - DW)
Samples: IUB2816-03

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 008

Report Number: IUB2816

Sampled: 02/26/11
Received: 02/26/11

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106 - Amherst, NY 14228

Method Performed: 8666
Samples: IUB2816-03, IUB2816-04

Method Performed: 900
Samples: IUB2816-03, IUB2816-04

Method Performed: 901.1
Samples: IUB2816-03, IUB2816-04

Method Performed: 903.1
Samples: IUB2816-03, IUB2816-04

Method Performed: 904
Samples: IUB2816-03, IUB2816-04

Method Performed: 905
Samples: IUB2816-03, IUB2816-04

Method Performed: 906
Samples: IUB2816-03

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: IUB2816-03

TestAmerica Irvine

Debby Wilson
Project Manager

23 IUB2816

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson		Project: Boeing-SSFL NPDES Annual Outfall 008 COMPOSITE Stormwater at Happy Valley		ANALYSIS REQUIRED																
Project Manager: Bronwyn Kelly Sampler: R. Banaga		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, B, V, Ti, Fe, Al, Se, Zn + PP, Hardness as CaCO ₃	TCDD (and all congeners)	Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N, F, Perchlorate	Nitrate-N, Nitrite-N	Ammonia-N (350.2)	TDS, TSS	Pesticides/PCBs, Chlorpyrifos, Diazinon + PP	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	SVOCs (625) + PP	Chromic Toxicity	Asbestos (100.2)	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Ti, Fe, Al, Ni, Se, Zn + PP, Hardness as CaCO ₃	Cyanide	Comments			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #														
Outfall 008	W	1L Poly	1	2-26-2011 08:41	HNO ₃	10A	X													
Outfall 008 Dup	W	1L Poly	1		HNO ₃	10B	X													
Outfall 008	W	1L Amber	2		None	11A, 11B		X												
Outfall 008	W	500 mL Poly	2		None	12A, 12B		X												
Outfall 008	W	500 mL Poly	1		None	13		X												
Outfall 008	W	500 mL Poly	1		H ₂ SO ₄	14			X											
Outfall 008	W	500 mL Poly	2		None	15A, 15B			X											
Outfall 008	W	1L Amber	2		None	16A, 16B			X											
Outfall 008	W	2.5 Gal Cube	1		None	17A														
Outfall 008	W	500 mL Amber	1		None	17B				X								Unfiltered and unpreserved analysis		
Outfall 008	W	1L Amber	2	2-26-2011 08:42	None	18A, 18B					X									
Outfall 008	W	1 Gal Poly	1		None	19						X						Only test if first or second rain events of the year		
Outfall 008	W	1L Poly	1	2-26-2011 08:42	None	20							X							
Outfall 008	W	1L Poly	1		None	21								X				Filter w/in 24hrs of receipt at lab		
Outfall 008	W	500 mL Poly	1	2-26-2011 08:42	NaOH	22									X					

COC Page 2 of 2 list the Composite Samples for Outfall 008 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.

Relinquished By: <i>Rin Bung</i> Date/Time: 2-27-2011 10:30	Received By: <i>Matt O'Connell</i> Date/Time: 2-27-11 10:30	Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: _____ 48 Hour: _____ 5 Day: _____ Normal: <input checked="" type="checkbox"/>
Relinquished By: <i>Matt O'Connell</i> Date/Time: 2-27-11 13:45	Received By: _____ Date/Time: _____	Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>
Relinquished By: _____ Date/Time: _____	Received By: <i>WJ</i> Date/Time: 2/27/11 13:45	Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>

271103 2.8

DATE: March 8, 2011
CUSTOMER: Test America-Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614
ATTENTION: Debbie Wilson
REPORT NO: 143468
REFERENCE: IUB2816
SUBJECT: ANALYSIS OF WATER SAMPLES FOR ASBESTOS BY TEM
ACCREDITATION: California Dept. of Health Services ELAP 1119

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

SAMPLE NO: IUB2816-03
DATE COLLECTED: February 26, 2011 at 0811
RECEIVED: 02/28/11 at 1030
UV-OZONATED: 02/28/11 1105 - 1405
FILTERED: 02/28/11 at 1421
DATE ANALYZED: March 4, 2011

In the drinking water document, EPA 600 R 94 134, 100.2, samples are analyzed for fibers >10 um in length. The regulation calls for an MCL (maximum contaminant level) of 7 MFL (million of fibers per liter) and an analytical sensitivity of 0.2 MFL.

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

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

Respectfully submitted,
EMS Laboratories, Inc.



B.M. Kolk
Laboratory Director
BMK/am

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.

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

EMS No.	143468	Customer	TEST AMERICA IRVINE
Sample No.	IUB2816-03	Date Analyzed	3/4/11

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

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

Particle Size Distribution (Chrysotile)

Particle Length - Microns							
0 - 0.49	0.50 - 0.99	1.00 - 1.49	1.50 - 1.99	2.00 - 2.49	2.5 - 4.99	5.00 - 9.99	10 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Particle Width - Microns							
0 - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 - .49	.50 - .99	1 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Aspect Ratio L/W							
0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 - 99	100 - 199	200 & UP
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

TEM 7B (1994)

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

EMS No.	143468	Date Analyzed	3/4/11
Customer	TEST AMERICA IRVINE		
Sample No.	EMS BLANK		
Fibers (chrysotile)	ND		MFL
> 5 Micron length (chrysotile)	ND		MFL
Mass (chrysotile)	0		ug/L
More/Less than 5 Fibers in Sample (chrysotile)	LESS		
Sensitivity Level	0.01		MFL

Particle Size Distribution (Chrysotile)

Particle Length - Microns					
0 - 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					
0 - .04	.05 - .09	.1 - .14	.15 - .19	.2 - .24	.25 & UP
0	0	0	0	0	0
Aspect Ratio L/W					
0 - 9.9	10 - 19.9	20 - 29.9	30 - 39.9	40 - 49.9	50 & UP
0	0	0	0	0	0

LABORATORY REPORT



"dedicated to providing quality aquatic toxicity testing"

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

Date: March 3, 2011

Client: Test America - Irvine
17461 Derian Ave., Suite 100
Irvine, CA 92614
Attn: Debby Wilson

Laboratory No.: A-11022702-001
Sample ID.: IUB2816-01

Sample Control: The sample was received by ATL in a chilled state, within the recommended hold time and with the chain of custody record attached.

Date Sampled: 02/26/11
Date Received: 02/27/11
Temp. Received: 4.2°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 02/27/11 to 03/03/11

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

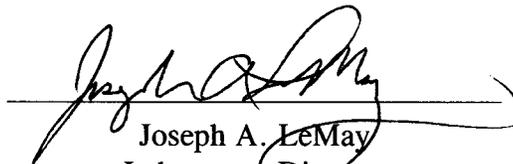
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).

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

Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IUB2816-01	100% Survival (TUa = 0.0)

Quality Control: Reviewed and approved by:


Joseph A. LeMay
Laboratory Director

FATHEAD MINNOW PERCENT SURVIVAL TEST
EPA Method 2000.0



Lab No.: A-11022702-001
Client/ID: TestAmerica IUB2816-01

Start Date: 02/27/2011

TEST SUMMARY

Species: *Pimephales promelas*.
Age: 8 (1-14) days.
Regulations: NPDES.
Test solution volume: 250 ml.
Feeding: prior to renewal at 48 hrs.
Number of replicates: 2.
Control 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 No.: RT-110201.

TEST DATA

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.1	8.7	8.1	0	0	R 12:15
	100%	19.9	9.5	7.6	0	0	
24 Hr	Control	19.4	8.4	7.8	0	0	R 1130
	100%	19.4	8.3	7.8	0	0	
48 Hr	Control	19.6	8.2	7.9	0	0	R 1200
	100%	19.6	7.6	7.9	0	0	
Renewal	Control	20.1	8.6	8.0	0	0	R 1200
	100%	20.0	9.2	7.6	0	0	
72 Hr	Control	19.6	8.1	7.8	0	0	R 1150
	100%	19.9	8.0	7.8	0	0	
96 Hr	Control	20.1	7.9	7.8	0	0	R 1200
	100%	20.2	8.2	7.9	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.6; Conductivity: 217 umho; Temp: 4.2°C;
DO: 9.6 mg/l; Alkalinity: 102 mg/l; Hardness: 78 mg/l; NH₃-N: 0.2 mg/l.
Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No.
Control: Alkalinity: 76 mg/l; Hardness: 92 mg/l; Conductivity: 339 umho.
Test solution aerated (not to exceed 100 bubbles/min) to maintain DO > 4.0 mg/l? Yes / No.
Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.
Dissolved Oxygen (DO) readings in mg/l O₂.

RESULTS

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

Subcontract Order - TestAmerica Irvine (IUB2816)

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB
 4350 Transport Street, Unit 107
 Ventura, CA 93003
 Phone : (805) 650-0546
 Fax: (805) 650-0756
 Project Location: California
 Receipt Temperature: 4.2 °C Ice: Y N

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

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

Sample ID: IUB2816-01 (Outfall 008 (Grab) - Water)

Sampled: 02/26/11 09:45

Bioassay-Acute 96hr	% Survival	02/27/11 21:45	FH minnow, EPA/821-R02-012, Sub to Aquatic testing
---------------------	------------	----------------	--

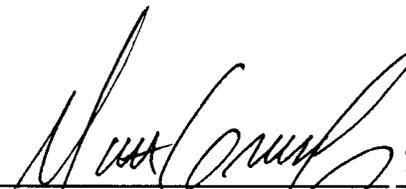
Containers Supplied:

1 gal Poly (L)


 Released By

 Released By

2-27-11/8:00
 Date/Time
2-27-11/11:40
 Date/Time


 Received By

 Received By

2-27-11/8:00
 Date/Time
2-27-11 11:40
 Date/Time



***REFERENCE
TOXICANT
DATA***

FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS



QA/QC Batch No.: RT-110201

TEST SUMMARY

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

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

TEST DATA

Date/Time: Analyst:	INITIAL			24 Hr					48 Hr				
	<u>2-1-11 1100</u>			<u>2-2-11 1030</u>					<u>2-3-11 1030</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
							A	B				A	B
Control	19.2	9.2	8.2	19.2	7.9	8.0	0	0	19.2	8.2	7.8	0	0
1.0 mg/l	19.2	9.1	8.2	19.1	7.9	8.0	0	0	19.1	8.4	7.8	0	0
2.0 mg/l	19.3	9.1	8.2	19.2	8.1	7.9	0	0	19.2	8.5	7.8	0	0
4.0 mg/l	19.3	9.2	8.2	19.1	8.2	7.9	2	4	19.1	8.2	7.9	0	0
8.0 mg/l	19.3	9.2	8.2	19.2	7.9	7.8	10	10	-	-	-	-	-

Date/Time: Analyst:	RENEWAL			72 Hr					96 Hr				
	<u>2-3-11 1030</u>			<u>2-4-11 1100</u>					<u>2-5-11 1030</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
							A	B				A	B
Control	19.1	8.8	8.1	20.2	7.9	8.0	0	0	20.5	7.3	8.0	0	0
1.0 mg/l	19.2	9.1	8.1	20.2	8.0	8.0	0	0	20.5	7.7	8.0	0	0
2.0 mg/l	19.1	9.0	8.1	20.2	8.1	8.0	0	0	20.4	7.9	8.0	0	0
4.0 mg/l	19.2	9.2	8.2	20.2	8.1	8.0	0	0	20.3	7.9	8.0	0	0
8.0 mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments: Control: Alkalinity: 66 mg/l; Hardness: 92 mg/l; Conductivity: 325 umho.
 SDS: Alkalinity: 66 mg/l; Hardness: 93 mg/l; Conductivity: 329 umho.

