APPENDIX G

Section 25

Outfall 006 – March 8, 2010

Test America Analytical Laboratory Report

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Annual Outfall 006

Sampled: 03/08/10
Received: 03/09/10
Issued: 04/27/10 11:27

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

SAMPLE CROSS REFERENCE

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

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

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

There are one or more analytes reported with a concentration less than the corresponding estimated detection limit (EDL). Even though the estimated concentration is less than the EDL it 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.

There are no other anomalies associated with this project.

Revised final report to include results for chlorpyrifos and diazinon-see corrective action report.

LABORATORY ID	CLIENT ID	MATRIX
ITC0989-01	Outfall 006 (Grab)	Water
ITC0989-02	Trip Blanks	Water
ITC0989-03	Outfall 006 (Composite)	Water

Reviewed By:

Debby Wilson

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

CORRECTIVE ACTION REPORT

Department: Project Management
Method: EPA 525.2
QC Batch: 10D2353, 10D3000

Date: 04/27/2010
Matrix: Water

Identification and Definition of Problem:

The requested analyses for chlorpyrifos and diazinon by EPA 525.2 were not performed on sample ITC0989-03.

Determination of the Cause of the Problem:

The two compounds were listed on the chain of custody with the routine (EPA 608) pesticides and were overlooked at log-in. Insufficent project notes and project manager workorder review contributed to this error not being caught.

Corrective Action Taken:

In an effort to report chlorpyrifos and diazinon for this sample, the following steps were taken.
1) A spike mix containing these two compounds was extracted and analyzed following 625 protocols. Recoveries were approximately 50-60% for diazinon and 105-106% for chlorpyrifos.
2) The original 625 extracts for the sample and the method blank were analyzed following 525.2 protocol.
3) The sample, method blank, and LCS/LCSD test samples are reported.
NOTE: There are no surrogate recoveries, no spiked extract batch QC. In addition, the 625 extracts were analyzed 5 days beyond the 40-day holding time.

Project notes have been updated in LIMS to prevent a reoccurrance of this oversight.

Quality Assurance Approval:  Date: 04/27/2010 10:56 AM
Dave Dawes

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-01 (Outfall 006 (Grab) - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	10C1196	0.28	0.50	ND	1	03/10/10	03/10/10	
Bromodichloromethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
Bromoform	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
Bromomethane	EPA 624	10C1196	0.42	1.0	ND	1	03/10/10	03/10/10	
Carbon tetrachloride	EPA 624	10C1196	0.28	0.50	ND	1	03/10/10	03/10/10	
Chlorobenzene	EPA 624	10C1196	0.36	0.50	ND	1	03/10/10	03/10/10	
Chloroethane	EPA 624	10C1196	0.40	1.0	ND	1	03/10/10	03/10/10	
Chloroform	EPA 624	10C1196	0.33	0.50	ND	1	03/10/10	03/10/10	
Chloromethane	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
Dibromochloromethane	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichlorobenzene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
1,3-Dichlorobenzene	EPA 624	10C1196	0.35	0.50	ND	1	03/10/10	03/10/10	
1,4-Dichlorobenzene	EPA 624	10C1196	0.37	0.50	ND	1	03/10/10	03/10/10	
1,1-Dichloroethane	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichloroethane	EPA 624	10C1196	0.28	0.50	ND	1	03/10/10	03/10/10	
1,1-Dichloroethene	EPA 624	10C1196	0.42	0.50	ND	1	03/10/10	03/10/10	
cis-1,2-Dichloroethene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
trans-1,2-Dichloroethene	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichloropropane	EPA 624	10C1196	0.35	0.50	ND	1	03/10/10	03/10/10	
cis-1,3-Dichloropropene	EPA 624	10C1196	0.22	0.50	ND	1	03/10/10	03/10/10	
trans-1,3-Dichloropropene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
Ethylbenzene	EPA 624	10C1196	0.25	0.50	ND	1	03/10/10	03/10/10	
Methylene chloride	EPA 624	10C1196	0.95	1.0	ND	1	03/10/10	03/10/10	
1,1,2,2-Tetrachloroethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
Tetrachloroethene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
Toluene	EPA 624	10C1196	0.36	0.50	ND	1	03/10/10	03/10/10	
1,1,1-Trichloroethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
1,1,2-Trichloroethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
Trichloroethene	EPA 624	10C1196	0.26	0.50	ND	1	03/10/10	03/10/10	
Trichlorofluoromethane	EPA 624	10C1196	0.34	0.50	ND	1	03/10/10	03/10/10	
Trichlorotrifluoroethane (Freon 113)	EPA 624	10C1196	0.50	5.0	ND	1	03/10/10	03/10/10	
Vinyl chloride	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
Xylenes, Total	EPA 624	10C1196	0.90	1.5	ND	1	03/10/10	03/10/10	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*103 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

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

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	10C1196	0.28	0.50	ND	1	03/10/10	03/10/10	
Bromodichloromethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
Bromoform	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
Bromomethane	EPA 624	10C1196	0.42	1.0	ND	1	03/10/10	03/10/10	
Carbon tetrachloride	EPA 624	10C1196	0.28	0.50	ND	1	03/10/10	03/10/10	
Chlorobenzene	EPA 624	10C1196	0.36	0.50	ND	1	03/10/10	03/10/10	
Chloroethane	EPA 624	10C1196	0.40	1.0	ND	1	03/10/10	03/10/10	
Chloroform	EPA 624	10C1196	0.33	0.50	ND	1	03/10/10	03/10/10	
Chloromethane	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
Dibromochloromethane	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichlorobenzene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
1,3-Dichlorobenzene	EPA 624	10C1196	0.35	0.50	ND	1	03/10/10	03/10/10	
1,4-Dichlorobenzene	EPA 624	10C1196	0.37	0.50	ND	1	03/10/10	03/10/10	
1,1-Dichloroethane	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichloroethane	EPA 624	10C1196	0.28	0.50	ND	1	03/10/10	03/10/10	
1,1-Dichloroethene	EPA 624	10C1196	0.42	0.50	ND	1	03/10/10	03/10/10	
cis-1,2-Dichloroethene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
trans-1,2-Dichloroethene	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichloropropane	EPA 624	10C1196	0.35	0.50	ND	1	03/10/10	03/10/10	
cis-1,3-Dichloropropene	EPA 624	10C1196	0.22	0.50	ND	1	03/10/10	03/10/10	
trans-1,3-Dichloropropene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
Ethylbenzene	EPA 624	10C1196	0.25	0.50	ND	1	03/10/10	03/10/10	
Methylene chloride	EPA 624	10C1196	0.95	1.0	ND	1	03/10/10	03/10/10	
1,1,2,2-Tetrachloroethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
Tetrachloroethene	EPA 624	10C1196	0.32	0.50	ND	1	03/10/10	03/10/10	
Toluene	EPA 624	10C1196	0.36	0.50	ND	1	03/10/10	03/10/10	
1,1,1-Trichloroethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
1,1,2-Trichloroethane	EPA 624	10C1196	0.30	0.50	ND	1	03/10/10	03/10/10	
Trichloroethene	EPA 624	10C1196	0.26	0.50	ND	1	03/10/10	03/10/10	
Trichlorofluoromethane	EPA 624	10C1196	0.34	0.50	ND	1	03/10/10	03/10/10	
Trichlorotrifluoroethane (Freon 113)	EPA 624	10C1196	0.50	5.0	ND	1	03/10/10	03/10/10	
Vinyl chloride	EPA 624	10C1196	0.40	0.50	ND	1	03/10/10	03/10/10	
Xylenes, Total	EPA 624	10C1196	0.90	1.5	ND	1	03/10/10	03/10/10	
Surrogate: 4-Bromofluorobenzene (80-120%)					*95 %*				
Surrogate: Dibromofluoromethane (80-120%)					*100 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-01 (Outfall 006 (Grab) - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	10C1196	4.0	5.0	ND	1	03/10/10	03/10/10	
Acrylonitrile	EPA 624	10C1196	1.2	2.0	ND	1	03/10/10	03/10/10	
2-Chloroethyl vinyl ether	EPA 624	10C1196	1.8	5.0	ND	1	03/10/10	03/10/10	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*103 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				
Sample ID: ITC0989-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	10C1196	4.0	5.0	ND	1	03/10/10	03/10/10	
Acrylonitrile	EPA 624	10C1196	1.2	2.0	ND	1	03/10/10	03/10/10	
2-Chloroethyl vinyl ether	EPA 624	10C1196	1.8	5.0	ND	1	03/10/10	03/10/10	
Surrogate: 4-Bromofluorobenzene (80-120%)					*95 %*				
Surrogate: Dibromofluoromethane (80-120%)					*100 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Acenaphthylene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Aniline	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
Anthracene	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
Benzidine	EPA 625	10C1554	9.6	19	ND	0.962	03/12/10	03/16/10	L6
Benzo(a)anthracene	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
Benzo(a)pyrene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Benzo(b)fluoranthene	EPA 625	10C1554	1.9	9.6	ND	0.962	03/12/10	03/16/10	
Benzo(g,h,i)perylene	EPA 625	10C1554	3.8	9.6	ND	0.962	03/12/10	03/16/10	
Benzo(k)fluoranthene	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
Benzoic acid	EPA 625	10C1554	9.6	19	ND	0.962	03/12/10	03/16/10	
Benzyl alcohol	EPA 625	10C1554	3.4	19	ND	0.962	03/12/10	03/16/10	
4-Bromophenyl phenyl ether	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Butyl benzyl phthalate	EPA 625	10C1554	3.8	19	ND	0.962	03/12/10	03/16/10	
4-Chloro-3-methylphenol	EPA 625	10C1554	2.4	19	ND	0.962	03/12/10	03/16/10	
4-Chloroaniline	EPA 625	10C1554	1.9	9.6	ND	0.962	03/12/10	03/16/10	
Bis(2-chloroethoxy)methane	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Bis(2-chloroethyl)ether	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Bis(2-chloroisopropyl)ether	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
Bis(2-ethylhexyl)phthalate	EPA 625	10C1554	3.8	48	ND	0.962	03/12/10	03/16/10	
2-Chloronaphthalene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
2-Chlorophenol	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
4-Chlorophenyl phenyl ether	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
Chrysene	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
Dibenz(a,h)anthracene	EPA 625	10C1554	2.9	19	ND	0.962	03/12/10	03/16/10	
Dibenzofuran	EPA 625	10C1554	3.8	9.6	ND	0.962	03/12/10	03/16/10	
Di-n-butyl phthalate	EPA 625	10C1554	2.9	19	ND	0.962	03/12/10	03/16/10	
1,2-Dichlorobenzene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
1,3-Dichlorobenzene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
1,4-Dichlorobenzene	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
3,3'-Dichlorobenzidine	EPA 625	10C1554	7.2	19	ND	0.962	03/12/10	03/16/10	
2,4-Dichlorophenol	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
Diethyl phthalate	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
2,4-Dimethylphenol	EPA 625	10C1554	3.4	19	ND	0.962	03/12/10	03/16/10	
Dimethyl phthalate	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
4,6-Dinitro-2-methylphenol	EPA 625	10C1554	3.8	19	ND	0.962	03/12/10	03/16/10	
2,4-Dinitrophenol	EPA 625	10C1554	7.7	19	ND	0.962	03/12/10	03/16/10	
2,4-Dinitrotoluene	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
2,6-Dinitrotoluene	EPA 625	10C1554	1.9	9.6	ND	0.962	03/12/10	03/16/10	
Di-n-octyl phthalate	EPA 625	10C1554	3.4	19	ND	0.962	03/12/10	03/16/10	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	10C1554	2.4	19	ND	0.962	03/12/10	03/16/10	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Fluoranthene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Fluorene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Hexachlorobenzene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Hexachlorobutadiene	EPA 625	10C1554	3.8	9.6	ND	0.962	03/12/10	03/16/10	
Hexachlorocyclopentadiene	EPA 625	10C1554	4.8	19	ND	0.962	03/12/10	03/16/10	
Hexachloroethane	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
Indeno(1,2,3-cd)pyrene	EPA 625	10C1554	3.4	19	ND	0.962	03/12/10	03/16/10	
Isophorone	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
2-Methylnaphthalene	EPA 625	10C1554	1.9	9.6	ND	0.962	03/12/10	03/16/10	
2-Methylphenol	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
4-Methylphenol	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
Naphthalene	EPA 625	10C1554	2.9	9.6	ND	0.962	03/12/10	03/16/10	
2-Nitroaniline	EPA 625	10C1554	1.9	19	ND	0.962	03/12/10	03/16/10	
3-Nitroaniline	EPA 625	10C1554	2.9	19	ND	0.962	03/12/10	03/16/10	
4-Nitroaniline	EPA 625	10C1554	3.8	19	ND	0.962	03/12/10	03/16/10	
Nitrobenzene	EPA 625	10C1554	2.9	19	ND	0.962	03/12/10	03/16/10	
2-Nitrophenol	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
4-Nitrophenol	EPA 625	10C1554	5.3	19	ND	0.962	03/12/10	03/16/10	
N-Nitroso-di-n-propylamine	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
N-Nitrosodimethylamine	EPA 625	10C1554	2.4	19	ND	0.962	03/12/10	03/16/10	
N-Nitrosodiphenylamine	EPA 625	10C1554	1.9	9.6	ND	0.962	03/12/10	03/16/10	
Pentachlorophenol	EPA 625	10C1554	3.4	19	ND	0.962	03/12/10	03/16/10	
Phenanthrene	EPA 625	10C1554	3.4	9.6	ND	0.962	03/12/10	03/16/10	
Phenol	EPA 625	10C1554	1.9	9.6	ND	0.962	03/12/10	03/16/10	
Pyrene	EPA 625	10C1554	3.8	9.6	ND	0.962	03/12/10	03/16/10	
1,2,4-Trichlorobenzene	EPA 625	10C1554	2.4	9.6	ND	0.962	03/12/10	03/16/10	
2,4,5-Trichlorophenol	EPA 625	10C1554	2.9	19	ND	0.962	03/12/10	03/16/10	
2,4,6-Trichlorophenol	EPA 625	10C1554	4.3	19	ND	0.962	03/12/10	03/16/10	
Surrogate: 2,4,6-Tribromophenol (40-120%)					*93 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*70 %*				
Surrogate: 2-Fluorophenol (30-120%)					*51 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*62 %*				
Surrogate: Phenol-d6 (35-120%)					*56 %*				
Surrogate: Terphenyl-d14 (50-125%)					*100 %*				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

ACID & BASE/NEUTRALS BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Chlorpyrifos	EPA 625	10C1554	N/A	48	ND	0.962	03/12/10	03/16/10	
Diazinon	EPA 625	10C1554	N/A	48	ND	0.962	03/12/10	03/16/10	

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ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03RE1 (Outfall 006 (Composite) - Water)									**H**
Reporting Units: ug/l									
Chlorpyrifos	EPA 525.2	10D3000	0.0096	0.96	ND	0.962	03/12/10	04/26/10	
Diazinon	EPA 525.2	10D3000	0.096	0.24	ND	0.962	03/12/10	04/26/10	L2

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	10C1222	0.0019	0.0047	ND	0.948	03/10/10	03/12/10	
4,4'-DDE	EPA 608	10C1222	0.0028	0.0047	ND	0.948	03/10/10	03/12/10	
4,4'-DDT	EPA 608	10C1222	0.0038	0.0095	ND	0.948	03/10/10	03/12/10	
Aldrin	EPA 608	10C1222	0.0014	0.0047	ND	0.948	03/10/10	03/12/10	
alpha-BHC	EPA 608	10C1222	0.0024	0.0047	ND	0.948	03/10/10	03/12/10	
beta-BHC	EPA 608	10C1222	0.0038	0.0095	ND	0.948	03/10/10	03/12/10	
delta-BHC	EPA 608	10C1222	0.0033	0.0047	ND	0.948	03/10/10	03/12/10	
Dieldrin	EPA 608	10C1222	0.0019	0.0047	ND	0.948	03/10/10	03/12/10	
Endosulfan I	EPA 608	10C1222	0.0019	0.0047	ND	0.948	03/10/10	03/12/10	
Endosulfan II	EPA 608	10C1222	0.0028	0.0047	ND	0.948	03/10/10	03/12/10	
Endosulfan sulfate	EPA 608	10C1222	0.0028	0.0095	ND	0.948	03/10/10	03/12/10	
Endrin	EPA 608	10C1222	0.0019	0.0047	ND	0.948	03/10/10	03/12/10	
Endrin aldehyde	EPA 608	10C1222	0.0019	0.0095	ND	0.948	03/10/10	03/12/10	
Endrin ketone	EPA 608	10C1222	0.0028	0.0095	ND	0.948	03/10/10	03/12/10	
gamma-BHC (Lindane)	EPA 608	10C1222	0.0028	0.019	ND	0.948	03/10/10	03/12/10	
Heptachlor	EPA 608	10C1222	0.0028	0.0095	ND	0.948	03/10/10	03/12/10	
Heptachlor epoxide	EPA 608	10C1222	0.0024	0.0047	ND	0.948	03/10/10	03/12/10	
Methoxychlor	EPA 608	10C1222	0.0033	0.0047	ND	0.948	03/10/10	03/12/10	
Chlordane	EPA 608	10C1222	0.038	0.095	ND	0.948	03/10/10	03/12/10	
Toxaphene	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/12/10	
Surrogate: Decachlorobiphenyl (45-120%)					*91 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*55 %*				

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TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Aroclor 1221	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Aroclor 1232	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Aroclor 1242	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Aroclor 1248	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Aroclor 1254	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Aroclor 1260	EPA 608	10C1222	0.24	0.47	ND	0.948	03/10/10	03/11/10	
Surrogate: Decachlorobiphenyl (45-120%)					*88 %*				

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HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-01 (Outfall 006 (Grab) - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10C2126	1.3	4.8	ND	1	03/17/10	03/17/10	

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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	**150**	1	03/15/10	03/19/10	
Boron	EPA 200.7	10C1781	0.020	0.050	**0.055**	1	03/15/10	03/19/10	
Calcium	EPA 200.7	10C1781	0.050	0.10	**51**	1	03/15/10	03/19/10	
Iron	EPA 200.7	10C1781	0.015	0.040	**0.14**	1	03/15/10	03/19/10	
Magnesium	EPA 200.7	10C1781	0.012	0.020	**4.1**	1	03/15/10	03/19/10	
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: ug/l									
Aluminum	EPA 200.7	10C1781	40	50	**200**	1	03/15/10	03/19/10	
Mercury	EPA 245.1	10C2010	0.10	0.20	ND	1	03/16/10	03/16/10	
Arsenic	EPA 200.7	10C1781	7.0	10	ND	1	03/15/10	03/19/10	
Antimony	EPA 200.8	10C1948	0.30	2.0	**0.45**	1	03/16/10	03/16/10	J
Beryllium	EPA 200.7	10C1781	0.90	2.0	ND	1	03/15/10	03/19/10	
Chromium	EPA 200.7	10D1079	2.0	5.0	ND	1	04/09/10	04/09/10	
Nickel	EPA 200.7	10C1781	2.0	10	ND	1	03/15/10	03/19/10	
Selenium	EPA 200.7	10C1781	8.0	10	ND	1	03/15/10	03/19/10	
Silver	EPA 200.7	10D1079	6.0	10	ND	1	04/09/10	04/09/10	
Cadmium	EPA 200.8	10C1948	0.10	1.0	ND	1	03/16/10	03/16/10	
Vanadium	EPA 200.7	10C1781	3.0	10	**3.7**	1	03/15/10	03/19/10	J
Zinc	EPA 200.7	10C1781	6.0	20	**7.7**	1	03/15/10	03/19/10	J
Copper	EPA 200.8	10C1948	0.50	2.0	**1.8**	1	03/16/10	03/16/10	J
Lead	EPA 200.8	10C1948	0.20	1.0	**0.49**	1	03/16/10	03/16/10	J
Thallium	EPA 200.8	10C1948	0.20	1.0	ND	1	03/16/10	03/16/10	

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DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]	N/A	0.33	**140**	1	03/17/10	03/20/10	
Boron	EPA 200.7-Diss	10C2228	0.020	0.050	**0.057**	1	03/17/10	03/20/10	
Calcium	EPA 200.7-Diss	10C2228	0.050	0.10	**51**	1	03/17/10	03/20/10	MHA
Iron	EPA 200.7-Diss	10C2228	0.015	0.040	**0.016**	1	03/17/10	03/20/10	J
Magnesium	EPA 200.7-Diss	10C2228	0.012	0.020	**4.1**	1	03/17/10	03/20/10	
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: ug/l									
Aluminum	EPA 200.7-Diss	10C2228	40	50	ND	1	03/17/10	03/20/10	
Mercury	EPA 245.1-Diss	10C2011	0.10	0.20	ND	1	03/16/10	03/16/10	
Arsenic	EPA 200.7-Diss	10C2228	7.0	10	ND	1	03/17/10	03/20/10	
Antimony	EPA 200.8-Diss	10C1953	0.30	2.0	**0.46**	1	03/16/10	03/17/10	J
Beryllium	EPA 200.7-Diss	10C2228	0.90	2.0	ND	1	03/17/10	03/20/10	
Chromium	EPA 200.7-Diss	10C2228	2.0	5.0	**4.6**	1	03/17/10	03/20/10	J
Nickel	EPA 200.7-Diss	10C2228	2.0	10	**10**	1	03/17/10	03/20/10	
Selenium	EPA 200.7-Diss	10C2228	8.0	10	ND	1	03/17/10	03/20/10	
Silver	EPA 200.7-Diss	10D1078	6.0	10	ND	1	04/09/10	04/09/10	
Cadmium	EPA 200.8-Diss	10C1953	0.10	1.0	ND	1	03/16/10	03/17/10	
Vanadium	EPA 200.7-Diss	10C2228	3.0	10	**3.4**	1	03/17/10	03/20/10	J
Zinc	EPA 200.7-Diss	10D1078	6.0	20	ND	1	04/09/10	04/09/10	
Copper	EPA 200.8-Diss	10C1953	0.50	2.0	**1.4**	1	03/16/10	03/17/10	J
Lead	EPA 200.8-Diss	10C1953	0.20	1.0	ND	1	03/16/10	03/17/10	
Thallium	EPA 200.8-Diss	10C1953	0.20	1.0	ND	1	03/16/10	03/17/10	

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DISSOLVED INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-01 (Outfall 006 (Grab) - Water)									
Reporting Units: mg/l									
Chromium VI	EPA 218.6	10C1119	0.00025	0.0010	**0.00083**	1	03/09/10	03/09/10	J

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: mg/l									
Chloride	EPA 300.0	10C1057	0.25	0.50	**7.3**	1	03/09/10	03/09/10	
Total Cyanide	SM4500CN-E	10C1460	0.0022	0.0050	ND	1	03/11/10	03/11/10	
Fluoride	SM 4500-F-C	10C1344	0.020	0.10	**0.14**	1	03/11/10	03/11/10	B
Nitrate/Nitrite-N	EPA 300.0	10C1057	0.15	0.26	**2.7**	1	03/09/10	03/09/10	
Sulfate	EPA 300.0	10C1057	0.20	0.50	**20**	1	03/09/10	03/09/10	
Total Dissolved Solids	SM2540C	10C1704	1.0	10	**240**	1	03/13/10	03/13/10	
Total Suspended Solids	SM 2540D	10C1880	1.0	10	**13**	1	03/15/10	03/15/10	
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10C1095	0.90	4.0	ND	1	03/10/10	03/10/10	

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EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	70198	0.0000014	0.00005	**2.6e-006**	0.95	03/11/10	03/16/10	J, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	70198	0.00000041	0.00005	**1.2e-006**	0.95	03/11/10	03/16/10	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	70198	0.00000072	0.00005	**6.2e-007**	0.95	03/11/10	03/16/10	J, Q, Ba
1,2,3,4,7,8-HxCDD	EPA-5 1613B	70198	0.00000092	0.00005	ND	0.95	03/11/10	03/16/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	70198	0.00000018	0.00005	**4.1e-007**	0.95	03/11/10	03/16/10	J, Q, Ba
1,2,3,6,7,8-HxCDD	EPA-5 1613B	70198	0.00000082	0.00005	ND	0.95	03/11/10	03/16/10	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	70198	0.00000018	0.00005	**6.5e-007**	0.95	03/11/10	03/16/10	J, Q, Ba
1,2,3,7,8,9-HxCDD	EPA-5 1613B	70198	0.00000072	0.00005	ND	0.95	03/11/10	03/16/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	70198	0.00000023	0.00005	**6.4e-007**	0.95	03/11/10	03/16/10	J, Q, Ba
1,2,3,7,8-PeCDD	EPA-5 1613B	70198	0.00000063	0.00005	ND	0.95	03/11/10	03/16/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	70198	0.0000002	0.00005	ND	0.95	03/11/10	03/16/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	70198	0.00000016	0.00005	**4.4e-007**	0.95	03/11/10	03/16/10	J, Q, Ba
2,3,4,7,8-PeCDF	EPA-5 1613B	70198	0.00000022	0.00005	ND	0.95	03/11/10	03/16/10	
2,3,7,8-TCDD	EPA-5 1613B	70198	0.00000047	0.00001	ND	0.95	03/11/10	03/16/10	
2,3,7,8-TCDF	EPA-5 1613B	70198	0.00000041	0.00001	ND	0.95	03/11/10	03/16/10	
OCDD	EPA-5 1613B	70198	0.0000027	0.0001	**1.1e-005**	0.95	03/11/10	03/16/10	J, Q, Ba
OCDF	EPA-5 1613B	70198	0.00000089	0.0001	**2.4e-006**	0.95	03/11/10	03/16/10	J, Q, Ba
Total HpCDD	EPA-5 1613B	70198	0.0000014	0.00005	**6e-006**	0.95	03/11/10	03/16/10	J, Ba
Total HpCDF	EPA-5 1613B	70198	0.00000041	0.00005	**3.3e-006**	0.95	03/11/10	03/16/10	J, Q, Ba
Total HxCDD	EPA-5 1613B	70198	0.00000072	0.00005	ND	0.95	03/11/10	03/16/10	
Total HxCDF	EPA-5 1613B	70198	0.00000016	0.00005	**2.4e-006**	0.95	03/11/10	03/16/10	J, Q, Ba
Total PeCDD	EPA-5 1613B	70198	0.00000063	0.00005	**1.1e-006**	0.95	03/11/10	03/16/10	J, Q
Total PeCDF	EPA-5 1613B	70198	0.0000002	0.00005	ND	0.95	03/11/10	03/16/10	
Total TCDD	EPA-5 1613B	70198	0.00000047	0.00001	ND	0.95	03/11/10	03/16/10	
Total TCDF	EPA-5 1613B	70198	0.00000041	0.00001	ND	0.95	03/11/10	03/16/10	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*81 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*93 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*80 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*78 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*78 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*80 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*77 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*73 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*79 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*80 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*80 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*79 %*				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*80 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*87 %*				
Surrogate: 13C-OCDD (17-157%)					*85 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*103 %*				

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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: ITC0989

Sampled: 03/08/10
Received: 03/09/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	83129	0.21	0.677	**0.441**	1	03/24/10	03/29/10	Jb

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Sampled: 03/08/10
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EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	76134	2	3	**0.7**	1	03/17/10	03/20/10	U
Gross Beta	EPA 900.0 MOD	76134	1.2	4	**3.6**	1	03/17/10	03/20/10	Jb

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Received: 03/09/10

EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	74318	16	20	-2.2	1	03/15/10	03/22/10	U
Potassium 40	EPA 901.1 MOD	74318	300	NA	-80	1	03/15/10	03/22/10	U

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Received: 03/09/10

EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	71128	0.05	1	**0.07**	1	03/12/10	04/05/10	Jb

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Sampled: 03/08/10
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EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	71129	0.44	1	**0.11**	1	03/12/10	03/29/10	U

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EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	71130	0.68	3	-0.1	1	03/12/10	03/25/10	U

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EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water)									
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	77060	150	500	**73**	1	03/18/10	03/24/10	U

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Sampled: 03/08/10
Received: 03/09/10

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 006 (Grab) (ITC0989-01) - Water					
EPA 218.6	1	03/08/2010 11:08	03/09/2010 17:20	03/09/2010 19:45	03/09/2010 19:53
EPA 624	3	03/08/2010 11:08	03/09/2010 17:20	03/10/2010 00:00	03/10/2010 11:28
Sample ID: Trip Blanks (ITC0989-02) - Water					
EPA 624	3	03/08/2010 11:08	03/09/2010 17:20	03/10/2010 00:00	03/10/2010 10:58
Sample ID: Outfall 006 (Composite) (ITC0989-03) - Water					
EPA 300.0	2	03/08/2010 11:08	03/09/2010 17:20	03/09/2010 21:30	03/09/2010 22:24
Sample ID: Outfall 006 (Composite) (ITC0989-03RE1) - Water					
EPA 525.2	1	03/08/2010 11:08	03/09/2010 17:20	03/12/2010 09:03	04/26/2010 16:59

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Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1196 Extracted: 03/10/10											
Blank Analyzed: 03/10/2010 (10C1196-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							
cis-1,2-Dichloroethene	ND	0.50	0.32	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.30	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
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							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: 4-Bromofluorobenzene	*24.2*			*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: Dibromofluoromethane	*24.4*			*ug/l*	*25.0*		*98*	*80-120*			

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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: 10C1196 Extracted: 03/10/10											
Blank Analyzed: 03/10/2010 (10C1196-BLK1)											
Surrogate: Toluene-d8	*26.6*			*ug/l*	*25.0*		*106*	*80-120*			
LCS Analyzed: 03/10/2010 (10C1196-BS1)											
Benzene	25.7	0.50	0.28	ug/l	25.0		103	70-120			
Bromodichloromethane	28.0	0.50	0.30	ug/l	25.0		112	70-135			
Bromoform	19.8	0.50	0.40	ug/l	25.0		79	55-130			
Bromomethane	26.5	1.0	0.42	ug/l	25.0		106	65-140			
Carbon tetrachloride	26.0	0.50	0.28	ug/l	25.0		104	65-140			
Chlorobenzene	26.1	0.50	0.36	ug/l	25.0		104	75-120			
Chloroethane	25.5	1.0	0.40	ug/l	25.0		102	60-140			
Chloroform	27.1	0.50	0.33	ug/l	25.0		108	70-130			
Chloromethane	25.2	0.50	0.40	ug/l	25.0		101	50-140			
Dibromochloromethane	22.6	0.50	0.40	ug/l	25.0		90	70-140			
1,2-Dichlorobenzene	26.2	0.50	0.32	ug/l	25.0		105	75-120			
1,3-Dichlorobenzene	27.1	0.50	0.35	ug/l	25.0		108	75-120			
1,4-Dichlorobenzene	26.2	0.50	0.37	ug/l	25.0		105	75-120			
1,1-Dichloroethane	27.8	0.50	0.40	ug/l	25.0		111	70-125			
1,2-Dichloroethane	26.7	0.50	0.28	ug/l	25.0		107	60-140			
1,1-Dichloroethene	25.8	0.50	0.42	ug/l	25.0		103	70-125			
cis-1,2-Dichloroethene	28.3	0.50	0.32	ug/l	25.0		113	70-125			
trans-1,2-Dichloroethene	26.3	0.50	0.30	ug/l	25.0		105	70-125			
1,2-Dichloropropane	25.8	0.50	0.35	ug/l	25.0		103	70-125			
cis-1,3-Dichloropropene	31.2	0.50	0.22	ug/l	25.0		125	75-125			
trans-1,3-Dichloropropene	21.0	0.50	0.32	ug/l	25.0		84	70-125			
Ethylbenzene	26.4	0.50	0.25	ug/l	25.0		106	75-125			
Methylene chloride	23.6	1.0	0.95	ug/l	25.0		94	55-130			
1,1,2,2-Tetrachloroethane	24.6	0.50	0.30	ug/l	25.0		98	55-130			
Tetrachloroethene	25.0	0.50	0.32	ug/l	25.0		100	70-125			
Toluene	27.6	0.50	0.36	ug/l	25.0		111	70-120			
1,1,1-Trichloroethane	26.5	0.50	0.30	ug/l	25.0		106	65-135			
1,1,2-Trichloroethane	25.4	0.50	0.30	ug/l	25.0		102	70-125			
Trichloroethene	26.2	0.50	0.26	ug/l	25.0		105	70-125			
Trichlorofluoromethane	26.2	0.50	0.34	ug/l	25.0		105	65-145			
Vinyl chloride	23.8	0.50	0.40	ug/l	25.0		95	55-135			
Xylenes, Total	82.0	1.5	0.90	ug/l	75.0		109	70-125			
Surrogate: 4-Bromofluorobenzene	*26.6*			*ug/l*	*25.0*		*106*	*80-120*			

