

APPENDIX F

Section 6

Outfall 019 – August 1 & 2, 2012

Test America Analytical Laboratory Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-18989-1

Client Project/Site: Monthly outfall 019 Grab

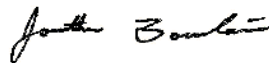
Sampling Event: Quarterly Outfall 019

Revision: 2

For:

MWH Americas Inc
618 Michillinda Avenue, Suite 200
Arcadia, California 91007

Attn: Bronwyn Kelly



Authorized for release by:

9/27/2012 12:32:37 PM

Jonathan Bousseilaire
Project Manager I

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LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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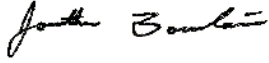
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I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate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



Jonathan Bouselaire
Project Manager I
9/27/2012 12:32:37 PM



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Sample Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-18989-1	Outfall 019 Grab	Water	08/01/12 09:40	08/01/12 19:25
440-18989-2	Trip Blank	Water	08/01/12 09:40	08/01/12 19:25
440-19096-1	Outfall 019	Water	08/02/12 10:00	08/02/12 18:10
440-19096-2	Trip Blank	Water	08/03/12 13:05	08/02/12 18:10
S208035-01	OUTFALL 019 (440-19096-1	WATER		

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Case Narrative

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Job ID: 440-18989-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-18989-1

Comments

No additional comments.

Receipt

The samples were received on 8/1/2012 7:25 PM and 8/2/2012 6:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 7.6° C and 10.7° C.

GC/MS VOA

No analytical or quality issues were noted.

GC/MS Semi VOA

Method(s) 625: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 43715. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

HPLC

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for chloride in batch 42850 were outside control limits due to matrix effects. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for nitrate in batch 42849 were outside control limits due to matrix effects. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 314.0, 314.0 LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 42783 were outside control limit for perchlorate. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 608: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 43155. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

Metals

Method(s) 200.8: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 440-44228. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

General Chemistry

Method(s) 1664A: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 44862. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) SM 4500 CN E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 45347 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) SM 5310B: The matrix spike (MS) recoveries for batch 43475 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Case Narrative

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Job ID: 440-18989-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

Organic Prep

No analytical or quality issues were noted.

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Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Outfall 019 Grab

Lab Sample ID: 440-18989-1

Date Collected: 08/01/12 09:40

Matrix: Water

Date Received: 08/01/12 19:25

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.30	ug/L			08/10/12 17:18	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			08/10/12 17:18	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			08/10/12 17:18	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			08/10/12 17:18	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			08/10/12 17:18	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			08/10/12 17:18	1
Benzene	ND		0.50	0.28	ug/L			08/10/12 17:18	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			08/10/12 17:18	1
Chloroform	ND		0.50	0.33	ug/L			08/10/12 17:18	1
Ethylbenzene	ND		0.50	0.25	ug/L			08/10/12 17:18	1
Tetrachloroethene	ND		0.50	0.32	ug/L			08/10/12 17:18	1
Toluene	ND		0.50	0.36	ug/L			08/10/12 17:18	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			08/10/12 17:18	1
Trichloroethene	ND		0.50	0.26	ug/L			08/10/12 17:18	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			08/10/12 17:18	1
Xylenes, Total	ND		1.5	0.90	ug/L			08/10/12 17:18	1
Vinyl chloride	ND		0.50	0.40	ug/L			08/10/12 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		08/10/12 17:18	1
Dibromofluoromethane (Surr)	116		80 - 120		08/10/12 17:18	1
Toluene-d8 (Surr)	99		80 - 120		08/10/12 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		4.7	1.3	mg/L		08/13/12 08:16	08/13/12 08:35	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Settleable Solids	ND		0.10	0.10	mL/L/Hr			08/02/12 09:09	1