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

Yes (response curve normal)
 No (dose interrupted indicated or non-normal)

TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT-110201

SOURCE: In-Lab Culture

DATE HATCHED: 1-18-11

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

MORTALITIES 48 HOURS PRIOR TO
TO USE IN TESTING: 0

DATE USED IN LAB: 2-1-11

AVERAGE FISH WEIGHT: 0.006 gm

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

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

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

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

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

ACCLIMATION WATER QUALITY:

Temp.: 19.2°C

pH: 8.2

Ammonia: 0.1 mg/l NH₃-N

DO: 9.2 mg/l

Alkalinity: 66 mg/l

Hardness: 2 mg/l

READINGS RECORDED BY: _____

DATE: 2-2-11

Acute Fish Test-96 Hr Survival

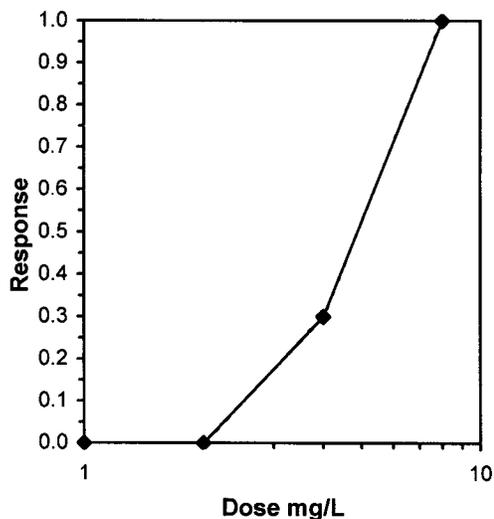
Start Date: 2/1/2011 11:00 Test ID: RT110201 Sample ID: REF-Ref Toxicant
 End Date: 2/5/2011 10:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate
 Sample Date: 2/1/2011 Protocol: ACUTE-EPA-821-R-02-012 Test Species: PP-Pimephales promelas
 Comments:

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	0.8000	0.6000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root					N	Number Resp	Total Number
			Mean	Min	Max	CV%				
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	0.7000	0.7000	0.9966	0.8861	1.1071	15.685	2	6	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20	

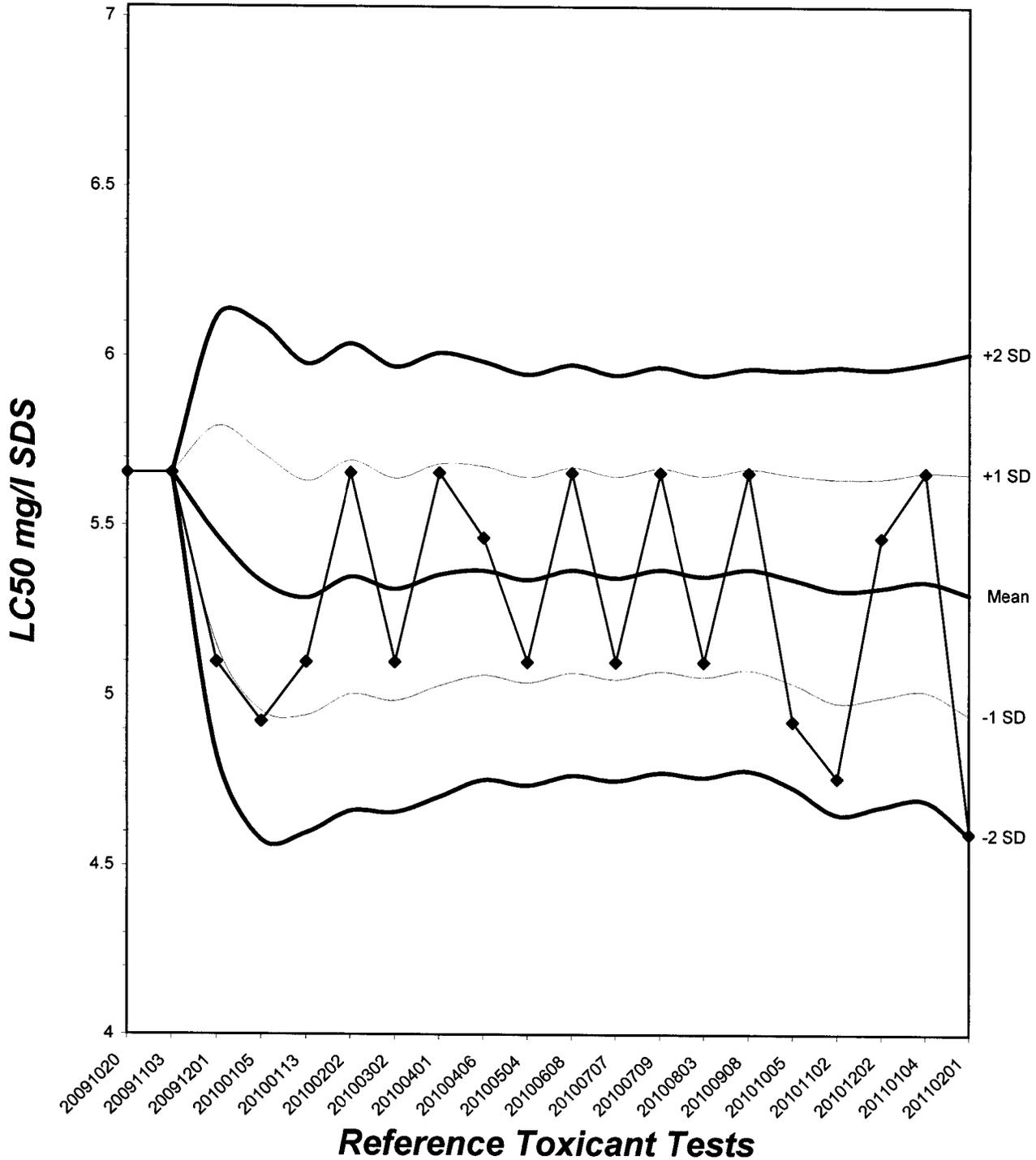
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Kärber			
Trim Level	EC50	95% CL	
0.0%	4.5948	3.9863	5.2961
5.0%	4.6576	3.9704	5.4637
10.0%	4.7177	3.9185	5.6800
20.0%	4.8227	3.6460	6.3792
Auto-0.0%	4.5948	3.9863	5.2961



Fathead Minnow Acute Laboratory Control Chart

CV% = 6.7

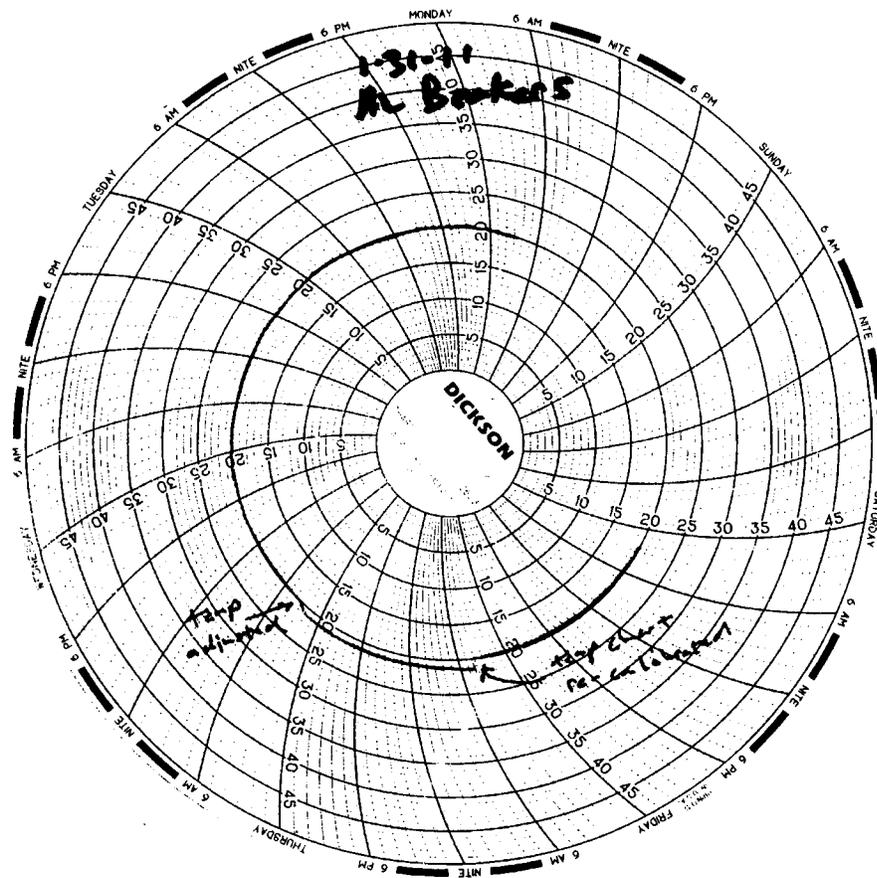


Test Temperature Chart

Test No: *RT-110201*

Date Tested: *02/01/11 to 02/05/11*

Acceptable Range: *20 +/- 1°C*





EBERLINE

SERVICES

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www.eberlineservices.com

March 30, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUB2816
Eberline Analytical Report S103014-8666
Sample Delivery Group 8666**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUB2816. The samples were received on March 1, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: *Level IV CLP-like Data Package CD*

1.0 General Comments

Sample delivery group 8666 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Samples IUB2816-03 and IUB2816-04 (Trip Blank) were analyzed in a common prep batch with other outfall samples from this project. The QC samples from that common prep batch were assigned to SDG 8665 and are also reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 **Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 **Strontium-90 Analysis** – No other problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 **Radium-226 Analysis** - The initial Ra-226 QC LCS recovery was less than the lower control limit of 80% therefore the LCS was re-emanated and recounted. The LCS recovery after the rework was within control limits and is reported herein. No other problems were encountered during the processing of the samples.
- 4.5 **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.6 **Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 **Gamma Spectroscopy** – The K-40 MDA for the sample IUB2816-03 was 54.1 pCi/L, greater than the required detection limit of 25 pCi/L. The gamma spectroscopy planchets were counted for sufficient time to meet the required Cs-137 detection limit of 20 pCi/L. As a consequence of keying to the Cs-137 RDL, the detection limits for K-40 were not achieved for all samples. No other problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0 Case Narrative Certification Statement

"I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



N. Joseph Verville
Client Services Manager

3/30/11

Date

E B E R L I N E A N A L Y T I C A L
SDG 8666

SDG 8666
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2816

S U M M A R Y D A T A S E C T I O N

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U6

Prepared by _____

Reviewed by _____

N. Joseph Verville

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-TOC</u>
Version	<u>3.06</u>
Report date	<u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8666

SDG 8666
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2816

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

SDG 8666
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2816

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EAS
Protocol TA
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EBERLINE ANALYTICAL

SDG 8666

LAB SAMPLE SUMMARY

SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S103013-03	Lab Control Sample		WATER				
S103013-04	Method Blank		WATER				
S103013-05	Duplicate (S103013-01)	Boeing - SSFL	WATER				02/26/11 20:26
S103014-01	IUB2816-03	Boeing - SSFL	WATER			IUB2816	02/26/11 08:42
S103014-02	IUB2816-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUB2816	02/26/11 10:30

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8665		Method Blank	WATER						S103013-04	8665-004
		Lab Control Sample	WATER						S103013-03	8665-003
		Duplicate (S103013-01)	WATER		10.0 L		03/01/11	3	S103013-05	8665-005
8666	IUB2816	IUB2816-03	WATER		10.0 L		03/01/11	3	S103014-01	8666-001
		IUB2816-04 (TRIP-BLANK)	WATER		10.0 L		03/01/11	3	S103014-02	8666-002

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

SDG 8666
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
Contract IUB2816

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI-	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS
Beta Counting										
AC	WATER	Radium-228 in Water	7281-046	10.4	2			1	1	1/0/1
SR	WATER	Strontium-90 in Water	7281-046	10.4	2			1	1	1/0/1
Gas Proportional Counting										
80A	WATER	Gross Alpha in Water	7281-046	20.6	2			1	1	1/0/1
80B	WATER	Gross Beta in Water	7281-046	11.0	2			1	1	1/0/1
Gamma Spectroscopy										
GAM	WATER	Gamma Emitters in Water	7281-046	7.0	2			1	1	1/0/1
Kinetic Phosphorimetry, ug										
U_T	WATER	Uranium, Total	7281-046		2			1	1	1/0/1
Liquid Scintillation Counting										
H	WATER	Tritium in Water	7281-046	10.0	1			1	1	1/0/1
Radon Counting										
RA	WATER	Radium-226 in Water	7281-046	16.4	2			1	1	1/0/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

LAB WORK SUMMARY

SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103013-03	Lab Control Sample	WATER	8665-003	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8665-003	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8665-003	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8665-003	GAM		03/08/11	03/15/11	MWT	Gamma Emitters in Water	
			8665-003	H		03/22/11	03/25/11	BW	Tritium in Water	
			8665-003	RA	R1	03/25/11	03/28/11	BW	Radium-226 in Water	
			8665-003	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8665-003	U_T		03/15/11	03/16/11	BW	Uranium, Total	
S103013-04	Method Blank	WATER	8665-004	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8665-004	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8665-004	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8665-004	GAM		03/08/11	03/15/11	MWT	Gamma Emitters in Water	
			8665-004	H		03/22/11	03/25/11	BW	Tritium in Water	
			8665-004	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8665-004	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8665-004	U_T		03/15/11	03/16/11	BW	Uranium, Total	
S103013-05	Duplicate (S103013-01) 02/26/11 Boeing - SSFL 03/01/11	WATER	8665-005	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8665-005	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8665-005	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8665-005	GAM		03/10/11	03/15/11	MWT	Gamma Emitters in Water	
			8665-005	H		03/22/11	03/25/11	BW	Tritium in Water	
			8665-005	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8665-005	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8665-005	U_T		03/15/11	03/16/11	BW	Uranium, Total	
S103014-01	IUB2816-03 02/26/11 Boeing - SSFL 03/01/11 IUB2816	WATER	8666-001	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8666-001	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8666-001	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8666-001	GAM		03/08/11	03/15/11	MWT	Gamma Emitters in Water	
			8666-001	H		03/22/11	03/25/11	BW	Tritium in Water	
			8666-001	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8666-001	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8666-001	U_T			03/16/11	BW	Uranium, Total	

WORK SUMMARY

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SUMMARY DATA SECTION

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Lab id EAS
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EBERLINE ANALYTICAL

SDG 8666

WORK SUMMARY, cont.

SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

LAB SAMPLE	CLIENT SAMPLE ID					SUF-				
COLLECTED	LOCATION	MATRIX				FIX	ANALYZED	REVIEWED	BY	METHOD
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST						
S103014-02	IUB2816-04 (TRIP-BLANK)		8666-002	80A/80		03/14/11	03/15/11	BW		Gross Alpha in Water
02/26/11	Boeing - SSFL	WATER	8666-002	80B/80		03/14/11	03/15/11	BW		Gross Beta in Water
03/01/11	IUB2816		8666-002	AC		03/18/11	03/21/11	BW		Radium-228 in Water
			8666-002	GAM		03/08/11	03/15/11	MWT		Gamma Emitters in Water
			8666-002	RA		03/19/11	03/28/11	BW		Radium-226 in Water
			8666-002	SR		03/16/11	03/22/11	BW		Strontium-90 in Water
			8666-002	U_T			03/16/11	BW		Uranium, Total

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	2			1	1	1	5
80B/80		Gross Beta in Water	900.0	2			1	1	1	5
AC		Radium-228 in Water	904.0	2			1	1	1	5
GAM		Gamma Emitters in Water	901.1	2			1	1	1	5
H		Tritium in Water	906.0	1			1	1	1	4
RA		Radium-226 in Water	903.1	2			1	1	1	5
SR		Strontium-90 in Water	905.0	2			1	1	1	5
U_T		Uranium, Total	D5174	2			1	1	1	5
TOTALS				15			8	8	8	39

WORK SUMMARY

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Lab id EAS
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EBERLINE ANALYTICAL

SDG 8666

8665-004

Method Blank

METHOD BLANK

SDG <u>8666</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2816</u>
Lab sample id <u>S103013-04</u>	Client sample id <u>Method Blank</u>
Dept sample id <u>8665-004</u>	Material/Matrix <u>WATER</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	0.089	0.90	1.62	3.00	U	80A
Gross Beta	12587472	0.136	1.7	2.78	4.00	U	80B
Tritium	10028178	-28.0	98	167	500	U	H
Radium-226	13982633	0.156	0.38	0.661	1.00	U	RA
Radium-228	15262201	-0.110	0.17	0.430	1.00	U	AC
Strontium-90	10098972	-0.258	0.38	1.04	2.00	U	SR
Uranium, Total		0	0.010	0.022	1.00	U	U_T
Potassium-40	13966002	U		23.0	25.0	U	GAM
Cesium-137	10045973	U		1.53	20.0	U	GAM

QC-BLANK #77580

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8666

8665-005

IUB2814-03

DUPLICATE

SDG <u>8666</u> Contact <u>N. Joseph Verville</u> DUPLICATE Lab sample id <u>S103013-05</u> Dept sample id <u>8665-005</u>	ORIGINAL Lab sample id <u>S103013-01</u> Dept sample id <u>8665-001</u> Received <u>03/01/11</u>	Client <u>Test America, Inc.</u> Contract <u>IUB2816</u> Client sample id <u>IUB2814-03</u> Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u> Collected/Volume <u>02/26/11 20:26</u> <u>10.0 L</u> Chain of custody id <u>IUB2814</u>
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ANALYTE	DUPLICATE	2σ ERR	MDA	RDL	QUALI-	ORIGINAL	2σ ERR	MDA	QUALI-	RPD	3σ	DER	
	pCi/L	(COUNT)	pCi/L	pCi/L	FIERS		TEST	pCi/L	(COUNT)	pCi/L	FIERS	%	TOT
Gross Alpha	1.44	0.58	0.572	3.00	J	80A	1.04	0.53	0.645	J	32	105	0.9
Gross Beta	3.86	0.91	1.35	4.00	J	80B	4.34	0.69	0.934		12	48	0.7
Tritium	-42.1	99	170	500	U	H	-106	98	172	U	-		0.9
Radium-226	0.467	0.39	0.618	1.00	U	RA	0.436	0.36	0.562	U	-		0.1
Radium-228	0.062	0.16	0.406	1.00	U	AC	0.016	0.17	0.421	U	-		0.4
Strontium-90	-0.199	0.43	1.10	2.00	U	SR	-0.031	0.62	1.35	U	-		0.4
Uranium, Total	0.574	0.065	0.022	1.00	J	U_T	0.618	0.070	0.022	J	7	24	0.9
Potassium-40	U		24.8	25.0	U	GAM	U		19.0	U	-		0.4
Cesium-137	U		1.52	20.0	U	GAM	U		1.67	U	-		0.1

QC-DUP#1 77581

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

E B E R L I N E A N A L Y T I C A L
SDG 8666

8666-001

IUB2816-03

D A T A S H E E T

SDG <u>8666</u> Contact <u>N. Joseph Verville</u>	Client <u>Test America, Inc.</u> Contract <u>IUB2816</u>
Lab sample id <u>S103014-01</u> Dept sample id <u>8666-001</u> Received <u>03/01/11</u>	Client sample id <u>IUB2816-03</u> Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u> Collected/Volume <u>02/26/11 08:42</u> <u>10.0 L</u> Chain of custody id <u>IUB2816</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	3.52	0.67	0.410	3.00		80A
Gross Beta	12587472	5.15	0.67	0.829	4.00		80B
Tritium	10028178	-28.6	100	170	500	U	H
Radium-226	13982633	0.100	0.31	0.547	1.00	U	RA
Radium-228	15262201	0.343	0.18	0.418	1.00	U	AC
Strontium-90	10098972	<u>-0.423</u>	0.37	1.10	2.00	U	SR
Uranium, Total		0.838	0.094	0.022	1.00	J	U_T
Potassium-40	13966002	U		24.0	25.0	U	GAM
Cesium-137	10045973	U		1.46	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8666

8666-002

IUB2816-04 (TRIP-BLANK)

DATA SHEET

SDG <u>8666</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2816</u>
Lab sample id <u>S103014-02</u>	Client sample id <u>IUB2816-04 (TRIP-BLANK)</u>
Dept sample id <u>8666-002</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/01/11</u>	Collected/Volume <u>02/26/11 10:30</u> <u>10.0 L</u>
	Chain of custody id <u>IUB2816</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	-0.097	0.12	0.273	3.00	U	80A
Gross Beta	12587472	-0.236	0.47	0.798	4.00	U	80B
Radium-226	13982633	-0.015	0.29	0.554	1.00	U	RA
Radium-228	15262201	0.017	0.22	0.493	1.00	U	AC
Strontium-90	10098972	0.134	0.57	1.29	2.00	U	SR
Uranium, Total		0	0.010	0.022	1.00	U	U_T
Potassium-40	13966002	U		<u>54.1</u>	25.0	U	GAM
Cesium-137	10045973	U		2.57	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8666

LAB METHOD SUMMARY

RADIUM-228 IN WATER
BETA COUNTING

Test AC Matrix WATER
SDG 8666
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2816

RESULTS

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **PLANCHET** **CLIENT SAMPLE ID** **Radium-228**

Preparation batch 7281-046

S103013-03	8665-003	Lab Control Sample	ok
S103013-04	8665-004	Method Blank	U
S103013-05	8665-005	Duplicate (S103013-01)	- U
S103014-01	8666-001	IUB2816-03	U
S103014-02	8666-002	IUB2816-04 (TRIP-BLANK)	U

Nominal values and limits from method **RDLS (pCi/L)** **1.00**

METHOD PERFORMANCE

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **CLIENT SAMPLE ID** **MDA** **ALIQ** **PREP** **DILU-** **YIELD** **EFF** **COUNT** **FWHM** **DRIFT** **DAYS** **ANAL-**
pCi/L **L** **FAC** **TION** **%** **%** **min** **keV** **KeV** **HELD** **PREPARED** **YZED** **DETECTOR**

Preparation batch 7281-046 **2σ prep error 10.4 %** Reference Lab Notebook No. 7281 pg 046

S103013-03	Lab Control Sample	0.429	1.80	81	150				03/18/11	03/18	GRB-220
S103013-04	Method Blank	0.430	1.80	78	150				03/18/11	03/18	GRB-221
S103013-05	Duplicate (S103013-01)	0.406	1.80	78	150			20	03/18/11	03/18	GRB-222
S103014-01	IUB2816-03	0.418	1.80	78	150			20	03/18/11	03/18	GRB-223
S103014-02	IUB2816-04 (TRIP-BLANK)	0.493	1.80	77	150			20	03/18/11	03/18	GRB-224

Nominal values and limits from method **1.00** **1.80** **30-105** **50** **180**

PROCEDURES **REFERENCE** 904.0
DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD **MDA** 0.435 ± 0.067
FOR 5 SAMPLES **YIELD** 78 ± 3

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER
 SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha

Preparation batch 7281-046

S103013-03	80	8665-003	Lab Control Sample	ok
S103013-04	80	8665-004	Method Blank	U
S103013-05	80	8665-005	Duplicate (S103013-01)	ok J
S103014-01	80	8666-001	IUB2816-03	3.52
S103014-02	80	8666-002	IUB2816-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-046 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg 046

S103013-03	80	Lab Control Sample	1.56	0.100			59	400				03/11/11	03/14	GRB-104
S103013-04	80	Method Blank	1.62	0.100			58	400				03/11/11	03/14	GRB-105
S103013-05	80	Duplicate (S103013-01)	0.572	0.300			91	400	16	03/11/11	03/14	03/14	03/14	GRB-107
S103014-01	80	IUB2816-03	0.410	0.300			52	400	16	03/11/11	03/14	03/14	03/14	GRB-109
S103014-02	80	IUB2816-04 (TRIP-BLANK)	0.273	0.300			0	400	16	03/11/11	03/14	03/14	03/14	GRB-111

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 0.887 ± 1.30
 FOR 5 SAMPLES RESIDUE 52 ± 66

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
 SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta

Preparation batch 7281-046

S103013-03	80	8665-003	Lab Control Sample	ok
S103013-04	80	8665-004	Method Blank	U
S103013-05	80	8665-005	Duplicate (S103013-01)	ok J
S103014-01	80	8666-001	IUB2816-03	5.15
S103014-02	80	8666-002	IUB2816-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EPF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-046 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg 046

S103013-03	80	Lab Control Sample	2.39	0.100			59	400				03/11/11	03/14	GRB-104
S103013-04	80	Method Blank	2.78	0.100			58	400				03/11/11	03/14	GRB-105
S103013-05	80	Duplicate (S103013-01)	1.35	0.300			91	400			16	03/11/11	03/14	GRB-107
S103014-01	80	IUB2816-03	0.829	0.300			52	400			16	03/11/11	03/14	GRB-109
S103014-02	80	IUB2816-04 (TRIP-BLANK)	0.798	0.300			0	400			16	03/11/11	03/14	GRB-111

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 1.63 ± 1.82
 FOR 5 SAMPLES RESIDUE 52 ± 66

METHOD SUMMARIES

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EBERLINE ANALYTICAL

SDG 8666

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8666
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2816

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137

Preparation batch 7281-046

S103013-03	8665-003	Lab Control Sample	ok	ok
S103013-04	8665-004	Method Blank		U
S103013-05	8665-005	Duplicate (S103013-01)		- U
S103014-01	8666-001	IUB2816-03		U
S103014-02	8666-002	IUB2816-04 (TRIP-BLANK)		U

Nominal values and limits from method	RDLs (pCi/L)	10.0	20.0
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METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-046 2σ prep error 7.0 % Reference Lab Notebook No. 7281 pg 046

S103013-03	Lab Control Sample	2.00	508									03/03/11	03/08	01,02,00
S103013-04	Method Blank	2.00	508									03/03/11	03/08	01,04,00
S103013-05	Duplicate (S103013-01)	2.00	402						12			03/03/11	03/10	01,03,00
S103014-01	IUB2816-03	2.00	508						10			03/03/11	03/08	01,03,00
S103014-02	IUB2816-04 (TRIP-BLANK)	2.00	493						10			03/03/11	03/08	MB,05,00

Nominal values and limits from method	6.00	2.00	400	180
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PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
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EBERLINE ANALYTICAL

SDG 8666

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

RESULTS

LAB	RAW	SUF-		Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-046				
S103013-03		8665-003	Lab Control Sample	ok
S103013-04		8665-004	Method Blank	U
S103013-05		8665-005	Duplicate (S103013-01)	ok J
S103014-01		8666-001	IUB2816-03	0.838 J
S103014-02		8666-002	IUB2816-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EPF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR
Preparation batch 7281-046			2σ prep error		Reference Lab Notebook No. 7281 pg 046								
S103013-03		Lab Control Sample	0.223	0.0200								03/15/11	03/15 KPA-001
S103013-04		Method Blank	0.022	0.0200								03/15/11	03/15 KPA-001
S103013-05		Duplicate (S103013-01)	0.022	0.0200								17 03/15/11	03/15 KPA-001
S103014-01		IUB2816-03	0.022	0.0200								17 03/15/11	KPA-001
S103014-02		IUB2816-04 (TRIP-BLANK)	0.022	0.0200								17 03/15/11	KPA-001

Nominal values and limits from method 1.00 0.0200 180

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.062 ± 0.180
 FOR 5 SAMPLES YIELD _____ ± _____

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EBERLINE ANALYTICAL

SDG 8666

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
 SDG 8666
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2816

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Tritium

Preparation batch 7281-046

S103013-03	8665-003	Lab Control Sample	ok
S103013-04	8665-004	Method Blank	U
S103013-05	8665-005	Duplicate (S103013-01)	- U
S103014-01	8666-001	IUB2816-03	U

Nominal values and limits from method RDLs (pCi/L) 500

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-046 2σ prep error 10.0 % Reference Lab Notebook No. 7281 pg 046