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1196 Extracted: 03/10/10											
LCS Analyzed: 03/10/2010 (10C1196-BS1)											
Surrogate: Dibromofluoromethane	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Matrix Spike Analyzed: 03/10/2010 (10C1196-MS1)						**Source: ITC0989-01**					
Benzene	24.9	0.50	0.28	ug/l	25.0	ND	99	65-125			
Bromodichloromethane	27.5	0.50	0.30	ug/l	25.0	ND	110	70-135			
Bromoform	20.3	0.50	0.40	ug/l	25.0	ND	81	55-135			
Bromomethane	24.3	1.0	0.42	ug/l	25.0	ND	97	55-145			
Carbon tetrachloride	24.9	0.50	0.28	ug/l	25.0	ND	100	65-140			
Chlorobenzene	25.5	0.50	0.36	ug/l	25.0	ND	102	75-125			
Chloroethane	23.4	1.0	0.40	ug/l	25.0	ND	94	55-140			
Chloroform	26.0	0.50	0.33	ug/l	25.0	ND	104	65-135			
Chloromethane	21.3	0.50	0.40	ug/l	25.0	ND	85	45-145			
Dibromochloromethane	22.6	0.50	0.40	ug/l	25.0	ND	90	65-140			
1,2-Dichlorobenzene	25.8	0.50	0.32	ug/l	25.0	ND	103	75-125			
1,3-Dichlorobenzene	26.3	0.50	0.35	ug/l	25.0	ND	105	75-125			
1,4-Dichlorobenzene	25.6	0.50	0.37	ug/l	25.0	ND	102	75-125			
1,1-Dichloroethane	26.5	0.50	0.40	ug/l	25.0	ND	106	65-130			
1,2-Dichloroethane	27.0	0.50	0.28	ug/l	25.0	ND	108	60-140			
1,1-Dichloroethene	24.6	0.50	0.42	ug/l	25.0	ND	98	60-130			
cis-1,2-Dichloroethene	26.9	0.50	0.32	ug/l	25.0	ND	108	65-130			
trans-1,2-Dichloroethene	24.8	0.50	0.30	ug/l	25.0	ND	99	65-130			
1,2-Dichloropropane	25.6	0.50	0.35	ug/l	25.0	ND	102	65-130			
cis-1,3-Dichloropropene	30.7	0.50	0.22	ug/l	25.0	ND	123	70-130			
trans-1,3-Dichloropropene	21.0	0.50	0.32	ug/l	25.0	ND	84	65-135			
Ethylbenzene	26.1	0.50	0.25	ug/l	25.0	ND	104	65-130			
Methylene chloride	22.5	1.0	0.95	ug/l	25.0	ND	90	50-135			
1,1,2,2-Tetrachloroethane	24.3	0.50	0.30	ug/l	25.0	ND	97	55-135			
Tetrachloroethene	24.5	0.50	0.32	ug/l	25.0	ND	98	65-130			
Toluene	26.7	0.50	0.36	ug/l	25.0	ND	107	70-125			
1,1,1-Trichloroethane	25.6	0.50	0.30	ug/l	25.0	ND	102	65-140			
1,1,2-Trichloroethane	26.6	0.50	0.30	ug/l	25.0	ND	106	65-130			
Trichloroethene	25.9	0.50	0.26	ug/l	25.0	ND	103	65-125			
Trichlorofluoromethane	24.6	0.50	0.34	ug/l	25.0	ND	98	60-145			
Vinyl chloride	21.3	0.50	0.40	ug/l	25.0	ND	85	45-140			
Xylenes, Total	80.8	1.5	0.90	ug/l	75.0	ND	108	60-130			

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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: 10C1196 Extracted: 03/10/10											
Matrix Spike Analyzed: 03/10/2010 (10C1196-MS1)						**Source: ITC0989-01**					
Surrogate: 4-Bromofluorobenzene	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Dibromofluoromethane	*26.7*			*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Matrix Spike Dup Analyzed: 03/10/2010 (10C1196-MSD1)						**Source: ITC0989-01**					
Benzene	25.1	0.50	0.28	ug/l	25.0	ND	100	65-125	0.9	20	
Bromodichloromethane	27.8	0.50	0.30	ug/l	25.0	ND	111	70-135	1	20	
Bromoform	20.8	0.50	0.40	ug/l	25.0	ND	83	55-135	2	25	
Bromomethane	24.3	1.0	0.42	ug/l	25.0	ND	97	55-145	0.1	25	
Carbon tetrachloride	25.2	0.50	0.28	ug/l	25.0	ND	101	65-140	1	25	
Chlorobenzene	25.3	0.50	0.36	ug/l	25.0	ND	101	75-125	0.6	20	
Chloroethane	23.6	1.0	0.40	ug/l	25.0	ND	95	55-140	0.9	25	
Chloroform	25.7	0.50	0.33	ug/l	25.0	ND	103	65-135	1	20	
Chloromethane	20.3	0.50	0.40	ug/l	25.0	ND	81	45-145	5	25	
Dibromochloromethane	23.2	0.50	0.40	ug/l	25.0	ND	93	65-140	2	25	
1,2-Dichlorobenzene	26.1	0.50	0.32	ug/l	25.0	ND	104	75-125	1	20	
1,3-Dichlorobenzene	26.6	0.50	0.35	ug/l	25.0	ND	106	75-125	1	20	
1,4-Dichlorobenzene	25.9	0.50	0.37	ug/l	25.0	ND	104	75-125	1	20	
1,1-Dichloroethane	26.5	0.50	0.40	ug/l	25.0	ND	106	65-130	0.08	20	
1,2-Dichloroethane	27.1	0.50	0.28	ug/l	25.0	ND	108	60-140	0.4	20	
1,1-Dichloroethene	24.4	0.50	0.42	ug/l	25.0	ND	98	60-130	0.9	20	
cis-1,2-Dichloroethene	27.3	0.50	0.32	ug/l	25.0	ND	109	65-130	2	20	
trans-1,2-Dichloroethene	25.3	0.50	0.30	ug/l	25.0	ND	101	65-130	2	20	
1,2-Dichloropropane	25.5	0.50	0.35	ug/l	25.0	ND	102	65-130	0.4	20	
cis-1,3-Dichloropropene	30.9	0.50	0.22	ug/l	25.0	ND	124	70-130	0.8	20	
trans-1,3-Dichloropropene	21.6	0.50	0.32	ug/l	25.0	ND	86	65-135	3	25	
Ethylbenzene	25.9	0.50	0.25	ug/l	25.0	ND	104	65-130	0.8	20	
Methylene chloride	22.9	1.0	0.95	ug/l	25.0	ND	91	50-135	1	20	
1,1,2,2-Tetrachloroethane	27.2	0.50	0.30	ug/l	25.0	ND	109	55-135	11	30	
Tetrachloroethene	24.7	0.50	0.32	ug/l	25.0	ND	99	65-130	0.9	20	
Toluene	27.1	0.50	0.36	ug/l	25.0	ND	108	70-125	1	20	
1,1,1-Trichloroethane	25.1	0.50	0.30	ug/l	25.0	ND	100	65-140	2	20	
1,1,2-Trichloroethane	26.5	0.50	0.30	ug/l	25.0	ND	106	65-130	0.5	25	
Trichloroethene	25.7	0.50	0.26	ug/l	25.0	ND	103	65-125	0.5	20	
Trichlorofluoromethane	24.8	0.50	0.34	ug/l	25.0	ND	99	60-145	1	25	
Vinyl chloride	19.9	0.50	0.40	ug/l	25.0	ND	80	45-140	7	30	

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Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1196 Extracted: 03/10/10											
Matrix Spike Dup Analyzed: 03/10/2010 (10C1196-MSD1)						**Source: ITC0989-01**					
Xylenes, Total	79.8	1.5	0.90	ug/l	75.0	ND	106	60-130	1	20	
Surrogate: 4-Bromofluorobenzene	*26.4*			*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Dibromofluoromethane	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			

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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: 10C1196 Extracted: 03/10/10											
Blank Analyzed: 03/10/2010 (10C1196-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	*24.2*			*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: Dibromofluoromethane	*24.4*			*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*26.6*			*ug/l*	*25.0*		*106*	*80-120*			
LCS Analyzed: 03/10/2010 (10C1196-BS1)											
2-Chloroethyl vinyl ether	19.5	5.0	1.8	ug/l	25.0		78	25-170			
Surrogate: 4-Bromofluorobenzene	*26.6*			*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Dibromofluoromethane	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Matrix Spike Analyzed: 03/10/2010 (10C1196-MS1)						**Source: ITC0989-01**					
2-Chloroethyl vinyl ether	19.6	5.0	1.8	ug/l	25.0	ND	78	25-170			
Surrogate: 4-Bromofluorobenzene	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Dibromofluoromethane	*26.7*			*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Matrix Spike Dup Analyzed: 03/10/2010 (10C1196-MSD1)						**Source: ITC0989-01**					
2-Chloroethyl vinyl ether	21.4	5.0	1.8	ug/l	25.0	ND	85	25-170	9	25	
Surrogate: 4-Bromofluorobenzene	*26.4*			*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Dibromofluoromethane	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	*25.0*		*106*	*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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
Blank Analyzed: 03/16/2010 (10C1554-BLK1)											
Acenaphthene	ND	10	3.0	ug/l							
Acenaphthylene	ND	10	3.0	ug/l							
Aniline	ND	10	3.5	ug/l							
Anthracene	ND	10	2.5	ug/l							
Benzidine	ND	20	10	ug/l							
Benzo(a)anthracene	ND	10	2.5	ug/l							
Benzo(a)pyrene	ND	10	3.0	ug/l							
Benzo(b)fluoranthene	ND	10	2.0	ug/l							
Benzo(g,h,i)perylene	ND	10	4.0	ug/l							
Benzo(k)fluoranthene	ND	10	2.5	ug/l							
Benzoic acid	ND	20	10	ug/l							
Benzyl alcohol	ND	20	3.5	ug/l							
4-Bromophenyl phenyl ether	ND	10	3.0	ug/l							
Butyl benzyl phthalate	ND	20	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	2.5	ug/l							
4-Chloroaniline	ND	10	2.0	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.0	ug/l							
Bis(2-chloroethyl)ether	ND	10	3.0	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	2.5	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	4.0	ug/l							
2-Chloronaphthalene	ND	10	3.0	ug/l							
2-Chlorophenol	ND	10	3.0	ug/l							
4-Chlorophenyl phenyl ether	ND	10	2.5	ug/l							
Chrysene	ND	10	2.5	ug/l							
Dibenz(a,h)anthracene	ND	20	3.0	ug/l							
Dibenzofuran	ND	10	4.0	ug/l							
Di-n-butyl phthalate	ND	20	3.0	ug/l							
1,2-Dichlorobenzene	ND	10	3.0	ug/l							
1,3-Dichlorobenzene	ND	10	3.0	ug/l							
1,4-Dichlorobenzene	ND	10	2.5	ug/l							
3,3'-Dichlorobenzidine	ND	20	7.5	ug/l							
2,4-Dichlorophenol	ND	10	3.5	ug/l							
Diethyl phthalate	ND	10	3.5	ug/l							
2,4-Dimethylphenol	ND	20	3.5	ug/l							
Dimethyl phthalate	ND	10	2.5	ug/l							

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
Blank Analyzed: 03/16/2010 (10C1554-BLK1)											
4,6-Dinitro-2-methylphenol	ND	20	4.0	ug/l							
2,4-Dinitrophenol	ND	20	8.0	ug/l							
2,4-Dinitrotoluene	ND	10	3.5	ug/l							
2,6-Dinitrotoluene	ND	10	2.0	ug/l							
Di-n-octyl phthalate	ND	20	3.5	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	2.5	ug/l							
Fluoranthene	ND	10	3.0	ug/l							
Fluorene	ND	10	3.0	ug/l							
Hexachlorobenzene	ND	10	3.0	ug/l							
Hexachlorobutadiene	ND	10	4.0	ug/l							
Hexachlorocyclopentadiene	ND	20	5.0	ug/l							
Hexachloroethane	ND	10	3.5	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	3.5	ug/l							
Isophorone	ND	10	3.0	ug/l							
2-Methylnaphthalene	ND	10	2.0	ug/l							
2-Methylphenol	ND	10	3.0	ug/l							
4-Methylphenol	ND	10	3.0	ug/l							
Naphthalene	ND	10	3.0	ug/l							
2-Nitroaniline	ND	20	2.0	ug/l							
3-Nitroaniline	ND	20	3.0	ug/l							
4-Nitroaniline	ND	20	4.0	ug/l							
Nitrobenzene	ND	20	3.0	ug/l							
2-Nitrophenol	ND	10	3.5	ug/l							
4-Nitrophenol	ND	20	5.5	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.5	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
N-Nitrosodiphenylamine	ND	10	2.0	ug/l							
Pentachlorophenol	ND	20	3.5	ug/l							
Phenanthrene	ND	10	3.5	ug/l							
Phenol	ND	10	2.0	ug/l							
Pyrene	ND	10	4.0	ug/l							
1,2,4-Trichlorobenzene	ND	10	2.5	ug/l							
2,4,5-Trichlorophenol	ND	20	3.0	ug/l							
2,4,6-Trichlorophenol	ND	20	4.5	ug/l							
Surrogate: 2,4,6-Tribromophenol	*182*			*ug/l*	*200*		*91*	*40-120*			

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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
Blank Analyzed: 03/16/2010 (10C1554-BLK1)											
Surrogate: 2-Fluorobiphenyl	*72.3*			*ug/l*	*100*		*72*	*50-120*			
Surrogate: 2-Fluorophenol	*124*			*ug/l*	*200*		*62*	*30-120*			
Surrogate: Nitrobenzene-d5	*68.4*			*ug/l*	*100*		*68*	*45-120*			
Surrogate: Phenol-d6	*122*			*ug/l*	*200*		*61*	*35-120*			
Surrogate: Terphenyl-d14	*91.6*			*ug/l*	*100*		*92*	*50-125*			
LCS Analyzed: 03/16/2010 (10C1554-BS1)											**MNR1**
Acenaphthene	78.2	10	3.0	ug/l	100		78	60-120			
Acenaphthylene	76.2	10	3.0	ug/l	100		76	60-120			
Aniline	61.3	10	3.5	ug/l	100		61	35-120			
Anthracene	83.2	10	2.5	ug/l	100		83	65-120			
Benzidine	19.9	20	10	ug/l	100		20	30-160			*L6, J*
Benzo(a)anthracene	83.3	10	2.5	ug/l	100		83	65-120			
Benzo(a)pyrene	84.1	10	3.0	ug/l	100		84	55-130			
Benzo(b)fluoranthene	75.8	10	2.0	ug/l	100		76	55-125			
Benzo(g,h,i)perylene	80.9	10	4.0	ug/l	100		81	45-135			
Benzo(k)fluoranthene	81.3	10	2.5	ug/l	100		81	50-125			
Benzoic acid	72.8	20	10	ug/l	100		73	25-120			
Benzyl alcohol	72.1	20	3.5	ug/l	100		72	50-120			
4-Bromophenyl phenyl ether	84.7	10	3.0	ug/l	100		85	60-120			
Butyl benzyl phthalate	97.0	20	4.0	ug/l	100		97	55-130			
4-Chloro-3-methylphenol	76.3	20	2.5	ug/l	100		76	60-120			
4-Chloroaniline	75.7	10	2.0	ug/l	100		76	55-120			
Bis(2-chloroethoxy)methane	71.4	10	3.0	ug/l	100		71	55-120			
Bis(2-chloroethyl)ether	64.1	10	3.0	ug/l	100		64	50-120			
Bis(2-chloroisopropyl)ether	71.0	10	2.5	ug/l	100		71	45-120			
Bis(2-ethylhexyl)phthalate	91.1	50	4.0	ug/l	100		91	65-130			
2-Chloronaphthalene	74.6	10	3.0	ug/l	100		75	60-120			
2-Chlorophenol	68.5	10	3.0	ug/l	100		68	45-120			
4-Chlorophenyl phenyl ether	82.6	10	2.5	ug/l	100		83	65-120			
Chrysene	82.6	10	2.5	ug/l	100		83	65-120			
Dibenz(a,h)anthracene	87.2	20	3.0	ug/l	100		87	50-135			
Dibenzofuran	75.2	10	4.0	ug/l	100		75	65-120			
Di-n-butyl phthalate	88.2	20	3.0	ug/l	100		88	60-125			
1,2-Dichlorobenzene	61.2	10	3.0	ug/l	100		61	40-120			
1,3-Dichlorobenzene	59.0	10	3.0	ug/l	100		59	35-120			

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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
LCS Analyzed: 03/16/2010 (10C1554-BS1)											**MNR1**
1,4-Dichlorobenzene	59.1	10	2.5	ug/l	100		59	35-120			
3,3'-Dichlorobenzidine	58.5	20	7.5	ug/l	100		59	45-135			
2,4-Dichlorophenol	80.2	10	3.5	ug/l	100		80	55-120			
Diethyl phthalate	81.3	10	3.5	ug/l	100		81	55-120			
2,4-Dimethylphenol	68.3	20	3.5	ug/l	100		68	40-120			
Dimethyl phthalate	81.4	10	2.5	ug/l	100		81	30-120			
4,6-Dinitro-2-methylphenol	80.0	20	4.0	ug/l	100		80	45-120			
2,4-Dinitrophenol	82.7	20	8.0	ug/l	100		83	40-120			
2,4-Dinitrotoluene	84.3	10	3.5	ug/l	100		84	65-120			
2,6-Dinitrotoluene	82.7	10	2.0	ug/l	100		83	65-120			
Di-n-octyl phthalate	90.3	20	3.5	ug/l	100		90	65-135			
1,2-Diphenylhydrazine/Azobenzene	69.1	20	2.5	ug/l	100		69	60-120			
Fluoranthene	87.8	10	3.0	ug/l	100		88	60-120			
Fluorene	79.8	10	3.0	ug/l	100		80	65-120			
Hexachlorobenzene	84.1	10	3.0	ug/l	100		84	60-120			
Hexachlorobutadiene	68.5	10	4.0	ug/l	100		68	40-120			
Hexachlorocyclopentadiene	70.3	20	5.0	ug/l	100		70	25-120			
Hexachloroethane	54.9	10	3.5	ug/l	100		55	35-120			
Indeno(1,2,3-cd)pyrene	85.5	20	3.5	ug/l	100		85	45-135			
Isophorone	71.4	10	3.0	ug/l	100		71	50-120			
2-Methylnaphthalene	75.5	10	2.0	ug/l	100		76	55-120			
2-Methylphenol	66.0	10	3.0	ug/l	100		66	50-120			
4-Methylphenol	67.5	10	3.0	ug/l	100		68	50-120			
Naphthalene	72.0	10	3.0	ug/l	100		72	55-120			
2-Nitroaniline	75.7	20	2.0	ug/l	100		76	65-120			
3-Nitroaniline	80.9	20	3.0	ug/l	100		81	60-120			
4-Nitroaniline	82.0	20	4.0	ug/l	100		82	55-125			
Nitrobenzene	70.6	20	3.0	ug/l	100		71	55-120			
2-Nitrophenol	80.3	10	3.5	ug/l	100		80	50-120			
4-Nitrophenol	80.2	20	5.5	ug/l	100		80	45-120			
N-Nitroso-di-n-propylamine	68.0	10	3.5	ug/l	100		68	45-120			
N-Nitrosodimethylamine	66.3	20	2.5	ug/l	100		66	45-120			
N-Nitrosodiphenylamine	78.4	10	2.0	ug/l	100		78	60-120			
Pentachlorophenol	80.4	20	3.5	ug/l	100		80	50-120			
Phenanthrene	82.9	10	3.5	ug/l	100		83	65-120			

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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: 10C1554 Extracted: 03/12/10											
LCS Analyzed: 03/16/2010 (10C1554-BS1)											**MNR1**
Phenol	58.3	10	2.0	ug/l	100		58	40-120			
Pyrene	86.3	10	4.0	ug/l	100		86	55-125			
1,2,4-Trichlorobenzene	68.5	10	2.5	ug/l	100		68	45-120			
2,4,5-Trichlorophenol	79.6	20	3.0	ug/l	100		80	55-120			
2,4,6-Trichlorophenol	81.3	20	4.5	ug/l	100		81	55-120			
Surrogate: 2,4,6-Tribromophenol	*192*			*ug/l*	*200*		*96*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*75.9*			*ug/l*	*100*		*76*	*50-120*			
Surrogate: 2-Fluorophenol	*117*			*ug/l*	*200*		*58*	*30-120*			
Surrogate: Nitrobenzene-d5	*71.1*			*ug/l*	*100*		*71*	*45-120*			
Surrogate: Phenol-d6	*127*			*ug/l*	*200*		*63*	*35-120*			
Surrogate: Terphenyl-d14	*90.7*			*ug/l*	*100*		*91*	*50-125*			
LCS Dup Analyzed: 03/16/2010 (10C1554-BSD1)											
Acenaphthene	79.7	10	3.0	ug/l	100		80	60-120	2	20	
Acenaphthylene	77.2	10	3.0	ug/l	100		77	60-120	1	20	
Aniline	57.8	10	3.5	ug/l	100		58	35-120	6	30	
Anthracene	85.7	10	2.5	ug/l	100		86	65-120	3	20	
Benzidine	69.6	20	10	ug/l	100		70	30-160	111	35	*R-2*
Benzo(a)anthracene	90.7	10	2.5	ug/l	100		91	65-120	9	20	
Benzo(a)pyrene	90.3	10	3.0	ug/l	100		90	55-130	7	25	
Benzo(b)fluoranthene	80.1	10	2.0	ug/l	100		80	55-125	5	25	
Benzo(g,h,i)perylene	87.9	10	4.0	ug/l	100		88	45-135	8	25	
Benzo(k)fluoranthene	90.3	10	2.5	ug/l	100		90	50-125	10	20	
Benzoic acid	63.6	20	10	ug/l	100		64	25-120	13	30	
Benzyl alcohol	67.1	20	3.5	ug/l	100		67	50-120	7	20	
4-Bromophenyl phenyl ether	87.8	10	3.0	ug/l	100		88	60-120	4	25	
Butyl benzyl phthalate	105	20	4.0	ug/l	100		105	55-130	8	20	
4-Chloro-3-methylphenol	76.7	20	2.5	ug/l	100		77	60-120	0.4	25	
4-Chloroaniline	75.8	10	2.0	ug/l	100		76	55-120	0.1	25	
Bis(2-chloroethoxy)methane	70.2	10	3.0	ug/l	100		70	55-120	2	20	
Bis(2-chloroethyl)ether	61.1	10	3.0	ug/l	100		61	50-120	5	20	
Bis(2-chloroisopropyl)ether	67.9	10	2.5	ug/l	100		68	45-120	5	20	
Bis(2-ethylhexyl)phthalate	100	50	4.0	ug/l	100		100	65-130	9	20	
2-Chloronaphthalene	73.7	10	3.0	ug/l	100		74	60-120	1	20	
2-Chlorophenol	60.3	10	3.0	ug/l	100		60	45-120	13	25	
4-Chlorophenyl phenyl ether	87.6	10	2.5	ug/l	100		88	65-120	6	20	

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Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
LCS Dup Analyzed: 03/16/2010 (10C1554-BSD1)											
Chrysene	88.5	10	2.5	ug/l	100		89	65-120	7	20	
Dibenz(a,h)anthracene	93.7	20	3.0	ug/l	100		94	50-135	7	25	
Dibenzofuran	78.4	10	4.0	ug/l	100		78	65-120	4	20	
Di-n-butyl phthalate	94.5	20	3.0	ug/l	100		94	60-125	7	20	
1,2-Dichlorobenzene	58.6	10	3.0	ug/l	100		59	40-120	4	25	
1,3-Dichlorobenzene	56.6	10	3.0	ug/l	100		57	35-120	4	25	
1,4-Dichlorobenzene	56.3	10	2.5	ug/l	100		56	35-120	5	25	
3,3'-Dichlorobenzidine	66.6	20	7.5	ug/l	100		67	45-135	13	25	
2,4-Dichlorophenol	73.2	10	3.5	ug/l	100		73	55-120	9	20	
Diethyl phthalate	88.7	10	3.5	ug/l	100		89	55-120	9	30	
2,4-Dimethylphenol	65.8	20	3.5	ug/l	100		66	40-120	4	25	
Dimethyl phthalate	86.9	10	2.5	ug/l	100		87	30-120	7	30	
4,6-Dinitro-2-methylphenol	81.5	20	4.0	ug/l	100		81	45-120	2	25	
2,4-Dinitrophenol	89.8	20	8.0	ug/l	100		90	40-120	8	25	
2,4-Dinitrotoluene	91.2	10	3.5	ug/l	100		91	65-120	8	20	
2,6-Dinitrotoluene	88.7	10	2.0	ug/l	100		89	65-120	7	20	
Di-n-octyl phthalate	99.3	20	3.5	ug/l	100		99	65-135	10	20	
1,2-Diphenylhydrazine/Azobenzene	72.7	20	2.5	ug/l	100		73	60-120	5	25	
Fluoranthene	93.0	10	3.0	ug/l	100		93	60-120	6	20	
Fluorene	83.3	10	3.0	ug/l	100		83	65-120	4	20	
Hexachlorobenzene	88.3	10	3.0	ug/l	100		88	60-120	5	20	
Hexachlorobutadiene	68.3	10	4.0	ug/l	100		68	40-120	0.2	25	
Hexachlorocyclopentadiene	67.4	20	5.0	ug/l	100		67	25-120	4	30	
Hexachloroethane	53.5	10	3.5	ug/l	100		54	35-120	3	25	
Indeno(1,2,3-cd)pyrene	94.2	20	3.5	ug/l	100		94	45-135	10	25	
Isophorone	71.6	10	3.0	ug/l	100		72	50-120	0.2	20	
2-Methylnaphthalene	74.5	10	2.0	ug/l	100		74	55-120	1	20	
2-Methylphenol	59.7	10	3.0	ug/l	100		60	50-120	10	20	
4-Methylphenol	59.9	10	3.0	ug/l	100		60	50-120	12	20	
Naphthalene	69.0	10	3.0	ug/l	100		69	55-120	4	20	
2-Nitroaniline	76.5	20	2.0	ug/l	100		76	65-120	1	20	
3-Nitroaniline	85.9	20	3.0	ug/l	100		86	60-120	6	25	
4-Nitroaniline	89.4	20	4.0	ug/l	100		89	55-125	9	20	
Nitrobenzene	67.0	20	3.0	ug/l	100		67	55-120	5	25	
2-Nitrophenol	73.4	10	3.5	ug/l	100		73	50-120	9	25	

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
LCS Dup Analyzed: 03/16/2010 (10C1554-BSD1)											
4-Nitrophenol	83.4	20	5.5	ug/l	100		83	45-120	4	30	
N-Nitroso-di-n-propylamine	66.6	10	3.5	ug/l	100		67	45-120	2	20	
N-Nitrosodimethylamine	56.9	20	2.5	ug/l	100		57	45-120	15	20	
N-Nitrosodiphenylamine	82.1	10	2.0	ug/l	100		82	60-120	5	20	
Pentachlorophenol	83.3	20	3.5	ug/l	100		83	50-120	4	25	
Phenanthrene	85.6	10	3.5	ug/l	100		86	65-120	3	20	
Phenol	46.6	10	2.0	ug/l	100		47	40-120	22	25	
Pyrene	92.4	10	4.0	ug/l	100		92	55-125	7	25	
1,2,4-Trichlorobenzene	66.7	10	2.5	ug/l	100		67	45-120	3	20	
2,4,5-Trichlorophenol	76.5	20	3.0	ug/l	100		76	55-120	4	30	
2,4,6-Trichlorophenol	77.9	20	4.5	ug/l	100		78	55-120	4	30	
Surrogate: 2,4,6-Tribromophenol	*193*			*ug/l*	*200*		*96*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*76.1*			*ug/l*	*100*		*76*	*50-120*			
Surrogate: 2-Fluorophenol	*95.2*			*ug/l*	*200*		*48*	*30-120*			
Surrogate: Nitrobenzene-d5	*66.9*			*ug/l*	*100*		*67*	*45-120*			
Surrogate: Phenol-d6	*98.4*			*ug/l*	*200*		*49*	*35-120*			
Surrogate: Terphenyl-d14	*99.4*			*ug/l*	*100*		*99*	*50-125*			

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METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1554 Extracted: 03/12/10											
Blank Analyzed: 03/16/2010 (10C1554-BLK1)											
Chlorpyrifos	ND	50	N/A	ug/l							
Diazinon	ND	50	N/A	ug/l							

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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: 10D3000 Extracted: 03/12/10											
Blank Analyzed: 04/26/2010 (10D3000-BLK1)											
Chlorpyrifos	ND	1.0	0.010	ug/l							
Diazinon	ND	0.25	0.10	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*ND*			*ug/l*				*70-130*			*A-01*
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*ND*			*ug/l*				*70-130*			*A-01*
Surrogate: Triphenylphosphate	*ND*			*ug/l*				*70-130*			*A-01*
Surrogate: Triphenylphosphate	*ND*			*ug/l*				*70-130*			*A-01*
Surrogate: Perylene-d12	*ND*			*ug/l*				*70-130*			*A-01*
Surrogate: Perylene-d12	*ND*			*ug/l*				*70-130*			*A-01*
LCS Analyzed: 04/26/2010 (10D3000-BS1)											
Chlorpyrifos	4.65	1.0	0.010	ug/l	5.00		93	70-130			
Diazinon	3.07	0.25	0.10	ug/l	5.00		61	70-130			*L2*
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.00*			*ug/l*	*5.00*		*100*	*70-130*			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*5.00*			*ug/l*	*5.00*		*100*	*70-130*			
Surrogate: Triphenylphosphate	*8.34*			*ug/l*	*5.00*		*167*	*70-130*			*Z1*
Surrogate: Triphenylphosphate	*8.34*			*ug/l*	*5.00*		*167*	*70-130*			*Z1*
Surrogate: Perylene-d12	*4.88*			*ug/l*	*5.00*		*98*	*70-130*			
Surrogate: Perylene-d12	*4.88*			*ug/l*	*5.00*		*98*	*70-130*			
LCS Dup Analyzed: 04/26/2010 (10D3000-BSD1)											
Chlorpyrifos	4.60	1.0	0.010	ug/l	5.00		92	70-130	1	30	
Diazinon	2.59	0.25	0.10	ug/l	5.00		52	70-130	17	30	*L2*
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.42*			*ug/l*	*5.00*		*88*	*70-130*			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	*4.42*			*ug/l*	*5.00*		*88*	*70-130*			
Surrogate: Triphenylphosphate	*7.19*			*ug/l*	*5.00*		*144*	*70-130*			*Z1*
Surrogate: Triphenylphosphate	*7.19*			*ug/l*	*5.00*		*144*	*70-130*			*Z1*
Surrogate: Perylene-d12	*4.78*			*ug/l*	*5.00*		*96*	*70-130*			
Surrogate: Perylene-d12	*4.78*			*ug/l*	*5.00*		*96*	*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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1222 Extracted: 03/10/10											
Blank Analyzed: 03/11/2010 (10C1222-BLK1)											
4,4'-DDD	ND	0.0050	0.0020	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
Endrin ketone	ND	0.010	0.0030	ug/l							
gamma-BHC (Lindane)	ND	0.020	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Methoxychlor	ND	0.0050	0.0035	ug/l							
Chlordane	ND	0.10	0.040	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	*0.447*			*ug/l*	*0.500*		*89*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.277*			*ug/l*	*0.500*		*55*	*35-115*			
LCS Analyzed: 03/11/2010 (10C1222-BS1)											**MNR1**
4,4'-DDD	0.507	0.0050	0.0020	ug/l	0.500		101	55-120			
4,4'-DDE	0.428	0.0050	0.0030	ug/l	0.500		86	50-120			
4,4'-DDT	0.432	0.010	0.0040	ug/l	0.500		86	55-120			
Aldrin	0.354	0.0050	0.0015	ug/l	0.500		71	40-115			
alpha-BHC	0.342	0.0050	0.0025	ug/l	0.500		68	45-115			
beta-BHC	0.351	0.010	0.0040	ug/l	0.500		70	55-115			
delta-BHC	0.387	0.0050	0.0035	ug/l	0.500		77	55-115			
Dieldrin	0.431	0.0050	0.0020	ug/l	0.500		86	55-115			
Endosulfan I	0.411	0.0050	0.0020	ug/l	0.500		82	55-115			
Endosulfan II	0.475	0.0050	0.0030	ug/l	0.500		95	55-120			
Endosulfan sulfate	0.491	0.010	0.0030	ug/l	0.500		98	60-120			
Endrin	0.432	0.0050	0.0020	ug/l	0.500		86	55-115			