Client Sample ID: Trip Blank

Lab Sample ID: 440-18989-2

Date Collected: 08/01/12 09:40

Matrix: Water

Date Received: 08/01/12 19:25

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.30	ug/L			08/10/12 17:44	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			08/10/12 17:44	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			08/10/12 17:44	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			08/10/12 17:44	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			08/10/12 17:44	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			08/10/12 17:44	1
Benzene	ND		0.50	0.28	ug/L			08/10/12 17:44	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			08/10/12 17:44	1
Chloroform	ND		0.50	0.33	ug/L			08/10/12 17:44	1
Ethylbenzene	ND		0.50	0.25	ug/L			08/10/12 17:44	1
Tetrachloroethene	ND		0.50	0.32	ug/L			08/10/12 17:44	1
Toluene	ND		0.50	0.36	ug/L			08/10/12 17:44	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			08/10/12 17:44	1
Trichloroethene	ND		0.50	0.26	ug/L			08/10/12 17:44	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			08/10/12 17:44	1
Xylenes, Total	ND		1.5	0.90	ug/L			08/10/12 17:44	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Trip Blank

Lab Sample ID: 440-18989-2

Date Collected: 08/01/12 09:40

Matrix: Water

Date Received: 08/01/12 19:25

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50	0.40	ug/L			08/10/12 17:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120					08/10/12 17:44	1
Dibromofluoromethane (Surr)	115		80 - 120					08/10/12 17:44	1
Toluene-d8 (Surr)	94		80 - 120					08/10/12 17:44	1

Client Sample ID: Outfall 019

Lab Sample ID: 440-19096-1

Date Collected: 08/02/12 10:00

Matrix: Water

Date Received: 08/02/12 18:10

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		5.66	0.0943	ug/L		08/07/12 17:09	08/09/12 20:26	1
Bis(2-ethylhexyl) phthalate	ND		4.72	1.60	ug/L		08/07/12 17:09	08/09/12 20:26	1
N-Nitrosodimethylamine	ND		4.72	0.0943	ug/L		08/07/12 17:09	08/09/12 20:26	1
Pentachlorophenol	ND		4.72	0.377	ug/L		08/07/12 17:09	08/09/12 20:26	1
2,4-Dinitrotoluene	ND		4.72	0.189	ug/L		08/07/12 17:09	08/09/12 20:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	83		40 - 120				08/07/12 17:09	08/09/12 20:26	1
2-Fluorobiphenyl	87		50 - 120				08/07/12 17:09	08/09/12 20:26	1
2-Fluorophenol	62		30 - 120				08/07/12 17:09	08/09/12 20:26	1
Nitrobenzene-d5	75		45 - 120				08/07/12 17:09	08/09/12 20:26	1
Phenol-d6	67		35 - 120				08/07/12 17:09	08/09/12 20:26	1
Terphenyl-d14	81		50 - 125				08/07/12 17:09	08/09/12 20:26	1

Method: 608 Pesticides - Organochlorine Pesticides Low level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0047	0.0024	ug/L		08/05/12 18:19	08/06/12 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		35 - 115				08/05/12 18:19	08/06/12 17:58	1
DCB Decachlorobiphenyl (Surr)	73		45 - 120				08/05/12 18:19	08/06/12 17:58	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36		10	8.0	mg/L			08/03/12 16:54	20
Nitrate as N	ND		0.11	0.080	mg/L			08/03/12 16:36	1
Nitrate Nitrite as N	ND		0.26	0.11	mg/L			08/03/12 16:36	1
Sulfate	160		10	8.0	mg/L			08/03/12 16:54	20
Nitrite as N	ND		0.15	0.11	mg/L			08/03/12 16:36	1

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	0.95	ug/L			08/03/12 11:29	1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000096	0.000049	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total TCDD	ND		0.000096	0.000049	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,7,8-PeCDD	ND		0.000048	0.000071	ug/L		08/07/12 09:00	08/14/12 01:13	0.96