S103013-03	Lab Control Sample	168	0.100	10	150								03/19/11	03/22	LSC-004
S103013-04	Method Blank	167	0.100	10	150								03/19/11	03/22	LSC-004
S103013-05	Duplicate (S103013-01)	170	0.0100	100	150					24			03/19/11	03/22	LSC-004
S103014-01	IUB2816-03	170	0.0100	100	150					24			03/19/11	03/22	LSC-004

Nominal values and limits from method 500 0.0100 100 180

PROCEDURES REFERENCE 906.0
 DWP-212 Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD MDA 169 ± 3.00
 FOR 4 SAMPLES YIELD 55 ± 104

METHOD SUMMARIES

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EBERLINE ANALYTICAL

SDG 8666

SDG 8666
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2816

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8666

SDG 8666
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
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PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

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WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

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SUMMARY DATA SECTION

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Lab id EAS
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DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

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DATA SHEET

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
- H Similar to 'L' except the recovery was high.
- P The RESULT is 'preliminary'.
- X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
- 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
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DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

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DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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SUMMARY DATA SECTION

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Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>03/30/11</u>

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DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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SUMMARY DATA SECTION

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Lab id EAS
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MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
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MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
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Version 3.06
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METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

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SUMMARY DATA SECTION

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Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/30/11

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METHOD SUMMARY

correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
 - * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.
- MDAs are underlined if greater than the printed RDL.
- * Aliquots are underlined if less than the nominal value specified for the method.
 - * Preparation factors are underlined if greater than the nominal value specified for the method.
 - * Dilution factors are underlined if greater than the nominal value specified for the method.
 - * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
 - * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
 - * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
 - * Count times are underlined if less than the nominal value

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
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Client Test America, Inc.
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METHOD SUMMARY

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
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METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
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Version 3.06
Report date 03/30/11

Subcontract Order - TestAmerica Irvine (IUB2816)

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services - SUB
 2030 Wright Avenue
 Richmond, CA 94804
 Phone : (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: _____ °C

8666

Ice: Y / N

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

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

Sample ID: IUB2816-03 (Outfall 008 (Composite) - Water)

Sampled: 02/26/11 08:42

Gamma Spec-O	mg/kg	02/26/12 08:42	Out eberline, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	08/25/11 08:42	Out eberline, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	08/25/11 08:42	Out eberline, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	02/26/12 08:42	Out eberline Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/26/12 08:42	Out eberline Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/26/12 08:42	Out eberline, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/26/12 08:42	Out eberline Boeing permit, DO NOT FILTER!

Containers Supplied:

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

Sample ID: IUB2816-04 (Trip Blanks - Water)

Sampled: 02/26/11 10:30

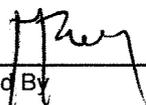
Gamma Spec-O	mg/kg	02/26/12 10:30	Out eberline, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	08/25/11 10:30	Out eberline, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	08/25/11 10:30	Out eberline, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	02/26/12 10:30	Out eberline Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/26/12 10:30	Out eberline Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/26/12 10:30	Out eberline Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (A) 500 mL Amber (B)



 Released By Date/Time

 02/01/11 0940

 Received By Date/Time

 Released By Date/Time

 Received By Date/Time



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: FEST AMERICA City IRVINE State CA
 Date/Time received 03/01/11 0940 CoC No. 10B2816
 Container I.D. No. ICE CHEST #1 Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes No [] N/A []
2. Custody seals on shipping container dated & signed? Yes No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A
5. Packing material is: Wet [] Dry
6. Number of samples in shipping container: 2 Sample Matrix W
7. Number of containers per sample: 2 (Or see CoC _____)
8. Samples are in correct container Yes No []
9. Paperwork agrees with samples? Yes No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels
11. Samples are: In good condition Leaking [] Broken Container [] Missing []
12. Samples are: Preserved Not preserved pH 12/N/A Preservative HNO3
13. Describe any anomalies:

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____

15. Inspected by M. Key Date: 03/02/11 Time: 1115

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>Are skipped</u>	<u>260</u>						

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. 100482 Calibration date 24 SEP 10

APPENDIX G

Section 25

Outfall 008 – March 20 & 21, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUC2141

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: IUC2141
 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	IUC2141-02	G1C230550-001, S103139-01	Water	3/21/2011 06:11	245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, ASTM 5174, SM2450D

II. Sample Management

No anomalies were observed regarding sample management. The samples were received above the temperature limit at Eberline; however, 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 Eberline and TestAmerica-West Sacramento. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: April 10, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two 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 reporting limit for OCDD; however, the method blank concentration was insufficient to qualify the associated sample result for OCDD.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613, and RPDs were within the laboratory control limit of ≤50%.
- 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 in the sample 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 result for 1,2,3,6,7,8-HxCDF was reported below the EDL by the laboratory, as signal-to noise and ratio criteria were met. Individual isomers reported as EMPCs were qualified as estimated nondetects, "UJ," at the level of the EMPC. Totals including EMPCs were qualified as estimated, "J." Any detects reported 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, 2011

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 Method 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, 28 days for mercury, was met.
- Tuning: Not applicable to this analysis.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 85-115%. CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- 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.
- 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 18, 2011

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, 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. The 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 detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as estimated, "J." The remaining detector efficiencies were $\geq 20\%$.

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.

- Blanks: There were no analytes detected in the method blanks.
- Blank Spikes and Laboratory Control Samples: The strontium recovery was nominally above the control limit; however, strontium was not detected in the sample. The remaining recoveries were within laboratory-established control limits.
- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG for all analytes. The RPDs were within the laboratory-established control limits.
- 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. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

A notation in the preparation log indicated that a portion of the aliquots were filtered and that the filtrate was dissolved and added back to the aliquot.

- 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 8, 2011

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

- Holding Times: The analytical holding times, seven days from collection for TSS and 28 days from collection for perchlorate, were met.
- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110%. The perchlorate IPC and reporting limit check standards were recovered within 80-120% and 75-125%, respectively. Balance calibration logs were acceptable.
- Blanks: There were no detects in the method blanks.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits for TSS and method-established control limits for perchlorate.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for TSS. The RPD was within the laboratory-established control limit.
- Matrix Spike/Matrix Spike Duplicate: Due to significant matrix interference in the perchlorate chromatogram, the reviewer requested that the sample be pre-treated, reanalyzed and spiked with a 10 $\mu\text{g/L}$ matrix spike in order to confirm the perchlorate detect. Perchlorate was not detected above the MDL in the reanalysis. As the level of matrix interference was substantially less in the reanalysis, the reviewer chose to reject, "R," the original result in favor of the reanalysis. Although the spike recovery was above the control limit at 136%, no qualifications were required as perchlorate was not detected in the sample. No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.
- 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 IUC2141

Analysis Method 900

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

Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	2.98	3	0.5	pCi/L	Jb	J	C, DNQ
Gross Beta	12587472	5.81	4	0.917	pCi/L			

Analysis Method 901.1

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

Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.29	pCi/L	U	U	
Potassium-40	13966002	ND	25	16.5	pCi/L	U	U	

Analysis Method 903.1

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

Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.191	1	0.781	pCi/L	U	U	

Analysis Method 904

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

Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	-0.025	1	0.538	pCi/L	U	U	

Analysis Method 905

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

Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	-0.335	2	0.921	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC2141-02	Sample Date:	3/21/2011 6:11:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	22.7	500	164	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name	Outfall 008 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC2141-02	Sample Date:	3/21/2011 6:11:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	0.439	1	0.02	pCi/L	Jb	J	DNQ

Analysis Method EPA 245.1

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC2141-02	Sample Date:	3/21/2011 6:11:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 245.1-Diss

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC2141-02	Sample Date:	3/21/2011 6:11:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 314.0

Sample Name	Outfall 008 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC2141-02RE1	Sample Date:	3/21/2011 6:11:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	ND	4.0	0.90	ug/l		U	
Perchlorate	14797-73-0	1.2	4.0	0.90	ug/l	J	R	D

Analysis Method EPA-5 1613B

Sample Name Outfall 008 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 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	2.1e-005	0.00005	0.0000043	ug/L	J	J	DNQ
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000019	ug/L	J, Q	UJ	*III
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000031	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000021	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000012	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000019	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	8e-007	0.00005	0.0000011	ug/L	J	J	DNQ
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000017	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000016	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000017	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000018	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000012	ug/L	J, Q	UJ	*III
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000019	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000014	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000015	ug/L		U	
OCDD	3268-87-9	0.00024	0.0001	0.0000076	ug/L	B		
OCDF	39001-02-0	1.3e-005	0.0001	0.0000041	ug/L	J	J	DNQ
Total HpCDD	37871-00-4	4.7e-005	0.00005	0.0000043	ug/L	J	J	DNQ
Total HpCDF	38998-75-3	1.2e-005	0.00005	0.0000019	ug/L	J, Q	J	C, DNQ
Total HxCDD	34465-46-8	4.6e-006	0.00005	0.0000017	ug/L			
Total HxCDF	55684-94-1	6.1e-006	0.00005	0.0000011	ug/L	J, Q	J	C, DNQ
Total PeCDD	36088-22-9	ND	0.00005	0.0000017	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000018	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000014	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000015	ug/L		U	

Analysis Method SM 2540D

Sample Name Outfall 008 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC2141-02 **Sample Date:** 3/21/2011 6:11:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	46	10	1.0	mg/l			

APPENDIX G

Section 26

Outfall 008 – March 20 & 21, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Routine Outfall 008 2010
Routine Outfall 008

Sampled: 03/20/11-03/21/11
Received: 03/20/11
Revised: 04/22/11 16:22

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
Some analytes in this sample 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.

Per client request, sample was pre-treated and reanalyzed for perchlorate; both results are included.

Revised report to issue cyanide in ug/L

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

LABORATORY ID

IUC2141-01
IUC2141-02

CLIENT ID

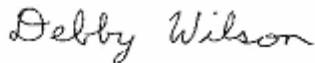
Outfall 008 (Grab)
Outfall 008 (Composite)

MATRIX

Water
Water

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

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-01 (Outfall 008 (Grab) - Water)					Sampled: 03/20/11				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C3551	1.3	4.8	ND	1	DA	03/28/11	

TestAmerica Irvine

Debby Wilson
Project Manager

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

IUC2141 <Page 3 of 40>

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

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUC2141

Sampled: 03/20/11-03/21/11
 Received: 03/20/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water)					Sampled: 03/21/11				
Reporting Units: ug/l									
Mercury	EPA 245.1	11C2939	0.10	0.20	ND	1	DB	03/23/11	
Antimony	EPA 200.8	11C2899	0.30	2.0	ND	1	RDC	03/22/11	
Cadmium	EPA 200.8	11C2899	0.10	1.0	ND	1	RDC	03/22/11	
Zinc	EPA 200.7	11C3037	6.00	20.0	14.3	1	LL	03/23/11	J
Copper	EPA 200.8	11C2899	0.500	2.00	4.78	1	RDC	03/22/11	
Lead	EPA 200.8	11C2899	0.20	1.0	2.4	1	RDC	03/22/11	
Selenium	EPA 200.8	11C2899	0.50	2.0	ND	1	RDC	03/22/11	
Thallium	EPA 200.8	11C2899	0.20	1.0	ND	1	RDC	03/22/11	

TestAmerica Irvine

Debby Wilson
 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 2010
 Routine Outfall 008
 Report Number: IUC2141

Sampled: 03/20/11-03/21/11
 Received: 03/20/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11C3083	0.10	0.20	ND	1	DB	03/23/11	
Antimony	EPA 200.8-Diss	11C3506	0.30	2.0	ND	1	RDC	03/28/11	
Cadmium	EPA 200.8-Diss	11C3506	0.10	1.0	ND	1	RDC	03/28/11	
Zinc	EPA 200.7-Diss	11C3474	6.00	20.0	ND	1	DP	03/26/11	
Copper	EPA 200.8-Diss	11C3506	0.500	2.00	2.04	1	RDC	03/28/11	
Lead	EPA 200.8-Diss	11C3506	0.20	1.0	ND	1	RDC	03/28/11	
Selenium	EPA 200.8-Diss	11C3506	0.50	2.0	ND	1	RDC	03/28/11	
Thallium	EPA 200.8-Diss	11C3506	0.20	1.0	ND	1	RDC	03/28/11	

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

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUC2141

Sampled: 03/20/11-03/21/11
 Received: 03/20/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11C2967	0.500	0.500	ND	1	TMK	03/22/11	
Chloride	EPA 300.0	11C2884	0.30	0.50	5.3	1	NN	03/22/11	
Nitrate-N	EPA 300.0	11C2884	0.060	0.11	0.57	1	NN	03/22/11	
Nitrite-N	EPA 300.0	11C2884	0.090	0.15	ND	1	NN	03/22/11	
Nitrate/Nitrite-N	EPA 300.0	11C2884	0.15	0.26	0.64	1	NN	03/22/11	
Sulfate	EPA 300.0	11C2884	0.30	0.50	4.1	1	NN	03/22/11	
Total Dissolved Solids	SM2540C	11C2823	1.0	10	130	1	MC	03/22/11	
Total Suspended Solids	SM 2540D	11C3143	1.0	10	46	1	DK1	03/23/11	

Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water)

Sampled: 03/21/11

Reporting Units: ug/l

Perchlorate	EPA 314.0	11C2871	0.90	4.0	1.2	1	mn	03/22/11	J
Total Cyanide	SM4500CN-E	11C3437	2.2	5.0	ND	1	SLA	03/25/11	