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1222 Extracted: 03/10/10											
LCS Analyzed: 03/11/2010 (10C1222-BS1)											**MNR1**
Endrin aldehyde	0.444	0.010	0.0020	ug/l	0.500		89	50-120			
Endrin ketone	0.493	0.010	0.0030	ug/l	0.500		99	55-120			
gamma-BHC (Lindane)	0.347	0.020	0.0030	ug/l	0.500		69	45-115			
Heptachlor	0.357	0.010	0.0030	ug/l	0.500		71	45-115			
Heptachlor epoxide	0.385	0.0050	0.0025	ug/l	0.500		77	55-115			
Methoxychlor	0.460	0.0050	0.0035	ug/l	0.500		92	60-120			
Surrogate: Decachlorobiphenyl	*0.473*			*ug/l*	*0.500*		*95*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.331*			*ug/l*	*0.500*		*66*	*35-115*			
LCS Dup Analyzed: 03/11/2010 (10C1222-BSD1)											
4,4'-DDD	0.483	0.0050	0.0020	ug/l	0.500		97	55-120	5	30	
4,4'-DDE	0.409	0.0050	0.0030	ug/l	0.500		82	50-120	5	30	
4,4'-DDT	0.414	0.010	0.0040	ug/l	0.500		83	55-120	4	30	
Aldrin	0.310	0.0050	0.0015	ug/l	0.500		62	40-115	13	30	
alpha-BHC	0.300	0.0050	0.0025	ug/l	0.500		60	45-115	13	30	
beta-BHC	0.328	0.010	0.0040	ug/l	0.500		66	55-115	7	30	
delta-BHC	0.363	0.0050	0.0035	ug/l	0.500		73	55-115	6	30	
Dieldrin	0.414	0.0050	0.0020	ug/l	0.500		83	55-115	4	30	
Endosulfan I	0.390	0.0050	0.0020	ug/l	0.500		78	55-115	5	30	
Endosulfan II	0.458	0.0050	0.0030	ug/l	0.500		92	55-120	4	30	
Endosulfan sulfate	0.471	0.010	0.0030	ug/l	0.500		94	60-120	4	30	
Endrin	0.415	0.0050	0.0020	ug/l	0.500		83	55-115	4	30	
Endrin aldehyde	0.421	0.010	0.0020	ug/l	0.500		84	50-120	5	30	
Endrin ketone	0.470	0.010	0.0030	ug/l	0.500		94	55-120	5	30	
gamma-BHC (Lindane)	0.308	0.020	0.0030	ug/l	0.500		62	45-115	12	30	
Heptachlor	0.314	0.010	0.0030	ug/l	0.500		63	45-115	13	30	
Heptachlor epoxide	0.360	0.0050	0.0025	ug/l	0.500		72	55-115	7	30	
Methoxychlor	0.441	0.0050	0.0035	ug/l	0.500		88	60-120	4	30	
Surrogate: Decachlorobiphenyl	*0.456*			*ug/l*	*0.500*		*91*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.286*			*ug/l*	*0.500*		*57*	*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: 10C1222 Extracted: 03/10/10											
Blank Analyzed: 03/11/2010 (10C1222-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	*0.437*			*ug/l*	*0.500*		*87*	*45-120*			
LCS Analyzed: 03/11/2010 (10C1222-BS2)											**MNR1**
Aroclor 1016	3.71	0.50	0.25	ug/l	4.00		93	50-115			
Aroclor 1260	4.04	0.50	0.25	ug/l	4.00		101	60-120			
Surrogate: Decachlorobiphenyl	*0.437*			*ug/l*	*0.500*		*87*	*45-120*			
LCS Dup Analyzed: 03/11/2010 (10C1222-BSD2)											
Aroclor 1016	3.52	0.50	0.25	ug/l	4.00		88	50-115	5	30	
Aroclor 1260	3.90	0.50	0.25	ug/l	4.00		97	60-120	3	25	
Surrogate: Decachlorobiphenyl	*0.426*			*ug/l*	*0.500*		*85*	*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
Batch: 10C2126 Extracted: 03/17/10											
Blank Analyzed: 03/17/2010 (10C2126-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/17/2010 (10C2126-BS1)											
Hexane Extractable Material (Oil & Grease)	20.4	5.0	1.4	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 03/17/2010 (10C2126-BSD1)											
Hexane Extractable Material (Oil & Grease)	20.7	5.0	1.4	mg/l	20.0		104	78-114	1	11	
Matrix Spike Analyzed: 03/17/2010 (10C2126-MS1)						**Source: ITC1021-02**					
Hexane Extractable Material (Oil & Grease)	18.9	5.0	1.4	mg/l	20.0	ND	94	78-114			
Matrix Spike Analyzed: 03/17/2010 (10C2126-MS2)						**Source: ITC1685-01**					
Hexane Extractable Material (Oil & Grease)	23.8	4.8	1.3	mg/l	19.0	3.51	107	78-114			

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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: 10C1781 Extracted: 03/15/10											
Blank Analyzed: 03/19/2010 (10C1781-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							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 03/19/2010 (10C1781-BS1)											
Aluminum	498	50	40	ug/l	500		100	85-115			
Arsenic	483	10	7.0	ug/l	500		97	85-115			
Beryllium	498	2.0	0.90	ug/l	500		100	85-115			
Boron	0.473	0.050	0.020	mg/l	0.500		95	85-115			
Calcium	2.49	0.10	0.050	mg/l	2.50		100	85-115			
Iron	0.490	0.040	0.015	mg/l	0.500		98	85-115			
Magnesium	2.50	0.020	0.012	mg/l	2.50		100	85-115			
Nickel	472	10	2.0	ug/l	500		94	85-115			
Selenium	469	10	8.0	ug/l	500		94	85-115			
Vanadium	488	10	3.0	ug/l	500		98	85-115			
Zinc	445	20	6.0	ug/l	500		89	85-115			
Matrix Spike Analyzed: 03/19/2010 (10C1781-MS1)						**Source: ITC0989-03**					
Aluminum	719	50	40	ug/l	500	195	105	70-130			
Arsenic	501	10	7.0	ug/l	500	ND	100	70-130			
Beryllium	516	2.0	0.90	ug/l	500	ND	103	70-130			
Boron	0.555	0.050	0.020	mg/l	0.500	0.0551	100	70-130			
Calcium	54.4	0.10	0.050	mg/l	2.50	51.3	126	70-130			
Iron	0.616	0.040	0.015	mg/l	0.500	0.145	94	70-130			
Magnesium	6.65	0.020	0.012	mg/l	2.50	4.12	101	70-130			
Nickel	464	10	2.0	ug/l	500	ND	93	70-130			
Selenium	457	10	8.0	ug/l	500	ND	91	70-130			
Vanadium	502	10	3.0	ug/l	500	3.72	100	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: 10C1781 Extracted: 03/15/10											
Matrix Spike Analyzed: 03/19/2010 (10C1781-MS1)						**Source: ITC0989-03**					
Zinc	455	20	6.0	ug/l	500	7.65	90	70-130			
Matrix Spike Dup Analyzed: 03/19/2010 (10C1781-MSD1)						**Source: ITC0989-03**					
Aluminum	699	50	40	ug/l	500	195	101	70-130	3	20	
Arsenic	486	10	7.0	ug/l	500	ND	97	70-130	3	20	
Beryllium	504	2.0	0.90	ug/l	500	ND	101	70-130	2	20	
Boron	0.541	0.050	0.020	mg/l	0.500	0.0551	97	70-130	3	20	
Calcium	53.5	0.10	0.050	mg/l	2.50	51.3	90	70-130	2	20	
Iron	0.601	0.040	0.015	mg/l	0.500	0.145	91	70-130	3	20	
Magnesium	6.50	0.020	0.012	mg/l	2.50	4.12	95	70-130	2	20	
Nickel	459	10	2.0	ug/l	500	ND	92	70-130	1	20	
Selenium	449	10	8.0	ug/l	500	ND	90	70-130	2	20	
Vanadium	493	10	3.0	ug/l	500	3.72	98	70-130	2	20	
Zinc	448	20	6.0	ug/l	500	7.65	88	70-130	2	20	
Batch: 10C1948 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C1948-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 03/16/2010 (10C1948-BS1)											
Antimony	80.2	2.0	0.30	ug/l	80.0		100	85-115			
Cadmium	77.8	1.0	0.10	ug/l	80.0		97	85-115			
Copper	78.7	2.0	0.50	ug/l	80.0		98	85-115			
Lead	75.7	1.0	0.20	ug/l	80.0		95	85-115			
Thallium	76.6	1.0	0.20	ug/l	80.0		96	85-115			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1948 Extracted: 03/16/10											
Matrix Spike Analyzed: 03/16/2010 (10C1948-MS1)						**Source: ITC1476-01**					
Antimony	84.5	2.0	0.30	ug/l	80.0	ND	106	70-130			
Cadmium	80.3	1.0	0.10	ug/l	80.0	ND	100	70-130			
Copper	79.0	2.0	0.50	ug/l	80.0	ND	99	70-130			
Lead	76.0	1.0	0.20	ug/l	80.0	0.249	95	70-130			
Thallium	76.4	1.0	0.20	ug/l	80.0	ND	96	70-130			
Matrix Spike Analyzed: 03/16/2010 (10C1948-MS2)						**Source: ITC1316-01**					
Antimony	83.7	2.0	0.30	ug/l	80.0	ND	105	70-130			
Cadmium	79.4	1.0	0.10	ug/l	80.0	ND	99	70-130			
Copper	85.5	2.0	0.50	ug/l	80.0	7.21	98	70-130			
Lead	74.4	1.0	0.20	ug/l	80.0	0.296	93	70-130			
Thallium	74.6	1.0	0.20	ug/l	80.0	ND	93	70-130			
Matrix Spike Dup Analyzed: 03/16/2010 (10C1948-MSD1)						**Source: ITC1476-01**					
Antimony	83.6	2.0	0.30	ug/l	80.0	ND	105	70-130	1	20	
Cadmium	78.9	1.0	0.10	ug/l	80.0	ND	99	70-130	2	20	
Copper	77.9	2.0	0.50	ug/l	80.0	ND	97	70-130	1	20	
Lead	75.0	1.0	0.20	ug/l	80.0	0.249	93	70-130	1	20	
Thallium	76.2	1.0	0.20	ug/l	80.0	ND	95	70-130	0.3	20	
Batch: 10C2010 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C2010-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/16/2010 (10C2010-BS1)											
Mercury	8.36	0.20	0.10	ug/l	8.00		105	85-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C2010 Extracted: 03/16/10											
Matrix Spike Analyzed: 03/16/2010 (10C2010-MS1)						**Source: ITC1476-01**					
Mercury	8.41	0.20	0.10	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/16/2010 (10C2010-MSD1)						**Source: ITC1476-01**					
Mercury	8.38	0.20	0.10	ug/l	8.00	ND	105	70-130	0.5	20	
Batch: 10D1079 Extracted: 04/09/10											
Blank Analyzed: 04/09/2010 (10D1079-BLK1)											
Chromium	ND	5.0	2.0	ug/l							
Silver	ND	10	6.0	ug/l							
LCS Analyzed: 04/09/2010 (10D1079-BS1)											
Chromium	502	5.0	2.0	ug/l	500		100	85-115			
Silver	256	10	6.0	ug/l	250		102	85-115			
Matrix Spike Analyzed: 04/09/2010 (10D1079-MS1)						**Source: ITC0989-03**					
Chromium	494	5.0	2.0	ug/l	500	ND	99	70-130			
Silver	252	10	6.0	ug/l	250	ND	101	70-130			
Matrix Spike Dup Analyzed: 04/09/2010 (10D1079-MSD1)						**Source: ITC0989-03**					
Chromium	494	5.0	2.0	ug/l	500	ND	99	70-130	0.1	20	
Silver	248	10	6.0	ug/l	250	ND	99	70-130	1	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: 10C1953 Extracted: 03/16/10											
Blank Analyzed: 03/17/2010 (10C1953-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 03/17/2010 (10C1953-BS1)											
Antimony	83.9	2.0	0.30	ug/l	80.0		105	85-115			
Cadmium	79.8	1.0	0.10	ug/l	80.0		100	85-115			
Copper	73.8	2.0	0.50	ug/l	80.0		92	85-115			
Lead	72.4	1.0	0.20	ug/l	80.0		91	85-115			
Thallium	74.7	1.0	0.20	ug/l	80.0		93	85-115			
Matrix Spike Analyzed: 03/17/2010 (10C1953-MS1)						**Source: ITC1272-01**					
Antimony	88.9	2.0	0.30	ug/l	80.0	ND	111	70-130			
Cadmium	78.7	1.0	0.10	ug/l	80.0	0.143	98	70-130			
Copper	74.4	2.0	0.50	ug/l	80.0	3.13	89	70-130			
Lead	69.6	1.0	0.20	ug/l	80.0	ND	87	70-130			
Thallium	71.5	1.0	0.20	ug/l	80.0	ND	89	70-130			
Matrix Spike Dup Analyzed: 03/17/2010 (10C1953-MSD1)						**Source: ITC1272-01**					
Antimony	87.8	2.0	0.30	ug/l	80.0	ND	110	70-130	1	20	
Cadmium	77.3	1.0	0.10	ug/l	80.0	0.143	96	70-130	2	20	
Copper	73.4	2.0	0.50	ug/l	80.0	3.13	88	70-130	1	20	
Lead	66.8	1.0	0.20	ug/l	80.0	ND	84	70-130	4	20	
Thallium	68.6	1.0	0.20	ug/l	80.0	ND	86	70-130	4	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: 10C2011 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C2011-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/16/2010 (10C2011-BS1)											
Mercury	8.65	0.20	0.10	ug/l	8.00		108	85-115			
Matrix Spike Analyzed: 03/16/2010 (10C2011-MS1)						**Source: ITC1128-01**					
Mercury	8.49	0.20	0.10	ug/l	8.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 03/16/2010 (10C2011-MSD1)						**Source: ITC1128-01**					
Mercury	8.36	0.20	0.10	ug/l	8.00	ND	104	70-130	2	20	
Batch: 10C2228 Extracted: 03/17/10											
Blank Analyzed: 03/20/2010 (10C2228-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							
Selenium	ND	10	8.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
LCS Analyzed: 03/20/2010 (10C2228-BS1)											
Aluminum	560	50	40	ug/l	500		112	85-115			
Arsenic	541	10	7.0	ug/l	500		108	85-115			
Beryllium	529	2.0	0.90	ug/l	500		106	85-115			
Boron	0.522	0.050	0.020	mg/l	0.500		104	85-115			
Calcium	2.66	0.10	0.050	mg/l	2.50		107	85-115			
Chromium	513	5.0	2.0	ug/l	500		103	85-115			
Iron	0.553	0.040	0.015	mg/l	0.500		111	85-115			
Magnesium	2.69	0.020	0.012	mg/l	2.50		107	85-115			
Nickel	522	10	2.0	ug/l	500		104	85-115			
Selenium	514	10	8.0	ug/l	500		103	85-115			

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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: 10C2228 Extracted: 03/17/10											
LCS Analyzed: 03/20/2010 (10C2228-BS1)											
Vanadium	533	10	3.0	ug/l	500		107	85-115			
Matrix Spike Analyzed: 03/20/2010 (10C2228-MS1)						**Source: ITC0989-03**					
Aluminum	563	50	40	ug/l	500	ND	113	70-130			
Arsenic	548	10	7.0	ug/l	500	ND	110	70-130			
Beryllium	538	2.0	0.90	ug/l	500	ND	108	70-130			
Boron	0.583	0.050	0.020	mg/l	0.500	0.0568	105	70-130			
Calcium	54.5	0.10	0.050	mg/l	2.50	51.2	131	70-130			*MHA*
Chromium	507	5.0	2.0	ug/l	500	4.61	100	70-130			
Iron	0.544	0.040	0.015	mg/l	0.500	0.0161	106	70-130			
Magnesium	6.79	0.020	0.012	mg/l	2.50	4.15	106	70-130			
Nickel	509	10	2.0	ug/l	500	10.3	100	70-130			
Selenium	501	10	8.0	ug/l	500	ND	100	70-130			
Vanadium	536	10	3.0	ug/l	500	3.43	107	70-130			
Matrix Spike Dup Analyzed: 03/20/2010 (10C2228-MSD1)						**Source: ITC0989-03**					
Aluminum	559	50	40	ug/l	500	ND	112	70-130	0.7	20	
Arsenic	546	10	7.0	ug/l	500	ND	109	70-130	0.3	20	
Beryllium	531	2.0	0.90	ug/l	500	ND	106	70-130	1	20	
Boron	0.582	0.050	0.020	mg/l	0.500	0.0568	105	70-130	0.1	20	
Calcium	54.0	0.10	0.050	mg/l	2.50	51.2	113	70-130	0.8	20	*MHA*
Chromium	502	5.0	2.0	ug/l	500	4.61	100	70-130	0.9	20	
Iron	0.551	0.040	0.015	mg/l	0.500	0.0161	107	70-130	1	20	
Magnesium	6.76	0.020	0.012	mg/l	2.50	4.15	105	70-130	0.4	20	
Nickel	505	10	2.0	ug/l	500	10.3	99	70-130	0.8	20	
Selenium	499	10	8.0	ug/l	500	ND	100	70-130	0.3	20	
Vanadium	535	10	3.0	ug/l	500	3.43	106	70-130	0.2	20	

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

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

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10D1078 Extracted: 04/09/10											
Blank Analyzed: 04/09/2010 (10D1078-BLK1)											
Silver	ND	10	6.0	ug/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 04/09/2010 (10D1078-BS1)											
Silver	262	10	6.0	ug/l	250		105	85-115			
Zinc	514	20	6.0	ug/l	500		103	85-115			
Matrix Spike Analyzed: 04/09/2010 (10D1078-MS1)						**Source: ITC0989-03**					
Silver	254	10	6.0	ug/l	250	ND	102	70-130			
Zinc	530	20	6.0	ug/l	500	ND	106	70-130			
Matrix Spike Dup Analyzed: 04/09/2010 (10D1078-MSD1)						**Source: ITC0989-03**					
Silver	249	10	6.0	ug/l	250	ND	100	70-130	2	20	
Zinc	505	20	6.0	ug/l	500	ND	101	70-130	5	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: 10C1119 Extracted: 03/09/10											
Blank Analyzed: 03/09/2010 (10C1119-BLK1)											
Chromium VI	ND	0.0010	0.00025	mg/l							
LCS Analyzed: 03/09/2010 (10C1119-BS1)											
Chromium VI	0.0525	0.0010	0.00025	mg/l	0.0500		105	90-110			
Matrix Spike Analyzed: 03/09/2010 (10C1119-MS1)						**Source: ITC0918-01**					
Chromium VI	0.0535	0.0010	0.00025	mg/l	0.0500	0.00397	99	90-110			
Matrix Spike Dup Analyzed: 03/09/2010 (10C1119-MSD1)						**Source: ITC0918-01**					
Chromium VI	0.0558	0.0010	0.00025	mg/l	0.0500	0.00397	104	90-110	4	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: 10C1057 Extracted: 03/09/10											
Blank Analyzed: 03/09/2010 (10C1057-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 03/09/2010 (10C1057-BS1)											
Chloride	5.00	0.50	0.25	mg/l	5.00		100	90-110			*M-3*
Sulfate	10.4	0.50	0.20	mg/l	10.0		104	90-110			
Matrix Spike Analyzed: 03/09/2010 (10C1057-MS1)						**Source: ITC0911-01**					
Sulfate	20.5	0.50	0.20	mg/l	10.0	10.7	98	80-120			
Matrix Spike Analyzed: 03/09/2010 (10C1057-MS2)						**Source: ITC0929-02**					
Chloride	135	5.0	2.5	mg/l	50.0	85.1	100	80-120			
Sulfate	217	5.0	2.0	mg/l	100	114	102	80-120			
Matrix Spike Dup Analyzed: 03/09/2010 (10C1057-MSD1)						**Source: ITC0911-01**					
Sulfate	20.5	0.50	0.20	mg/l	10.0	10.7	98	80-120	0.3	20	
Batch: 10C1095 Extracted: 03/09/10											
Blank Analyzed: 03/09/2010 (10C1095-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/09/2010 (10C1095-BS1)											
Perchlorate	24.2	4.0	0.90	ug/l	25.0		97	85-115			
Matrix Spike Analyzed: 03/09/2010 (10C1095-MS1)						**Source: ITC0793-02**					
Perchlorate	25.1	4.0	0.90	ug/l	25.0	ND	100	80-120			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1095 Extracted: 03/09/10											
Matrix Spike Dup Analyzed: 03/09/2010 (10C1095-MSD1)						**Source: ITC0793-02**					
Perchlorate	24.7	4.0	0.90	ug/l	25.0	ND	99	80-120	1	20	
Batch: 10C1344 Extracted: 03/11/10											
Blank Analyzed: 03/11/2010 (10C1344-BLK1)											
Fluoride	0.0273	0.10	0.020	mg/l							*J*
LCS Analyzed: 03/11/2010 (10C1344-BS1)											
Fluoride	1.04	0.10	0.020	mg/l	1.00		104	90-110			
Matrix Spike Analyzed: 03/11/2010 (10C1344-MS1)						**Source: ITC0989-03**					
Fluoride	1.15	0.10	0.020	mg/l	1.00	0.135	101	80-120			
Matrix Spike Dup Analyzed: 03/11/2010 (10C1344-MSD1)						**Source: ITC0989-03**					
Fluoride	1.16	0.10	0.020	mg/l	1.00	0.135	103	80-120	1	20	
Batch: 10C1460 Extracted: 03/11/10											
Blank Analyzed: 03/11/2010 (10C1460-BLK1)											
Total Cyanide	ND	0.0050	0.0022	mg/l							
LCS Analyzed: 03/11/2010 (10C1460-BS1)											
Total Cyanide	0.191	0.0050	0.0022	mg/l	0.200		95	90-110			
Matrix Spike Analyzed: 03/11/2010 (10C1460-MS1)						**Source: ITC0989-03**					
Total Cyanide	0.186	0.0050	0.0022	mg/l	0.200	ND	93	70-115			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1460 Extracted: 03/11/10											
Matrix Spike Dup Analyzed: 03/11/2010 (10C1460-MSD1)						**Source: ITC0989-03**					
Total Cyanide	0.185	0.0050	0.0022	mg/l	0.200	ND	93	70-115	0.6	15	
Batch: 10C1704 Extracted: 03/13/10											
Blank Analyzed: 03/13/2010 (10C1704-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/13/2010 (10C1704-BS1)											
Total Dissolved Solids	996	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/13/2010 (10C1704-DUP1)						**Source: ITC1040-13**					
Total Dissolved Solids	360	10	1.0	mg/l		359			0.3	10	
Batch: 10C1880 Extracted: 03/15/10											
Blank Analyzed: 03/15/2010 (10C1880-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/15/2010 (10C1880-BS1)											
Total Suspended Solids	999	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/15/2010 (10C1880-DUP1)						**Source: ITC0875-01**					
Total Suspended Solids	19.0	10	1.0	mg/l		19.0			0	10	

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 70198 Extracted: 03/11/10											
Blank Analyzed: 03/15/2010 (G0C110000198B)						**Source:**					
1,2,3,4,6,7,8-HpCDD	0.0000033	0.00005	0.00000074	ug/L				-			*J, Q*
1,2,3,4,6,7,8-HpCDF	0.0000024	0.00005	0.00000082	ug/L				-			*J, Q*
1,2,3,4,7,8,9-HpCDF	0.0000016	0.00005	0.000001	ug/L				-			*J*
1,2,3,4,7,8-HxCDD	0.0000011	0.00005	0.00000071	ug/L				-			*J, Q*
1,2,3,4,7,8-HxCDF	0.0000018	0.00005	0.00000021	ug/L				-			*J*
1,2,3,6,7,8-HxCDD	0.0000015	0.00005	0.00000065	ug/L				-			*J*
1,2,3,6,7,8-HxCDF	0.000001	0.00005	0.0000002	ug/L				-			*J, Q*
1,2,3,7,8,9-HxCDD	0.0000012	0.00005	0.00000061	ug/L				-			*J, Q*
1,2,3,7,8,9-HxCDF	0.0000015	0.00005	0.00000022	ug/L				-			*J, Q*
1,2,3,7,8-PeCDD	ND	0.00005	0.0000032	ug/L				-			
1,2,3,7,8-PeCDF	0.0000012	0.00005	0.00000004	ug/L				-			*J*
2,3,4,6,7,8-HxCDF	0.0000016	0.00005	0.00000019	ug/L				-			*J*
2,3,4,7,8-PeCDF	0.0000008	0.00005	0.00000004	ug/L				-			*J, Q*
2,3,7,8-TCDD	ND	0.00001	0.00000003	ug/L				-			
2,3,7,8-TCDF	0.00000086	0.00001	0.00000004	ug/L				-			*J*
OCDD	0.000017	0.0001	0.00000084	ug/L				-			*J*
OCDF	0.0000061	0.0001	0.00000067	ug/L				-			*J*
Total HpCDD	0.000006	0.00005	0.00000074	ug/L				-			*J, Q*
Total HpCDF	0.000004	0.00005	0.00000082	ug/L				-			*J, Q*
Total HxCDD	0.0000039	0.00005	0.00000061	ug/L				-			*J, Q*
Total HxCDF	0.0000063	0.00005	0.00000019	ug/L				-			*J, Q*
Total PeCDD	ND	0.00005	0.0000032	ug/L				-			
Total PeCDF	0.0000024	0.00005	0.00000004	ug/L				-			*J, Q*
Total TCDD	ND	0.00001	0.00000003	ug/L				-			
Total TCDF	0.00000086	0.00001	0.00000004	ug/L				-			*J*
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.0015*			*ug/L*	*0.00200*		*73*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.0014*			*ug/L*	*0.00200*		*69*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.0014*			*ug/L*	*0.00200*		*69*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.0015*			*ug/L*	*0.00200*		*74*	*32-141*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.0014*			*ug/L*	*0.00200*		*70*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.0014*			*ug/L*	*0.00200*		*71*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.0013*			*ug/L*	*0.00200*		*67*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.0013*			*ug/L*	*0.00200*		*66*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.0012*			*ug/L*	*0.00200*		*61*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.001*			*ug/L*	*0.00200*		*52*	*24-185*			

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EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 70198 Extracted: 03/11/10											
Blank Analyzed: 03/15/2010 (G0C110000198B)						**Source:**					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.0014*			*ug/L*	*0.00200*		*70*	*28-136*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.0011*			*ug/L*	*0.00200*		*53*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.0011*			*ug/L*	*0.00200*		*57*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.001*			*ug/L*	*0.00200*		*52*	*24-169*			
Surrogate: 13C-OCDD	*0.0029*			*ug/L*	*0.00400*		*74*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.00074*			*ug/L*	*0.000800*		*92*	*35-197*			
LCS Analyzed: 03/15/2010 (G0C110000198C)						**Source:**					
1,2,3,4,6,7,8-HpCDD	0.00106	0.00005	0.0000016	ug/L	0.00100		106	70-140			*Ba*
1,2,3,4,6,7,8-HpCDF	0.00106	0.00005	0.0000021	ug/L	0.00100		106	82-122			*Ba*
1,2,3,4,7,8,9-HpCDF	0.0011	0.00005	0.0000029	ug/L	0.00100		110	78-138			*Ba*
1,2,3,4,7,8-HxCDD	0.00104	0.00005	0.00000032	ug/L	0.00100		104	70-164			*Ba*
1,2,3,4,7,8-HxCDF	0.00108	0.00005	0.00000001	ug/L	0.00100		108	72-134			*Ba*
1,2,3,6,7,8-HxCDD	0.000997	0.00005	0.0000003	ug/L	0.00100		100	76-134			*Ba*
1,2,3,6,7,8-HxCDF	0.00109	0.00005	0.00000001	ug/L	0.00100		109	84-130			*Ba*
1,2,3,7,8,9-HxCDD	0.000993	0.00005	0.00000028	ug/L	0.00100		99	64-162			*Ba*
1,2,3,7,8,9-HxCDF	0.00108	0.00005	0.00000001	ug/L	0.00100		108	78-130			*Ba*
1,2,3,7,8-PeCDD	0.000957	0.00005	0.0000021	ug/L	0.00100		96	70-142			
1,2,3,7,8-PeCDF	0.00106	0.00005	0.0000011	ug/L	0.00100		106	80-134			*Ba*
2,3,4,6,7,8-HxCDF	0.00109	0.00005	0.00000001	ug/L	0.00100		109	70-156			*Ba*
2,3,4,7,8-PeCDF	0.00108	0.00005	0.0000012	ug/L	0.00100		108	68-160			*Ba*
2,3,7,8-TCDD	0.000201	0.00001	0.00000002	ug/L	0.000200		100	67-158			
2,3,7,8-TCDF	0.000195	0.00001	0.00000002	ug/L	0.000200		98	75-158			*Ba*
OCDD	0.00204	0.0001	0.0000015	ug/L	0.00200		102	78-144			*Ba*
OCDF	0.00194	0.0001	0.00000081	ug/L	0.00200		97	63-170			*Ba*
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00181*			*ug/L*	*0.00200*		*91*	*26-166*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00175*			*ug/L*	*0.00200*		*88*	*21-158*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.0017*			*ug/L*	*0.00200*		*85*	*20-186*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00195*			*ug/L*	*0.00200*		*98*	*21-193*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00182*			*ug/L*	*0.00200*		*91*	*19-202*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00167*			*ug/L*	*0.00200*		*84*	*25-163*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00164*			*ug/L*	*0.00200*		*82*	*21-159*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00169*			*ug/L*	*0.00200*		*85*	*17-205*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.00151*			*ug/L*	*0.00200*		*76*	*21-227*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00129*			*ug/L*	*0.00200*		*65*	*21-192*			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00174*			*ug/L*	*0.00200*		*87*	*22-176*			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 70198 Extracted: 03/11/10											
LCS Analyzed: 03/15/2010 (G0C110000198C)						**Source:**					
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.00132*			*ug/L*	*0.00200*		*66*	*13-328*			
Surrogate: 13C-2,3,7,8-TCDD	*0.00145*			*ug/L*	*0.00200*		*73*	*20-175*			
Surrogate: 13C-2,3,7,8-TCDF	*0.00137*			*ug/L*	*0.00200*		*68*	*22-152*			
Surrogate: 13C-OCDD	*0.00375*			*ug/L*	*0.00400*		*94*	*13-199*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.000741*			*ug/L*	*0.000800*		*93*	*31-191*			
Blank Analyzed: 03/16/2010 (G0C1100098RE1)						**Source:**					
2,3,7,8-TCDF	ND	0.00001	0.0000026	ug/L				-			
Surrogate: 13C-2,3,7,8-TCDF	*0.0012*			*ug/L*	*0.00200*		*58*	*24-169*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.0007*			*ug/L*	*0.000800*		*87*	*35-197*			

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METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 83129 Extracted: 03/24/10											
Matrix Spike Dup Analyzed: 03/29/2010 (F0C110508001D)						**Source: ITC0989-03**					
Total Uranium	28.4	0.7	0.2	pCi/L	27.1	0.441	103	62-150	2	20	
Matrix Spike Analyzed: 03/29/2010 (F0C110508001S)						**Source: ITC0989-03**					
Total Uranium	27.9	0.7	0.2	pCi/L	27.1	0.441	101	62-150			
Blank Analyzed: 03/29/2010 (F0C240000129B)						**Source:**					
Total Uranium	0.269	0.677	0.21	pCi/L				-			*Jb*
LCS Analyzed: 03/29/2010 (F0C240000129C)						**Source:**					
Total Uranium	5.5	0.68	0.21	pCi/L	5.42		102	90-120			

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 76134 Extracted: 03/17/10											
Matrix Spike Analyzed: 03/20/2010 (F0C120530001S)						**Source: F0C120530001**					
Gross Alpha	44	3	1.5	pCi/L	49.4	0.04	89	35-150			
Gross Beta	66.4	4	1.1	pCi/L	67.9	0.83	96	54-150			
Duplicate Analyzed: 03/20/2010 (F0C120530001X)						**Source: F0C120530001**					
Gross Alpha	1.2	3	1.5	pCi/L		0.04		-			*U*
Gross Beta	-0.13	4	1	pCi/L		0.83		-			*U*
Blank Analyzed: 03/21/2010 (F0C170000134B)						**Source:**					
Gross Alpha	0.16	2	0.71	pCi/L				-			*U*
Gross Beta	0.66	4	1.1	pCi/L				-			*U*
LCS Analyzed: 03/21/2010 (F0C170000134C)						**Source:**					
Gross Alpha	56.6	3	1	pCi/L	49.4		114	62-134			
Gross Beta	71.7	4	1	pCi/L	67.9		106	58-133			

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Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 74318 Extracted: 03/15/10											
Duplicate Analyzed: 03/22/2010 (F0C110508001X)						**Source: ITC0989-03**					
Cesium 137	ND	20	20	pCi/L		-2.2		-			*U*
Potassium 40	5	NA	220	pCi/L		-80		-			*U*
Blank Analyzed: 03/22/2010 (F0C150000318B)						**Source:**					
Cesium 137	3.6	20	14	pCi/L				-			*U*
Potassium 40	-90	NA	200	pCi/L				-			*U*
LCS Analyzed: 03/22/2010 (F0C150000318C)						**Source:**					
Americium 241	140000	NA	500	pCi/L	141000		99	87-110			
Cobalt 60	86800	NA	200	pCi/L	87900		99	89-110			
Cesium 137	53200	20	200	pCi/L	53100		100	90-110			

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Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 71128 Extracted: 03/12/10											
Blank Analyzed: 04/05/2010 (F0C120000128B)						**Source:**					
Radium (226)	0.059	1	0.053	pCi/L				-			*Jb*
LCS Analyzed: 04/05/2010 (F0C120000128C)						**Source:**					
Radium (226)	10.1	1	0.06	pCi/L	11.3		90	68-136			
LCS Dup Analyzed: 04/05/2010 (F0C120000128L)						**Source:**					
Radium (226)	10.2	1	0.06	pCi/L	11.3		91	68-136	0.9	40	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 71129 Extracted: 03/12/10											
Blank Analyzed: 03/29/2010 (F0C120000129B)						**Source:**					
Radium 228	-0.06	1	0.41	pCi/L				-			*U*
LCS Analyzed: 03/29/2010 (F0C120000129C)						**Source:**					
Radium 228	6.25	1	0.41	pCi/L	6.35		98	60-142			
LCS Dup Analyzed: 03/29/2010 (F0C120000129L)						**Source:**					
Radium 228	6.46	1	0.41	pCi/L	6.35		102	60-142	3	40	

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 71130 Extracted: 03/12/10											
Blank Analyzed: 03/25/2010 (F0C120000130B)						**Source:**					
Strontium 90	-0.04	3	0.54	pCi/L				-			*U*
LCS Analyzed: 03/25/2010 (F0C120000130C)						**Source:**					
Strontium 90	7.29	3	0.59	pCi/L	6.78		107	80-130			
LCS Dup Analyzed: 03/25/2010 (F0C120000130L)						**Source:**					
Strontium 90	7.72	3	0.57	pCi/L	6.78		114	80-130	6	40	

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Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

METHOD BLANK/QC DATA

EPA 906.0 MOD

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

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITC0989-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.096	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

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
ITC0989-03	Antimony-200.8	Antimony	ug/l	0.45	2.0	6
ITC0989-03	Boron-200.7	Boron	mg/l	0.055	0.050	1
ITC0989-03	Cadmium-200.8	Cadmium	ug/l	0.053	1.0	4
ITC0989-03	Chloride - 300.0	Chloride	mg/l	7.31	0.50	150
ITC0989-03	Copper-200.8	Copper	ug/l	1.79	2.0	14
ITC0989-03	Fluoride SM4500F,C	Fluoride	mg/l	0.14	0.10	1.6
ITC0989-03	Lead-200.8	Lead	ug/l	0.49	1.0	5.2
ITC0989-03	Nickel-200.7	Nickel	ug/l	1.72	10	100
ITC0989-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	2.74	0.26	10
ITC0989-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
ITC0989-03	Sulfate-300.0	Sulfate	mg/l	20	0.50	250
ITC0989-03	TDS - SM2540C	Total Dissolved Solids	mg/l	243	10	850
ITC0989-03	Thallium-200.8	Thallium	ug/l	0.096	1.0	2

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

TestAmerica Irvine

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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: ITC0989

Sampled: 03/08/10
Received: 03/09/10

DATA QUALIFIERS AND DEFINITIONS

A-01	Surrogate was not added to sample due to sample preparation modification.
B	Analyte was detected in the associated Method Blank.
Ba	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
H	Sample analysis performed past method-specified holding time.
J	Estimated result. Result is less than the reporting limit.
Jb	Result is greater than sample detection limit but less than stated reporting limit.
L2	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits.
L6	Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
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-2	The RPD exceeded the acceptance limit.
U	Result is less than the sample detection limit.
Z1	Surrogate recovery was above 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 TICs:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library.