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Outfall 019

Lab Sample ID: 440-19096-1

Date Collected: 08/02/12 10:00

Matrix: Water

Date Received: 08/02/12 18:10

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	ND		0.000048	0.0000071	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,4,7,8-HxCDD	ND		0.000048	0.0000037	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,6,7,8-HxCDD	ND		0.000048	0.0000037	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,7,8,9-HxCDD	ND		0.000048	0.0000030	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total HxCDD	ND		0.000048	0.0000030	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,4,6,7,8-HpCDD	0.0000023	J Q B	0.000048	0.0000027	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total HpCDD	0.0000023	J Q B	0.000048	0.0000027	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
OCDD	0.000011	J Q B	0.000096	0.0000080	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
2,3,7,8-TCDF	ND		0.0000096	0.0000093	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total TCDF	ND		0.0000096	0.0000093	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,7,8-PeCDF	ND		0.000048	0.0000094	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
2,3,4,7,8-PeCDF	ND		0.000048	0.0000099	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total PeCDF	ND		0.000048	0.0000094	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,4,7,8-HxCDF	ND		0.000048	0.0000060	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,6,7,8-HxCDF	ND		0.000048	0.0000058	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
2,3,4,6,7,8-HxCDF	ND		0.000048	0.0000052	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,7,8,9-HxCDF	ND		0.000048	0.0000066	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total HxCDF	ND		0.000048	0.0000052	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,4,6,7,8-HpCDF	0.0000029	J Q B	0.000048	0.0000029	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
1,2,3,4,7,8,9-HpCDF	ND		0.000048	0.0000038	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
Total HpCDF	0.0000029	J Q B	0.000048	0.0000033	ug/L		08/07/12 09:00	08/14/12 01:13	0.96
OCDF	0.0000048	J Q B	0.000096	0.0000052	ug/L		08/07/12 09:00	08/14/12 01:13	0.96

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197	08/07/12 09:00	08/14/12 01:13	0.96

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,7,8-PeCDD	59		25 - 181	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,4,7,8-HxCDD	70		32 - 141	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,6,7,8-HxCDD	65		28 - 130	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,4,6,7,8-HpCDD	72		23 - 140	08/07/12 09:00	08/14/12 01:13	0.96
13C-OCDD	68		17 - 157	08/07/12 09:00	08/14/12 01:13	0.96
13C-2,3,7,8-TCDF	55		24 - 169	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,7,8-PeCDF	54		24 - 185	08/07/12 09:00	08/14/12 01:13	0.96
13C-2,3,4,7,8-PeCDF	57		21 - 178	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,6,7,8-HxCDF	61		26 - 123	08/07/12 09:00	08/14/12 01:13	0.96
13C-2,3,4,6,7,8-HxCDF	65		28 - 136	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,7,8,9-HxCDF	60		29 - 147	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,4,6,7,8-HpCDF	68		28 - 143	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,4,7,8,9-HpCDF	66		26 - 138	08/07/12 09:00	08/14/12 01:13	0.96
13C-1,2,3,4,7,8-HxCDF	63		26 - 152	08/07/12 09:00	08/14/12 01:13	0.96

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		08/07/12 21:56	08/08/12 19:37	1

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		08/07/12 19:51	08/08/12 15:44	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Outfall 019

Lab Sample ID: 440-19096-1

Date Collected: 08/02/12 10:00

Matrix: Water

Date Received: 08/02/12 18:10

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		08/07/12 17:29	08/09/12 21:22	1
Copper	ND		2.0	0.50	ug/L		08/07/12 17:29	08/09/12 21:22	1
Lead	ND		1.0	0.20	ug/L		08/07/12 17:29	08/09/12 21:22	1
Selenium	0.96	J,DX	2.0	0.50	ug/L		08/07/12 17:29	08/14/12 12:09	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		08/09/12 12:03	08/11/12 17:06	1
Copper	ND		2.0	0.50	ug/L		08/09/12 12:03	08/11/12 17:06	1
Lead	ND		1.0	0.20	ug/L		08/09/12 12:03	08/11/12 17:06	1
Selenium	ND		2.0	0.50	ug/L		08/09/12 12:03	08/11/12 17:06	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		08/06/12 11:25	08/06/12 18:23	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		08/08/12 16:50	08/09/12 15:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	0.10		0.10	0.040	NTU			08/03/12 13:16	1
Total Dissolved Solids	530		10	10	mg/L			08/03/12 07:34	1
Total Suspended Solids	ND		10	10	mg/L			08/06/12 19:22	1
Cyanide, Total	ND		0.0050	0.0030	mg/L		08/14/12 17:24	08/14/12 23:11	1
Ammonia (as N)	ND		0.400	0.157	mg/L		08/08/12 16:21	08/08/12 19:15	1
Total Organic Carbon	0.90	J,DX	1.0	0.75	mg/L			08/06/12 14:22	1
Methylene Blue Active Substances	ND		0.10	0.050	mg/L			08/02/12 22:45	1
Biochemical Oxygen Demand	ND		2.0	0.50	mg/L			08/03/12 10:07	1