Sample ID: IUC2141-02RE1 (Outfall 008 (Composite) - Water)

Sampled: 03/21/11

Reporting Units: ug/l

Perchlorate	EPA 314.0	11D1346	0.90	4.0	ND	1	mn	04/12/11	
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Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Gross Alpha	900	8677	0.5	3	2.98	1	LS	03/31/11	Jb
Gross Beta	900	8677	0.917	4	5.81	1	LS	03/31/11	

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Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8677	1.29	20	ND	1	LS	03/30/11	U
Potassium-40	901.1	8677	16.5	25	ND	1	LS	03/30/11	U

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Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Radium-226	903.1	8677	0.781	1	0.191	1	TM	04/05/11	U

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Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Radium-228	904	8677	0.538	1	-0.025	1	LD	04/07/11	U

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Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Strontium-90	905	8677	0.921	2	-0.335	1	EMB	04/01/11	U

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Sampled: 03/20/11-03/21/11
Received: 03/20/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Tritium	906	8677	164	500	22.7	1	WL	03/30/11	U

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Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

ASTM-D5174

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: pCi/L									
Uranium, Total	D5174	8677	0.02	1	0.439	1	TAC	03/29/11	Jb

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) - cont.					Sampled: 03/21/11				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1083190	0.0000043	0.00005	2.1e-005	0.98	MO	03/25/11	J
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1083190	0.0000019	0.00005	6.6e-006	0.98	MO	03/25/11	J, Q
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1083190	0.0000031	0.00005	ND	0.98	MO	03/25/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1083190	0.0000021	0.00005	ND	0.98	MO	03/25/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1083190	0.0000012	0.00005	1.2e-006	0.98	MO	03/25/11	J, Q
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1083190	0.0000019	0.00005	ND	0.98	MO	03/25/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1083190	0.0000011	0.00005	8e-007	0.98	MO	03/25/11	J
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1083190	0.0000017	0.00005	ND	0.98	MO	03/25/11	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1083190	0.0000016	0.00005	ND	0.98	MO	03/25/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1083190	0.0000017	0.00005	ND	0.98	MO	03/25/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1083190	0.0000018	0.00005	ND	0.98	MO	03/25/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1083190	0.0000012	0.00005	9.4e-007	0.98	MO	03/25/11	J, Q
2,3,4,7,8-PeCDF	EPA-5 1613B	1083190	0.0000019	0.00005	ND	0.98	MO	03/25/11	
2,3,7,8-TCDD	EPA-5 1613B	1083190	0.0000014	0.00001	ND	0.98	MO	03/25/11	
2,3,7,8-TCDF	EPA-5 1613B	1083190	0.0000015	0.00001	ND	0.98	MO	03/25/11	
OCDD	EPA-5 1613B	1083190	0.0000076	0.0001	0.00024	0.98	MO	03/25/11	B
OCDF	EPA-5 1613B	1083190	0.0000041	0.0001	1.3e-005	0.98	MO	03/25/11	J
Total HpCDD	EPA-5 1613B	1083190	0.0000043	0.00005	4.7e-005	0.98	MO	03/25/11	J
Total HpCDF	EPA-5 1613B	1083190	0.0000019	0.00005	1.2e-005	0.98	MO	03/25/11	J, Q
Total HxCDD	EPA-5 1613B	1083190	0.0000017	0.00005	4.6e-006	0.98	MO	03/25/11	
Total HxCDF	EPA-5 1613B	1083190	0.0000011	0.00005	6.1e-006	0.98	MO	03/25/11	J, Q
Total PeCDD	EPA-5 1613B	1083190	0.0000017	0.00005	ND	0.98	MO	03/25/11	
Total PeCDF	EPA-5 1613B	1083190	0.0000018	0.00005	ND	0.98	MO	03/25/11	
Total TCDD	EPA-5 1613B	1083190	0.0000014	0.00001	ND	0.98	MO	03/25/11	
Total TCDF	EPA-5 1613B	1083190	0.0000015	0.00001	ND	0.98	MO	03/25/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	38 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	39 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	35 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	43 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	40 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	40 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	45 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	41 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	41 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	36 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	45 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	37 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	40 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	41 %
Surrogate: 13C-OCDD (17-157%)	36 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	82 %

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Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

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) (IUC2141-02) - Water					
EPA 300.0	2	03/21/2011 06:11	03/20/2011 16:40	03/22/2011 11:00	03/22/2011 11:30
Filtration	1	03/21/2011 06:11	03/20/2011 16:40	03/21/2011 23:30	03/21/2011 23:30

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Sampled: 03/20/11-03/21/11
 Received: 03/20/11

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
<u>Batch: 11C3551 Extracted: 03/28/11</u>											
Blank Analyzed: 03/28/2011 (11C3551-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/28/2011 (11C3551-BS1)											
Hexane Extractable Material (Oil & Grease)	18.7	5.0	1.4	mg/l	20.0		94	78-114			MNR1
LCS Dup Analyzed: 03/28/2011 (11C3551-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.1	5.0	1.4	mg/l	20.0		96	78-114	2	11	

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 Received: 03/20/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2899 Extracted: 03/22/11											
Blank Analyzed: 03/22/2011 (11C2899-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 03/22/2011 (11C2899-BS1)											
Antimony	82.8	2.0	0.30	ug/l	80.0		104	85-115			
Cadmium	85.3	1.0	0.10	ug/l	80.0		107	85-115			
Copper	82.8	2.00	0.500	ug/l	80.0		104	85-115			
Lead	79.6	1.0	0.20	ug/l	80.0		100	85-115			
Selenium	82.8	2.0	0.50	ug/l	80.0		104	85-115			
Thallium	79.7	1.0	0.20	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 03/22/2011 (11C2899-MS1) Source: IUC2134-02											
Antimony	77.1	2.0	0.30	ug/l	80.0	ND	96	70-130			
Cadmium	77.7	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	85.0	2.00	0.500	ug/l	80.0	4.75	100	70-130			
Lead	73.0	1.0	0.20	ug/l	80.0	1.35	90	70-130			
Selenium	75.4	2.0	0.50	ug/l	80.0	ND	94	70-130			
Thallium	72.3	1.0	0.20	ug/l	80.0	ND	90	70-130			
Matrix Spike Analyzed: 03/22/2011 (11C2899-MS2) Source: IUC1965-02											
Antimony	82.3	2.0	0.30	ug/l	80.0	0.480	102	70-130			
Cadmium	77.9	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	84.2	2.00	0.500	ug/l	80.0	6.68	97	70-130			
Lead	70.4	1.0	0.20	ug/l	80.0	0.795	87	70-130			
Selenium	80.3	2.0	0.50	ug/l	80.0	2.49	97	70-130			
Thallium	70.4	1.0	0.20	ug/l	80.0	ND	88	70-130			

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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: 11C2899 Extracted: 03/22/11											
Matrix Spike Dup Analyzed: 03/22/2011 (11C2899-MSD1)						Source: IUC2134-02					
Antimony	77.2	2.0	0.30	ug/l	80.0	ND	96	70-130	0.1	20	
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	0.6	20	
Copper	86.2	2.00	0.500	ug/l	80.0	4.75	102	70-130	1	20	
Lead	72.3	1.0	0.20	ug/l	80.0	1.35	89	70-130	0.9	20	
Selenium	76.2	2.0	0.50	ug/l	80.0	ND	95	70-130	1	20	
Thallium	71.2	1.0	0.20	ug/l	80.0	ND	89	70-130	2	20	

Batch: 11C2939 Extracted: 03/22/11

Blank Analyzed: 03/23/2011 (11C2939-BLK1)

Mercury	ND	0.20	0.10	ug/l							
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LCS Analyzed: 03/23/2011 (11C2939-BS1)

Mercury	7.89	0.20	0.10	ug/l	8.00		99	85-115			
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Matrix Spike Analyzed: 03/23/2011 (11C2939-MS1)

Source: IUC2224-01

Mercury	7.87	0.20	0.10	ug/l	8.00	ND	98	70-130			
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Matrix Spike Dup Analyzed: 03/23/2011 (11C2939-MSD1)

Source: IUC2224-01

Mercury	7.86	0.20	0.10	ug/l	8.00	ND	98	70-130	0.2	20	
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Batch: 11C3037 Extracted: 03/23/11

Blank Analyzed: 03/23/2011 (11C3037-BLK1)

Zinc	ND	20.0	6.00	ug/l							
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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: 11C3037 Extracted: 03/23/11											
LCS Analyzed: 03/23/2011 (11C3037-BS1)											
Zinc	524	20.0	6.00	ug/l	500		105	85-115			
Matrix Spike Analyzed: 03/23/2011 (11C3037-MS1)											
Zinc	509	20.0	6.00	ug/l	500	ND	102	70-130			
Matrix Spike Analyzed: 03/23/2011 (11C3037-MS2)											
Zinc	515	20.0	6.00	ug/l	500	ND	103	70-130			
Matrix Spike Dup Analyzed: 03/23/2011 (11C3037-MSD1)											
Zinc	522	20.0	6.00	ug/l	500	ND	104	70-130	3	20	

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Received: 03/20/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C3083 Extracted: 03/23/11</u>											
Blank Analyzed: 03/23/2011 (11C3083-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/23/2011 (11C3083-BS1)											
Mercury	7.87	0.20	0.10	ug/l	8.00		98	85-115			
Matrix Spike Analyzed: 03/23/2011 (11C3083-MS1)											
						Source: IUC2139-03					
Mercury	7.77	0.20	0.10	ug/l	8.00	ND	97	70-130			
Matrix Spike Dup Analyzed: 03/23/2011 (11C3083-MSD1)											
						Source: IUC2139-03					
Mercury	7.76	0.20	0.10	ug/l	8.00	ND	97	70-130	0.2	20	
<u>Batch: 11C3474 Extracted: 03/25/11</u>											
Blank Analyzed: 03/26/2011 (11C3474-BLK1)											
Zinc	11.1	20.0	6.00	ug/l							J
LCS Analyzed: 03/26/2011 (11C3474-BS1)											
Zinc	505	20.0	6.00	ug/l	500		101	85-115			
Matrix Spike Analyzed: 03/26/2011 (11C3474-MS1)											
						Source: IUC2140-03					
Zinc	509	20.0	6.00	ug/l	500	7.18	100	70-130			
Matrix Spike Dup Analyzed: 03/26/2011 (11C3474-MSD1)											
						Source: IUC2140-03					
Zinc	531	20.0	6.00	ug/l	500	7.18	105	70-130	4	20	
<u>Batch: 11C3506 Extracted: 03/26/11</u>											
Blank Analyzed: 03/28/2011 (11C3506-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C3506 Extracted: 03/26/11											
LCS Analyzed: 03/28/2011 (11C3506-BS1)											
Antimony	80.1	2.0	0.30	ug/l	80.0		100	85-115			
Cadmium	79.3	1.0	0.10	ug/l	80.0		99	85-115			
Copper	84.1	2.00	0.500	ug/l	80.0		105	85-115			
Lead	78.6	1.0	0.20	ug/l	80.0		98	85-115			
Selenium	79.7	2.0	0.50	ug/l	80.0		100	85-115			
Thallium	78.5	1.0	0.20	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 03/28/2011 (11C3506-MS1)						Source: IUC2142-02					
Antimony	78.6	2.0	0.30	ug/l	80.0	0.723	97	70-130			
Cadmium	77.2	1.0	0.10	ug/l	80.0	ND	96	70-130			
Copper	83.9	2.00	0.500	ug/l	80.0	1.96	102	70-130			
Lead	76.8	1.0	0.20	ug/l	80.0	0.555	95	70-130			
Selenium	74.2	2.0	0.50	ug/l	80.0	ND	93	70-130			
Thallium	74.8	1.0	0.20	ug/l	80.0	ND	94	70-130			
Matrix Spike Analyzed: 03/28/2011 (11C3506-MS2)						Source: IUC2141-02					
Antimony	78.7	2.0	0.30	ug/l	80.0	ND	98	70-130			
Cadmium	77.0	1.0	0.10	ug/l	80.0	ND	96	70-130			
Copper	83.9	2.00	0.500	ug/l	80.0	2.04	102	70-130			
Lead	76.2	1.0	0.20	ug/l	80.0	ND	95	70-130			
Selenium	73.3	2.0	0.50	ug/l	80.0	ND	92	70-130			
Thallium	75.5	1.0	0.20	ug/l	80.0	ND	94	70-130			
Matrix Spike Dup Analyzed: 03/28/2011 (11C3506-MSD1)						Source: IUC2142-02					
Antimony	79.8	2.0	0.30	ug/l	80.0	0.723	99	70-130	2	20	
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	1	20	
Copper	84.8	2.00	0.500	ug/l	80.0	1.96	104	70-130	1	20	
Lead	76.6	1.0	0.20	ug/l	80.0	0.555	95	70-130	0.3	20	
Selenium	73.5	2.0	0.50	ug/l	80.0	ND	92	70-130	1	20	
Thallium	75.2	1.0	0.20	ug/l	80.0	ND	94	70-130	0.5	20	