For 1,2-Diphenylhydrazine:

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

TestAmerica Irvine

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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: ITC0989

Sampled: 03/08/10
Received: 03/09/10

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 218.6	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 525.2	Water		
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM 2540D	Water	X	X
SM 4500-F-C	Water	X	X
SM2340B-Diss	Water		
SM2340B	Water	X	X
SM2540C	Water	X	
SM4500CN-E	Water	X	X

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 For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Annual Outfall 006
Report Number: ITC0989

Sampled: 03/08/10
Received: 03/09/10

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITC0989-03

Method Performed: EPA 900.0 MOD
Samples: ITC0989-03

Method Performed: EPA 901.1 MOD
Samples: ITC0989-03

Method Performed: EPA 903.0 MOD
Samples: ITC0989-03

Method Performed: EPA 904 MOD
Samples: ITC0989-03

Method Performed: EPA 905 MOD
Samples: ITC0989-03

Method Performed: EPA 906.0 MOD
Samples: ITC0989-03

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ITC0989-03

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

CHAIN OF CUSTODY FORM

ITC0989

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Annual Outfall 006** **GRAB** Stormwater at FSDF-2
Project Manager: Bronwyn Kelly Sampler: SDawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	VOCs 624, Xylenes + PP	VOCs 624 +A+A+2CVE	Cr (VI) (218.6)	Acute Toxicity										Comments
							ANALYSIS REQUIRED														
Outfall 006	W	1L Amber	2	3/8/10 - 1108	HCl	1A, 1B	X														
Outfall 006	W	VOAs	3		HCl	2A, 2B, 2C		X													
Outfall 006	W	VOAs	3		None	3A, 3B, 3C			X												
Trip Blanks	W	VOAs	3		HCl	4A, 4B, 4C		X													
Trip Blanks	W	VOAs	3		None	5A, 5B, 5C			X												
Outfall 006	W	500 mL Poly	1		None	6				X											
Outfall 006	W	1 Gal Cube	1		None	7					X										

Field readings:
(Log in and include in report Temp and pH)

Temp °F = 51.1

pH = 7.6

Time of readings = 1500

Low Flow

20:10
3/9/10
NP

These Samples are the Grab Portion of Outfall 006 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
SDawson	3/8/10 - 0900		3/8/10 - 0900
	3/8/10 - 11:40		11:40 3-9-10
	3-9-10 17:20		3/9/10 17:20

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

Sample Integrity: (Check)
Intact: ✓ On Ice: X

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

M391

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Test America Version 6/29/09

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Annual Outfall 006** **COMPOSITE** Stormwater at FSDF-2
Project Manager: Bronwyn Kelly Sampler: SDawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni, + PP, Hardness as $CaCO_3$	TCDD (and all congeners)	Cl, SO_4, NO_3+NO_2-N, F, Perchlorate	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	Chronic Toxicity	Cyanide	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni + PP, Hardness as $CaCO_3$					Comments
							ANALYSIS REQUIRED														
Outfall 006	W	1L Poly	1	3/8/10 - 1108	HNO_3	7A	X														
Outfall 006 Dup	W	1L Poly	1		HNO_3	7B	X														
Outfall 006	W	1L Amber	2		None	8A, 8B		X													
Outfall 006	W	500 mL Poly	2		None	9A, 9B			X												
Outfall 006	W	500 mL Poly	2		None	10A, 10B				X											
Outfall 006	W	1L Amber	2		None	11A, 11B					X										
Outfall 006	W	2.5 Gal Cube	1		None	12A						X									Unfiltered and unpreserved analysis
		500 mL Amber	1		None	12B															
Outfall 006	W	1L Amber	2		None	13A, 13B							X								
~~Outfall 006~~	~~W~~	~~1 Gal Poly~~	~~1~~		~~None~~	~~14~~								X							
Outfall 006	W	500 mL Poly	1		NaOH	15									X						
Outfall 006	W	1L Poly	1		None	16										X					Filter w/in 24hrs of receipt at lab

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	Date/Time:	Received By	Date/Time:
SDawson	3/8/10 -0900		3/8/10-0900
Relinquished By	Date/Time:	Received By	Date/Time:
	3/8/10 - 11:40		3-9-10 11:40
Relinquished By	Date/Time:	Received By	Date/Time:
	3-9-10 17:20	VnBand	3/9/10 17:20

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

Sample Integrity: (Check)
Intact: ✓ On Ice: X

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

M391 1.6

LABORATORY REPORT

Aquatic Testing Laboratories
"dedicated to providing quality aquatic toxicity testing"
4350 Transport Street, Unit 107
Ventura, CA 93003
(805) 650-0546 FAX (805) 650-0756
CA DOHS ELAP Cert. No.: 1775

Date: March 15, 2010

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

Laboratory No.: A-10030905-001
Sample ID.: ITC0989 (Outfall 006)

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:	03/08/10
Date Received:	03/09/10
Temp. Received:	4.1°C
Chlorine (TRC):	0.0 mg/l
Date Tested:	03/09/10 to 03/13/10

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:

Sample ID.	Results
ITC0989	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

Aquatic Testing Laboratories

Lab No.: A-10030905-001
Client/ID: TestAmerica Outfall 006
ITC 0989

Start Date: 03/09/2010

TEST SUMMARY

Species: *Pimephales promelas*.
Age: 13 (1-14) days.
Regulations: NPDES.
Test solution volume: 250 ml.
Feeding: prior to renewal at 48 hrs.
Number of replicates: 2.
Dilution water: Moderately hard reconstituted water.
Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.
Test type: Static-Renewal.
Test Protocol: EPA-821-R-02-012.
Endpoints: Percent Survival at 96 hrs.
Test chamber: 600 ml beakers.
Temperature: 20 +/- 1°C.
Number of fish per chamber: 10.
QA/QC Batch No.: RT-100302.

TEST DATA

		°C	DO	pH	# Dead A	# Dead B	Analyst & Time of Readings
INITIAL	Control	19.6	9.0	7.7	0	0	1500
	100%	19.8	11.2	7.2	0	0	
24 Hr	Control	19.2	7.7	7.5	0	0	1400
	100%	19.1	7.9	7.9	0	0	
48 Hr	Control	19.0	7.4	7.5	0	0	1400
	100%	19.1	7.2	7.9	0	0	
Renewal	Control	19.6	9.2	7.8	0	0	1400
	100%	20.2	11.3	7.3	0	0	
72 Hr	Control	19.2	7.3	7.4	0	0	1500
	100%	19.2	6.7	7.7	0	0	
96 Hr	Control	20.3	6.8	7.3	0	0	1400
	100%	20.3	7.4	7.8	0	0	

Comments:
Sample as received: Chlorine: 0.0 mg/l; pH: 7.2; Conductivity: 396 umho; Temp: 4.1°C;
DO: 11.2 mg/l; Alkalinity: 181 mg/l; Hardness: 156 mg/l; NH_3-N: 0.3 mg/l.
Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / (No).
Control: Alkalinity: 79 mg/l; Hardness: 102 mg/l; Conductivity: 340 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 O_2.

RESULTS

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

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Annual Outfall 006** **GRAB** Stormwater at FSDF-2
Project Manager: Bronwyn Kelly Sampler: SDawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	VOCs 624, Xylenes + PP	VOCs 624 +A+A+2CVE	Cr (VI) (218.6)	Acute Toxicity	Comments
Outfall 006	W	1L Amber	2	3/8/10 - 1108	HCl	1A, 1B	X					
Outfall 006	W	VOAs	3		HCl	2A, 2B, 2C		X				
Outfall 006	W	VOAs	3		None	3A, 3B, 3C			X			
Trip Blanks	W	VOAs	3		HCl	4A, 4B, 4C		X				
Trip Blanks	W	VOAs	3		None	5A, 5B, 5C			X			
Outfall 006	W	500 mL Poly	1		None	6				X		
Outfall 006	W	1 Gal Cube	1		None	7					X	

ANALYSIS REQUIRED

Field readings:
(Log in and include in report Temp and pH)

Temp °F = 51.1

pH = 7.6

Time of readings = 1500

Low Flow

These Samples are the Grab Portion of Outfall 006 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
SDawson	3/8/10 - 0900	[signature]	3/8/10 - 0900
[signature]	3/8/10 - 11:40	[signature]	11:40 3-9-10
[signature]	3-9-10 13:00	[signature]	3-9-10 13:00

Turn-around time: (Check)

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

48 Hour: _____ 5 Day: _____ Normal: _____

Sample Integrity: (Check)

Intact: _____ On Ice: X

Data Requirements: (Check)

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

Aquatic
Testing
Laboratories

REFERENCE TOXICANT DATA

FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS

Aquatic Testing Laboratories

QA/QC Batch No.: RT-100302

TEST SUMMARY

Species: *Pimephales promel*as.
Age: 14 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

	INITIAL			24 Hr					48 Hr				
Date/Time:	3-2-10 1400			3-3-10 1500					3-4-10 1300				
Analyst:													
	°C	DO	pH	°C	DO	pH	# Dead A	# Dead B	°C	DO	pH	# Dead A	# Dead B
Control	20.2	9.0	7.7	19.2	8.1	7.7	0	0	19.0	8.2	7.7	0	0
1.0 mg/l	20.2	9.0	7.7	19.2	7.9	7.6	0	0	19.1	8.1	7.7	0	0
2.0 mg/l	20.2	9.1	7.7	19.3	7.8	7.6	0	0	19.1	8.2	7.6	0	0
4.0 mg/l	20.2	9.1	7.7	19.4	7.3	7.5	2	1	19.2	7.9	7.6	0	0
8.0 mg/l	20.2	9.1	7.7	19.5	5.2	7.3	10	10	—	—	—	—	—

	RENEWAL			72 Hr					96 Hr				
Date/Time:	3-4-10 1300			3-5-10 1300					3-6-10 1400				
Analyst:													
	°C	DO	pH	°C	DO	pH	# Dead A	# Dead B	°C	DO	pH	# Dead A	# Dead B
Control	19.7	9.1	7.8	19.1	7.2	7.3	0	0	19.8	6.8	7.4	0	0
1.0 mg/l	19.7	9.1	7.8	19.1	7.3	7.3	0	0	19.8	6.8	7.4	0	0
2.0 mg/l	19.7	9.2	7.8	19.0	7.6	7.4	0	0	19.9	6.7	7.4	0	0
4.0 mg/l	19.7	9.2	7.8	19.0	7.1	7.3	0	0	20.0	7.0	7.5	0	0
8.0 mg/l	—	—	—	—	—	—	—	—	—	—	—	—	—

Comments: Control: Alkalinity: 72 mg/l; Hardness: 97 mg/l; Conductivity: 352 umho.
SDS: Alkalinity: 72 mg/l; Hardness: 98 mg/l; Conductivity: 345 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:	3/2/2010 14:00	Test ID:	RT100302	Sample ID:	REF-Ref Toxicant
End Date:	3/6/2010 14:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	SDS-Sodium dodecyl sulfate
Sample Date:	3/2/2010	Protocol:	ACUTE-EPA-821-R-02-012	Test Species:	PP-Pimephales promelas
Comments:					

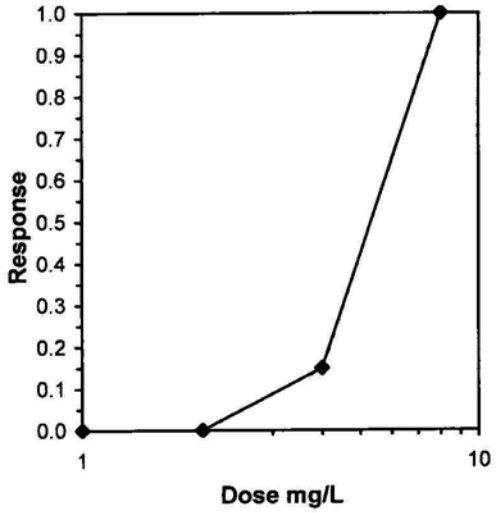
Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	0.8000	0.9000
8	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
4	0.8500	0.8500	1.1781	1.1071	1.2490	8.517	2	3	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-Karber

Trim Level	EC50	95% CL	
0.0%	5.0982	4.5640	5.6950
5.0%	5.2099	4.5766	5.9309
10.0%	5.2897	4.4710	6.2583
20.0%	5.3212	4.9289	5.7449
Auto-0.0%	5.0982	4.5640	5.6950

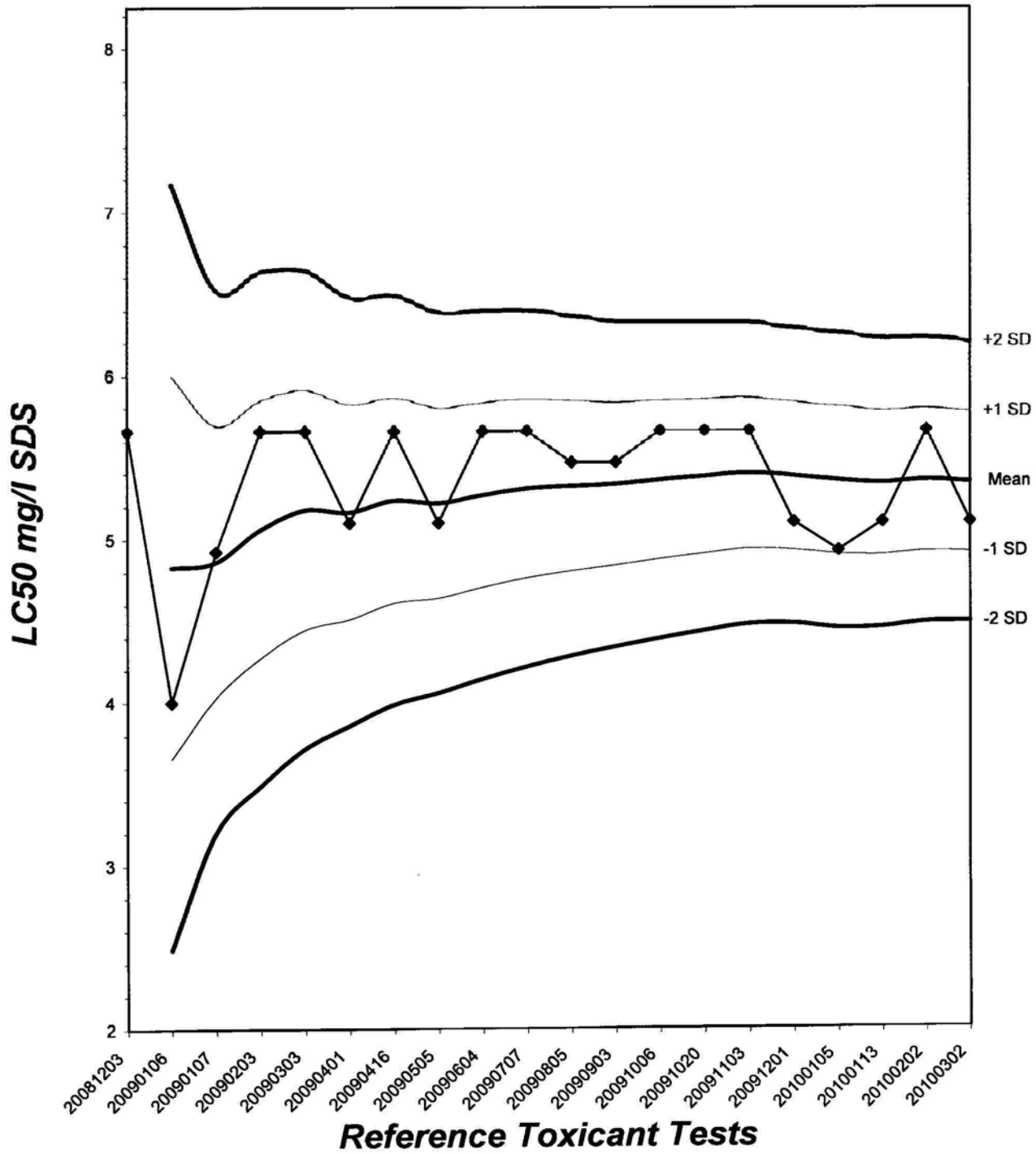


ToxCalc v5.0.23

Reviewed by:

Fathead Minnow Acute Laboratory Control Chart

CV% = 8



TEST ORGANISM LOG

Aquatic Testing Laboratories

FATHEAD MINNOW - LARVAL
(*Pimephales promelas*)

QA/QC BATCH NO.: RT-100302

SOURCE: In-Lab Culture

DATE HATCHED: 2-16-10

APPROXIMATE QUANTITY: 4w

GENERAL APPEARANCE: good

 # MORTALITIES 48 HOURS PRIOR TO TO USE IN TESTING: 0

DATE USED IN LAB: 3/2/10

AVERAGE FISH WEIGHT: 0.006 **gm**

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

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

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

200 ml test solution volume = 0.013 gm mean fish weight limit @ 20°C; 0.008 @ 25°C
250 ml test solution volume = 0.016 gm mean fish weight limit @ 20°C; 0.010 @ 25°C

ACCLIMATION WATER QUALITY:

Temp.: 24.2 **°C** **pH:** 7.7 **Ammonia:** <0.1 **mg/l NH_3-N**

DO: 9.0 **mg/l** **Alkalinity:** 70 **mg/l** **Hardness:** 97 **mg/l**

READINGS RECORDED BY: _____ **DATE:** 3-3-10

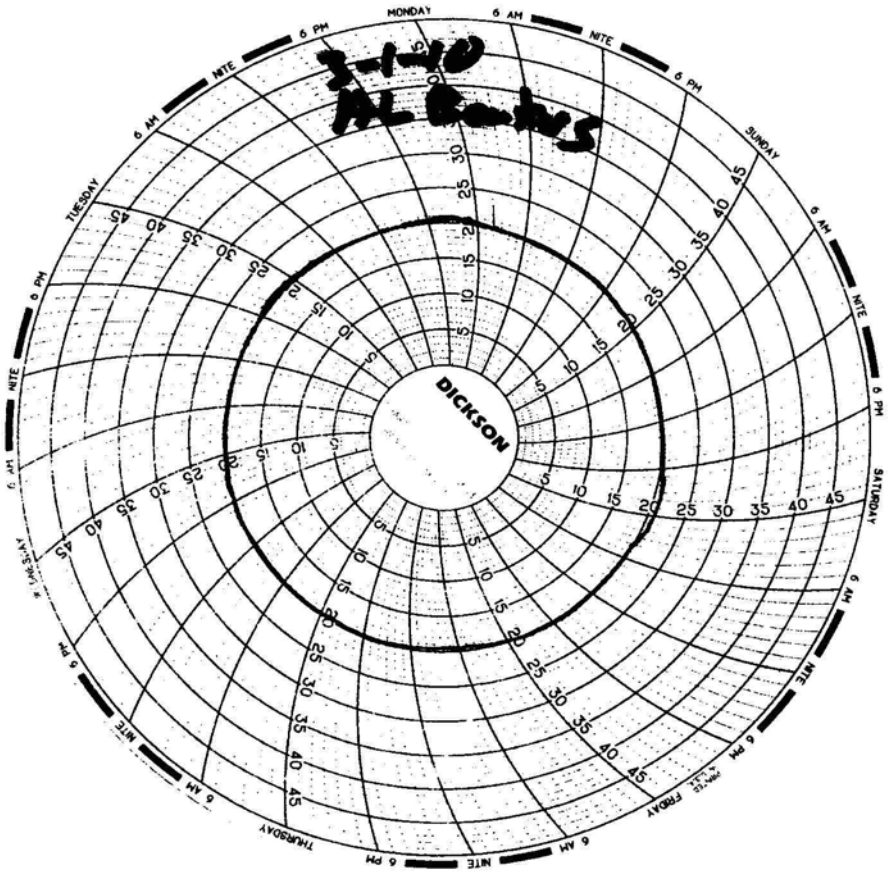
Aquatic Testing Laboratories

Test Temperature Chart

Test No: RT-100302

Date Tested: 03/02/10 to 03/06/10

Acceptable Range: 20+/- 1°C



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITC0989

MWH-Pasadena Boeing

Lot #: F0C110508

Debbie Wilson

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

TESTAMERICA LABORATORIES, INC.

Lynn Fussner
Project Manager

April 5, 2010

Case Narrative
LOT NUMBER: F0C110508

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 11, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

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

Radium-226 by GFPC (EPA 903.0 MOD)
There was insufficient sample volume to perform MS/MSD analysis. A LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:
F0C110508 (1): ITC0989-03

Radium-228 by GFPC (EPA 904 MOD)
There was insufficient sample volume to perform MS/MSD analysis. A LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:
F0C110508 (1): ITC0989-03

METHODS SUMMARY

F0C110508

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Radium-226 by GFPC	EPA 903.0 MOD	
Radium-228 by GFPC	EPA 904 MOD	
Strontium 90 by GFPC	EPA 905 MOD	
Total Uranium By Laser Ph osphorimetry	ASTM 5174-91	

References:

ASTM Annual Book Of ASTM Standards.

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

SAMPLE SUMMARY

F0C110508

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LWJRQ	001	ITC0989-03	03/09/10	11:08

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ITC0989-03

Radiochemistry

Lab Sample ID: F0C110508-001
Work Order: LWJRQ
Matrix: WATER

Date Collected: 03/09/10 1108
Date Received: 03/11/10 0930

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**Batch # 0074318**		**Yld %**
Cesium 137	-2.2	U	9.0	20.0	16	03/15/10	03/22/10
Potassium 40	-80	U	3300		300	03/15/10	03/22/10
Gross Alpha/Beta EPA 900				**pCi/L**	**Batch # 0076134**		**Yld %**
Gross Alpha	0.7	U	1.2	3.0	2.0	03/17/10	03/20/10
Gross Beta	**3.6**	**J**	1.0	4.0	**1.2**	**03/17/10**	**03/20/10**
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**Batch # 0071130**		**Yld % 63**
Strontium 90	-0.10	U	0.39	3.00	0.68	03/12/10	03/25/10
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**Batch # 0077060**		**Yld %**
Tritium	73	U	92	500	150	03/18/10	03/24/10
Total Uranium by KPA ASTM 5174-91				**pCi/L**	**Batch # 0083129**		**Yld %**
Total Uranium	0.441	J	0.050	0.677	0.21	03/24/10	03/29/10
Radium 226 by EPA 903.0 MOD				**pCi/L**	**Batch # 0071128**		**Yld % 103**
Radium (226)	0.070	J	0.041	1.00	0.050	03/12/10	04/05/10
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**Batch # 0071129**		**Yld % 91**
Radium 228	0.11	U	0.26	1.00	0.44	03/12/10	03/29/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0C110508
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC	Prep Date	Analysis Date	Lab Sample ID
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch # 0083129	Yld %			F0C240000-129B
Total Uranium	0.269	J	0.033	0.677	0.21		03/24/10	03/29/10
Radium 226 by EPA 903.0 MOD			pCi/L	Batch # 0071128	Yld % 106			F0C120000-128B
Radium (226)	0.059	J	0.040	1.00	0.053		03/12/10	04/05/10
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch # 0071129	Yld % 90			F0C120000-129B
Radium 228	-0.06	U	0.23	1.00	0.41		03/12/10	03/29/10
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch # 0071130	Yld % 78			F0C120000-130B
Strontium 90	-0.04	U	0.31	3.00	0.54		03/12/10	03/25/10
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch # 0074318	Yld %			F0C150000-318B
Cesium 137	3.6	U	7.8	20.0	14		03/15/10	03/22/10
Potassium 40	-90	U	3600		200		03/15/10	03/22/10
Gross Alpha/Beta EPA 900			pCi/L	Batch # 0076134	Yld %			F0C170000-134B
Gross Alpha	0.16	U	0.39	2.00	0.71		03/17/10	03/21/10
Gross Beta	0.66	U	0.70	4.00	1.1		03/17/10	03/21/10
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch # 0077060	Yld %			F0C180000-060B
Tritium	83	U	94	500	150		03/18/10	03/23/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0C110508
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ+/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gamma Cs-137 & Hits by EPA 901.1 MOD		**pCi/L**		**901.1 MOD**			**F0C150000-318C**
Americium 241	141000	140000	11000	500		99	(87 - 110)
Cesium 137	53100	53200	3100	200		100	(90 - 110)
Cobalt 60	87900	86800	4900	200		99	(89 - 110)
	Batch #:	0074318		Analysis Date:	03/22/10		
Gross Alpha/Beta EPA 900		**pCi/L**		**900.0 MOD**			**F0C170000-134C**
Gross Beta	67.9	71.7	6.1	1		106	(58 - 133)
	Batch #:	0076134		Analysis Date:	03/21/10		
Gross Alpha/Beta EPA 900		**pCi/L**		**900.0 MOD**			**F0C170000-134C**
Gross Alpha	49.4	56.6	6.2	1.0		114	(62 - 134)
	Batch #:	0076134		Analysis Date:	03/21/10		
TRITIUM (Distill) by EPA 906.0 MOD		**pCi/L**		**906.0 MOD**			**F0C180000-060C**
Tritium	4510	4450	470	150		99	(85 - 112)
	Batch #:	0077060		Analysis Date:	03/23/10		
Total Uranium by KPA ASTM 5174-91		**pCi/L**		**5174-91**			**F0C240000-129C**
Total Uranium	27.1	26.9	3.2	0.2		99	(90 - 120)
	Batch #:	0083129		Analysis Date:	03/29/10		
Total Uranium by KPA ASTM 5174-91		**pCi/L**		**5174-91**			**F0C240000-129C**
Total Uranium	5.42	5.50	0.57	0.21		102	(90 - 120)
	Batch #:	0083129		Analysis Date:	03/29/10		

NOTE(S)

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

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0C110508
Matrix: WATER

Parameter		Spike Amount	Result		Total Uncert. (2 σ+/-)	% Yld	% Rec	QC Control Limits	Precision	
								Lab Sample ID		
Radium 226 by EPA 903.0 MOD				**pCi/L**	**903.0 MOD**			**F0C120000-128C**		
Radium (226)		11.3	10.1		0.88	109	90	(68 - 136)		
	Spk 2	11.3	10.2		0.88	107	91	(68 - 136)	0.9	%RPD
		Batch #:	0071128			**Analysis Date:**		04/05/10		
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**904 MOD**			**F0C120000-129C**		
Radium 228		6.35	6.25		0.76	99	98	(60 - 142)		
	Spk 2	6.35	6.46		0.78	95	102	(60 - 142)	3	%RPD
		Batch #:	0071129			**Analysis Date:**		03/29/10		
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			**F0C120000-130C**		
Strontium 90		6.78	7.29		0.88	73	107	(80 - 130)		
	Spk 2	6.78	7.72		0.90	77	114	(80 - 130)	6	%RPD
		Batch #:	0071130			**Analysis Date:**		03/25/10		

NOTE(S)

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F0C090512
Matrix: WATER

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

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	QC Sample ID %REC	QC Control Limits
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F0C090512-001**	
Tritium	4510	4170	440		-17	74		93	(62 - 147)
	Batch #:	0077060		Analysis Date:		03/24/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0C120530-001**	
Gross Alpha	49.4	44.0	5.5		0.04	0.75		89	(35 - 150)
	Batch #:	0076134		Analysis Date:		03/20/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0C120530-001**	
Gross Beta	67.9	66.4	5.7		0.83	0.70		96	(54 - 150)
	Batch #:	0076134		Analysis Date:		03/20/10			

NOTE(S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F0C110508
Matrix: WATER

Date Sampled: 03/09/10 1108
Date Received: 03/11/10 0930

Parameter		Spike Amount	SPIKE Result	Total Uncert. (2 σ+/-)	Spike Yld	SAMPLE Result		Total Uncert. (2σ +/-)	QC Sample ID % Yld	%Rec	QC Control Limits
Total Uranium by KPA ASTM 5				**pCi/L**		**5174-91**				**F0C110508-001**	
Total Uranium		27.1	27.9	3.3		0.441	J	0.050		101	(62 - 150)
	Spk2	27.1	28.4	3.4		0.441	J	0.050		103	(62 - 150)
									Precision:	2	%RPD

Batch #: 0083129 Analysis date: 03/29/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F0C110508
Matrix: WATER

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

Parameter	SAMPLE Result		Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ+/-)	% Yld	QC Sample ID Precision	
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**				**F0C090509-001**	
Tritium	34	U	87		-26	U	72		1480	%RPD
	Batch #:		0077060	(Sample)	0077060		(Duplicate)			
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**				**F0C110508-001**	
Cesium 137	-2.2	U	9.0		0.0	U	11		200	%RPD
Potassium 40	-80	U	3300		5	U	100		228	%RPD
	Batch #:		0074318	(Sample)	0074318		(Duplicate)			
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F0C120530-001**	
Gross Alpha	0.04	U	0.75		1.2	U	1.0		187	%RPD
Gross Beta	0.83	U	0.70		-0.13	U	0.58		274	%RPD
	Batch #:		0076134	(Sample)	0076134		(Duplicate)			

NOTE(S)

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

U Result is less than the sample detection limit.