Client Sample ID: Trip Blank

Lab Sample ID: 440-19096-2

Date Collected: 08/03/12 13:05

Matrix: Water

Date Received: 08/02/12 18:10

Method: 5174 -

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0	U	1		pCi/L		08/20/12 00:00	08/20/12 00:00	1

Method: 900 - 900

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.067	U	3		pCi/L		08/15/12 00:00	08/20/12 07:28	1
Gross Beta	-0.084	U	4		pCi/L		08/15/12 00:00	08/20/12 07:28	1

Method: 901.1 - 901.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	0.494	U	20		pCi/L		08/15/12 00:00	08/17/12 00:00	1
Potassium-40	11.5	U	25		pCi/L		08/15/12 00:00	08/17/12 00:00	1

Method: 903.1 - 903.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	0.112	U	1		pCi/L		08/31/12 00:00	08/31/12 11:28	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Trip Blank

Lab Sample ID: 440-19096-2

Date Collected: 08/03/12 13:05

Matrix: Water

Date Received: 08/02/12 18:10

Method: 904 - 904

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	-0.1	U	1		pCi/L		08/30/12 00:00	08/30/12 16:06	1

Method: 905 - 905

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	-0.019	U	2		pCi/L		08/25/12 00:00	08/25/12 12:58	1

Client Sample ID: OUTFALL 019 (440-19096-1)

Lab Sample ID: S208035-01

Date Collected:

Matrix: WATER

Date Received:

Method: 5174 -

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0.132	J	1		pCi/L		08/20/12 00:00	08/20/12 00:00	1

Method: 900 - 900

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.162	U	3		pCi/L		08/15/12 00:00	08/20/12 07:28	1
Gross Beta	3.28	J	4		pCi/L		08/15/12 00:00	08/20/12 07:28	1

Method: 901.1 - 901.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-1.32	U	20		pCi/L		08/15/12 00:00	08/17/12 00:00	1
Potassium-40	8.51	U	25		pCi/L		08/15/12 00:00	08/17/12 00:00	1

Method: 903.1 - 903.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	0.285	U	1		pCi/L		08/31/12 00:00	08/31/12 11:28	1

Method: 904 - 904

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	0.212	U	1		pCi/L		08/30/12 00:00	08/30/12 16:06	1

Method: 905 - 905

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.046	U	2		pCi/L		08/25/12 00:00	08/25/12 12:58	1

Method: 906 - 906

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	-50.4	U	500		pCi/L		08/29/12 00:00	08/30/12 02:47	1

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Outfall 019 Grab

Date Collected: 08/01/12 09:40

Date Received: 08/01/12 19:25

Lab Sample ID: 440-18989-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	10 mL	10 mL	44431	08/10/12 17:18	AT	TAL IRV
Total/NA	Analysis	SM 2540F		1	900 mL	900 mL	42505	08/02/12 09:09	DAE	TAL IRV
Total/NA	Prep	1664A			1055 mL	1000 mL	44856	08/13/12 08:16	DA	TAL IRV
Total/NA	Analysis	1664A		1			44862	08/13/12 08:35	DA	TAL IRV

Client Sample ID: Trip Blank

Date Collected: 08/01/12 09:40

Date Received: 08/01/12 19:25

Lab Sample ID: 440-18989-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	10 mL	10 mL	44431	08/10/12 17:44	AT	TAL IRV