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C2823 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2823-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/22/2011 (11C2823-BS1)											
Total Dissolved Solids	998	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/22/2011 (11C2823-DUP1)											
						Source: IUC2198-02					
Total Dissolved Solids	509	10	1.0	mg/l		513			0.8	10	
<u>Batch: 11C2871 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2871-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/22/2011 (11C2871-BS1)											
Perchlorate	26.0	4.0	0.90	ug/l	25.0		104	85-115			
Matrix Spike Analyzed: 03/22/2011 (11C2871-MS1)											
						Source: IUC2009-01					
Perchlorate	26.1	4.0	0.90	ug/l	25.0	ND	104	80-120			
Matrix Spike Dup Analyzed: 03/22/2011 (11C2871-MSD1)											
						Source: IUC2009-01					
Perchlorate	26.3	4.0	0.90	ug/l	25.0	ND	105	80-120	0.6	20	
<u>Batch: 11C2884 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2884-BLK1)											
Chloride	ND	0.50	0.30	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	0.30	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C2884 Extracted: 03/22/11</u>											
LCS Analyzed: 03/22/2011 (11C2884-BS1)											
Chloride	4.94	0.50	0.30	mg/l	5.00		99	90-110			M-3
Nitrate-N	1.12	0.11	0.060	mg/l	1.13		99	90-110			
Nitrite-N	1.43	0.15	0.090	mg/l	1.52		94	90-110			
Sulfate	9.96	0.50	0.30	mg/l	10.0		100	90-110			
Matrix Spike Analyzed: 03/22/2011 (11C2884-MS1) Source: IUC2181-03											
Chloride	7.84	0.50	0.30	mg/l	5.00	3.16	94	80-120			
Nitrate-N	1.55	0.11	0.060	mg/l	1.13	0.453	97	80-120			
Nitrite-N	1.41	0.15	0.090	mg/l	1.52	ND	93	80-120			
Sulfate	13.8	0.50	0.30	mg/l	10.0	4.18	96	80-120			
Matrix Spike Analyzed: 03/22/2011 (11C2884-MS2) Source: IUC2320-01											
Nitrate-N	3.76	0.22	0.12	mg/l	1.13	2.81	84	80-120			
Nitrite-N	1.67	0.30	0.18	mg/l	1.52	ND	110	80-120			
Sulfate	48.2	1.0	0.60	mg/l	10.0	38.8	95	80-120			
Matrix Spike Dup Analyzed: 03/22/2011 (11C2884-MSD1) Source: IUC2181-03											
Chloride	8.21	0.50	0.30	mg/l	5.00	3.16	101	80-120	5	20	
Nitrate-N	1.59	0.11	0.060	mg/l	1.13	0.453	101	80-120	3	20	
Nitrite-N	1.50	0.15	0.090	mg/l	1.52	ND	99	80-120	6	20	
Sulfate	14.3	0.50	0.30	mg/l	10.0	4.18	101	80-120	4	20	
<u>Batch: 11C2967 Extracted: 03/22/11</u>											
Blank Analyzed: 03/22/2011 (11C2967-BLK1)											
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C2967 Extracted: 03/22/11</u>											
LCS Analyzed: 03/22/2011 (11C2967-BS1)											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/22/2011 (11C2967-MS1)											
						Source: IUC2139-03					
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 03/22/2011 (11C2967-MSD1)											
						Source: IUC2139-03					
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120	0	15	
<u>Batch: 11C3143 Extracted: 03/23/11</u>											
Blank Analyzed: 03/23/2011 (11C3143-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/23/2011 (11C3143-BS1)											
Total Suspended Solids	1000	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/23/2011 (11C3143-DUP1)											
						Source: IUC2141-02					
Total Suspended Solids	45.0	10	1.0	mg/l		46.0			2	10	
<u>Batch: 11C3437 Extracted: 03/25/11</u>											
Blank Analyzed: 03/25/2011 (11C3437-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/25/2011 (11C3437-BS1)											
Total Cyanide	194	5.0	2.2	ug/l	196		99	90-110			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C3437 Extracted: 03/25/11</u>											
Matrix Spike Analyzed: 03/25/2011 (11C3437-MS1)						Source: IUC2139-03					
Total Cyanide	199	5.0	2.2	ug/l	196	ND	101	70-115			
Matrix Spike Dup Analyzed: 03/25/2011 (11C3437-MSD1)						Source: IUC2139-03					
Total Cyanide	201	5.0	2.2	ug/l	196	ND	102	70-115	0.9	15	
<u>Batch: 11D1346 Extracted: 04/12/11</u>											
Blank Analyzed: 04/12/2011 (11D1346-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 04/12/2011 (11D1346-BS1)											
Perchlorate	28.2	4.0	0.90	ug/l	25.0		113	85-115			
Matrix Spike Analyzed: 04/12/2011 (11D1346-MS1)						Source: IUC2140-03RE1					
Perchlorate	29.9	4.0	0.90	ug/l	25.0	ND	120	80-120			
Matrix Spike Dup Analyzed: 04/12/2011 (11D1346-MSD1)						Source: IUC2140-03RE1					
Perchlorate	28.2	4.0	0.90	ug/l	25.0	ND	113	80-120	6	20	

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METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 03/31/11											
LCS Analyzed: 03/31/2011 (S103143-02)						Source:					
Gross Alpha	122	3	1.21	pCi/L	101		121	70-130			
Gross Beta	83.8	4	3.06	pCi/L	87.1		96	70-130			
Blank Analyzed: 03/31/2011 (S103143-03)						Source:					
Gross Alpha	0.261	3	1.85	pCi/L				-			U
Gross Beta	-0.333	4	2.4	pCi/L				-			U
Duplicate Analyzed: 03/31/2011 (S103143-04)						Source:					
Gross Alpha	1.94	3	0.434	pCi/L				-	15		Jb
Gross Beta	6.74	4	0.831	pCi/L				-	8		

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METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 03/24/11											
LCS Analyzed: 03/31/2011 (S103143-02)						Source:					
Cobalt-60	123	10	2.5	pCi/L	124		99	80-120			
Cesium-137	118	20	3.18	pCi/L	110		107	80-120			
Blank Analyzed: 03/31/2011 (S103143-03)						Source:					
Cesium-137	ND	20	2.34	pCi/L				-			U
Potassium-40	ND	25	47.4	pCi/L				-			U
Duplicate Analyzed: 03/31/2011 (S103143-04)						Source:					
Cesium-134	ND	20	3.68	pCi/L				-	0		U
Cesium-137	ND	20	1.17	pCi/L				-	0		U
Potassium-40	ND	25	15.8	pCi/L				-	0		U

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903.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 04/05/11											
LCS Analyzed: 04/05/2011 (S103143-02)											
Radium-226	49	1	0.859	pCi/L	55.7		88	80-120			
Blank Analyzed: 04/05/2011 (S103143-03)											
Radium-226	0.031	1	0.8	pCi/L				-			U
Duplicate Analyzed: 04/05/2011 (S103143-04)											
Radium-226	0.283	1	0.711	pCi/L				-	0		U

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METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 04/07/11											
LCS Analyzed: 04/07/2011 (S103143-02)											
Radium-228	3.92	1	0.432	pCi/L	5.01		78	60-140			
Blank Analyzed: 04/07/2011 (S103143-03)											
Radium-228	-0.153	1	0.434	pCi/L				-			U
Duplicate Analyzed: 04/07/2011 (S103143-04)											
Radium-228	0.235	1	0.402	pCi/L				-	0		U

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METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 04/01/11											
LCS Analyzed: 04/01/2011 (S103143-02)											
Strontium-90	19.7	2	0.576	pCi/L	17.4		113	80-120			
Blank Analyzed: 04/01/2011 (S103143-03)											
Strontium-90	0.045	2	0.468	pCi/L				-			U
Duplicate Analyzed: 04/01/2011 (S103143-04)											
Strontium-90	0.078	2	0.717	pCi/L				-	0		U

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906

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 03/30/11											
LCS Analyzed: 03/30/2011 (S103143-02)											
Tritium	2150	500	166	pCi/L	2350		91	80-120			
Blank Analyzed: 03/30/2011 (S103143-03)											
Tritium	-30.1	500	163	pCi/L				-			U
Duplicate Analyzed: 03/30/2011 (S103143-04)											
Tritium	-10.9	500	168	pCi/L				-	0		U

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METHOD BLANK/QC DATA

ASTM-D5174

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8677 Extracted: 03/29/11											
LCS Analyzed: 03/29/2011 (S103143-02)											
Uranium, Total	55.3	1	0.205	pCi/L	56.5		98	80-120			
Blank Analyzed: 03/29/2011 (S103143-03)											
Uranium, Total	ND	1	0.02	pCi/L				-			U
Duplicate Analyzed: 03/29/2011 (S103143-04)											
Uranium, Total	0.292	1	0.02	pCi/L				-	9		Jb

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1083190 Extracted: 03/24/11											
Blank Analyzed: 03/25/2011 (G1C240000190B)						Source:					
1,2,3,4,6,7,8-HpCDD	ND	0.00005	0.0000013	ug/L				-			
1,2,3,4,6,7,8-HpCDF	ND	0.00005	0.00000066	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.00000096	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.00000068	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.00000062	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.00000065	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.00000033	ug/L				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	0.00000058	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.00000043	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.00000091	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.00000087	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000032	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000009	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.00000052	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.00000012	ug/L				-			
OCDD	2.2e-006	0.0001	0.00000019	ug/L				-			J
OCDF	ND	0.0001	0.00000021	ug/L				-			
Total HpCDD	ND	0.00005	0.00000013	ug/L				-			
Total HpCDF	ND	0.00005	0.00000066	ug/L				-			
Total HxCDD	ND	0.00005	0.00000058	ug/L				-			
Total HxCDF	ND	0.00005	0.00000032	ug/L				-			
Total PeCDD	ND	0.00005	0.00000091	ug/L				-			
Total PeCDF	ND	0.00005	0.00000087	ug/L				-			
Total TCDD	ND	0.00001	0.00000052	ug/L				-			
Total TCDF	ND	0.00001	0.00000012	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	0.0011			ug/L	0.002		57	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.001			ug/L	0.002		52	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0011			ug/L	0.002		55	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0011			ug/L	0.002		55	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0013			ug/L	0.002		64	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0013			ug/L	0.002		65	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0012			ug/L	0.002		61	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0013			ug/L	0.002		65	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0011			ug/L	0.002		53	24-185			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUC2141

Sampled: 03/20/11-03/21/11
 Received: 03/20/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1083190 Extracted: 03/24/11											
Blank Analyzed: 03/25/2011 (G1C240000190B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0013			ug/L	0.002		65	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0011			ug/L	0.002		56	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0011			ug/L	0.002		53	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0012			ug/L	0.002		58	24-169			
Surrogate: 13C-OCDD	0.0024			ug/L	0.004		61	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00066			ug/L	0.0008		82	35-197			
LCS Analyzed: 03/25/2011 (G1C240000190C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00107	0.00005	0.0000086	ug/L	0.001		107	70-140			
1,2,3,4,6,7,8-HpCDF	0.00109	0.00005	0.0000018	ug/L	0.001		109	82-122			
1,2,3,4,7,8,9-HpCDF	0.00114	0.00005	0.0000027	ug/L	0.001		114	78-138			
1,2,3,4,7,8-HxCDD	0.00109	0.00005	0.00000078	ug/L	0.001		109	70-164			
1,2,3,4,7,8-HxCDF	0.00107	0.00005	0.0000053	ug/L	0.001		107	72-134			
1,2,3,6,7,8-HxCDD	0.0011	0.00005	0.00000071	ug/L	0.001		110	76-134			
1,2,3,6,7,8-HxCDF	0.0011	0.00005	0.0000048	ug/L	0.001		110	84-130			
1,2,3,7,8,9-HxCDD	0.00121	0.00005	0.00000065	ug/L	0.001		121	64-162			
1,2,3,7,8,9-HxCDF	0.00111	0.00005	0.0000064	ug/L	0.001		111	78-130			
1,2,3,7,8-PeCDD	0.000988	0.00005	0.0000025	ug/L	0.001		99	70-142			
1,2,3,7,8-PeCDF	0.00112	0.00005	0.0000034	ug/L	0.001		112	80-134			
2,3,4,6,7,8-HxCDF	0.0011	0.00005	0.0000047	ug/L	0.001		110	70-156			
2,3,4,7,8-PeCDF	0.00109	0.00005	0.0000036	ug/L	0.001		109	68-160			
2,3,7,8-TCDD	0.000219	0.00001	0.0000014	ug/L	0.0002		110	67-158			
2,3,7,8-TCDF	0.000263	0.00001	0.0000015	ug/L	0.0002		132	75-158			
OCDD	0.00207	0.0001	0.000014	ug/L	0.002		103	78-144			B
OCDF	0.00204	0.0001	0.000011	ug/L	0.002		102	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.000957			ug/L	0.002		48	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.000967			ug/L	0.002		48	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.000872			ug/L	0.002		44	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.000944			ug/L	0.002		47	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00102			ug/L	0.002		51	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00111			ug/L	0.002		56	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00109			ug/L	0.002		55	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00104			ug/L	0.002		52	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00111			ug/L	0.002		56	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00095			ug/L	0.002		48	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0011			ug/L	0.002		55	22-176			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 008 2010
 Routine Outfall 008
 Report Number: IUC2141

Sampled: 03/20/11-03/21/11
 Received: 03/20/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1083190 Extracted: 03/24/11											
LCS Analyzed: 03/25/2011 (G1C240000190C)											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.000997			ug/L	0.002		50	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.000983			ug/L	0.002		49	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00103			ug/L	0.002		51	22-152			
Surrogate: 13C-OCDD	0.00197			ug/L	0.004		49	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000667			ug/L	0.0008		83	31-191			