Cell 3-11-10 3770

F0C110508

SUBCONTRACT ORDER
TestAmerica Irvine

ITC0989

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone :(314) 298-8566
Fax: (314) 298-8757
Project Location: CA - CALIFORNIA
Receipt Temperature: _____ °C Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) Sampled: 03/09/10 11:08						
Gamma Spec-O	mg/kg	03/18/10	03/09/11 11:08	$200.00	50%	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/18/10	09/05/10 11:08	$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/18/10	09/05/10 11:08	$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	03/18/10	03/09/11 11:08	$200.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/18/10	03/09/11 11:08	$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/18/10	03/09/11 11:08	$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/18/10	03/09/11 11:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

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

Released By	Date/Time	Received By	Date/Time
3/10/10	17:00	Fed Ex	3/10/10 17:00
Released By	Date/Time	Received By	Date/Time
			3/11/10 9:30

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F0C110508

370

CONDITION UPON RECEIPT FORM

Client: TA Irvine
Quote No: 85044
COC/RFA No: ITC0989
Initiated By: AB Date: 3-11-10 Time: 9:30

Shipping Information

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

Shipping # (s):*				Sample Temperature (s):**			
1.	4289 2133 6966	6.		1.	ambient	6.	
2.		7.		2.		7.	
3.		8.		3.		8.	
4.		9.		4.		9.	
5.		10.		5.		10.	

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes:

Log 21 day TAT

Corrective Action:
☐ Client Contact Name: _____ Informed by: _____
☐ Sample(s) processed "as is"
☐ Sample(s) on hold until: _____ If released, notify: _____
Project Management Review: Jaymak Patel Date: 3-14-10

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004, REVISED 10/21/08 \\Slsvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc

APPENDIX G

Section 26

Outfall 006 – BMP Effectiveness March 8, 2010

Test America Analytical Laboratory Report

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: BMP Effectiveness 2009
Effectiveness Monitoring

Sampled: 03/08/10
Received: 03/10/10
Issued: 03/21/10 09:31

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

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
ITC1151-01	006 EFF-1	Water

Reviewed By:

Debby Wilson

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness 2009
Effectiveness Monitoring
Report Number: ITC1151

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

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC1151-01 (006 EFF-1 - Water)									
Reporting Units: g/cc									
Density	Displacement	10C2375	N/A	NA	**0.99**	1	03/18/10	03/18/10	
Sample ID: ITC1151-01 (006 EFF-1 - Water)									
Reporting Units: mg/l									
Sediment	ASTM D3977	10C2377	10	10	ND	1	03/08/10	03/08/10	

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: BMP Effectiveness 2009
Effectiveness Monitoring
Report Number: ITC1151

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C2375 Extracted: 03/18/10											
Duplicate Analyzed: 03/18/2010 (10C2375-DUP1)						**Source: ITC1151-01**					
Density	0.992	NA	N/A	g/cc		0.992			0.05	20	

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: BMP Effectiveness 2009
Effectiveness Monitoring
Report Number: ITC1151

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

DATA QUALIFIERS AND DEFINITIONS

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

RPD Relative Percent Difference

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness 2009
Effectiveness Monitoring
Report Number: ITC1151

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

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

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

TestAmerica Irvine

Debby Wilson For Heather Clark
Project Manager

Test America

CHAIN OF CUSTODY FORM

Client Name/Address:
MWH-Arcadia
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007

Test America Contact: Joseph Doak

Project Manager: Bronwyn Kelly

Sampler: E Walker

Project: **Boeing BMP Effectiveness Monitoring Program**

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

ITC1151

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	ANALYSIS REQUIRED: Suspended Sediment Concentration (SSC, ASTM-D3977-1997)									Comments
006 EFF-1	W	1 Gal Poly	1	3/8/10 - 1108	None	1	X									

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	3/9/10 - 1000	[signature]	3/9/10 1000
[signature]	3-10-10 14:55	[signature]	3-10-10 14:55
[signature]	3-10-10 17:30	[signature]	3/10/10 17:30

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

Sample Integrity: (check)
Intact ✓ On Ice: X ✓

M3105

28

APPENDIX G

Section 27

Outfall 008 – January 18, 2010

MEC^X Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITA1358

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:	ITA1358
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	1
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 008 (Composite)	ITA1358-02	F0A210532-001, G0A210542-001	Water	1/18/2010 2:08:00 PM	ASTM 5174-91, 200.8, 200.8 (Diss), 245.1, 245.1-Diss, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD
Outfall 008 (Composite)	ITA1358-02RE	F0A210532-001,	Water	1/18/2010 2:08:00 PM	900.0 MOD

II. Sample Management

No anomalies were observed regarding sample management. The sample receipt temperature was not noted by TestAmerica-St Louis; 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 present upon receipt at TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were delivered to the remaining laboratories by courier, no custody seals were necessary. 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 25, 2010

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had detects between the EDL and the RL for more than half of all compounds, including all of the HxCDD isomers and total HxCDD, 1,2,3,6,7,8-HpCDD and total HpCDD, OCDD, total HxCDF and all of the HxCDF isomers except 1,2,3,4,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF and total HpCDF, and OCDF. Any sample detects for individual target compound isomers present at concentrations less than five times the

method blank concentrations were qualified as nondetected, "U," at the RL. Several detects in the method blank did not meet ratio criteria and were reported as EMPCs; however, due to the extent of contamination present in the method blank, it was the reviewer's professional opinion that those results be utilized to qualify applicable sample results. Results for totals that included peaks meeting ratio criteria that were not present in the method blank were qualified as estimated, "J," as only a portion of the total was considered method blank contamination. Total HxCDF did not contain any of the same peaks as the method blank and was therefore not qualified. The concentrations of 1,2,3,4,6,7,8-HpCDD and 1,2,3,4,6,7,8-HpCDF in the method blank were insufficient to qualify the sample results or associated totals.

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

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

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

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

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

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

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample detects. The laboratory calculated and reported compound-specific detection limits. The result for OCDF was reported as an EMPC. As ratio criteria were not met, the result was qualified as an estimated nondetect, "UJ," at the reported concentration level. Any reported totals reported as EMPCs or that included EMPCs were qualified as estimated, "J." Any detects between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

B. EPA METHODS 200.7, 200.8, and 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: February 26, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 6010B, 6020, 7470A/7471A*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.

- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were ≤5%, and all masses of interest were calibrated to ≤ 0.1 amu and ≤0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. CRDL recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no detects.

- Interference Check Samples: Recoveries were within the method- (6010B) or laboratory-(6020) established control limits. Most analytes were detected in the ICSA solution; however, the reviewer was not able to determine if sample detects were due to matrix interference.

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

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

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the dissolved fraction. Recoveries and RPDs were within laboratory-established QC limits. Mercury method accuracy was evaluated based on LCS results.

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

- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration. Copper and zinc were not bracketed by internal

standards of a lower mass; therefore, copper and zinc detected in the sample were qualified as estimated, "J."

- 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 26, 2010

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquot for total uranium was prepared beyond 3× the five-day holding time for unpreserved samples; therefore, the detected result for this analyte was qualified as estimated, "J." The aliquots for gross alpha and gross beta were prepared beyond the five-day analytical holding time for unpreserved samples; therefore, the detected results for these analytes were qualified as estimated, "J." Aliquots for radium-226, radium-228, strontium-90, and gamma spectroscopy were prepared within the five-day holding time for unpreserved aqueous samples.

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

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

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: Tritium was detected in the method blank but was not detected in the site sample. There were no other analytes detected in the method blanks or KPA CCBs.

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

- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for the gamma spectroscopy analytes. There were no detects in either sample.

- 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 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 MDA.

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

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

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

Validated Sample Result Forms: ITA1358

Analysis Method ASTM 5174-91

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	0.652	0.693	0.21	pCi/L	Jb	J	H, DNQ

Analysis Method EPA 200.8

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	ND	2.0	0.30	ug/l		U	
Cadmium	7440-43-9	0.25	1.0	0.10	ug/l	Ja	J	DNQ
Copper	7440-50-8	6.8	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	7.9	1.0	0.20	ug/l			
Selenium	7782-49-2	ND	2.0	0.50	ug/l		U	
Thallium	7440-28-0	ND	1.0	0.20	ug/l		U	
Zinc	7440-66-6	47	20	5.0	ug/l		J	*III

Analysis Method EPA 200.8-Diss

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony, dissolved	7440-36-0	ND	2.0	0.30	ug/l		U	
Cadmium, dissolved	7440-43-9	0.22	1.0	0.10	ug/l	Ja	J	DNQ
Copper, dissolved	7440-50-8	4.6	2.0	0.50	ug/l		J	*III
Lead, dissolved	7439-92-1	5.2	1.0	0.20	ug/l			
Selenium, dissolved	7782-49-2	ND	2.0	0.50	ug/l		U	
Thallium, dissolved	7440-28-0	0.29	1.0	0.20	ug/l	Ja	J	DNQ
Zinc, dissolved	7440-66-6	30	20	5.0	ug/l		J	*III

Analysis Method EPA 245.1

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.00020	0.00010	mg/l		U	

Analysis Method EPA 245.1-Diss

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.00020	0.00010	mg/l	C	U	

Analysis Method EPA 900.0 MOD

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	25.8	3	3.8	pCi/L		J	H, C
Gross Beta	12587-47-2	25.4	4	4.4	pCi/L		J	H

Analysis Method EPA 901.1 MOD

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-2.3	20	17	pCi/L	U	U	
Potassium 40	13966-00-2	-30	0	290	pCi/L	U	U	

Analysis Method EPA 903.0 MOD

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.11	1	0.29	pCi/L	U	U	

Analysis Method EPA 904 MOD

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	-1.92	1	1.7	pCi/L	U	U	

Analysis Method EPA 905 MOD

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098-97-2	0.26	3	0.77	pCi/L	U	U	

Analysis Method EPA 906.0 MOD

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	81	500	140	pCi/L	U	U	

Analysis Method EPA-5 1613B

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

Lab Sample Name: ITA1358-02 **Sample Date:** 1/18/2010 2:08:00 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	0.00016	0.00005	0.000026	ug/L	B		
1,2,3,4,6,7,8-HpCDF	67562-39-4	5.8e-005	0.00005	0.000013	ug/L	B		
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.000019	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.000011	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.000011	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	1.2e-005	0.00001	ug/L	J, Q, B	U	B
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.000009	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.000008	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.000009	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.000017	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.000011	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.000008	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.000011	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.000004	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.000004	ug/L		U	
OCDD	3268-87-9	0.0017	0.0001	0.000043	ug/L	B		
OCDF	39001-02-0	ND	9.6e-005	0.000026	ug/L	Q, J, B	UJ	*III
Total HpCDD	37871-00-4	0.00038	0.00005	0.000026	ug/L	B		
Total HpCDF	38998-75-3	0.00011	0.00005	0.000013	ug/L	B		
Total HxCDD	34465-46-8	2.4e-005	2.4e-005	0.000008	ug/L	J, Q, B	J	B, *III, DNQ
Total HxCDF	55684-94-1	9.1e-006	9.1e-006	0.000008	ug/L	J, Q, B	J	*III, DNQ
Total PeCDD	36088-22-9	ND	0.00005	0.000017	ug/L		U	
Total PeCDF	30402-15-4	2.2e-006	2.2e-006	0.000007	ug/L	J, Q	J	*III, DNQ
Total TCDD	41903-57-5	ND	0.00001	0.000004	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.000004	ug/L		U	

APPENDIX G

Section 28

Outfall 008 – January 18, 2010

Test America Analytical Laboratory Report

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

LABORATORY REPORT

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

Project: Routine Outfall 008

Sampled: 01/18/10
Received: 01/18/10
Revised: 03/31/10 14:13

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

CASE NARRATIVE

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

LABORATORY ID	CLIENT ID	MATRIX
ITA1358-01	Outfall 008 (Grab)	Water
ITA1358-02	Outfall 008 (Composite)	Water

Reviewed By:

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-01 (Outfall 008 (Grab) - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10A1786	1.3	4.8	ND	1	01/20/10	01/20/10	

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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: ug/l									
Mercury	EPA 245.1	10A1830	0.10	0.20	ND	1	01/20/10	01/20/10	
Antimony	EPA 200.8	10A1800	0.30	2.0	ND	1	01/20/10	01/25/10	
Cadmium	EPA 200.8	10A1800	0.10	1.0	**0.25**	1	01/20/10	01/25/10	Ja
Copper	EPA 200.8	10A1800	0.50	2.0	**6.8**	1	01/20/10	01/25/10	
Lead	EPA 200.8	10A1800	0.20	1.0	**7.9**	1	01/20/10	01/25/10	
Selenium	EPA 200.8	10A1800	0.50	2.0	ND	1	01/20/10	01/25/10	
Thallium	EPA 200.8	10A1800	0.20	1.0	ND	1	01/20/10	01/25/10	
Zinc	EPA 200.8	10A1800	5.0	20	**47**	1	01/20/10	01/25/10	

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Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10A2023	0.10	0.20	ND	1	01/21/10	01/21/10	C
Antimony	EPA 200.8-Diss	10A1999	0.30	2.0	ND	1	01/21/10	01/25/10	
Cadmium	EPA 200.8-Diss	10A1999	0.10	1.0	**0.22**	1	01/21/10	01/25/10	Ja
Copper	EPA 200.8-Diss	10A1999	0.50	2.0	**4.6**	1	01/21/10	01/25/10	
Lead	EPA 200.8-Diss	10A1999	0.20	1.0	**5.2**	1	01/21/10	01/27/10	
Selenium	EPA 200.8-Diss	10A1999	0.50	2.0	ND	1	01/21/10	01/25/10	
Thallium	EPA 200.8-Diss	10A1999	0.20	1.0	**0.29**	1	01/21/10	01/25/10	Ja
Zinc	EPA 200.8-Diss	10A1999	5.0	20	**30**	1	01/21/10	01/25/10	

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	10A1730	0.50	0.50	ND	1	01/19/10	01/20/10	
Chloride	EPA 300.0	10A1646	0.25	0.50	**6.0**	1	01/19/10	01/19/10	
Nitrate-N	EPA 300.0	10A1646	0.060	0.11	**0.64**	1	01/19/10	01/19/10	
Nitrite-N	EPA 300.0	10A1646	0.090	0.15	ND	1	01/19/10	01/19/10	
Nitrate/Nitrite-N	EPA 300.0	10A1646	0.15	0.26	**0.64**	1	01/19/10	01/19/10	
Sulfate	EPA 300.0	10A1646	0.20	0.50	**7.2**	1	01/19/10	01/19/10	
Total Dissolved Solids	SM2540C	10A1751	1.0	10	**240**	1	01/20/10	01/20/10	
Total Suspended Solids	SM 2540D	10C1775	4.0	40	**780**	1	03/15/10	03/15/10	H-1
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10A2275	0.90	4.0	ND	1	01/25/10	01/25/10	

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	35029	0.21	0.693	**0.652**	1	02/04/10	02/08/10	Jb

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	25415	3.8	3	**25.8**	1	01/25/10	01/29/10	
Gross Beta	EPA 900.0 MOD	25415	4.4	4	**25.4**	1	01/25/10	01/29/10	

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Project ID: Routine Outfall 008
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Sampled: 01/18/10
Received: 01/18/10

EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	23036	17	20	-2.3	1	01/23/10	01/26/10	U
Potassium 40	EPA 901.1 MOD	23036	290	NA	-30	1	01/23/10	01/26/10	U

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EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	22145	0.29	1	**0.11**	1	01/22/10	02/08/10	U

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	22148	1.7	1	-1.92	1	01/22/10	02/08/10	U

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Project ID: Routine Outfall 008
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Sampled: 01/18/10
Received: 01/18/10

EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	22149	0.77	3	**0.26**	1	01/22/10	02/01/10	U

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	28080	140	500	**81**	1	01/28/10	01/29/10	U

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)									
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	26267	0.000026	0.00005	**0.00016**	1	01/26/10	02/02/10	B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	26267	0.000013	0.00005	**5.8e-005**	1	01/26/10	02/02/10	B
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	26267	0.000019	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	26267	0.000011	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	26267	0.000011	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	26267	0.00001	0.00005	**1.2e-005**	1	01/26/10	02/02/10	J, Q, B
1,2,3,6,7,8-HxCDF	EPA-5 1613B	26267	0.0000097	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	26267	0.0000083	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	26267	0.0000095	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	26267	0.000017	0.00005	ND	1	01/26/10	02/02/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	26267	0.000011	0.00005	ND	1	01/26/10	02/02/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	26267	0.0000086	0.00005	ND	1	01/26/10	02/02/10	
2,3,4,7,8-PeCDF	EPA-5 1613B	26267	0.000011	0.00005	ND	1	01/26/10	02/02/10	
2,3,7,8-TCDD	EPA-5 1613B	26267	0.0000047	0.00001	ND	1	01/26/10	02/02/10	
2,3,7,8-TCDF	EPA-5 1613B	26267	0.0000043	0.00001	ND	1	01/26/10	02/02/10	
OCDD	EPA-5 1613B	26267	0.000043	0.0001	**0.0017**	1	01/26/10	02/02/10	B
OCDF	EPA-5 1613B	26267	0.000026	0.0001	**9.6e-005**	1	01/26/10	02/02/10	Q, J, B
Total HpCDD	EPA-5 1613B	26267	0.000026	0.00005	**0.00038**	1	01/26/10	02/02/10	B
Total HpCDF	EPA-5 1613B	26267	0.000013	0.00005	**0.00011**	1	01/26/10	02/02/10	B
Total HxCDD	EPA-5 1613B	26267	0.0000083	0.00005	**2.4e-005**	1	01/26/10	02/02/10	J, Q, B
Total HxCDF	EPA-5 1613B	26267	0.0000086	0.00005	**9.1e-006**	1	01/26/10	02/02/10	J, Q, B
Total PeCDD	EPA-5 1613B	26267	0.000017	0.00005	ND	1	01/26/10	02/02/10	
Total PeCDF	EPA-5 1613B	26267	0.0000076	0.00005	**2.2e-006**	1	01/26/10	02/02/10	J, Q
Total TCDD	EPA-5 1613B	26267	0.0000047	0.00001	ND	1	01/26/10	02/02/10	
Total TCDF	EPA-5 1613B	26267	0.0000043	0.00001	ND	1	01/26/10	02/02/10	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*34 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*38 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*35 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*33 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*31 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*34 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*33 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*36 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*31 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*31 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*37 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*33 %*				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*38 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*36 %*				
Surrogate: 13C-OCDD (17-157%)					*29 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*92 %*				

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 008 (Composite) (ITA1358-02) - Water					
EPA 300.0	2	01/18/2010 14:08	01/18/2010 19:00	01/19/2010 15:00	01/19/2010 17:25
Filtration	1	01/18/2010 14:08	01/18/2010 19:00	01/19/2010 17:40	01/19/2010 17:40

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A1786 Extracted: 01/20/10											
Blank Analyzed: 01/20/2010 (10A1786-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 01/20/2010 (10A1786-BS1)											
Hexane Extractable Material (Oil & Grease)	20.2	5.0	1.4	mg/l	20.0		101	78-114			
LCS Dup Analyzed: 01/20/2010 (10A1786-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.7	5.0	1.4	mg/l	20.0		98	78-114	3	11	
Matrix Spike Analyzed: 01/20/2010 (10A1786-MS1)						**Source: ITA0996-01**					
Hexane Extractable Material (Oil & Grease)	19.6	4.8	1.3	mg/l	19.0	ND	103	78-114			

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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: 10A1800 Extracted: 01/20/10											
Blank Analyzed: 01/25/2010 (10A1800-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	5.0	ug/l							
LCS Analyzed: 01/25/2010 (10A1800-BS1)											
Antimony	73.9	2.0	0.30	ug/l	80.0		92	85-115			
Cadmium	74.1	1.0	0.10	ug/l	80.0		93	85-115			
Copper	73.8	2.0	0.50	ug/l	80.0		92	85-115			
Lead	74.3	1.0	0.20	ug/l	80.0		93	85-115			
Selenium	73.9	2.0	0.50	ug/l	80.0		92	85-115			
Thallium	73.9	1.0	0.20	ug/l	80.0		92	85-115			
Zinc	74.3	20	5.0	ug/l	80.0		93	85-115			
Matrix Spike Analyzed: 01/25/2010 (10A1800-MS1)						**Source: ITA1401-01**					
Antimony	81.2	2.0	0.30	ug/l	80.0	2.44	98	70-130			
Cadmium	77.9	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	86.3	2.0	0.50	ug/l	80.0	6.94	99	70-130			
Lead	118	1.0	0.20	ug/l	80.0	39.4	98	70-130			
Selenium	77.8	2.0	0.50	ug/l	80.0	ND	97	70-130			
Thallium	78.6	1.0	0.20	ug/l	80.0	0.228	98	70-130			
Zinc	150	20	5.0	ug/l	80.0	72.4	97	70-130			
Matrix Spike Analyzed: 01/25/2010 (10A1800-MS2)						**Source: ITA1478-01**					
Antimony	73.2	4.0	0.60	ug/l	80.0	0.938	90	70-130			
Cadmium	80.5	2.0	0.20	ug/l	80.0	0.628	100	70-130			
Copper	101	4.0	1.0	ug/l	80.0	19.2	102	70-130			
Lead	130	2.0	0.40	ug/l	80.0	47.6	103	70-130			
Selenium	81.5	4.0	1.0	ug/l	80.0	1.61	100	70-130			
Thallium	81.9	2.0	0.40	ug/l	80.0	0.594	102	70-130			
Zinc	186	40	10	ug/l	80.0	93.9	116	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: 10A1800 Extracted: 01/20/10											
Matrix Spike Dup Analyzed: 01/25/2010 (10A1800-MSD1)						**Source: ITA1401-01**					
Antimony	81.3	2.0	0.30	ug/l	80.0	2.44	99	70-130	0.2	20	
Cadmium	79.0	1.0	0.10	ug/l	80.0	ND	99	70-130	1	20	
Copper	87.7	2.0	0.50	ug/l	80.0	6.94	101	70-130	2	20	
Lead	120	1.0	0.20	ug/l	80.0	39.4	101	70-130	2	20	
Selenium	79.9	2.0	0.50	ug/l	80.0	ND	100	70-130	3	20	
Thallium	81.2	1.0	0.20	ug/l	80.0	0.228	101	70-130	3	20	
Zinc	153	20	5.0	ug/l	80.0	72.4	101	70-130	2	20	
Batch: 10A1830 Extracted: 01/20/10											
Blank Analyzed: 01/20/2010 (10A1830-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 01/20/2010 (10A1830-BS1)											
Mercury	8.22	0.20	0.10	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 01/20/2010 (10A1830-MS1)						**Source: ITA1359-01**					
Mercury	8.18	0.20	0.10	ug/l	8.00	ND	102	70-130			
Matrix Spike Dup Analyzed: 01/20/2010 (10A1830-MSD1)						**Source: ITA1359-01**					
Mercury	8.18	0.20	0.10	ug/l	8.00	ND	102	70-130	0.08	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: 10A1999 Extracted: 01/21/10											
Blank Analyzed: 01/25/2010 (10A1999-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	5.0	ug/l							
LCS Analyzed: 01/25/2010 (10A1999-BS1)											
Antimony	80.9	2.0	0.30	ug/l	80.0		101	85-115			
Cadmium	79.9	1.0	0.10	ug/l	80.0		100	85-115			
Copper	84.4	2.0	0.50	ug/l	80.0		106	85-115			
Lead	88.1	1.0	0.20	ug/l	80.0		110	85-115			
Selenium	84.8	2.0	0.50	ug/l	80.0		106	85-115			
Thallium	86.6	1.0	0.20	ug/l	80.0		108	85-115			
Zinc	84.1	20	5.0	ug/l	80.0		105	85-115			
Matrix Spike Analyzed: 01/25/2010 (10A1999-MS1)						**Source: ITA1358-02**					
Antimony	79.8	2.0	0.30	ug/l	80.0	ND	100	70-130			
Cadmium	78.2	1.0	0.10	ug/l	80.0	0.217	98	70-130			
Copper	86.7	2.0	0.50	ug/l	80.0	4.63	103	70-130			
Lead	91.4	1.0	0.20	ug/l	80.0	5.21	108	70-130			
Selenium	79.8	2.0	0.50	ug/l	80.0	ND	100	70-130			
Thallium	85.9	1.0	0.20	ug/l	80.0	0.290	107	70-130			
Zinc	110	20	5.0	ug/l	80.0	29.7	100	70-130			
Matrix Spike Dup Analyzed: 01/25/2010 (10A1999-MSD1)						**Source: ITA1358-02**					
Antimony	80.7	2.0	0.30	ug/l	80.0	ND	101	70-130	1	20	
Cadmium	79.1	1.0	0.10	ug/l	80.0	0.217	99	70-130	1	20	
Copper	85.7	2.0	0.50	ug/l	80.0	4.63	101	70-130	1	20	
Lead	91.0	1.0	0.20	ug/l	80.0	5.21	107	70-130	0.5	20	
Selenium	80.6	2.0	0.50	ug/l	80.0	ND	101	70-130	1	20	
Thallium	86.1	1.0	0.20	ug/l	80.0	0.290	107	70-130	0.3	20	
Zinc	109	20	5.0	ug/l	80.0	29.7	99	70-130	1	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: 10A2023 Extracted: 01/21/10											
Blank Analyzed: 01/21/2010 (10A2023-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 01/21/2010 (10A2023-BS1)											
Mercury	8.84	0.20	0.10	ug/l	8.00		110	85-115			
Matrix Spike Analyzed: 01/21/2010 (10A2023-MS1)						**Source: ITA1481-02**					
Mercury	8.85	0.20	0.10	ug/l	8.00	ND	111	70-130			
Matrix Spike Dup Analyzed: 01/21/2010 (10A2023-MSD1)						**Source: ITA1481-02**					
Mercury	8.92	0.20	0.10	ug/l	8.00	ND	111	70-130	0.8	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A1646 Extracted: 01/19/10											
Blank Analyzed: 01/19/2010 (10A1646-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 01/19/2010 (10A1646-BS1)											
Chloride	4.86	0.50	0.25	mg/l	5.00		97	90-110			
Nitrate-N	1.14	0.11	0.060	mg/l	1.13		101	90-110			
Nitrite-N	1.51	0.15	0.090	mg/l	1.52		100	90-110			
Sulfate	9.85	0.50	0.20	mg/l	10.0		98	90-110			
Matrix Spike Analyzed: 01/19/2010 (10A1646-MS1)						**Source: ITA1359-01**					
Chloride	13.5	0.50	0.25	mg/l	5.00	8.18	107	80-120			
Nitrate-N	2.77	0.11	0.060	mg/l	1.13	1.48	114	80-120			
Nitrite-N	1.63	0.15	0.090	mg/l	1.52	ND	107	80-120			
Sulfate	35.5	0.50	0.20	mg/l	10.0	24.6	108	80-120			
Matrix Spike Analyzed: 01/19/2010 (10A1646-MS2)						**Source: ITA1466-01**					
Chloride	6.34	0.50	0.25	mg/l	5.00	1.60	95	80-120			
Nitrate-N	1.23	0.11	0.060	mg/l	1.13	0.0658	103	80-120			
Nitrite-N	1.57	0.15	0.090	mg/l	1.52	ND	103	80-120			
Sulfate	11.6	0.50	0.20	mg/l	10.0	1.27	103	80-120			
Matrix Spike Dup Analyzed: 01/19/2010 (10A1646-MSD1)						**Source: ITA1359-01**					
Chloride	13.4	0.50	0.25	mg/l	5.00	8.18	105	80-120	0.6	20	
Nitrate-N	2.74	0.11	0.060	mg/l	1.13	1.48	111	80-120	1	20	
Nitrite-N	1.65	0.15	0.090	mg/l	1.52	ND	109	80-120	1	20	
Sulfate	35.6	0.50	0.20	mg/l	10.0	24.6	110	80-120	0.4	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A1730 Extracted: 01/19/10											
Blank Analyzed: 01/20/2010 (10A1730-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
LCS Analyzed: 01/20/2010 (10A1730-BS1)											
Ammonia-N (Distilled)	10.4	0.50	0.50	mg/l	10.0		104	80-115			
Matrix Spike Analyzed: 01/20/2010 (10A1730-MS1)						**Source: ITA1289-05**					
Ammonia-N (Distilled)	10.4	0.50	0.50	mg/l	10.0	ND	104	70-120			
Matrix Spike Dup Analyzed: 01/20/2010 (10A1730-MSD1)						**Source: ITA1289-05**					
Ammonia-N (Distilled)	10.4	0.50	0.50	mg/l	10.0	ND	104	70-120	0	15	
Batch: 10A1751 Extracted: 01/20/10											
Blank Analyzed: 01/20/2010 (10A1751-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 01/20/2010 (10A1751-BS1)											
Total Dissolved Solids	998	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/20/2010 (10A1751-DUP1)						**Source: ITA1458-01**					
Total Dissolved Solids	1020	10	1.0	mg/l		1020			0.8	10	
Batch: 10A2275 Extracted: 01/25/10											
Blank Analyzed: 01/25/2010 (10A2275-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2275 Extracted: 01/25/10											
LCS Analyzed: 01/25/2010 (10A2275-BS1)											
Perchlorate	23.8	4.0	0.90	ug/l	25.0		95	85-115			
Matrix Spike Analyzed: 01/25/2010 (10A2275-MS1)						**Source: ITA1654-13**					
Perchlorate	28.7	4.0	0.90	ug/l	25.0	6.12	90	80-120			
Matrix Spike Dup Analyzed: 01/25/2010 (10A2275-MSD1)						**Source: ITA1654-13**					
Perchlorate	29.6	4.0	0.90	ug/l	25.0	6.12	94	80-120	3	20	
Batch: 10C1775 Extracted: 03/15/10											
Blank Analyzed: 03/15/2010 (10C1775-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/15/2010 (10C1775-BS1)											
Total Suspended Solids	982	10	1.0	mg/l	1000		98	85-115			
Duplicate Analyzed: 03/15/2010 (10C1775-DUP1)						**Source: ITA1358-02**					
Total Suspended Solids	768	40	4.0	mg/l		776			1	10	

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METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 35029 Extracted: 02/04/10											
Matrix Spike Dup Analyzed: 02/08/2010 (F0A200486001D)						**Source: F0A200486001**					
Total Uranium	29.2	0.7	0.2	pCi/L	27.7	-0.0334	105	62-150	2	20	
Matrix Spike Analyzed: 02/08/2010 (F0A200486001S)						**Source: F0A200486001**					
Total Uranium	28.8	0.7	0.2	pCi/L	27.7	-0.0334	104	62-150			
Blank Analyzed: 02/08/2010 (F0B040000029B)						**Source:**					
Total Uranium	-0.0623	0.693	0.21	pCi/L				-			*U*
LCS Analyzed: 02/08/2010 (F0B040000029C)						**Source:**					
Total Uranium	29.2	0.7	0.2	pCi/L	27.7		105	90-120			
LCS Dup Analyzed: 02/08/2010 (F0B040000029D)						**Source:**					
Total Uranium	5.67	0.69	0.21	pCi/L	5.54		102	90-120			

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Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 25415 Extracted: 01/25/10											
Matrix Spike Analyzed: 01/29/2010 (F0A200486001S)						**Source: F0A200486001**					
Gross Alpha	6.9	3	1	pCi/L	49.4	0.98	12	35-150			*a*
Gross Beta	10	4	1.6	pCi/L	68.1	0.83	14	54-150			*a*
Duplicate Analyzed: 01/29/2010 (F0A200486001X)						**Source: F0A200486001**					
Gross Alpha	0.71	3	1.4	pCi/L		0.98		-			*Jb*
Gross Beta	1.6	4	1.6	pCi/L		0.83		-			*Jb*
Blank Analyzed: 01/29/2010 (F0A250000415B)						**Source:**					
Gross Alpha	-0.03	3	0.71	pCi/L				-			*U*
Gross Beta	-0.26	4	1.5	pCi/L				-			*U*
LCS Analyzed: 01/29/2010 (F0A250000415C)						**Source:**					
Gross Alpha	45.4	3	0.9	pCi/L	49.4		92	62-134			
Gross Beta	73.4	4	1.6	pCi/L	68.1		108	58-133			