Client Sample ID: Outfall 019

Date Collected: 08/02/12 10:00

Date Received: 08/02/12 18:10

Lab Sample ID: 440-19096-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			1060 mL	2 mL	43715	08/07/12 17:09	DM	TAL IRV
Total/NA	Analysis	625		1			44344	08/09/12 20:26	AI	TAL IRV
Total/NA	Prep	608			1060 mL	2 mL	43155	08/05/12 18:19	AB	TAL IRV
Total/NA	Analysis	608 Pesticides		1			43241	08/06/12 17:58	DD	TAL IRV
Total/NA	Analysis	314.0		1	1 mL	1.0 mL	42783	08/03/12 11:29	MN	TAL IRV
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	42849	08/03/12 16:36	NN	TAL IRV
Total/NA	Analysis	300.0		20	1 mL	1.0 mL	42850	08/03/12 16:54	NN	TAL IRV
Total	Prep	3542			1037.37 mL	20 uL	2220053_P	08/07/12 09:00	TL	TAL WSC
Total	Analysis	1613B		0.96			2220053	08/14/12 01:13	LLH	TAL WSC
Total/NA	Prep	245.1			20 mL	20 mL	42941	08/06/12 11:25	SN	TAL IRV
Total/NA	Analysis	245.1		1			43600	08/06/12 18:23	DB	TAL IRV
Dissolved	Prep	200.2			50 mL	50 mL	43746	08/07/12 19:51	SC	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1			43993	08/08/12 15:44	MP	TAL IRV
Total Recoverable	Prep	200.2			50 mL	50 mL	43762	08/07/12 21:56	SC	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			44173	08/08/12 19:37		TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	43920	08/08/12 16:50	DB	TAL IRV
Dissolved	Analysis	245.1		1			44349	08/09/12 15:44	DB	TAL IRV
Total Recoverable	Prep	200.2			50 mL	50 mL	43720	08/07/12 17:29	SC	TAL IRV
Total Recoverable	Analysis	200.8		1			44466	08/09/12 21:22	NH	TAL IRV
Dissolved	Prep	200.2			50 mL	50 mL	44228	08/09/12 12:03	ND	TAL IRV
Dissolved	Analysis	200.8		1			44839	08/11/12 17:06	NH	TAL IRV
Total Recoverable	Analysis	200.8		1			45206	08/14/12 12:09	NH	TAL IRV
Total/NA	Analysis	SM 5540C		1	100 mL	100 mL	42768	08/02/12 22:45	CC	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	42804	08/03/12 07:34	XL	TAL IRV
Total/NA	Analysis	SM5210B		1			42865	08/03/12 10:07	TAI	TAL IRV
Total/NA	Analysis	180.1		1			42917	08/03/12 13:16	DAE	TAL IRV

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Client Sample ID: Outfall 019

Lab Sample ID: 440-19096-1

Date Collected: 08/02/12 10:00

Matrix: Water

Date Received: 08/02/12 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	100 mL	100 mL	43430	08/06/12 19:22	DK	TAL IRV
Total/NA	Analysis	SM 5310B		1			43475	08/06/12 14:22		TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	44053	08/08/12 16:21	RW	TAL IRV
Total/NA	Analysis	SM 4500 NH3 C		1			44055	08/08/12 19:15	RW	TAL IRV
Total/NA	Prep	Distill/CN			50 mL	50 mL	45318	08/14/12 17:24	SL	TAL IRV
Total/NA	Analysis	SM 4500 CN E		1			45347	08/14/12 23:11	SL	TAL IRV

Client Sample ID: Trip Blank

Lab Sample ID: 440-19096-2

Date Collected: 08/03/12 13:05

Matrix: Water

Date Received: 08/02/12 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5174		1			8624	08/20/12 00:00		
Total/NA	Prep	General Prep		1			8624_P	08/20/12 00:00		
Total/NA	Prep	General Prep		1			8624_P	08/15/12 00:00		
Total/NA	Analysis	900		1			8624	08/20/12 07:28		
Total/NA	Analysis	901.1		1			8624	08/17/12 00:00		
Total/NA	Prep	General Prep		1			8624_P	08/31/12 00:00		
Total/NA	Analysis	903.1		1			8624	08/31/12 11:28		
Total/NA	Prep	General Prep		1			8624_P	08/30/12 00:00		
Total/NA	Analysis	904		1			8624	08/30/12 16:06		
Total/NA	Prep	General Prep		1			8624_P	08/25/12 00:00		
Total/NA	Analysis	905		1			8624	08/25/12 12:58		

Client Sample ID: OUTFALL 019 (440-19096-1)

Lab Sample ID: S208035-01

Date Collected:

Matrix: WATER

Date Received:

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5174		1			8624	08/20/12 00:00		
Total/NA	Prep	General Prep		1			8624_P	08/20/12 00:00		
Total/NA	Prep	General Prep		1			8624_P	08/15/12 00:00		
Total/NA	Analysis	900		1			8624	08/20/12 07:28		
Total/NA	Analysis	901.1		1			8624	08/17/12 00:00		
Total/NA	Prep	General Prep		1			8624_P	08/31/12 00:00		
Total/NA	Analysis	903.1		1			8624	08/31/12 11:28		
Total/NA	Prep	General Prep		1			8624_P	08/30/12 00:00		
Total/NA	Analysis	904		1			8624	08/30/12 16:06		
Total/NA	Prep	General Prep		1			8624_P	08/25/12 00:00		
Total/NA	Analysis	905		1			8624	08/25/12 12:58		
Total/NA	Prep	General Prep		1			8624_P	08/29/12 00:00		
Total/NA	Analysis	906		1			8624	08/30/12 02:47		

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Laboratory References:

= , , ,

Eber-Rich = Eberline - Richmond, 2030 Wright Avenue, Richmond, CA 94804

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-44431/4

Matrix: Water

Analysis Batch: 44431

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.30	ug/L			08/10/12 09:14	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			08/10/12 09:14	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			08/10/12 09:14	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			08/10/12 09:14	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			08/10/12 09:14	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			08/10/12 09:14	1
Benzene	ND		0.50	0.28	ug/L			08/10/12 09:14	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			08/10/12 09:14	1
Chloroform	ND		0.50	0.33	ug/L			08/10/12 09:14	1
Ethylbenzene	ND		0.50	0.25	ug/L			08/10/12 09:14	1
Tetrachloroethene	ND		0.50	0.32	ug/L			08/10/12 09:14	1
Toluene	ND		0.50	0.36	ug/L			08/10/12 09:14	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			08/10/12 09:14	1
Trichloroethene	ND		0.50	0.26	ug/L			08/10/12 09:14	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			08/10/12 09:14	1
Xylenes, Total	ND		1.5	0.90	ug/L			08/10/12 09:14	1
Vinyl chloride	ND		0.50	0.40	ug/L			08/10/12 09:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		08/10/12 09:14	1
Dibromofluoromethane (Surr)	110		80 - 120		08/10/12 09:14	1
Toluene-d8 (Surr)	94		80 - 120		08/10/12 09:14	1

Lab Sample ID: LCS 440-44431/5

Matrix: Water

Analysis Batch: 44431

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	27.0		ug/L		108	65 - 135
1,1,2-Trichloroethane	25.0	21.6		ug/L		87	70 - 125
1,1-Dichloroethane	25.0	23.3		ug/L		93	70 - 125
1,1-Dichloroethene	25.0	22.7		ug/L		91	70 - 125
1,2-Dichloroethane	25.0	25.1		ug/L		100	60 - 140
Benzene	25.0	20.9		ug/L		84	70 - 120
Carbon tetrachloride	25.0	28.0		ug/L		112	65 - 140
Chloroform	25.0	24.5		ug/L		98	70 - 130
Ethylbenzene	25.0	25.5		ug/L		102	75 - 125
Tetrachloroethene	25.0	25.6		ug/L		103	70 - 125
Toluene	25.0	23.2		ug/L		93	70 - 120
Trichlorofluoromethane	25.0	29.5		ug/L		118	65 - 145
Trichloroethene	25.0	22.7		ug/L		91	70 - 125
cis-1,2-Dichloroethene	25.0	24.7		ug/L		99	70 - 125
m,p-Xylene	50.0	50.2		ug/L		100	75 - 125
o-Xylene	25.0	24.0		ug/L		96	75 - 125
Xylenes, Total	75.0	74.2		ug/L		99	70 - 125
Vinyl chloride	25.0	28.5		ug/L		114	55 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-44431/5

Matrix: Water

Analysis Batch: 44431

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Dibromofluoromethane (Surr)</i>	115		80 - 120
<i>Toluene-d8 (Surr)</i>	94		80 - 120