TestAmerica Irvine

Debby Wilson
 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 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

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
IUC2141-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.48	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
IUC2141-02	Ammonia-N, Titr 4500NH3-C (w/di:Ammonia-N (Distilled)	Ammonia-N	mg/l	0	0.500	10.1
IUC2141-02	Antimony-200.8	Antimony	ug/l	0.23	2.0	6
IUC2141-02	Cadmium-200.8	Cadmium	ug/l	0.067	1.0	3.1
IUC2141-02	Chloride - 300.0	Chloride	mg/l	5.29	0.50	150
IUC2141-02	Copper-200.8	Copper	ug/l	4.78	2.00	14
IUC2141-02	Lead-200.8	Lead	ug/l	2.42	1.0	5.2
IUC2141-02	Mercury - 245.1	Mercury	ug/l	0	0.20	0.13
IUC2141-02	Nitrate-N, 300.0	Nitrate-N	mg/l	0.57	0.11	8
IUC2141-02	Nitrite-N, 300.0	Nitrite-N	mg/l	0.066	0.15	1
IUC2141-02	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.64	0.26	8
IUC2141-02	Perchlorate 314.0 - Default	Perchlorate	ug/l	1.19	4.0	6
IUC2141-02	Selenium-200.8	Selenium	ug/l	0.26	2.0	5
IUC2141-02	Sulfate-300.0	Sulfate	mg/l	4.11	0.50	300
IUC2141-02	TDS - SM2540C	Total Dissolved Solids	mg/l	132	10	950
IUC2141-02	Thallium-200.8	Thallium	ug/l	0.034	1.0	2
IUC2141-02	Zinc-200.7	Zinc	ug/l	14	20.0	159

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
IUC2141-02RE1	Perchlorate 314.0 - Default	Perchlorate	ug/l	0.56	4.0	6

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

DATA QUALIFIERS AND DEFINITIONS

- B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- 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** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the 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** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

TestAmerica Irvine

Debby Wilson
Project Manager

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IUC2141 <Page 37 of 40>

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2540C	Water	X	N/A
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
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 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUC2141-02

Analysis Performed: Gross Alpha
Samples: IUC2141-02

Analysis Performed: Gross Beta
Samples: IUC2141-02

Analysis Performed: Level 4 Data Package
Samples: IUC2141-02

Analysis Performed: Radium, Combined
Samples: IUC2141-02

Analysis Performed: Strontium 90
Samples: IUC2141-02

Analysis Performed: Tritium
Samples: IUC2141-02

Analysis Performed: Uranium, Combined
Samples: IUC2141-02

Method Performed: 900
Samples: IUC2141-02

Method Performed: 901.1
Samples: IUC2141-02

Method Performed: 903.1
Samples: IUC2141-02

Method Performed: 904
Samples: IUC2141-02

Method Performed: 905
Samples: IUC2141-02

Method Performed: 906
Samples: IUC2141-02

Method Performed: D5174
Samples: IUC2141-02

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 008 2010
Routine Outfall 008
Report Number: IUC2141

Sampled: 03/20/11-03/21/11
Received: 03/20/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B

Samples: IUC2141-02

TestAmerica Irvine

Debby Wilson
Project Manager

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 008 COMPOSITE - 11:6:11 Stormwater at Happy Valley		ANALYSIS REQUIRED														Comments	
Test America Contact: Debby Wilson		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Ti, Se, Zn	TCDD (and all congeners)	Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N, Perchlorate	TDS, TSS	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Ti, Se, Zn	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Nitrate-N, Nitrite-N	Ammonia-N (350.2)	Cyanide						
Project Manager: Bronwyn Kelly	Sampler: RICK BANAAGA	Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #											
Outfall 008	W	1L Poly	1	3-21-11 06:11	HNO ₃	2A		X											
Outfall 008 Dup	W	1L Poly	1		HNO ₃	2B		X											
Outfall 008	W	1L Amber	2		None	3A, 3B			X										
Outfall 008	W	500 mL Poly	2		None	4A, 4B			X										
Outfall 008	W	500 mL Poly	1		None	5			X										
Outfall 008	W	1L Poly	1		None	6			X										Filter w/in 24hrs of receipt at lab
Outfall 008	W	2.5 Gal Cube	1		None	7A				X									Unfiltered and unpreserved analysis
		500 mL Amber	1		None	7B													
Outfall 008	W	1 Gal Poly	1		None	8				X									Only test if first or second rain events of the year
Outfall 008	W	500 mL Poly	1		None	9					X								
Outfall 008	W	500 mL Poly	1		H ₂ SO ₄	10						X							
Outfall 008	W	500 mL Poly	1	3-21-11 06:11	NaOH	11							X						

COC Page 2 of 2 list the Composite Samples for Outfall 008 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.

Relinquished By <i>Rick Banaaga</i>	Date/Time: 3-21-11 15:00	Received By <i>Strain Figueroa</i>	Date/Time: 3-21-11 15:00	Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: _____ 48 Hour: _____ 5 Day: <input checked="" type="checkbox"/> Normal: _____
Relinquished By <i>Strain Figueroa</i>	Date/Time: 3-21-11 22:15	Received By <i>[Signature]</i>	Date/Time: 3-21-11 22:15	Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> 2.4
Relinquished By <i>[Signature]</i>	Date/Time: 3/21/11 22:5	Received By <i>[Signature]</i>	Date/Time: 3/21/11 22:5	Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>



EBERLINE

SERVICES

EBERLINE ANALYTICAL CORPORATION
2030 Wright Avenue
Richmond, California 94804-3849
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Toll Free (800) 841-5487
www.eberlineservices.com

April 13, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUC2141
Eberline Analytical Report S103139-8677
Sample Delivery Group 8677**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for one water sample received under Test America Job No. IUC2141. The sample was received on March 23, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8677 consists of the analytical results and supporting documentation for one water sample. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Sample IUC2141-02 was analyzed in a common prep batch with other outfall samples from this project. The QC samples from that common prep batch were assigned to SDG 8681 and are also reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 **Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 **Strontium-90 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 **Radium-226 Analysis** –No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.5 **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits
- 4.6 **Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 **Gamma Spectroscopy** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0 Case Narrative Certification Statement

"I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



N. Joseph Verville
Client Services Manager

4/13/11

Date

EBERLINE ANALYTICAL
SDG 8677

SDG 8677
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2141

S U M M A R Y D A T A S E C T I O N

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Prepared by



Reviewed by

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

SDG 8677
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC2141

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

SDG 8677
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC2141

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

EBERLINE ANALYTICAL

SDG 8677

LAB SAMPLE SUMMARY

SDG 8677
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2141

LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S103139-01	IUC2141-02	Boeing - SSFL	WATER			IUC2141	03/21/11 06:11
S103143-02	Lab Control Sample		WATER				
S103143-03	Method Blank		WATER				
S103143-04	Duplicate (S103143-01)	Boeing - SSFL	WATER				03/20/11 21:35

LAB SUMMARY

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Lab id EAS
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EBERLINE ANALYTICAL

SDG 8677

SDG 8677
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2141

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8677	IUC2141	IUC2141-02	WATER		18.0 L		03/23/11 2		S103139-01	8677-001
8681		Method Blank	WATER						S103143-03	8681-003
		Lab Control Sample	WATER						S103143-02	8681-002
		Duplicate (S103143-01)	WATER		10.0 L		03/23/11 3		S103143-04	8681-004

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

SDG 8677
 Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
 Contract IUC2141

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI- FIERS	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS
Beta Counting										
AC	WATER	Radium-228 in Water	7281-071	10.4	1			1	1	1/0/1
SR	WATER	Strontium-90 in Water	7281-071	10.4	1			1	1	1/0/1
Gas Proportional Counting										
80A	WATER	Gross Alpha in Water	7281-071	20.6	1			1	1	1/0/1
80B	WATER	Gross Beta in Water	7281-071	11.0	1			1	1	1/0/1
Gamma Spectroscopy										
GAM	WATER	Gamma Emitters in Water	7281-071	7.0	1			1	1	1/0/1
Kinetic Phosphorimetry, ug										
U_T	WATER	Uranium, Total	7281-071		1			1	1	1/0/1
Liquid Scintillation Counting										
H	WATER	Tritium in Water	7281-071	10.0	1			1	1	1/0/1
Radon Counting										
RA	WATER	Radium-226 in Water	7281-071	16.4	1			1	1	1/0/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
 In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-PBS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

LAB WORK SUMMARY

SDG 8677
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2141

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX		SUF-						
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103139-01	IUC2141-02		8677-001	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
03/21/11	Boeing - SSFL	WATER	8677-001	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
03/23/11	IUC2141		8677-001	AC		04/07/11	04/11/11	BW	Radium-228 in Water	
			8677-001	GAM		03/30/11	04/04/11	MWT	Gamma Emitters in Water	
			8677-001	H		03/30/11	04/04/11	BW	Tritium in Water	
			8677-001	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8677-001	SR		04/01/11	04/08/11	KWP	Strontium-90 in Water	
			8677-001	U_T		03/29/11	03/29/11	BW	Uranium, Total	
S103143-02	Lab Control Sample		8681-002	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
		WATER	8681-002	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
			8681-002	AC		04/07/11	04/08/11	MWT	Radium-228 in Water	
			8681-002	GAM		03/31/11	04/04/11	MWT	Gamma Emitters in Water	
			8681-002	H		03/30/11	04/04/11	BW	Tritium in Water	
			8681-002	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8681-002	SR		04/01/11	04/08/11	MWT	Strontium-90 in Water	
			8681-002	U_T		03/29/11	03/29/11	BW	Uranium, Total	
S103143-03	Method Blank		8681-003	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
		WATER	8681-003	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
			8681-003	AC		04/07/11	04/08/11	MWT	Radium-228 in Water	
			8681-003	GAM		03/31/11	04/04/11	MWT	Gamma Emitters in Water	
			8681-003	H		03/30/11	04/04/11	BW	Tritium in Water	
			8681-003	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8681-003	SR		04/01/11	04/08/11	MWT	Strontium-90 in Water	
			8681-003	U_T		03/29/11	03/29/11	BW	Uranium, Total	
S103143-04	Duplicate (S103143-01)		8681-004	80A/80		03/31/11	04/01/11	MWT	Gross Alpha in Water	
03/20/11	Boeing - SSFL	WATER	8681-004	80B/80		03/31/11	04/01/11	MWT	Gross Beta in Water	
03/23/11			8681-004	AC		04/07/11	04/08/11	MWT	Radium-228 in Water	
			8681-004	GAM		03/31/11	04/04/11	MWT	Gamma Emitters in Water	
			8681-004	H		03/30/11	04/04/11	BW	Tritium in Water	
			8681-004	RA		04/05/11	04/06/11	BW	Radium-226 in Water	
			8681-004	SR		04/01/11	04/08/11	MWT	Strontium-90 in Water	
			8681-004	U_T		03/29/11	03/29/11	BW	Uranium, Total	

WORK SUMMARY

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Lab id EAS
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EBERLINE ANALYTICAL

SDG 8677

SDG 8677
 Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Test America, Inc.
 Contract IUC2141

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	1			1	1	1	4
80B/80		Gross Beta in Water	900.0	1			1	1	1	4
AC		Radium-228 in Water	904.0	1			1	1	1	4
GAM		Gamma Emitters in Water	901.1	1			1	1	1	4
H		Tritium in Water	906.0	1			1	1	1	4
RA		Radium-226 in Water	903.1	1			1	1	1	4
SR		Strontium-90 in Water	905.0	1			1	1	1	4
U_T		Uranium, Total	D5174	1			1	1	1	4
TOTALS				8			8	8	8	32

WORK SUMMARY

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 Protocol TA
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 Form DVD-LWS
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EBERLINE ANALYTICAL

SDG 8677

8681-004

IUC2187-03

DUPLICATE

SDG <u>8677</u> Contact <u>N. Joseph Verville</u> DUPLICATE	ORIGINAL Lab sample id <u>S103143-01</u> Dept sample id <u>8681-001</u> Received <u>03/23/11</u>	Client <u>Test America, Inc.</u> Contract <u>IUC2141</u> Client sample id <u>IUC2187-03</u> Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u> Collected/Volume <u>03/20/11 21:35</u> <u>10.0 L</u> Chain of custody id <u>IUC2187</u>
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ANALYTE	DUPLICATE	2σ ERR	MDA	RDL	QUALI-	TEST	ORIGINAL	2σ ERR	MDA	QUALI-	RPD	3σ	DER
	pCi/L	(COUNT)	pCi/L	pCi/L	FIERS		pCi/L	(COUNT)	pCi/L	FIERS	%	TOT	σ
Gross Alpha	1.94	0.48	0.434	3.00	J	80A	2.26	0.46	0.276	J	15	65	0.7
Gross Beta	6.74	0.70	0.831	4.00		80B	6.22	0.70	0.866		8	33	0.7
Tritium	-10.9	99	168	500	U	H	-77.2	96	167	U	-		1.0
Radium-226	0.283	0.42	0.711	1.00	U	RA	0.350	0.34	0.544	U	-		0.2
Radium-228	0.235	0.38	0.402	1.00	U	AC	0.229	0.32	0.420	U	-		0
Strontium-90	0.078	0.32	0.717	2.00	U	SR	-0.018	0.26	0.625	U	-		0.5
Uranium, Total	0.292	0.034	0.020	1.00	J	U_T	0.321	0.18	0.020	J	9	90	0.3
Potassium-40	U		15.8	25.0	U	GAM	U		58.4	U	-		1.4
Cesium-134	U		3.68	20.0	U	GAM	U			J	0	213	0
Cesium-137	U		1.17	20.0	U	GAM	U		3.25	U	-		1.2