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METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 23036 Extracted: 01/23/10											
Duplicate Analyzed: 01/26/2010 (F0A210532001X)						**Source: ITA1358-02**					
Cesium 137	-1.4	20	18	pCi/L		-2.3		-			*U*
Potassium 40	-60	NA	250	pCi/L		-30		-			*U*
Blank Analyzed: 01/26/2010 (F0A230000036B)						**Source:**					
Cesium 137	-0.4	20	12	pCi/L				-			*U*
Potassium 40	-70	NA	210	pCi/L				-			*U*
LCS Analyzed: 01/26/2010 (F0A230000036C)						**Source:**					
Americium 241	132000	NA	500	pCi/L	141000		93	87-110			
Cobalt 60	79000	NA	200	pCi/L	87900		90	89-110			
Cesium 137	48200	20	200	pCi/L	53100		91	90-110			

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METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 22145 Extracted: 01/22/10											
Blank Analyzed: 02/08/2010 (F0A220000145B)						**Source:**					
Radium (226)	0.111	1	0.13	pCi/L				-			*U*
LCS Analyzed: 02/08/2010 (F0A220000145C)						**Source:**					
Radium (226)	10.7	1	0.1	pCi/L	11.3		95	68-136			
LCS Dup Analyzed: 02/08/2010 (F0A220000145L)						**Source:**					
Radium (226)	11.2	1	0.2	pCi/L	11.3		100	68-136	5	40	

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METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 22148 Extracted: 01/22/10											
Blank Analyzed: 02/08/2010 (F0A220000148B)						**Source:**					
Radium 228	0.22	1	0.59	pCi/L				-			*U*
LCS Analyzed: 02/08/2010 (F0A220000148C)						**Source:**					
Radium 228	8.22	1	0.61	pCi/L	6.45		127	60-142			
LCS Dup Analyzed: 02/08/2010 (F0A220000148L)						**Source:**					
Radium 228	7.58	1	0.57	pCi/L	6.45		118	60-142	8	40	

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METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 22149 Extracted: 01/22/10											
Blank Analyzed: 02/01/2010 (F0A220000149B)						**Source:**					
Strontium 90	-0.01	3	0.38	pCi/L				-			*U*
LCS Analyzed: 02/01/2010 (F0A220000149C)						**Source:**					
Strontium 90	6.74	3	0.39	pCi/L	6.81		99	80-130			
LCS Dup Analyzed: 02/01/2010 (F0A220000149L)						**Source:**					
Strontium 90	6.99	3	0.38	pCi/L	6.81		103	80-130	4	40	

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METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 28080 Extracted: 01/28/10											
Duplicate Analyzed: 01/29/2010 (F0A200486001X)						**Source: F0A200486001**					
Tritium	-49	500	140	pCi/L		99		-			*U*
Matrix Spike Analyzed: 01/29/2010 (F0A200494001S)						**Source: F0A200494001**					
Tritium	4350	500	140	pCi/L	4540	64	94	62-147			
Blank Analyzed: 01/28/2010 (F0A280000080B)						**Source:**					
Tritium	250	500	140	pCi/L				-			*Jb*
LCS Analyzed: 01/28/2010 (F0A280000080C)						**Source:**					
Tritium	4680	500	140	pCi/L	4540		103	85-112			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 26267 Extracted: 01/26/10											
Blank Analyzed: 02/02/2010 (G0A260000267B)						**Source:**					
1,2,3,4,6,7,8-HpCDD	7.9e-006	0.00005	0.0000056	ug/L				-			*J*
1,2,3,4,6,7,8-HpCDF	6.9e-006	0.00005	0.0000044	ug/L				-			*J*
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000071	ug/L				-			
1,2,3,4,7,8-HxCDD	4.6e-006	0.00005	0.0000048	ug/L				-			*J*
1,2,3,4,7,8-HxCDF	ND	0.00005	0.0000039	ug/L				-			
1,2,3,6,7,8-HxCDD	6.5e-006	0.00005	0.0000041	ug/L				-			*J*
1,2,3,6,7,8-HxCDF	5.7e-006	0.00005	0.0000034	ug/L				-			*J*
1,2,3,7,8,9-HxCDD	2.7e-006	0.00005	0.0000033	ug/L				-			*J, Q*
1,2,3,7,8,9-HxCDF	2.2e-006	0.00005	0.0000036	ug/L				-			*J, Q*
1,2,3,7,8-PeCDD	ND	0.00005	0.0000067	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000038	ug/L				-			
2,3,4,6,7,8-HxCDF	6e-006	0.00005	0.0000031	ug/L				-			*J, Q*
2,3,4,7,8-PeCDF	ND	0.00005	0.0000042	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000027	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.000002	ug/L				-			
OCDD	2e-005	0.0001	0.0000089	ug/L				-			*J, Q*
OCDF	1.6e-005	0.0001	0.0000089	ug/L				-			*J*
Total HpCDD	7.9e-006	0.00005	0.0000056	ug/L				-			*J*
Total HpCDF	6.9e-006	0.00005	0.0000044	ug/L				-			*J*
Total HxCDD	1.4e-005	0.00005	0.0000035	ug/L				-			*J, Q*
Total HxCDF	1.4e-005	0.00005	0.0000031	ug/L				-			*J, Q*
Total PeCDD	ND	0.00005	0.0000067	ug/L				-			
Total PeCDF	ND	0.00005	0.0000026	ug/L				-			
Total TCDD	ND	0.00001	0.0000027	ug/L				-			
Total TCDF	ND	0.00001	0.000002	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	*0.0021*			*ug/L*	*0.002*		*104*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.0019*			*ug/L*	*0.002*		*93*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.0017*			*ug/L*	*0.002*		*83*	*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*		*88*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.0017*			*ug/L*	*0.002*		*85*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.0017*			*ug/L*	*0.002*		*85*	*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	*0.0013*			*ug/L*	*0.002*		*66*	*24-185*			

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Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 26267 Extracted: 01/26/10											
Blank Analyzed: 02/02/2010 (G0A260000267B)						**Source:**					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.0019*			*ug/L*	*0.002*		*93*	*28-136*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.0014*			*ug/L*	*0.002*		*69*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.0012*			*ug/L*	*0.002*		*61*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.0012*			*ug/L*	*0.002*		*60*	*24-169*			
Surrogate: 13C-OCDD	*0.0036*			*ug/L*	*0.004*		*89*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.00077*			*ug/L*	*0.0008*		*96*	*35-197*			
LCS Analyzed: 02/02/2010 (G0A260000267C)						**Source:**					
1,2,3,4,6,7,8-HpCDD	0.00102	0.00005	0.0000092	ug/L	0.001		102	70-140			
1,2,3,4,6,7,8-HpCDF	0.00108	0.00005	0.0000073	ug/L	0.001		108	82-122			
1,2,3,4,7,8,9-HpCDF	0.00111	0.00005	0.0000012	ug/L	0.001		111	78-138			
1,2,3,4,7,8-HxCDD	0.00103	0.00005	0.0000078	ug/L	0.001		103	70-164			
1,2,3,4,7,8-HxCDF	0.00114	0.00005	0.0000051	ug/L	0.001		114	72-134			
1,2,3,6,7,8-HxCDD	0.000964	0.00005	0.0000063	ug/L	0.001		96	76-134			
1,2,3,6,7,8-HxCDF	0.00102	0.00005	0.0000045	ug/L	0.001		102	84-130			
1,2,3,7,8,9-HxCDD	0.000912	0.00005	0.0000055	ug/L	0.001		91	64-162			
1,2,3,7,8,9-HxCDF	0.00102	0.00005	0.0000046	ug/L	0.001		102	78-130			
1,2,3,7,8-PeCDD	0.000999	0.00005	0.0000085	ug/L	0.001		100	70-142			
1,2,3,7,8-PeCDF	0.00104	0.00005	0.0000054	ug/L	0.001		104	80-134			
2,3,4,6,7,8-HxCDF	0.00104	0.00005	0.000004	ug/L	0.001		104	70-156			
2,3,4,7,8-PeCDF	0.00106	0.00005	0.000006	ug/L	0.001		106	68-160			
2,3,7,8-TCDD	0.000175	0.00001	0.0000038	ug/L	0.0002		88	67-158			
2,3,7,8-TCDF	0.0002	0.00001	0.0000027	ug/L	0.0002		100	75-158			
OCDD	0.002	0.0001	0.0000021	ug/L	0.002		100	78-144			
OCDF	0.00214	0.0001	0.000001	ug/L	0.002		107	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00169*			*ug/L*	*0.002*		*84*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00191*			*ug/L*	*0.002*		*96*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00165*			*ug/L*	*0.002*		*83*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00133*			*ug/L*	*0.002*		*66*	*32-141*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00139*			*ug/L*	*0.002*		*69*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00175*			*ug/L*	*0.002*		*88*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00162*			*ug/L*	*0.002*		*81*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00161*			*ug/L*	*0.002*		*80*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.00124*			*ug/L*	*0.002*		*62*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00123*			*ug/L*	*0.002*		*62*	*24-185*			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00171*			*ug/L*	*0.002*		*86*	*28-136*			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 26267 Extracted: 01/26/10											
LCS Analyzed: 02/02/2010 (G0A260000267C)						**Source:**					
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.00127*			*ug/L*	*0.002*		*63*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.00116*			*ug/L*	*0.002*		*58*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.00112*			*ug/L*	*0.002*		*56*	*24-169*			
Surrogate: 13C-OCDD	*0.00318*			*ug/L*	*0.004*		*80*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.000752*			*ug/L*	*0.0008*		*94*	*35-197*			

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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
ITA1358-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.095	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
ITA1358-02	Antimony-200.8	Antimony	ug/l	0.062	2.0	6
ITA1358-02	Cadmium-200.8	Cadmium	ug/l	0.25	1.0	3.1
ITA1358-02	Chloride - 300.0	Chloride	mg/l	6.05	0.50	150
ITA1358-02	Copper-200.8	Copper	ug/l	6.75	2.0	14
ITA1358-02	**Lead-200.8**	**Lead**	**ug/l**	**7.94**	**1.0**	**5.2**
ITA1358-02	Nitrate-N, 300.0	Nitrate-N	mg/l	0.64	0.11	8
ITA1358-02	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITA1358-02	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.64	0.26	8
ITA1358-02	Perchlorate 314.0 - Default	Perchlorate	ug/l	0.54	4.0	6
ITA1358-02	Selenium-200.8	Selenium	ug/l	0.35	2.0	5
ITA1358-02	Sulfate-300.0	Sulfate	mg/l	7.22	0.50	300
ITA1358-02	TDS - SM2540C	Total Dissolved Solids	mg/l	237	10	950
ITA1358-02	Thallium-200.8	Thallium	ug/l	0	1.0	2
ITA1358-02	Zinc-200.8	Zinc	ug/l	47	20	160

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

DATA QUALIFIERS AND DEFINITIONS

a	Spiked analyte outside of stated QC limits.
B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
H-1	Sample analysis performed past the method-specified holding time per client's approval.
J	Estimated result. Result is less than the reporting limit.
Ja	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
Jb	Result is greater than sample detection limit but less than stated reporting limit.
Q	Estimated maximum possible concentration (EMPC).
U	Result is less than the sample detection limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

Certification Summary

TestAmerica Irvine

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

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB *California Cert #1775*
4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnic
Samples: ITA1358-02

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 008
Report Number: ITA1358

Sampled: 01/18/10
Received: 01/18/10

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITA1358-02

Method Performed: EPA 900.0 MOD
Samples: ITA1358-02

Method Performed: EPA 901.1 MOD
Samples: ITA1358-02

Method Performed: EPA 903.0 MOD
Samples: ITA1358-02

Method Performed: EPA 904 MOD
Samples: ITA1358-02

Method Performed: EPA 905 MOD
Samples: ITA1358-02

Method Performed: EPA 906.0 MOD
Samples: ITA1358-02

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ITA1358-02

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 008** **COMPOSITE** Stormwater at Happy Valley
Project Manager: Bronwyn Kelly Sampler: S Dawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	TCDD (and all congeners)	Cl-, SO_4, NO3+NO2-N, Perchlorate	TDS	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	**Chronic Toxicity**	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	Nitrate-N, Nitrite-N	Ammonia-N (350.2)					**Comments**
Outfall 008	W	1L Poly	1	1/18/10 1408	HNO_3	2A	X													Hold (Low Flow)
Outfall 008 Dup	W	1L Poly	1		HNO_3	2B	X													
Outfall 008	W	1L Amber	2		None	3A, 3B		X												
Outfall 008	W	500 mL Poly	2		None	4A, 4B			X											
Outfall 008	W	500 mL Poly	1		None	5				X										
Outfall 008	W	2.5 Gal Cube	1		None	6A					X									Unfiltered and unpreserved analysis
		500 ml Amber	1		None	6B														
Outfall 008	W	1 Gal Poly	1		None	7						X								**Only test if first or second rain events of the year**
Outfall 008	W	1L Poly	1		None	8							X							Filter w/in 24hrs of receipt at lab
Outfall 008	W	500 mL Poly	1		None	9								X						
Outfall 008	W	500 mL Poly	1	1/18/10 1408	H_2SO_4	10									X					Hold (Low Flow)

COC Page 2 of 2 are the composite samples for Outfall 008 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-18-10 16:00	[signature]	1-18-10 16:00
Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-18-10 19:00		
Relinquished By	Date/Time:	Received By	Date/Time:
		[signature]	1/18/10 19:00

Turn-around time: (Check)

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

48 Hour: _____ 5 Day: _____ Normal: X

Sample Integrity: (Check)

Intact: _____ On Ice: X

Data Requirements: (Check)

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

01/19/10 16:20

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

ITA1358

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 008** **GRAB** Stormwater at Happy Valley
Project Manager: Bronwyn Kelly Sampler: S Dawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	ANALYSIS REQUIRED	Comments
Outfall 008	W	1L Amber	2	1/15/10 1400	HCl	1A, 1B	X		

Field readings:

Temp °F = 56.0°F

pH = 7.5

Time of readings = 1400

These Samples are the Grab Portion of Outfall 008 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-18-10 16:00	[signature]	1-18-10 16:00
[signature]	1-18-10 19:00		
		[signature]	1/18/10 19:00

Turn-around time: (Check)

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

48 Hour: _____ 5 Day: _____ Normal: X

Sample Integrity: (Check)

Intact: _____ On Ice: X 4.1

Data Requirements: (Check)

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

LABORATORY REPORT

Aquatic Testing Laboratories

"dedicated to providing quality aquatic toxicity testing"

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

Date: January 28, 2010

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

Laboratory No.: A-10012006-001
Sample I.D.: ITA1358-02 (Outfall 008)

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

Date Sampled:	01/18/10 (composite)
Date Received:	01/20/10
Temp. Received:	3.9°C
Chlorine (TRC):	0.0 mg/l
Date Tested:	01/20/10 to 01/27/10

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

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

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

Result Summary:

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

Quality Control: Reviewed and approved by:

Joseph A. LeMay
Laboratory Director

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0

Aquatic Testing Laboratories

Lab No.: A-10012006-001
Client/ID: Test America – ITA1358-02 (Outfall 008)

Date Tested: 01/20/10 to 01/27/10

TEST SUMMARY

Test type: Daily static-renewal.
Species: *Ceriodaphnia dubia*.
Age: < 24 hrs; all released within 8 hrs.
Test vessel size: 30 ml.
Number of test organisms per vessel: 1.
Temperature: 25 +/- 1°C.
Dilution water: Mod. hard reconstituted (MHRW).
QA/QC Batch No.: RT-100119.

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

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	23.5
100% Sample	100%	29.3
* Sample not statistically significantly less than Control.		

CHRONIC TOXICITY

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

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (23.5 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 9.5%)
Statistically significantly different concentrations relative difference >13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	1/20/2010 13:30	Test ID:	10012006c
End Date:	1/27/2010 14:30	Lab ID:	CAATL-Aquatic Testing Labs
Sample Date:	1/19/2010 14:08	Protocol:	FWCH EPA
Comments:			

Sample ID:	Outfall 008									
Sample Type:	EFF2-Industrial									
Test Species:	CD-Ceriodaphnia dubia									

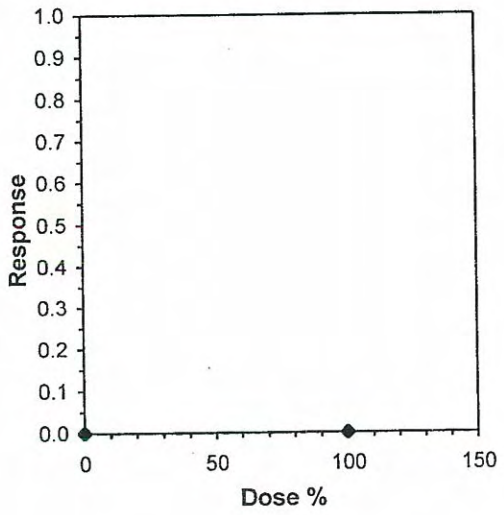
Conc-%	1	2	3	4	5	6	7	8	9	10
B-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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

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

Linear Interpolation (200 Resamples)

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



Reviewed by:

Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	1/20/2010 13:30	Test ID:	10012006c	Sample ID:	Outfall 008
End Date:	1/27/2010 14:30	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	EFF2-Industrial
Sample Date:	1/19/2010 14:08	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

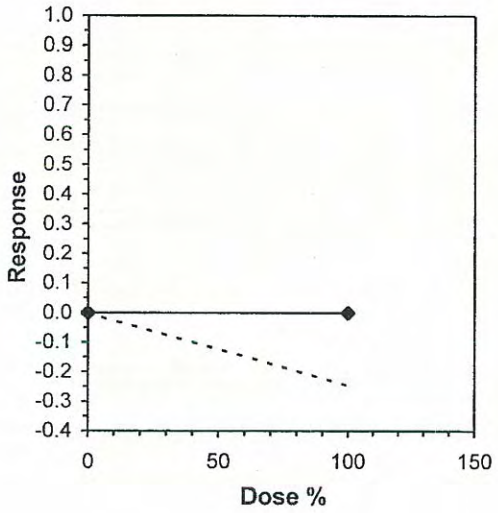
Conc-%	1	2	3	4	5	6	7	8	9	10
B-Control	27.000	21.000	24.000	23.000	26.000	25.000	19.000	25.000	24.000	21.000
100	27.000	34.000	25.000	24.000	32.000	30.000	31.000	30.000	28.000	32.000

			Transform: Untransformed					1-Tailed			Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
B-Control	23.500	1.0000	23.500	19.000	27.000	10.662	10				26.400	1.0000
100	29.300	1.2468	29.300	24.000	34.000	11.036	10	-4.484	1.734	2.243	26.400	1.0000

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.95557		0.905		-0.3956	-0.7193
F-Test indicates equal variances (p = 0.46)	1.66549		6.54109			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences	2.24314	0.09545	168.2	8.36667	2.9E-04	1, 18
Treatments vs B-Control						

Linear Interpolation (200 Resamples)

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



ToxCalc v5.0.23

Reviewed by:

CERIODAPHNIA DUBIA CHRONIC BIOASSAY
EPA METHOD 1002.0 Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-10012006-001
Client ID: TestAmerica - ITA1358-02 Outfall 008
Start Date: 01/20/2010

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:															
Time of Readings:		1330	1430	1430	1330	1330	1430	1430	1330	1330	1400	1400	1430	1430	1430
Control	DO	7.9	8.2	9.0	8.7	9.3	8.2	8.3	8.4	8.2	8.2	8.3	8.3	8.6	8.1
	pH	8.0	7.7	7.7	7.8	7.7	7.7	7.7	7.6	7.6	8.0	7.7	7.6	7.7	7.7
	Temp	25.4	24.2	25.0	24.0	25.4	24.9	24.2	24.5	24.5	24.2	24.9	24.0	24.8	24.8
100%	DO	10.0	8.1	9.4	8.3	10.5	7.7	8.9	7.7	9.7	7.2	9.6	7.7	9.5	7.4
	pH	7.5	7.6	7.2	7.5	7.2	7.4	7.3	7.5	7.3	7.7	7.4	7.5	7.3	7.4
	Temp	25.0	24.0	24.5	24.1	24.6	24.5	24.3	24.6	24.4	24.4	24.8	24.4	25.0	24.4

Additional Parameters	Control	100% Sample
Conductivity (umohms)	345	128
Alkalinity (mg/l $CaCO_3$)	72	36
Hardness (mg/l $CaCO_3$)	92	38
Ammonia (mg/l NH_3-N)	<0.1	0.3

Source of Neonates

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

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	3	0	0	3	0	0	4	10	10	
	4	3	4	5	0	4	3	0	4	5	0	28	10	
	5	0	0	7	9	7	5	6	9	6	6	55	10	
	6	8	7	0	0	0	0	0	0	0	0	15	10	
	7	14	10	12	11	15	17	10	12	13	11	127	10	
	Total	27	21	24	23	26	25	19	25	24	21	235	10	
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	3	0	0	0	0	0	0	3	0	0	6	10	
	4	0	4	5	3	4	4	3	0	4	5	32	10	
	5	7	14	8	6	9	0	10	10	7	8	79	10	
	6	0	0	0	0	19	11	18	17	17	19	101	10	
	7	17	16	12	15	0	15	(16)	0	0	0	75	10	
	Total	27	34	25	24	32	30	31	30	28	32	293	10	

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

SUBCONTRACT ORDER
TestAmerica Irvine

ITA1358

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB
4350 Transport Street, Unit 107
Ventura, CA 93003
Phone :(805) 650-0546
Fax: (805) 650-0756
Project Location: CA - CALIFORNIA
Receipt Temperature: 3-9 °C Ice: (Y) N

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

Analysis	Units	Expires	Comments
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water)		Sampled: **01/18/10 14:08**	
Bioassay-7 dy Chrnic	N/A	01/20/10 02:08	Cerio, EPA/821-R02-013, Sub to Aquatic testing
Containers Supplied:			
1 gal Poly (J)			

Olga Ornelas — Released By — 1-20-10/7:30 — Date/Time — Received By — 1-20-10/7:30 — Date/Time

Released By — 1-20-10/11:30 — Date/Time — Received By — 1-20-10 11:30 — Date/Time

Aquatic
Testing
Laboratories

Ceriodaphnia dubia
Chronic Toxicity Test
Reference
Toxicant
Data

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0
REFERENCE TOXICANT - NaCl

Aquatic Testing Laboratories

QA/QC Batch No.: RT-100119

Date Tested: 01/19/10 to 01/26/10

TEST SUMMARY

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

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

RESULTS SUMMARY

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		23.4	
0.25 g/l	100%		25.0	
0.5 g/l	100%		24.3	
1.0 g/l	100%		13.7	*
2.0 g/l	100%		2.7	*
4.0 g/l	0%	*	0	**

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

CHRONIC TOXICITY

Survival LC50	2.8 g/l
Reproduction IC25	0.79 g/l

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥15 young per surviving control female	Pass (23.4 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 9.5%)
Stat. sig. diff. conc. relative difference >13%	Pass (Stat. sig. diff. conc. Relative difference= 41.5%)
Concentration response relationship acceptable	Pass (Response curve normal)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	1/19/2010 14:00	Test ID:	RT100119c	Sample ID:	REF-Ref Toxicant
End Date:	1/26/2010 14:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	NACL-Sodium chloride
Sample Date:	1/19/2010	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

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

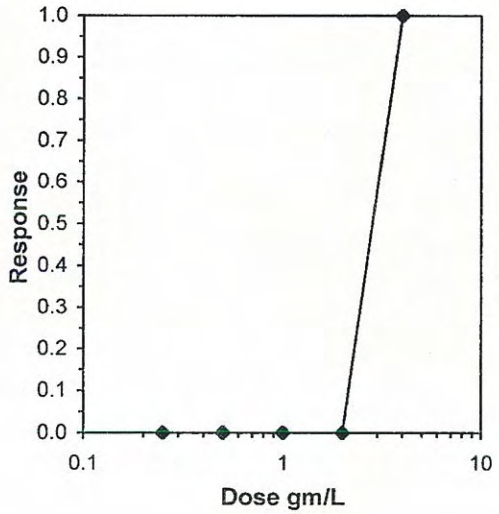
Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	1.0000	1.0000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

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

Graphical Method

Trim Level	EC50
0.0%	2.8284

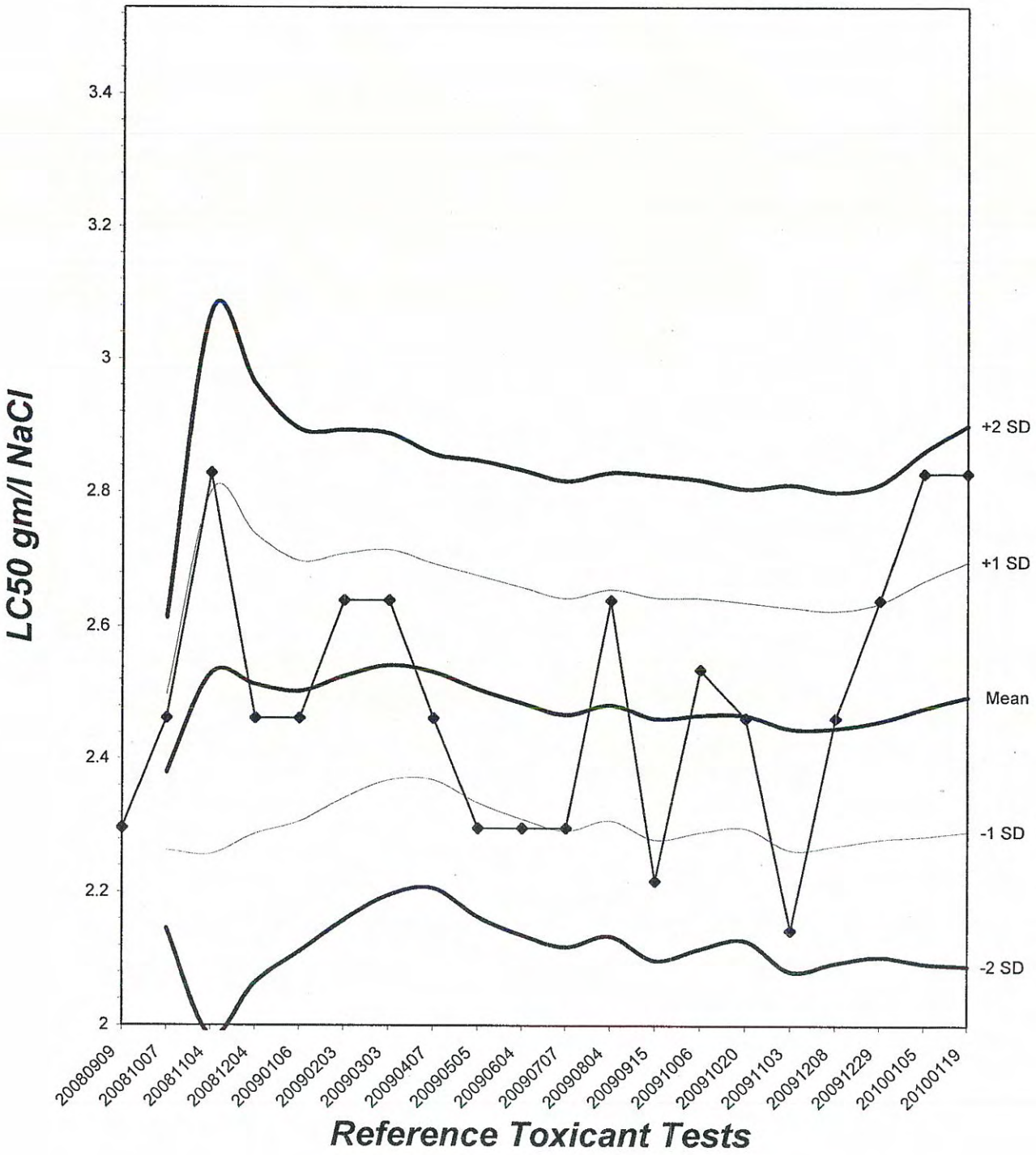
2.8284



Reviewed by:

Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 8.13



Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	1/19/2010 14:00	Test ID:	RT100119c	Sample ID:	REF-Ref Toxicant
End Date:	1/26/2010 14:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	NACL-Sodium chloride
Sample Date:	1/19/2010	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	23.000	25.000	21.000	24.000	23.000	25.000	25.000	21.000	22.000	25.000
0.25	23.000	26.000	27.000	24.000	24.000	25.000	27.000	22.000	28.000	24.000
0.5	22.000	26.000	25.000	26.000	24.000	22.000	26.000	23.000	25.000	24.000
1	17.000	14.000	10.000	14.000	14.000	12.000	8.000	20.000	13.000	15.000
2	0.000	2.000	3.000	5.000	3.000	3.000	7.000	0.000	2.000	2.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

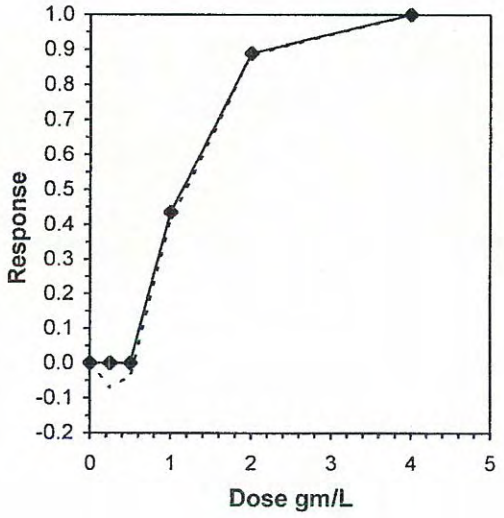
			Transform: Untransformed					1-Tailed			Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	23.400	1.0000	23.400	21.000	25.000	7.037	10				24.233	1.0000
0.25	25.000	1.0684	25.000	22.000	28.000	7.775	10	-1.608	2.223	2.212	24.233	1.0000
0.5	24.300	1.0385	24.300	22.000	26.000	6.449	10	-0.905	2.223	2.212	24.233	1.0000
*1	13.700	0.5855	13.700	8.000	20.000	24.585	10	9.750	2.223	2.212	13.700	0.5653
*2	2.700	0.1154	2.700	0.000	7.000	78.178	10	20.807	2.223	2.212	2.700	0.1114
4	0.000	0.0000	0.000	0.000	0.000	0.000	10				0.000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.98781	0.947	0.1743	1.07344
Bartlett's Test indicates equal variances (p = 0.12)	7.30799	13.2767		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test Treatments vs D-Control	0.5	1	0.70711		2.21194	0.09453	925.67	4.94889	2.0E-27	4, 45