Lab Sample ID: 440-19636-C-1 MS

Matrix: Water

Analysis Batch: 44431

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
1,1,1-Trichloroethane	ND		25.0	29.3		ug/L		117	65 - 140
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		92	65 - 130
1,1-Dichloroethane	ND		25.0	25.0		ug/L		100	65 - 130
1,1-Dichloroethene	ND		25.0	25.9		ug/L		103	60 - 130
1,2-Dichloroethane	ND		25.0	27.7		ug/L		111	60 - 140
Benzene	ND		25.0	22.3		ug/L		89	65 - 125
Carbon tetrachloride	ND		25.0	29.9		ug/L		120	65 - 140
Chloroform	ND		25.0	26.9		ug/L		108	65 - 135
Ethylbenzene	ND		25.0	25.6		ug/L		103	65 - 130
Tetrachloroethene	ND		25.0	25.9		ug/L		104	65 - 130
Toluene	ND		25.0	25.2		ug/L		101	70 - 125
Trichlorofluoromethane	ND		25.0	31.9		ug/L		128	60 - 145
Trichloroethene	ND		25.0	24.6		ug/L		98	65 - 125
cis-1,2-Dichloroethene	ND		25.0	26.5		ug/L		106	65 - 130
m,p-Xylene	ND		50.0	46.9		ug/L		94	65 - 130
o-Xylene	ND		25.0	25.5		ug/L		102	65 - 125
Xylenes, Total	ND		75.0	72.4		ug/L		97	60 - 130
Vinyl chloride	ND		25.0	30.7		ug/L		123	45 - 140

	MS	MS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>4-Bromofluorobenzene (Surr)</i>	102		80 - 120
<i>Dibromofluoromethane (Surr)</i>	119		80 - 120
<i>Toluene-d8 (Surr)</i>	96		80 - 120

Lab Sample ID: 440-19636-C-1 MSD

Matrix: Water

Analysis Batch: 44431

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
1,1,1-Trichloroethane	ND		25.0	29.6		ug/L		118	65 - 140	1	20
1,1,2-Trichloroethane	ND		25.0	22.9		ug/L		91	65 - 130	1	25
1,1-Dichloroethane	ND		25.0	25.4		ug/L		102	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	24.4		ug/L		97	60 - 130	6	20
1,2-Dichloroethane	ND		25.0	27.6		ug/L		110	60 - 140	1	20
Benzene	ND		25.0	21.6		ug/L		86	65 - 125	3	20
Carbon tetrachloride	ND		25.0	29.7		ug/L		119	65 - 140	1	25
Chloroform	ND		25.0	26.9		ug/L		108	65 - 135	0	20
Ethylbenzene	ND		25.0	26.6		ug/L		106	65 - 130	4	20
Tetrachloroethene	ND		25.0	28.1		ug/L		112	65 - 130	8	20
Toluene	ND		25.0	24.5		ug/L		98	70 - 125	3	20
Trichlorofluoromethane	ND		25.0	32.0		ug/L		128	60 - 145	0	25

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-19636-C-1 MSD

Matrix: Water

Analysis Batch: 44431

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Trichloroethene	ND		25.0	24.5		ug/L		98	65 - 125	0	20
cis-1,2-Dichloroethene	ND		25.0	28.3		ug/L		113	65 - 130	7	20
m,p-Xylene	ND		50.0	53.0		ug/L		106	65 - 130	12	25
o-Xylene	ND		25.0	28.0		ug/L		112	65 - 125	9	20
Xylenes, Total	ND		75.0	81.0		ug/L		108	60 - 130	11	20
Vinyl chloride	ND		25.0	31.8		ug/L		127	45 - 140	4	30
Surrogate	%Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	110		80 - 120								
Dibromofluoromethane (Surr)	120		80 - 120								
Toluene-d8 (Surr)	90		80 - 120								