QC-DUP#1 77926

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>04/12/11</u>

EBERLINE ANALYTICAL

SDG 8677

8677-001

IUC2141-02

DATA SHEET

SDG <u>8677</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC2141</u>
Lab sample id <u>S103139-01</u>	Client sample id <u>IUC2141-02</u>
Dept sample id <u>8677-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/23/11</u>	Collected/Volume <u>03/21/11 06:11</u> <u>18.0 L</u>
	Chain of custody id <u>IUC2141</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	2.98	0.61	0.500	3.00	J	80A
Gross Beta	12587472	5.81	0.72	0.917	4.00		80B
Tritium	10028178	22.7	98	164	500	U	H
Radium-226	13982633	0.191	0.45	0.781	1.00	U	RA
Radium-228	15262201	-0.025	0.27	0.538	1.00	U	AC
Strontium-90	10098972	-0.335	0.36	0.921	2.00	U	SR
Uranium, Total		0.439	0.051	0.020	1.00	J	U_T
Potassium-40	13966002	U		16.5	25.0	U	GAM
Cesium-137	10045973	U		1.29	20.0	U	GAM

DATA SHEETS

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Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>04/12/11</u>

EBERLINE ANALYTICAL

SDG 8677

LAB METHOD SUMMARY

RADIUM-228 IN WATER
BETA COUNTING

Test AC Matrix WATER
SDG 8677
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2141

RESULTS

LAB RAW SUF-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Radium-228

Preparation batch 7281-071

S103139-01	8677-001	IUC2141-02	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-071 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg. 71

S103139-01	IUC2141-02	0.538	1.80	79	150	17	04/07/11	04/07	GRB-222
S103143-02	Lab Control Sample	0.432	1.80	80	150	04/07/11	04/07	GRB-230	
S103143-03	Method Blank	0.434	1.80	89	150	04/07/11	04/07	GRB-231	
S103143-04	Duplicate (S103143-01)	0.402	1.80	88	150	18	04/07/11	04/07	GRB-232

Nominal values and limits from method 1.00 1.80 30-105 50 180

PROCEDURES REFERENCE 904.0
DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD MDA 0.452 ± 0.119
FOR 4 SAMPLES YIELD 84 ± 10

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER
BETA COUNTING

Test SR Matrix WATER
SDG 8677
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2141

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90

Preparation batch 7281-071

S103139-01	8677-001	IUC2141-02	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method RDLs (pCi/L) 2.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-071 , 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg. 71

S103139-01	IUC2141-02	0.921	0.500	74	50	11	04/01/11	04/01	GRB-224
S103143-02	Lab Control Sample	0.576	0.500	94	50		04/01/11	04/01	GRB-232
S103143-03	Method Blank	0.468	0.500	85	100		04/01/11	04/01	GRB-231
S103143-04	Duplicate (S103143-01)	0.717	0.500	83	50	12	04/01/11	04/01	GRB-204

Nominal values and limits from method 2.00 0.500 30-105 50 180

PROCEDURES REFERENCE 905.0
DWP-380 Strontium in Drinking Water, rev 8

AVERAGES ± 2 SD MDA 0.670 ± 0.391
FOR 4 SAMPLES YIELD 84 ± 16

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

LAB METHOD SUMMARY

GROSS ALPHA IN WATER
GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER

SDG 8677

Contact N. Joseph Verville

Client Test America, Inc.

Contract IUC2141

RESULTS

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **PLANCHET** **CLIENT SAMPLE ID** **Gross Alpha**

Preparation batch 7281-071

S103139-01	80	8677-001	IUC2141-02	2.98	J
S103143-02	80	8681-002	Lab Control Sample	ok	
S103143-03	80	8681-003	Method Blank	U	
S103143-04	80	8681-004	Duplicate (S103143-01)	ok	J

Nominal values and limits from method **RDLs (pCi/L)** 3.00

METHOD PERFORMANCE

LAB **RAW** **SUF-** **MDA** **ALIQ** **PREP** **DILU-** **RESID** **EFF** **COUNT** **FWHM** **DRIFT** **DAYS** **ANAL-**
SAMPLE ID **TEST FIX** **CLIENT SAMPLE ID** **pCi/L** **L** **FAC** **TION** **mg** **%** **min** **keV** **KeV** **HELD** **PREPARED** **YZED** **DETECTOR**

Preparation batch 7281-071 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg. 71

S103139-01	80	IUC2141-02	0.500	0.300			36	400		10	03/31/11	03/31	GRB-105
S103143-02	80	Lab Control Sample	1.21	0.100			60	400			03/31/11	03/31	GRB-103
S103143-03	80	Method Blank	1.85	0.100			60	400			03/31/11	03/31	GRB-104
S103143-04	80	Duplicate (S103143-01)	0.434	0.300			26	400		11	03/31/11	03/31	GRB-109

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
DWP-121 Gross Alpha and Gross Beta in Drinking Water,
rev 10

AVERAGES ± 2 SD MDA 0.998 ± 1.34
FOR 4 SAMPLES RESIDUE 46 ± 34

METHOD SUMMARIES

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SUMMARY DATA SECTION

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Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LMS

Version 3.06

Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
 SDG 8677
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2141

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7281-071				
S103139-01	80	8677-001	IUC2141-02	5.81
S103143-02	80	8681-002	Lab Control Sample	ok
S103143-03	80	8681-003	Method Blank	U
S103143-04	80	8681-004	Duplicate (S103143-01)	ok

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR
Preparation batch 7281-071 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg. 71														
S103139-01	80	IUC2141-02	0.917	0.300			36	400			10	03/31/11	03/31	GRB-105
S103143-02	80	Lab Control Sample	3.06	0.100			60	400				03/31/11	03/31	GRB-103
S103143-03	80	Method Blank	2.40	0.100			60	400				03/31/11	03/31	GRB-104
S103143-04	80	Duplicate (S103143-01)	0.831	0.300			26	400			11	03/31/11	03/31	GRB-109

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 1.80 ± 2.21
 FOR 4 SAMPLES RESIDUE 46 ± 34

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8677
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC2141

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7281-071					
S103139-01		8677-001	IUC2141-02		U
S103143-02		8681-002	Lab Control Sample	ok	ok
S103143-03		8681-003	Method Blank		U
S103143-04		8681-004	Duplicate (S103143-01)		- U

Nominal values and limits from method RDLs (pCi/L) 10.0 20.0

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EPF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR
Preparation batch 7281-071 2σ prep error 7.0 % Reference Lab Notebook No. 7281 pg. 71													
S103139-01		IUC2141-02		2.00					595		9	03/24/11	03/30 MB,08,00
S103143-02		Lab Control Sample		2.00					401			03/24/11	03/31 MB,08,00
S103143-03		Method Blank		2.00					621			03/24/11	03/31 MB,05,00
S103143-04		Duplicate (S103143-01)		2.00					596		11	03/24/11	03/31 MB,08,00

Nominal values and limits from method 6.00 2.00 400 180

PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 04/12/11

EBERLINE ANALYTICAL

SDG 8677

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8677
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2141

RESULTS

LAB	RAW	SUF-		Uranium,	
SAMPLE ID	TEST	FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-071					
S103139-01			8677-001	IUC2141-02	0.439 J
S103143-02			8681-002	Lab Control Sample	ok
S103143-03			8681-003	Method Blank	U
S103143-04			8681-004	Duplicate (S103143-01)	ok J

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-			
SAMPLE ID	TEST	FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-071			2σ prep error	Reference Lab Notebook No. 7281 pg. 71												
S103139-01			IUC2141-02	0.020	0.0200								8	03/29/11	03/29	KPA-001
S103143-02			Lab Control Sample	0.205	0.0200									03/29/11	03/29	KPA-001
S103143-03			Method Blank	0.020	0.0200									03/29/11	03/29	KPA-001
S103143-04			Duplicate (S103143-01)	0.020	0.0200								9	03/29/11	03/29	KPA-001

Nominal values and limits from method 1.00 0.0200 180

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.066 ± 0.185
 FOR 4 SAMPLES YIELD _____ ± _____

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 04/12/11

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LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
 SDG 8677
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC2141

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Tritium

Preparation batch 7281-071

S103139-01	8677-001	IUC2141-02	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method RDLs (pCi/L) 500

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-071 2σ prep error 10.0 % Reference Lab Notebook No. 7281 pg. 71

S103139-01	IUC2141-02	164	0.0100	100	150	9	03/30/11	03/30	LSC-004
S103143-02	Lab Control Sample	166	0.100	10	150		03/30/11	03/30	LSC-004
S103143-03	Method Blank	163	0.100	10	150		03/30/11	03/30	LSC-004
S103143-04	Duplicate (S103143-01)	168	0.0100	100	150	10	03/30/11	03/30	LSC-004

Nominal values and limits from method 500 0.0100 100 180

PROCEDURES REFERENCE 906.0
 DWP-212 Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD MDA 165 ± 4.43
 FOR 4 SAMPLES YIELD 55 ± 104

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 Form DVD-LMS
 Version 3.06
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LAB METHOD SUMMARY

RADIUM-226 IN WATER
RADON COUNTING

Test RA Matrix WATER
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RESULTS

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **PLANCHET** **CLIENT SAMPLE ID** **Radium-226**

Preparation batch 7281-071

S103139-01	8677-001	IUC2141-02	U
S103143-02	8681-002	Lab Control Sample	ok
S103143-03	8681-003	Method Blank	U
S103143-04	8681-004	Duplicate (S103143-01)	- U

Nominal values and limits from method **RDLs (pCi/L)** 1.00

METHOD PERFORMANCE

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **CLIENT SAMPLE ID** **MDA** **ALIQ** **PREP** **DILU-** **YIELD** **EFF** **COUNT** **FWHM** **DRIFT** **DAYS** **ANAL-**
pCi/L **L** **FAC** **TION** **%** **%** **min** **keV** **KeV** **HELD** **PREPARED** **YZED** **DETECTOR**

Preparation batch 7281-071 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg. 71

S103139-01	IUC2141-02	0.781	0.100	100	<u>90</u>	15	04/05/11	04/05	RN-016
S103143-02	Lab Control Sample	0.859	0.100	100	<u>90</u>		04/05/11	04/05	RN-009
S103143-03	Method Blank	0.800	0.100	100	<u>90</u>		04/05/11	04/05	RN-010
S103143-04	Duplicate (S103143-01)	0.711	0.100	100	<u>90</u>	16	04/05/11	04/05	RN-015

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.788 ± 0.122
FOR 4 SAMPLES YIELD 100 ± 0

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Version 3.06
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SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

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PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

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REPORT GUIDE

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

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J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.

B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.

Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.

For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.

L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.

H Similar to 'L' except the recovery was high.

P The RESULT is 'preliminary'.

X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.

2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

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may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

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DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

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MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

* The recovery is underlined (out of spec) if it is outside either of these ranges.

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METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

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correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
- * Count times are underlined if less than the nominal value

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METHOD SUMMARY

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

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No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

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Subcontract Order - TestAmerica Irvine (IUC2141)

8677

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services
 2030 Wright Avenue
 Richmond, CA 94804
 Phone : (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: _____ °C

Ice: Y N

Analysis	Units	Due	Expires	Comments
Sample ID: IUC2141-02 (Outfall 008 (Composite) - Water) Sampled: 03/21/11 06:11				
Gamma Spec-O	mg/kg	03/28/11	03/20/12 06:11	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/28/11	09/17/11 06:11	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/28/11	09/17/11 06:11	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	03/28/11	04/18/11 06:11	
Radium, Combined-O	pCi/L	03/28/11	03/20/12 06:11	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/28/11	03/20/12 06:11	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/28/11	03/20/12 06:11	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/28/11	03/20/12 06:11	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

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


 Released By _____ Date/Time 3/22/11 17:00
 Released By FedEx _____ Date/Time _____

FedEx
 Received By _____ Date/Time 3/22/11 17:00
 Received By [Signature] _____ Date/Time 03/23/11 09:30



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 03/23/11 0930 CoC No. 10C2141

Container I.D. No. UE CTEST Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes No [] N/A []
2. Custody seals on shipping container dated & signed? Yes No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A
5. Packing material is: Wet [] Dry
6. Number of samples in shipping container: 1 Sample Matrix W
7. Number of containers per sample: 2 (Or see CoC _____)
8. Samples are in correct container Yes No []
9. Paperwork agrees with samples? Yes [] No
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels
11. Samples are: In good condition Leaking [] Broken Container [] Missing []
12. Samples are: Preserved Not preserved pH 2.4 Preservative HNO₃
13. Describe any anomalies:
SAMPLE IN 5.0 GAL CONTAINER. NOT 2.5 GAL/COC

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____

15. Inspected by Meyer Date: 03/23/11 Time: 1030

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
10C2141	60						

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. 100482 Calibration date 24 SEP 10