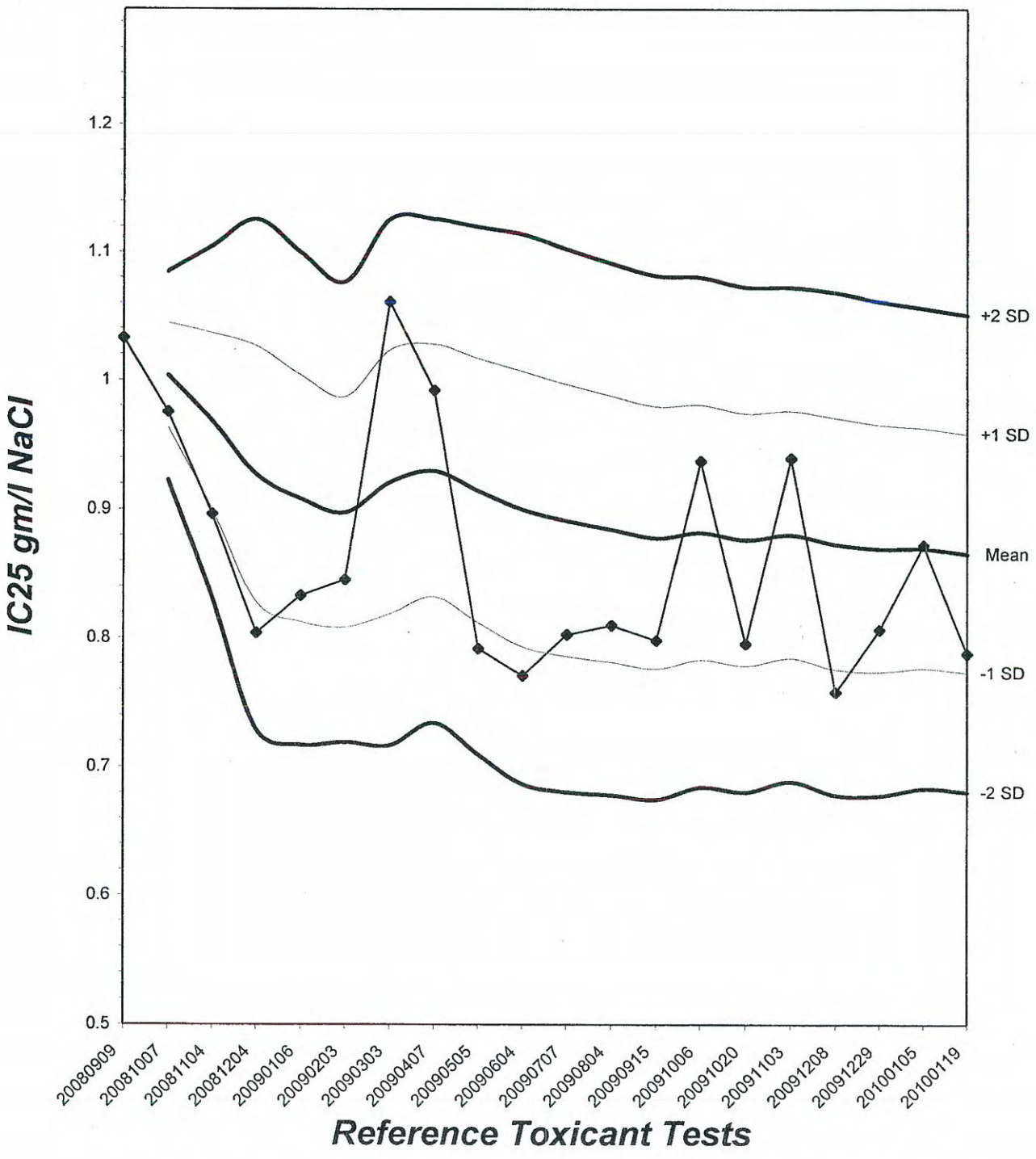
Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	0.5575	0.0143	0.5110	0.5655	-2.0775
IC10	0.6150	0.0146	0.5755	0.6311	-0.4724
IC15	0.6725	0.0178	0.6297	0.6978	0.1744
IC20	0.7301	0.0222	0.6808	0.7720	0.4277
IC25	0.7876	0.0272	0.7293	0.8440	0.5197
IC40	0.9601	0.0466	0.8758	1.0814	0.8653
IC50	1.1439	0.0763	0.9761	1.2715	-0.1589



Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 10.7



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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	0	0	0	10	
	4	3	4	3	5	3	4	4	3	3	4	36	10	
	5	6	9	0	0	0	0	8	7	9	8	47	10	
	6	14	0	8	7	8	7	13	0	0	0	57	10	
	7	0	14	10	12	12	14	0	11	10	13	94	10	
	Total	23	25	21	24	23	25	25	21	22	25	234	10	
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	4	0	4	10	
	4	3	4	5	5	3	4	4	3	0	4	35	10	
	5	8	0	0	0	0	7	8	7	9	8	47	10	
	6	0	8	10	7	8	0	0	0	15	0	48	10	
	7	12	14	12	12	13	14	15	12	0	12	116	10	
	Total	23	26	27	24	24	25	27	22	28	24	256	10	
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	0	0	0	10	
	4	3	4	5	4	3	3	4	3	3	4	36	10	
	5	7	8	0	0	0	0	0	8	9	9	41	10	
	6	0	14	7	8	9	9	10	12	0	0	69	10	
	7	12	0	13	14	12	10	12	0	13	11	97	10	
	Total	22	26	25	26	24	22	26	23	25	24	243	10	

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	3	0	2	5	10	
	4	3	2	4	3	3	2	3	0	4	0	24	10	
	5	6	0	0	0	0	0	0	7	0	6	19	10	
	6	0	5	6	4	3	4	5	0	0	0	27	10	
	7	8	7	0	7	8	6	0	10	9	7	62	10	
	Total	17	14	10	14	14	12	8	20	13	15	137	10	
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	0	0	0	10	
	4	0	0	0	0	0	0	0	0	0	0	0	10	
	5	0	2	3	2	0	3	0	0	0	2	12	10	
	6	0	0	0	0	3	0	3	0	0	0	6	10	
	7	0	0	0	3	0	0	4	0	2	0	9	10	
	Total	0	2	3	5	3	3	7	0	2	2	27	10	
4.0 g/l	1	X	X	X	X	X	X	X	X	X	X	0	0	
	2	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	(0)	(0)	0	(0)	0	0	(0)	(0)	(0)	(0)	(0)	0	

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst Initials:															
Time of Readings:		1400	1400	1400	1430	1430	1330	1330	1500	1500	1330	1510	1440	1440	1440
Control	DO	9.1	8.3	8.0	8.1	9.0	8.0	9.3	8.0	8.3	8.0	8.3	8.2	8.2	8.0
	pH	7.8	8.0	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.0	7.6	8.0	7.7	7.6
	Temp	25.3	25.3	25.4	25.0	25.0	25.0	25.4	24.8	25.7	24.7	25.0	24.4	24.9	24.2
0.25 g/l	DO	9.1	8.3	8.0	8.0	9.0	8.0	9.2	8.0	8.3	8.1	8.5	8.0	8.2	8.2
	pH	7.8	8.0	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.0	7.7	8.0	7.9	7.9
	Temp	25.3	25.4	25.4	25.1	25.0	25.1	25.4	25.1	25.7	24.2	25.2	24.7	25.0	24.3
0.5 g/l	DO	9.0	8.2	8.0	8.0	8.9	8.1	9.2	8.0	8.3	8.2	8.5	8.3	8.3	8.3
	pH	7.7	8.0	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.1	7.8	8.0	7.9	8.0
	Temp	25.3	25.4	25.5	25.2	25.0	25.1	25.4	25.3	25.7	24.3	25.5	24.5	24.9	24.5
1.0 g/l	DO	9.0	8.3	8.0	8.0	8.7	8.1	9.3	8.0	8.3	8.1	8.6	8.1	8.3	8.3
	pH	7.7	8.1	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.0	7.9	7.9	7.8	7.9
	Temp	25.3	25.5	25.5	25.1	25.1	25.1	25.5	25.3	25.8	24.5	24.8	24.7	25.0	24.3
2.0 g/l	DO	8.9	8.3	7.9	8.1	8.5	8.3	9.3	8.0	8.2	8.1	8.6	8.0	8.2	8.2
	pH	7.7	8.1	8.0	7.8	7.7	7.9	7.7	7.9	7.6	7.9	7.7	7.9	7.8	>9
	Temp	25.2	25.5	25.6	25.1	25.1	25.2	25.5	25.3	25.9	24.2	24.7	24.2	25.1	24.5
4.0 g/l	DO	8.7	8.4	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.7	8.1	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	25.2	25.5	—	—	—	—	—	—	—	—	—	—	—	—

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

Additional Parameters	Control			High Concentration		
	Day 1	Day 3	Day 5	Day 1	Day 3	Day 5
Conductivity (µS)	345	340	330	6800	3710	3650
Alkalinity (mg/l $CaCO_3$)	72	72	74	72	73	74
Hardness (mg/l $CaCO_3$)	92	93	89	92	92	90

Source of Neonates

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

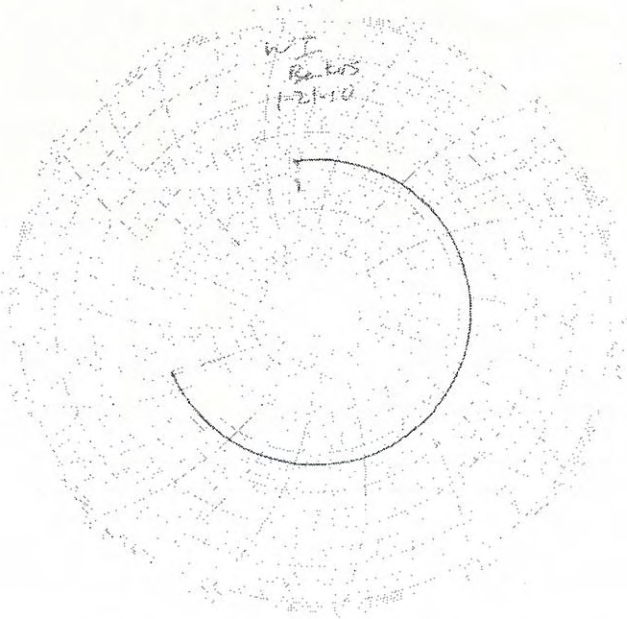
Aquatic Testing Laboratories

Test Temperature Chart

Test No: RT-100122

Date Tested: 01/19/10 to 01/26/10

Acceptable Range: 25+/- 1°C



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. ITA1358

MWH-Pasadena Boeing

Lot #: F0A210532

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Kay Clay
Project Manager

March 17, 2010

Case Narrative
LOT NUMBER: F0A210532
Revised 03-17-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on January 21, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

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

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

Radium-228 by GFPC (EPA 904 MOD)
The Radium 228 reporting limit wasvnot met due to reduced barium and yttrium carrier recovery. The carrier recovery is within acceptance criteria. Analytical results are reported.

Affected Samples:
F0A210532 (1): ITA1358-02

Gross Alpha/Beta (EPA 900.0 MOD)
The Gross Alpha and Beta reporting limit was not met due to a reduction of sample size attributed to the sample's high residual mass or activity of the sample. The analytical results are reported.

The gross alpha and beta matrix spike for batch QC are outside lower control limits due to possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:
F0A210532 (1): ITA1358-02

TestAmerica Irvine

ITA1358

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone :(314) 298-8566
Fax: (314) 298-8757
Project Location: CA - CALIFORNIA
Receipt Temperature: ____ °C Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water) Sampled: **01/18/10 14:08**						
Gamma Spec-O	mg/kg	01/27/10	01/18/11 14:08	$250.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/27/10	07/17/10 14:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/27/10	07/17/10 14:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	01/27/10	02/15/10 14:08	$0.00	0%	
Radium, Combined-O	pCi/L	01/27/10	01/18/11 14:08	$238.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	01/27/10	01/18/11 14:08	$155.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	01/27/10	01/18/11 14:08	$120.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

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

Olga Ornelas 1/20/10 17:00
Released By Date/Time

Fedex 1/20/10 17:00
Received By Date/Time

SW 1.21.10

est America Version 6/29/09

CHAIN OF CUSTODY FORM

Name/Address:	Project:
l-Arcadia ichillinda Ave, Suite 200 ia, CA 91007 merica Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 008** **COMPOSITE** Stormwater at Happy Valley
t Manager: Bronwyn Kelly ler: S Dawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

mple cription	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	TCDD (and all congeners)	Cl-, SO_4, NO3+NO2-N, Perchlorate	TDS	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	Nitrate-N, Nitrite-N	Ammonia-N (350.2)					Comments
all 008	W	1L Poly	1	1/18/10 1415	HNO_3	2A	X													Hold (Low Flow
008 Dup	W	1L Poly	1		HNO_3	2B	X													
all 008	W	1L Amber	2		None	3B		X												
all 008	W	500 mL Poly	2		None	4B			X											
all 008	W	500 mL Poly	1		None	4D				X										
all 008	W	2.5 Gal Cube	1		None	5A					X									Unfiltered and unpreserved analysis
		500 ml Amber	1		None	5B														
all 008	W	1 Gal Poly	1		None	6						X								Only test if first or second rain events of the year
all 008	W	1L Poly	1		None	8							X							Filter w/in 24hrs of receipt at lab
all 008	W	500 mL Poly	1	"	None	9								X						
all 008	W	500 mL Poly	1	1/18/10 1415	H_2SO_4	10									X					Hold (Low Flow

COC Page 2 of 2 are the composite samples for Outfall 008 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.

ished By	Date/Time:	Received By	Date/Time:
	1-18-10 16:00		1-18-10 16:00
ished By	Date/Time:	Received By	Date/Time:
	1-18-10 19:00		
ished By	Date/Time:	Received By	Date/Time:
			1/18/10 19:00

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

Sample Integrity: (Check)
Intact: _____ On Ice: X

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

est America Version 6/29/09

CHAIN OF CUSTODY FORM

ITA1358

Name/Address:
H-Arcadia
lichillinda Ave, Suite 200
lia, CA 91007

America Contact: Joseph Doak

Project:
Boeing-SSFL NPDES
Routine Outfall 008
GRAB
Stormwater at Happy Valley

ct Manager: Bronwyn Kelly

ler: S Dawson

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

ANALYSIS REQUIRED

Field readings:
°F
Temp °C = 56.0°F
pH = 7.5
Time of readings =
1400

ample scription	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	Comments
tfall 008	W	1L Amber	2	1/15/10 1400	HCl	[redacted]	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.

quished By	Date/Time:	Received By	Date/Time:
	1-18-10 16:00		1-18-10 16:00
quished By	Date/Time:	Received By	Date/Time:
	1-18-10 19:00		
quished By	Date/Time:	Received By	Date/Time:
			1/18/10 19:00

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

Sample Integrity: (Check)
Intact: ____ On Ice: X 4.1

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

THE LEADER IN ENVIRONMENTAL TESTING

CONDITION UPON RECEIPT FORM

Client: TA Irvine

Quote No: 85044

COC/RFA No: ITA1330, 31, 28, 58

Initiated By: SV Date: 1.21.10 Time: 1215

534
540
541

Shipping Information

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

Shipping # (s):*

1. 4289 2132 9059
2. 9060
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Sample Temperature (s):**

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

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes: Log tritium for ITA1358 per RC 1.22.10

Corrective Action:

☐ Client Contact Name: _____ Informed by: _____

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until: _____ If released, notify: _____

Project Management Review: _____ Date: 01.22.10

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

METHODS SUMMARY

F0A210532

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Gamma Spectroscopy - Cesium-137 & Hits	EPA 901.1 MOD	
Gross Alpha/Beta EPA 900	EPA 900.0 MOD	EPA 900.0
H-3 by Distillation & LSC	EPA 906.0 MOD	
Radium-226 by GFPC	EPA 903.0 MOD	
Radium-228 by GFPC	EPA 904 MOD	
Strontium 90 by GFPC	EPA 905 MOD	
Total Uranium By Laser Ph osphorimetry	ASTM 5174-91	

References:

ASTM Annual Book Of ASTM Standards.

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

SAMPLE SUMMARY

F0A210532

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LTH7V	001	ITA1358-02	01/18/10	14:08

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ITA1358-02

Radiochemistry

Lab Sample ID: F0A210532-001
Work Order: LTH7V
Matrix: WATER

Date Collected: 01/18/10 1408
Date Received: 01/21/10 1215

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**Batch # 0023036**		**Yld %**
Cesium 137	-2.3	U	9.2	20.0	17	01/23/10	01/26/10
Potassium 40	-30	U	240		290	01/23/10	01/26/10
Gross Alpha/Beta EPA 900				**pCi/L**	**Batch # 0025415**		**Yld %**
Gross Alpha	**25.8**		**5.5**	3.0	**3.8**	**01/25/10**	**01/29/10**
Gross Beta	**25.4**		**4.3**	4.0	**4.4**	**01/25/10**	**01/29/10**
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**Batch # 0022149**		**Yld % 61**
Strontium 90	0.26	U	0.46	3.00	0.77	01/22/10	02/01/10
Total Uranium by KPA ASTM 5174-91				**pCi/L**	**Batch # 0035029**		**Yld %**
Total Uranium	**0.652**	**J**	**0.070**	0.693	**0.21**	**02/04/10**	**02/08/10**
Radium 226 by EPA 903.0 MOD				**pCi/L**	**Batch # 0022145**		**Yld % 47**
Radium (226)	0.11	U	0.17	1.00	0.29	01/22/10	02/08/10
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**Batch # 0022148**		**Yld % 38**
Radium 228	-1.92	U	0.88	1.00	1.7	01/22/10	02/08/10
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**Batch # 0028080**		**Yld %**
Tritium	81	U	90	500	140	01/28/10	01/29/10

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

Bold results are greater than the MDC

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0A210532
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC		Prep Date	Analysis Date	Lab Sample ID
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch # 0035029		Yld %			F0B040000-029B
Total Uranium	-0.0623	U	0.0075	0.693	0.21		02/04/10	02/08/10	
Radium 226 by EPA 903.0 MOD			pCi/L	Batch # 0022145		Yld % 108			F0A220000-145B
Radium (226)	0.111	U	0.094	1.00	0.13		01/22/10	02/08/10	
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch # 0022148		Yld % 92			F0A220000-148B
Radium 228	0.22	U	0.35	1.00	0.59		01/22/10	02/08/10	
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch # 0022149		Yld % 79			F0A220000-149B
Strontium 90	-0.01	U	0.22	3.00	0.38		01/22/10	02/01/10	
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch # 0023036		Yld %			F0A230000-036B
Cesium 137	-0.4	U	6.7	20.0	12		01/23/10	01/26/10	
Potassium 40	-70	U	240		210		01/23/10	01/26/10	
Gross Alpha/Beta EPA 900			pCi/L	Batch # 0025415		Yld %			F0A250000-415B
Gross Alpha	-0.03	U	0.34	3.00	0.71		01/25/10	01/29/10	
Gross Beta	-0.26	U	0.86	4.00	1.5		01/25/10	01/29/10	
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch # 0028080		Yld %			F0A280000-080B
Tritium	250	J	120	500	140		01/28/10	01/28/10	

NOTE(S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0A210532
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ+/-)	MDC	% Yld	% Rec	Lab Sample ID / QC Control Limits
Gamma Cs-137 & Hits by EPA 901.1 MOD		**pCi/L**		**901.1 MOD**			**F0A230000-036C**
Americium 241	141000	132000	10000	500		93	(87 - 110)
Cesium 137	53100	48200	2800	200		91	(90 - 110)
Cobalt 60	87900	79000	4400	200		90	(89 - 110)
	Batch #:	0023036		**Analysis Date:**	01/26/10		
Gross Alpha/Beta EPA 900		**pCi/L**		**900.0 MOD**			**F0A250000-415C**
Gross Beta	68.1	73.4	6.2	1.6		108	(58 - 133)
	Batch #:	0025415		**Analysis Date:**	01/29/10		
Gross Alpha/Beta EPA 900		**pCi/L**		**900.0 MOD**			**F0A250000-415C**
Gross Alpha	49.4	45.4	5.0	0.9		92	(62 - 134)
	Batch #:	0025415		**Analysis Date:**	01/29/10		
TRITIUM (Distill) by EPA 906.0 MOD		**pCi/L**		**906.0 MOD**			**F0A280000-080C**
Tritium	4540	4680	480	140		103	(85 - 112)
	Batch #:	0028080		**Analysis Date:**	01/28/10		
Total Uranium by KPA ASTM 5174-91		**pCi/L**		**5174-91**			**F0B040000-029C**
Total Uranium	27.7	29.2	3.5	0.2		105	(90 - 120)
	Batch #:	0035029		**Analysis Date:**	02/08/10		
Total Uranium by KPA ASTM 5174-91		**pCi/L**		**5174-91**			**F0B040000-029C**
Total Uranium	5.54	5.67	0.59	0.21		102	(90 - 120)
	Batch #:	0035029		**Analysis Date:**	02/08/10		

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0A210532
Matrix: WATER

Parameter		Spike Amount	Result		Total Uncert. (2 σ +/-)	% Yld	% Rec	QC Control Limits	Precision	
								Lab Sample ID		
Radium 226 by EPA 903.0 MOD				**pCi/L**	**903.0 MOD**			**F0A220000-145C**		
Radium (226)		11.3	10.7		1.1	108	95	(68 - 136)		
	Spk 2	11.3	11.2		1.1	110	100	(68 - 136)	5	%RPD
		Batch #:	0022145			**Analysis Date:**		02/08/10		
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**904 MOD**			**F0A220000-148C**		
Radium 228		6.45	8.22		0.95	93	127	(60 - 142)		
	Spk 2	6.45	7.58		0.88	99	118	(60 - 142)	8	%RPD
		Batch #:	0022148			**Analysis Date:**		02/08/10		
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			**F0A220000-149C**		
Strontium 90		6.81	6.74		0.79	77	99	(80 - 130)		
	Spk 2	6.81	6.99		0.81	80	103	(80 - 130)	4	%RPD
		Batch #:	0022149			**Analysis Date:**		02/01/10		

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F0A200486
Matrix: WATER

Date Sampled: 01/18/10
Date Received: 01/20/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	%REC		QC Control Limits
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0A200486-001**		
Gross Beta	68.1	10.0	1.6		0.83	0.99		14	a	(54 - 150)
	Batch #:	0025415		Analysis Date:		01/29/10				
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0A200486-001**		
Gross Alpha	49.4	6.9	1.6		0.98	0.70		12	a	(35 - 150)
	Batch #:	0025415		Analysis Date:		01/29/10				
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F0A200494-001**		
Tritium	4540	4350	460		64	88		94		(62 - 147)
	Batch #:	0028080		Analysis Date:		01/29/10				

NOTE(S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F0A200486
Matrix: WATER

Date Sampled: 01/18/10 0730
Date Received: 01/20/10 0915

Parameter		Spike Amount	SPIKE Result	Total Uncert. (2 σ+/-)	Spike Yld	SAMPLE Result	Total Uncert. (2σ +/-)	QC Sample ID % Yld	%Rec	QC Control Limits
Total Uranium by KPA ASTM 5				**pCi/L**		**5174-91**			**F0A200486-001**	
Total Uranium		27.7	28.8	3.4		-0.0334 U	0.0040		104	(62 - 150)
	Spk2	27.7	29.2	3.5		-0.0334 U	0.0040		105	(62 - 150)
								Precision:	2	%RPD

Batch #: 0035029 **Analysis date:** 02/08/10

NOTE(S)

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F0A210532
Matrix: WATER

Date Sampled: 01/18/10
Date Received: 01/20/10

Parameter	SAMPLE Result		Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ+/-)	% Yld	QC Sample ID Precision	
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F0A200486-001**	
Gross Alpha	**0.98**	J	**0.70**		0.71	J	0.85		32	%RPD
Gross Beta	0.83	U	0.99		**1.6**	J	**1.0**		62	%RPD
	Batch #:		0025415	(Sample)	0025415		(Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**				**F0A200486-001**	
Tritium	**99**	U	**94**		**-49**	U	**64**		586	%RPD
	Batch #:		0028080	(Sample)	0028080		(Duplicate)			
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**				**F0A210532-001**	
Cesium 137	**-2.3**	U	**9.2**		-1.4	U	9.8		47	%RPD
Potassium 40	**-30**	U	**240**		**-60**	U	**440**		69	%RPD
	Batch #:		0023036	(Sample)	0023036		(Duplicate)			

NOTE(S)

Data are incomplete without the case narrative.

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Analytical Data Package Prepared For

TestAmerica - Irvine, CA

ITA1358

Radiochemical Analysis By

TestAmerica

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

Assigned Laboratory Code: TARL

Data Package Contains 18 *Pages*

Report No.: 43800

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

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
41277		ITA1358-02	J0D280537-2	L0NP71AC	9L0NP710	0118345
		ITA1358-02	J0D280537-2	L0NP71AA	9L0NP710	0118346
		ITA1358-02	J0D280537-2	L0NP71AD	9L0NP710	0118347
		ITA1358-02	J0D280537-2	L0NP71AE	9L0NP710	0118349

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

May 10, 2010

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

Attention: Debby Wilson

Date Received by Lab	:	April 28, 2010
Sample Number/Matrix	:	One (1) Water
SDG Number	:	41277
Project	:	MWH-Pasadena Boeing
Project Number	:	ITA1358

CASE NARRATIVE

I. Introduction

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

II. Sample Receipt

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

III. Analytical Results/Methodology

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

The analyses requested were:

Alpha Spectroscopy
Americium by method RL-ALP-010 (RICH-RC-5080)*
Plutonium by method RL-ALP-001 (RICH-RC-5087)*
Thorium by method RL-ALP-005 (RICH-RC-5084)*
Uranium by method RL-ALP-009 (RICH-RC-5079)*

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

IV. Quality Control

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

V. Comments

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

Alpha Spectroscopy

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

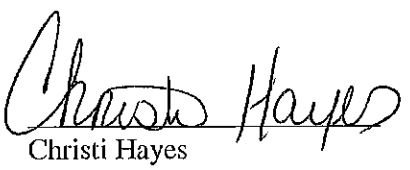
Plutonium by method RL-ALP-001 (RICH-RC-5087):
The LCS, batch blank, and sample results are within acceptance limits.

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

Uranium by method RL-ALP-009 (RICH-RC-5079):
The LCS, batch blank, and sample results are within acceptance limits.

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

Reviewed and approved:



Christi Hayes
Project Manager

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

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

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

Drinking Water Method Cross References

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

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

Uncertainty Estimation

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

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

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

Report Definitions

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

Sample Results Summary

TestAmerica TARL

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

Date: 10-May-10

Report No. : 43800 **SDG No:** 41277

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RER2
0118345 RL-ALP-002									
	ITA1358-02								
	L0NP71AC	Pu-238	6.43E-02 +- 2.8E-02	U	pCi/g	56%	6.43E-02	1.00E+00	
		Pu-239/40	5.09E-02 +- 4.0E-02	U	pCi/g	56%	5.09E-02	1.00E+00	
0118347 RL-ALP-010									
	ITA1358-02								
	L0NP71AD	Am-241	4.25E-02 +- 2.3E-02	U	pCi/g	91%	4.25E-02	1.00E+00	
0118349 RAD-TH ISO BY ALPHA									
	ITA1358-02								
	L0NP71AE	Th-228	1.93E+01 +- 3.0E+00		pCi/g	108%	8.41E-02	1.00E+00	
		Th-230	1.25E+01 +- 2.0E+00		pCi/g	108%	7.71E-02	1.00E+00	
		Th-232	1.65E+01 +- 2.6E+00		pCi/g	108%	6.91E-02	1.00E+00	
0118346 RL-ALP-009									
	ITA1358-02								
	L0NP71AA	U-233/234	7.60E+00 +- 1.2E+00		pCi/g	89%	8.17E-02	5.00E-01	
		U-235/236	4.15E-01 +- 1.1E-01		pCi/g	89%	3.90E-02	5.00E-01	
		U-238	9.00E+00 +- 1.4E+00		pCi/g	89%	7.61E-02	5.00E-01	

No. of Results: 9

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

QC Results Summary

Date: 10-May-10

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 43800 **SDG No.:** 41277

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDC|MDA
RL-ALP-002								
0118345 BLANK QC,								
L0NTH1AA	Pu-238	7.77E-05 +- 4.1E-05	U	pCi/g	78%			7.77E-05
	Pu-239/40	6.15E-05 +- 3.8E-05	U	pCi/g	78%			6.15E-05
0118345 LCS,								
L0NTH1AC	Pu-239/40	3.05E-02 +- 4.3E-03		pCi/g	83%	91%	-0.1	9.22E-05
RL-ALP-010								
0118347 BLANK QC,								
L0NTM1AA	Am-241	6.28E-05 +- 2.4E-05	U	pCi/g	98%			6.28E-05
0118347 LCS,								
L0NTM1AC	Am-241	3.90E-02 +- 5.5E-03		pCi/g	110%	91%	-0.1	5.01E-05
RAD-TH ISO BY ALPHA								
0118349 BLANK QC,								
L0NTN1AA	Th-228	5.93E-04 +- 2.2E-04		pCi/g	108%			1.15E-04
	Th-230	1.05E-04 +- 7.6E-05	U	pCi/g	108%			1.05E-04
	Th-232	1.05E-04 +- 5.8E-05	U	pCi/g	108%			1.05E-04
0118349 LCS,								
L0NTN1AC	Th-230	1.09E-02 +- 1.8E-03		pCi/g	103%	95%	-0.1	1.10E-04
RL-ALP-009								
0118346 BLANK QC,								
L0NTK1AA	U-233/234	6.61E-05 +- 5.0E-05	U	pCi/g	94%			6.61E-05
	U-235/236	6.61E-05 +- 2.5E-05	U	pCi/g	94%			6.61E-05
	U-238	7.38E-05 +- 4.1E-05	U	pCi/g	94%			7.38E-05
0118346 LCS,								
L0NTK1AC	U-233/234	9.30E-03 +- 1.5E-03		pCi/g	86%	109%	0.1	5.90E-05
	U-238	9.20E-03 +- 1.5E-03		pCi/g	86%	103%	0.0	6.84E-05

No. of Results: 14

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

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 10-May-10

Lab Name: TestAmerica | **SDG:** 41277 | **Collection Date:** 2/5/2010 9:02:00 PM

Lot-Sample No.: J0D280537-2 | **Report No. :** 43800 | **Received Date:** 4/28/2010 10:00:00 AM

Client Sample ID: ITA1358-02 | **COC No. :** | **Matrix:** WATER

ITA1358 — Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0118345	RL-ALP-002			**Work Order:** L0NP71AC			**Report DB ID:** 9L0NP710					
Pu-238	**6.43E-02**	U	2.8E-02	2.8E-02	6.43E-02	pCi/g	56%	*0.*	5/5/10 11:11 p	1.0	0.33441	ALP38
						2.28E-02	1.00E+00	*0.*		g	g	
Pu-239/40	**5.09E-02**	U	3.9E-02	4.0E-02	5.09E-02	pCi/g	56%	*0.82*	5/5/10 11:11 p	1.0	0.33441	ALP38
						1.61E-02	1.00E+00	*(2.1)*		g	g	
Batch: 0118346	RL-ALP-009			**Work Order:** L0NP71AA			**Report DB ID:** 9L0NP710					
U-233/234	**7.60E+00**		3.6E-01	1.2E+00	8.17E-02	pCi/g	89%	*(93.)*	5/5/10 02:44 a	1.0	0.32712	ALP3
						3.52E-02	5.00E-01	*(12.7)*		g	g	
U-235/236	**4.15E-01**		8.5E-02	1.1E-01	3.90E-02	pCi/g	89%	*(10.7)*	5/5/10 02:44 a	1.0	0.32712	ALP3
						1.38E-02	5.00E-01	*(7.9)*		g	g	
U-238	**9.00E+00**		3.9E-01	1.4E+00	7.61E-02	pCi/g	89%	*(118.3)*	5/5/10 02:44 a	1.0	0.32712	ALP3
						3.24E-02	5.00E-01	*(12.8)*		g	g	
							Ratio U-234/238 = 0.8					
Batch: 0118347	RL-ALP-010			**Work Order:** L0NP71AD			**Report DB ID:** 9L0NP710					
Am-241	**4.25E-02**	U	2.3E-02	2.3E-02	4.25E-02	pCi/g	91%	*0.41*	5/5/10 11:29 p	1.0	0.33441	ALP123
						1.34E-02	1.00E+00	*(1.5)*		g	g	
Batch: 0118349	RAD-TH ISO BY ALPHA			**Work Order:** L0NP71AE			**Report DB ID:** 9L0NP710					
Th-228	**1.93E+01**		7.4E-01	3.0E+00	8.41E-02	pCi/g	108%	*(229.9)*	5/5/10 02:41 a	1.0	0.33384	ALP172
						3.26E-02	1.00E+00	*(13.)*		g	g	
Th-230	**1.25E+01**		5.7E-01	2.0E+00	7.71E-02	pCi/g	108%	*(162.1)*	5/5/10 02:41 a	1.0	0.33384	ALP172
						2.99E-02	1.00E+00	*(12.8)*		g	g	

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V5.2.5 A2002

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

FORM I

SAMPLE RESULTS

Date: 10-May-10

Lab Name: TestAmerica **SDG:** 41277 **Collection Date:** 2/5/2010 9:02:00 PM

Lot-Sample No.: J0D280537-2 **Report No. :** 43800 **Received Date:** 4/28/2010 10:00:00 AM

Client Sample ID: ITA1358-02 **COC No. :** **Matrix:** WATER

ITA1358 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Th-232	**1.65E+01**		6.5E-01	2.6E+00	6.91E-02	pCi/g	108%	*(238.9)*	5/5/10 02:41 a	1.0	0.33384	ALP172
						2.59E-02	1.00E+00	*(12.9)*		g	g	

No. of Results: 9 Comments:

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

FORM II

BLANK RESULTS

Date: 10-May-10

Lab Name: TestAmerica **SDG:** 41277

Matrix: WATER **Report No. :** 43800

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 0118345	RL-ALP-002			**Work Order:**	L0NTH1AA		**Report DB ID:**	L0NTH1AB				
Pu-238	7.77E-05	U	4.1E-05	4.1E-05	7.77E-05	pCi/g	78%	0.22	5/5/10 11:11 p		200.04	ALP39
					2.75E-05	1.00E+00		0.81			g	
Pu-239/40	6.15E-05	U	3.7E-05	3.8E-05	6.15E-05	pCi/g	78%	0.41	5/5/10 11:11 p		200.04	ALP39
					1.94E-05	1.00E+00		(1.3)			g	
Batch: 0118347	RL-ALP-010			**Work Order:**	L0NTM1AA		**Report DB ID:**	L0NTM1AB				
Am-241	6.28E-05	U	2.4E-05	2.4E-05	6.28E-05	pCi/g	98%	0.	5/5/10 11:29 p		200.04	ALP124
					1.99E-05	1.00E+00		0.			g	
Batch: 0118349	RAD-TH ISO BY ALPHA			**Work Order:**	L0NTN1AA		**Report DB ID:**	L0NTN1AB				
Th-228	5.93E-04		2.0E-04	2.2E-04	1.15E-04	pCi/g	108%	(5.2)	5/5/10 02:41 a		207.53	ALP173
					3.63E-05	1.00E+00		(5.5)			g	
Th-230	1.05E-04	U	7.6E-05	7.6E-05	1.05E-04	pCi/g	108%	0.68	5/5/10 02:41 a		207.53	ALP173
					3.33E-05	1.00E+00		(1.9)			g	
Th-232	1.05E-04	U	5.7E-05	5.8E-05	1.05E-04	pCi/g	108%	0.41	5/5/10 02:41 a		207.53	ALP173
					3.33E-05	1.00E+00		(1.5)			g	
Batch: 0118346	RL-ALP-009			**Work Order:**	L0NTK1AA		**Report DB ID:**	L0NTK1AB				
U-233/234	6.61E-05	U	4.9E-05	5.0E-05	6.61E-05	pCi/g	94%	0.93	5/5/10 02:44 a		208.99	ALP4
					2.48E-05	5.00E-01		(2.5)			g	
U-235/236	6.61E-05	U	2.5E-05	2.5E-05	6.61E-05	pCi/g	94%	-0.19	5/5/10 02:44 a		208.99	ALP4
					2.48E-05	5.00E-01		-1.			g	
U-238	7.38E-05	U	4.1E-05	4.1E-05	7.38E-05	pCi/g	94%	0.25	5/5/10 02:44 a		208.99	ALP4
					2.86E-05	5.00E-01		0.9			g	
								Ratio U-234/238 = 3.3				

TestAmerica
rptSTLRchBlank
V5.2.5 A2002

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

FORM II

BLANK RESULTS

Date: 10-May-10

Lab Name: TestAmerica **SDG:** 41277

Matrix: WATER **Report No. :** 43800

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 9 Comments:

FORM II

LCS RESULTS

Date: 10-May-10

Lab Name: TestAmerica **SDG:** 41277

Matrix: WATER **Report No. :** 43800

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 0118345	RL-ALP-002			**Work Order:**	L0NTH1AC		**Report DB ID:**	L0NTH1CS					
Pu-239/40	3.05E-02		9.7E-04	4.3E-03	9.22E-05	pCi/g	83%	3.35E-02	1.01E-03	91%	5/5/10 11:11 p	210.71	ALP40
							Rec Limits:	70	130	-0.1		g	
Batch: 0118347	RL-ALP-010			**Work Order:**	L0NTM1AC		**Report DB ID:**	L0NTM1CS					
Am-241	3.90E-02		1.0E-03	5.5E-03	5.01E-05	pCi/g	110%	4.28E-02	1.40E-03	91%	5/5/10 11:29 p	210.71	ALP125
							Rec Limits:	70	130	-0.1		g	
Batch: 0118349	RAD-TH ISO BY ALPHA			**Work Order:**	L0NTN1AC		**Report DB ID:**	L0NTN1CS					
Th-230	1.09E-02		8.1E-04	1.8E-03	1.10E-04	pCi/g	103%	1.16E-02	3.47E-04	95%	5/5/10 02:41 a	201.96	ALP174
							Rec Limits:	70	130	-0.1		g	
Batch: 0118346	RL-ALP-009			**Work Order:**	L0NTK1AC		**Report DB ID:**	L0NTK1CS					
U-233/234	9.30E-03		4.9E-04	1.5E-03	5.90E-05	pCi/g	86%	8.53E-03	5.19E-05	109%	5/5/10 02:44 a	204.28	ALP5
							Rec Limits:	70	130	0.1		g	
U-238	9.20E-03		4.8E-04	1.5E-03	6.84E-05	pCi/g	86%	8.93E-03	5.43E-05	103%	5/5/10 02:44 a	204.28	ALP5
							Rec Limits:	70	130	0.0		g	

No. of Results: 5 **Comments:**

SUBCONTRACT ORDER
TestAmerica Irvine

ITA1358

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone :(314) 298-8566
Fax: (314) 298-8757
Project Location: CA - CALIFORNIA
Receipt Temperature: _____ °C Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water) Sampled: 01/18/10 14:08						LONPT
Gamma Spec-O	mg/kg	01/27/10	01/18/11 14:08	$250.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/27/10	07/17/10 14:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/27/10	07/17/10 14:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	01/27/10	02/15/10 14:08	$0.00	0%	
Radium, Combined-O	pCi/L	01/27/10	01/18/11 14:08	$238.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	01/27/10	01/18/11 14:08	$155.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	01/27/10	01/18/11 14:08	$120.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

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

TOD280587
SDG41277
Due 50710
7 Day TAT

Olga Ovnelas 1/20/10 17:00
Released By Date/Time

Fedex 1/20/10 17:00 SW 1.21.10
Received By Date/Time

Released By Date/Time

Received By 1.21.10 1285
Date/Time

Page 1 of 1

TestAmerica	Work Sharing Agreement		Exporting Lab	St. Louis
			Project Name	MWH-Pasadena Boeing
Import Lab Information			**Export Lab Information**	
Lab Name	Richland		PM Contact Name	Lynn Fussner
PM Contact Name	Erika Jordon		Backup Contact Name	
Backup Contact Name			Agreement Date	
Pricing Information			**Project Information**	
QA/QC (i.e. MS/MSD) Billable?			Client Company Name	MWH-Pasadena Boeing
Raw Data Surcharge	%		Date First Samples to Arrive	
EDD Surcharge	%		Est. Duration of Sampling Event	
TAT Surcharges	%			
Penalty Terms	None			
Other Charges Not in Unit Price? (i.e. canisters, regulators, shipping, bottles)	None		Quote or Contract Reference ID	**ITA1358**

Project Details					
Non-Standard Work Product	No				
Quality Assurance Plan	No				
Certifications					
Analyte/Cmpd. List with RLs Attached	Yes-See Attached				
Results Dry-Weight Corrected					
Special Method Holding Times	None				
Internal Chain of Custody Required	No				
Known Hazards/High Analyte Level	No				
Saturday/Special Delivery Options	None				
Special Instructions	None				
Reporting Limit Convention	Report to RL with no "J" Values				

Deliverable Requirements		Transmittal medium	Format Column	TAT	**Import and Export Lab Agreement**
Preliminary Report:	No				*Import lab must acknowledge* receipt of Agreement and samples *via E-Mail*
Final Report:	No		D		
EDD:	Yes		Element		
Total Access/MyTestAmerica	No	NA	NA		
Custom Forms:	No	NA	See Attached		

Analysis	Method	Matrix	# of Samples	Import Lab's Unit Price	Unit Price w/Surcharges	Extended Price
Uranium 238	10-A-CO-SR-01				$ -	$ -
Rthorium 232	10-A-9R-S1-01				$ -	$ -
Plutonium 236	10-A-6A-SO-01				$ -	$ -
Americium 241	10-A-8Y-SN-01				$ -	$ -
					$ -	$ -
					$ -	$ -
					$ -	$ -
					$ -	$ -
					$ -	$ -
				Approximate Total Project Value		**$ -**

Work Instruction No. CA-WI-010/A-03/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

10AM
Date/Time Received: 4/28/10 @ GM Screen Results (out) 3 (in) 3 Initials: [illegible]

Client: TA-Irvine SDG #: 41277 NA [ ] SAF #: NA [ ]

Work Order Number: 100280537 Chain of Custody # QTA1358

Shipping Container ID: NA [ ] Air Bill # NA [ ]

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

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

Item 6 through 10 for samples. Initial appropriate response.

6. Number of samples in shipping container (Each sample may contain multiple bottles): 2@2C 9Hcl
7. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
8. Samples have:
   - [ ] tape
   - _____ custody seals
   - [ ] hazard labels
   - [ ] appropriate sample labels

   2LP each
9. Samples are:
   - [ ] in good condition
   - _____ broken
   - _____ leaking
   - _____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount of HNO3 Added 4ml
11. Sample Location, Sample Collector Listed? * Yes [ ] No [ ]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
13. Description of anomalies (include sample numbers): NA [ ] _____

see other side for additional comments

Sample Custodian: [signature] Date: 4/28/10

Client Informed on _____ by _____ Person contacted _____

[X] No action necessary; process as is.

Project Manager: [signature] Date 4/28/10

LS-023, Rev. 10, 10/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITA1358

MWH-Pasadena Boeing

Lot #: F0C010430

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Kay Clay
Project Manager

March 18, 2010

Case Narrative
LOT NUMBER: F0C010430

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 1, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

Gross Alpha/Beta Method: 900.0 MOD

Batch 0062107
The Gross Alpha reporting limit was not met due to a reduction of sample size attributed to the sample's high residual mass. The analytical results are reported.
Affected Sample:
F0C010430 (1): ITA1358-02

Gross Alpha/Beta Method: 9310 MOD

Batch 0073019-Suspended
The Gross Alpha and Beta reporting limits were not met due to a reduction of sample size attributed to the high activity of the sample. The analytical results are reported.
Affected Sample:
F0C010430 (1): ITA1358-02

METHODS SUMMARY

F0C010430

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

References:

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

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

SAMPLE SUMMARY

F0C010430

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LV6L6	001	ITA1358-02	01/18/10	14:08

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ITA1358-02

Radiochemistry

Lab Sample ID: F0C010430-001
Work Order: LV6L6
Matrix: WATER

Date Collected: 01/18/10 1408
Date Received: 03/01/10 1000

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	mdc	Prep Date	Analysis Date
Gross Alpha/Beta EPA 900				pCi/L		Batch # 0062107	Yld %
Gross Alpha	32.6		8.1	3.0	6.3	03/03/10	03/07/10
GROSS A/B BY GFPC SW846 9310 MOD				pCi/L		Batch # 0073020	Yld %
Gross Alpha, Dissolved	2.2	J	1.0	3.0	1.1	03/14/10	03/18/10
Gross Beta, Dissolved	5.1		1.2	4.0	1.6	03/14/10	03/18/10
GROSS A/B BY GFPC SW846 9310 MOD				pCi/L		Batch # 0073019	Yld %
Gross Alpha, Suspended	43		13	3	10	03/15/10	03/16/10
Gross Beta, Suspended	64		16	4	16	03/15/10	03/16/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0C010430
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC		Prep Date	Analysis Date	Lab Sample ID
Gross Alpha/Beta EPA 900			pCi/L	Batch # 0062107		Yld %			F0C030000-107B
Gross Alpha	-0.52	U	0.42	3.00	1.1		03/03/10	03/07/10	
Gross Beta	-0.44	U	0.57	4.00	1.1		03/03/10	03/07/10	
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	Batch # 0073020		Yld %			F0C140000-020B
Gross Alpha, Dissolved	-0.09	U	0.38	3.00	0.82		03/14/10	03/16/10	
Gross Beta, Dissolved	0.53	U	0.92	4.00	1.5		03/14/10	03/16/10	
GROSS A/B BY GFPC SW846 9310 MOD			pCi/L	Batch # 0073019		Yld %			F0C140000-019B
Gross Alpha, Suspended	0.47	U	0.48	3.00	0.74		03/15/10	03/16/10	
Gross Beta, Suspended	0.45	U	0.69	4.00	1.1		03/15/10	03/16/10	

NOTE(S)

Data are incomplete without the case narrative.

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

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0C010430
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ+/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gross Alpha/Beta EPA 900			**pCi/L**	**900.0 MOD**			**F0C030000-107C**
Gross Beta	68.0	75.0	6.3	0.7		110	(58 - 133)
	Batch #:	0062107		**Analysis Date:**	03/07/10		
Gross Alpha/Beta EPA 900			**pCi/L**	**900.0 MOD**			**F0C030000-107C**
Gross Alpha	49.4	47.9	5.5	1.1		97	(62 - 134)
	Batch #:	0062107		**Analysis Date:**	03/07/10		
GROSS A/B BY GFPC SW846 9310 MOD			**pCi/L**	**9310 MOD**			**F0C140000-019C**
Gross Alpha, Suspended	372	318	26	0.5		86	(73 - 136)
Gross Beta, Suspended	283	259	20	1		92	(73 - 122)
	Batch #:	0073019		**Analysis Date:**	03/16/10		
GROSS A/B BY GFPC SW846 9310 MOD			**pCi/L**	**9310 MOD**			**F0C140000-020C**
Gross Beta, Dissolved	68.2	67.8	5.8	1.6		99	(77 - 123)
	Batch #:	0073020		**Analysis Date:**	03/16/10		
GROSS A/B BY GFPC SW846 9310 MOD			**pCi/L**	**9310 MOD**			**F0C140000-020C**
Gross Alpha, Dissolved	49.4	50.0	5.4	1		101	(80 - 140)
	Batch #:	0073020		**Analysis Date:**	03/16/10		

NOTE(S)

MDC is determined by instrument performance only.

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F0B250518
Matrix: WATER

Date Sampled: 02/25/10
Date Received: 02/25/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	QC Sample ID %REC	QC Control Limits
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0B250518-001**	
Gross Beta	566	595	50		56.3	9.4		95	(54 - 150)
	Batch #:	0062107		Analysis Date:		03/07/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0B250518-001**	
Gross Alpha	412	339	49		10	10		80	(35 - 150)
	Batch #:	0062107		Analysis Date:		03/07/10			
GROSS A/B BY GFPC SW846 9310 MOD			**pCi/L**		**9310 MOD**			**F0C010430-001**	
Gross Beta, Dissolved	68.2	79.2	6.6		5.1	1.2		109	(71 - 146)
	Batch #:	0073020		Analysis Date:		03/16/10			
GROSS A/B BY GFPC SW846 9310 MOD			**pCi/L**		**9310 MOD**			**F0C010430-001**	
Gross Alpha, Dissolved	49.4	51.9	5.8		2.2	1.0		100	(33 - 150)
	Batch #:	0073020		Analysis Date:		03/16/10			

NOTE(S)

Data are incomplete without the case narrative.

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F0C010430
Matrix: WATER

Date Sampled: 02/25/10
Date Received: 02/25/10

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision	
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F0B250518-001**	
Gross Alpha	10	U	10		14	U	12		29	%RPD
Gross Beta	56.3		9.4		57.4		9.4		2	%RPD
	Batch #:		0062107	(Sample)	0062107	(Duplicate)				
GROSS A/B BY GFPC SW846 9310 MOD				**pCi/L**	**9310 MOD**				**F0C010430-001**	
Gross Alpha, Dissolved	2.2	J	1.0		3.6		1.2		46	%RPD
Gross Beta, Dissolved	5.1		1.2		5.6		1.3		9	%RPD
	Batch #:		0073020	(Sample)	0073020	(Duplicate)				
GROSS A/B BY GFPC SW846 9310 MOD				**pCi/L**	**9310 MOD**				**F0C010430-001**	
Gross Alpha, Suspended	43		13		36		13		17	%RPD
Gross Beta, Suspended	64		16		52		15		20	%RPD
	Batch #:		0073019	(Sample)	0073019	(Duplicate)				

NOTE(S)

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

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

REANALYSIS / SUB-CONTRACT / CLIENT RETURN FORM

Request Initiated by: Kay Clay
Request Date: 03-01-10
Quote Number: 85044 (Protocol B)
Client Number:
SDG Number:

Request is for (check one):

- [ ] Return to Client -- *(Client FedEx #)*
- [ ] Reanalysis
- [ ] Sub-Contract Sample
- [X] Additional Analysis

New Lot (check one):

- [X] Yes
- [ ] No

Old Lot Number: F0A210532

Client ID	Sampled date/time*	Shelf Location	Line item from quote (include Rad Screen if required)
ITA1358-02	See attached	R232	1. Gross Alpha (re-analysis)
			2. Gross Alpha Suspended
			3. Gross Alpha Dissolved

* or attach original Chain of Custody

Due Date for New Login:

Analytical	Report
3-15-10	3-16-10

For Sub-Contract or Return to Client ONLY

Shipping Address:

Contact Person:
Phone Number:

Project Manager Signature:

DO NOT HAVE LAB PULL ORIGINAL SAMPLE

Completed by: [signature] Date: 3-1-10

New Login Lot Number: F0C010430 (place copy of this form in old file)

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

SUBCONTRACT ORDER
TestAmerica Irvine

ITA1358

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Phone :(314) 298-8566
Fax: (314) 298-8757
Project Location: CA - CALIFORNIA
Receipt Temperature: ____ ℃ Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water) Sampled: 01/18/10 14:08						
Gamma Spec-O	mg/kg	01/27/10	01/18/11 14:08	$250.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/27/10	07/17/10 14:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/27/10	07/17/10 14:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	01/27/10	02/15/10 14:08	$0.00	0%	
Radium, Combined-O	pCi/L	01/27/10	01/18/11 14:08	$238.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	01/27/10	01/18/11 14:08	$155.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	01/27/10	01/18/11 14:08	$120.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

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

Olga Ovnelas 1/20/10 17:00
Released By Date/Time

FedEx 1/20/10 17:00
Received By Date/Time

1-21-10 12:05

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

Client Name/Address:
MWH-Arcadia
618 Michillinda Ave, Suite 200
Arcadia, CA 91007

Test America Contact: Joseph Doak

Project:
Boeing-SSFL NPDES
Routine Outfall 008
COMPOSITE
Stormwater at Happy Valley

Project Manager: Bronwyn Kelly

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

Sampler: S Dawson

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	TCDD (and all congeners)	Cl-, SO_4, NO3+NO2-N, Perchlorate	TDS	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 228 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl, Se, Zn	Nitrate-N, Nitrite-N	Ammonia-N (350.2)					Comments
							ANALYSIS REQUIRED													
Outfall 008	W	1L Poly	1	1/18/10 1405	HNO_3	2A	X													Hold (Low Flow)
Outfall 008 Dup	W	1L Poly	1		HNO_3	2B	X													
Outfall 008	W	1L Amber	2		None			X												
Outfall 008	W	500 mL Poly	2		None				X											
Outfall 008	W	500 mL Poly	1		None					X										
Outfall 008	W	2.5 Gal Cube	1		None						X									Unfiltered and unpreserved analysis
		500 ml Amber	1		None															
Outfall 008	W	1 Gal Poly	1		None							X								Only test if first or second rain events of the year
Outfall 008	W	1L Poly	1		None								X							Filter w/in 24hrs of receipt at lab
Outfall 008	W	500 mL Poly	1	"	None									X						
Outfall 008	W	500 mL Poly	1	1/18/10 1405	H_2SO_4										X					Hold (Low Flow)

COC Page 2 of 2 are the composite samples for Outfall 008 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-18-10 16:20	[signature]	1-18-10 16:20
[signature]	1-18-10 19:00		
		[signature]	1/18/10 19:00

01/19/10 0:0 16:20

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

Sample Integrity: (Check)
Intact: ____ On Ice: X 4.1

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

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

ITA 1358

Client Name/Address:
MWH-Arcadia
618 Michillinda Ave, Suite 200
Arcadia, CA 91007

Test America Contact: Joseph Doak

Project:
Boeing-SSFL NPDES
Routine Outfall 008
GRAB
Stormwater at Happy Valley

Project Manager: Bronwyn Kelly

Sampler: S Dawson

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	Field readings:
Outfall 008	W	1L Amber	2	1/15/10 14[illegible]	HCl	[illegible]	X	Temp °F = 56.0°F pH = 7.5 Time of readings = 1400

Comments

These Samples are the Grab Portion of Outfall 008 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-18-10 16:00	[signature]	1-18-10 16:00
[signature]	1-18-10 19:00		
[signature]		[signature]	1/18/10 19:00

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

Sample Integrity: (Check)
Intact: ____ On Ice: X 4.1

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F0A210532
536
540
541

CONDITION UPON RECEIPT FORM

Client: TA Irvine
Quote No: 85044
COC/RFA No: ITA 330, 31, 28, 58
Initiated By: SH Date: 20 1.21.10 Time: 1215

Shipping Information

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

Shipping # (s):*		Sample Temperature (s):**	
1. 4289 2132 9059	6.	1. amber	6.
2. 9060	7.	2. d	7.
3.	8.	3.	8.
4.	9.	4.	9.
5.	10.	5.	10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes: Log tritium for ITA1358 per RC 10/21/10

Sample re-logged for Gross Alpha, total, dissolved + Suspended 03-01-10, Analyses cancelled 03-01-10, Analyses re-requested late 03-01-10 and lab notified 03-02-10 KEO

Corrective Action:
- ☐ Client Contact Name: _____ Informed by: _____
- ☐ Sample(s) processed "as is"
- ☐ Sample(s) on hold until: _____ If released, notify: _____
- Project Management Review: _____ Date: 01-22-10

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMBONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004, REVISED 10/21/08 \\Slavr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc

APPENDIX G

Section 29

Outfall 008 – February 5 & 6, 2010

MEC^X Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITB0892

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:	ITB0892
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 (Comp)	ITB0892-03	F0B090481-001, G0B100426-001, 135418-3	Water	2/5/2010 21:02	ASTM 5174-91, 100.2, 200.7, 200.7 (Diss), 200.8, 200.8 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B (Diss), SM2540D

II. Sample Management

No anomalies were observed regarding sample management. The sample receipt temperature was noted to be ambient by TestAmerica-St Louis; however, due to the nonvolatile nature of the analytes, no qualifications were required. No temperature information was provided by EMS Laboratories for asbestos. Asbestos samples should be cooled during transport to retard algal growth; however, as the case narrative did not note any sample receipt problems, no qualifications were required. The sample was received below the temperature limits at TestAmerica-West Sacramento; however, the sample was not noted to be frozen or damaged. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narratives 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 present upon receipt at TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were delivered to the remaining laboratories by courier, no custody seals were necessary. 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 29, 2009

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

- Holding Times: The sample was filtered one day beyond the 48-hour holding time; therefore, nondetected asbestos in the sample was qualified as estimated, "UJ." There is no analysis holding time; however, the sample was analyzed within 5 days of collection.

- Calibration: The refractive index calibration was 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: March 27, 2010

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had detects between the EDL and the RL for 1,2,3,4,6,7,8-HpCDD and total HpCDD, OCDD, 1,2,3,4,6,7,8-HpCDF and total HpCDF, and OCDF. Most detects in the method blank did not meet ratio criteria and were reported as EMPCs; however, due to the extent of contamination present in the method blank, it was the reviewer's professional opinion that those results be utilized to qualify applicable sample results. Isomers present in the sample between the EDLs and RLs were qualified as nondetected, "U," at the levels of contamination. The sample result for total HpCDD was

qualified as nondetected, "U," as both peaks comprising the total were present in the method blank. Total HpCDF included one peak not present in the method blank, and was qualified as estimated, "J," as only a portion of the total was considered method blank contamination. The method blank concentration for OCDD was insufficient to qualify the sample result.

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

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

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

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

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

- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. A confirmation analysis was performed for 2,3,7,8-TCDF, and the initial result was not confirmed. The initial result was rejected, "R," in favor of the confirmation result, and the result for total TCDF was changed to nondetected, "U," at the level of the initial result.

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. Any EMPCs qualified as nondetected for method blank contamination were not further qualified as EMPCs. Any remaining isomers reported as EMPCs were qualified as estimated and nondetected, "UJ," at the level of the EMPC. Any total results reported as EMPCs or including EMPCs were qualified as estimated, "J." Any detects reported below the EDL, or between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

C. EPA METHODS 200.7, 200.8, and 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: March 29, 2010

The sample listed in Table 1 for these analyses were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA*

Methods 200.7, 200.8, and 245.1, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.

- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were ≤5%, and all remaining masses of interest were calibrated to ≤ 0.1 amu and ≤0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. The total thallium ICV was recovered marginally above the control limit; however, as thallium was not detected in the sample, no qualifications were required. Mercury initial calibration r^2 values were ≥0.995 and all remaining initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. The total nickel 5 ppb CRDL recovery was 66%, the total cadmium 0.2 ppb CRDL recovery was 50%, and the dissolved silver 20 ppb CRDL recovery was 43%; therefore, the nondetected results for these analytes were qualified as estimated, "UJ." The remaining CRDL/CRI recoveries were within the control limits of 70-130%.

- Blanks: Boron was detected in the total and dissolved method blanks at 24.3 and 45.3 µg/L, respectively; therefore, total and dissolved boron detected in the sample were qualified as nondetected, "U," at the levels of contamination. Antimony and cadmium were reported in the total method blank at -0.36 and -0.15 µg/L, respectively; therefore, the nondetected total results for these analytes were qualified as estimated, "UJ." Method blanks and CCBs had no other applicable detects.

- Interference Check Samples: Recoveries were within 80-120%. Total and dissolved boron, total arsenic, and total silver were reported in the ICSA analyses at –78, 75, -13.9, and -7.1 µg/L, respectively; however, the concentration of the primary interferents were not sufficient to cause matrix interference in the site sample. Copper and cadmium were detected in the 200.8 dissolved ICSA; however, the reviewer was not able to determine if the detects were due to low-level contamination of the ICSA standard. No ICSA/B analyses were performed for the 200.8 total 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 was evaluated based on the LCS results.

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

- Internal Standards Performance: All sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration blank. Copper was not bracketed by an internal standard of lower mass; therefore, copper detected in the sample was qualified as estimated, "J."

- 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.

  The reviewer noted that the laboratory did not list the dissolved chromium or silver results for the method blank or LCS. The reviewer checked the raw data and determined that the LCS recoveries were acceptable and that neither analyte was detected in the method blank.

  Antimony was not detected in the total fraction but was detected marginally above the MDL in the dissolved fraction. Boron was detected in the dissolved fraction but the slightly smaller total boron detect was qualified as nondetected due to method blank contamination.

- 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: March 29, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0, ASTM Method D-5174,* and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquots for total uranium and radium-228 were reanalyzed more than 3× beyond the

holding time for unpreserved samples; therefore, total uranium detected in the sample was qualified as estimated, "J," and nondetected radium-228 was rejected, "R." Aliquots for gross alpha and gross beta, and gamma spectroscopy were prepared beyond the five-day analytical holding time for unpreserved samples; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. Aliquots for radium-226 and strontium-90 were prepared within the five-day holding time for unpreserved aqueous samples.

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

  The gross alpha and radium-226 detector efficiencies were less than 20%; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. The remaining detector efficiencies were greater than 20%.

  The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The strontium chemical yield was <40%; therefore, nondetected strontium-90 was qualified as estimated, "UJ." All remaining chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: Tritium was detected in the method blank at 165 pCi/L; therefore, tritium detected in the sample was qualified as nondetected, "U," at the reporting limit. There were no other analytes detected in the method blanks or KPA CCBs.

- Blank Spikes and Laboratory Control Samples: The recoveries and the radium-228 RPD were within laboratory-established control limits.

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

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.

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

  The reviewer noted that the preparation log for KPA was not signed as having been reviewed.

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

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

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

E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 29, 2010

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

- Holding Times: The analytical holding time of seven days was met.

- Calibration: The balance calibration logs were acceptable.

- Blanks: The method blank had no detect.

- Blank Spikes and Laboratory Control Samples: The recovery was within laboratory-established QC limits.

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

- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.

- 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.

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

EMS No. 135418 **Client** Test America

Sample No. ITB0892-03 **Date Analyzed** 2/10/2010

Outfall 008

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

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

Particle Size Distribution (Chrysotile)

Particle Length - Microns

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

Particle Width - Microns

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

Aspect Ratio L/W

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

TEM 7B (1994)

Level IV

KS 4/1/10

Validated Sample Result Forms ITB0892

Analysis Method ASTM 5174-91

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	0.811	0.693	0.21	pCi/L		J	H

Analysis Method EPA 200.7

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	12	0.050	0.040	mg/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	ND	0.062	0.020	mg/l	B	U	B
Calcium	7440-70-2	28	0.10	0.050	mg/l			
Chromium	7440-47-3	16	5.0	2.0	ug/l			
Iron	7439-89-6	14	0.040	0.015	mg/l			
Magnesium	7439-95-4	6.8	0.020	0.012	mg/l			
Nickel	7440-02-0	7.2	10	2.0	ug/l	Ja	J	R, DNQ
Silver	7440-22-4	ND	10	6.0	ug/l		U	
Vanadium	7440-62-2	26	10	3.0	ug/l			
Zinc	7440-66-6	49	20	6.0	ug/l			

Analysis Method EPA 200.7-Diss

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	0.27	0.050	0.040	mg/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	ND	0.12	0.020	mg/l	B	U	B
Calcium	7440-70-2	21	0.10	0.050	mg/l			
Chromium	7440-47-3	12	5.0	2.0	ug/l			
Iron	7439-89-6	0.29	0.040	0.015	mg/l			
Magnesium	7439-95-4	3.7	0.020	0.012	mg/l			
Nickel	7440-02-0	5.3	10	2.0	ug/l	Ja	J	DNQ
Silver	7440-22-4	ND	10	6.0	ug/l		UJ	C
Vanadium	7440-62-2	ND	10	3.0	ug/l		U	
Zinc	7440-66-6	49	20	6.0	ug/l			

Analysis Method EPA 200.8

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	ND	2.0	0.30	ug/l		UJ	B
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		UJ	R, B
Copper	7440-50-8	13.9	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	10	1.0	0.20	ug/l			
Selenium	7782-49-2	0.62	2.0	0.50	ug/l	J	J	DNQ
Thallium	7440-28-0	ND	1.0	0.20	ug/l	C	U	

Analysis Method EPA 200.8-Diss

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	0.36	2.0	0.30	ug/l	Ja	J	DNQ
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		U	
Copper	7440-50-8	3.5	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	ND	1.0	0.20	ug/l		U	
Selenium	7782-49-2	ND	2.0	0.50	ug/l		U	
Thallium	7440-28-0	ND	1.0	0.20	ug/l		U	

Analysis Method EPA 245.1

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 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: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 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 900.0 MOD

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	20.5	3	2.2	pCi/L		J	H, C
Gross Beta	12587-47-2	10.8	4	1.2	pCi/L		J	H

Analysis Method EPA 901.1 MOD

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-1.6	20	16	pCi/L	U	UJ	H
Potassium 40	13966-00-2	-100	0	200	pCi/L	U	UJ	H

Analysis Method EPA 903.0 MOD

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.34	1	0.21	pCi/L	Jb	J	C, DNQ

Analysis Method EPA 904 MOD

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

Lab Sample Name: ITB0892-03RE1 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	-0.03	1	0.32	pCi/L	U	R	H

Analysis Method EPA 905 MOD

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.85	3	1.4	pCi/L	U	UJ	*III

Analysis Method EPA 906.0 MOD

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	ND	500	95	pCi/L	Jb	U	B

Analysis Method EPA-5 1613B

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 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	0.0000008	ug/L	J, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.0000052	0.0000007	ug/L	J, Q, Ba	UJ	*III
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.0000007	0.0000012	ug/L	J, Q	UJ	*III
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.0000006	0.0000007	ug/L	J, Q	UJ	*III
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.0000013	0.0000007	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.0000011	0.0000005	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.0000008	0.0000006	ug/L	J, Q	UJ	*III
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.0000014	0.0000005	ug/L	J, Q	UJ	*III
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000007	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000008	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000005	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.0000004	0.0000006	ug/L	J, Q	UJ	*III
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000006	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000006	ug/L		U	
2,3,7,8-TCDF	51207-31-9	0.000001	0.00001	0.0000004	ug/L	J	R	D
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000028	ug/L		U	
OCDD	3268-87-9	0.00012	0.0001	0.0000013	ug/L	Ba		
OCDF	39001-02-0	ND	0.0001	0.0000009	ug/L	J, Ba	U	B
Total HpCDD	37871-00-4	ND	0.00005	0.0000008	ug/L	J, Ba	U	B
Total HpCDF	38998-75-3	0.000009	0.00005	0.0000007	ug/L	J, Q, Ba	J	B, DNQ, *III
Total HxCDD	34465-46-8	0.000004	0.00005	0.0000005	ug/L	J, Q	J	DNQ, *III
Total HxCDF	55684-94-1	0.000004	0.00005	0.0000006	ug/L	J, Q	J	DNQ, *III
Total PeCDD	36088-22-9	ND	0.00005	0.0000008	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000005	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000006	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000004	ug/L	J	U	$

Analysis Method SM 2540D

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

Lab Sample Name: ITB0892-03 **Sample Date:** 2/5/2010 9:02:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	250	20	2.0	mg/l			

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