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-43715/1-A

Matrix: Water

Analysis Batch: 45075

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 43715

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4,6-Trichlorophenol	ND		6.00	0.100	ug/L		08/07/12 17:09	08/13/12 22:12	1
Bis(2-ethylhexyl) phthalate	ND		5.00	1.70	ug/L		08/07/12 17:09	08/13/12 22:12	1
N-Nitrosodimethylamine	ND		5.00	0.100	ug/L		08/07/12 17:09	08/13/12 22:12	1
Pentachlorophenol	ND		5.00	0.400	ug/L		08/07/12 17:09	08/13/12 22:12	1
2,4-Dinitrotoluene	ND		5.00	0.200	ug/L		08/07/12 17:09	08/13/12 22:12	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	67		40 - 120				08/07/12 17:09	08/13/12 22:12	1
2-Fluorobiphenyl	74		50 - 120				08/07/12 17:09	08/13/12 22:12	1
2-Fluorophenol	67		30 - 120				08/07/12 17:09	08/13/12 22:12	1
Nitrobenzene-d5	78		45 - 120				08/07/12 17:09	08/13/12 22:12	1
Phenol-d6	72		35 - 120				08/07/12 17:09	08/13/12 22:12	1
Terphenyl-d14	74		50 - 125				08/07/12 17:09	08/13/12 22:12	1

Lab Sample ID: LCS 440-43715/2-A

Matrix: Water

Analysis Batch: 44344

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 43715

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
2,4,6-Trichlorophenol	10.0	8.003		ug/L		80	20 - 139
Bis(2-ethylhexyl) phthalate	10.0	8.114		ug/L		81	61 - 126
N-Nitrosodimethylamine	10.0	7.497		ug/L		75	20 - 143
Pentachlorophenol	10.0	8.189		ug/L		82	20 - 137
Surrogate	%Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol	80		40 - 120				
2-Fluorobiphenyl	71		50 - 120				
2-Fluorophenol	65		30 - 120				
Nitrobenzene-d5	81		45 - 120				

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-43715/2-A
Matrix: Water
Analysis Batch: 44344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43715

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Phenol-d6	74		35 - 120
Terphenyl-d14	84		50 - 125

Lab Sample ID: LCSD 440-43715/3-A
Matrix: Water
Analysis Batch: 44344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43715

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
2,4,6-Trichlorophenol	10.0	7.662		ug/L		77	20 - 139	4	30	
Bis(2-ethylhexyl) phthalate	10.0	7.597		ug/L		76	61 - 126	7	20	
N-Nitrosodimethylamine	10.0	6.791		ug/L		68	20 - 143	10	20	
Pentachlorophenol	10.0	7.733		ug/L		77	20 - 137	6	25	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	73		40 - 120
2-Fluorobiphenyl	66		50 - 120
2-Fluorophenol	62		30 - 120
Nitrobenzene-d5	73		45 - 120
Phenol-d6	67		35 - 120
Terphenyl-d14	78		50 - 125

Method: 608 Pesticides - Organochlorine Pesticides Low level

Lab Sample ID: MB 440-43155/1-A
Matrix: Water
Analysis Batch: 43241

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43155

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0050	0.0025	ug/L		08/05/12 18:19	08/06/12 15:37	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	91		35 - 115	08/05/12 18:19	08/06/12 15:37	1
DCB Decachlorobiphenyl (Surr)	82		45 - 120	08/05/12 18:19	08/06/12 15:37	1

Lab Sample ID: LCS 440-43155/2-A
Matrix: Water
Analysis Batch: 43241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43155

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	RPD
alpha-BHC	0.500	0.463		ug/L		93	45 - 115	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	88		35 - 115
DCB Decachlorobiphenyl (Surr)	85		45 - 120

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 608 Pesticides - Organochlorine Pesticides Low level (Continued)

Lab Sample ID: LCSD 440-43155/3-A

Matrix: Water

Analysis Batch: 43241

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 43155

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	0.500	0.470		ug/L		94	45 - 115	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	89		35 - 115
DCB Decachlorobiphenyl (Surr)	84		45 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-42849/2

Matrix: Water

Analysis Batch: 42849

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.080	mg/L			08/03/12 10:17	1
Nitrate Nitrite as N	ND		0.26	0.11	mg/L			08/03/12 10:17	1
Nitrite as N	ND		0.15	0.11	mg/L			08/03/12 10:17	1

Lab Sample ID: LCS 440-42849/3

Matrix: Water

Analysis Batch: 42849

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.20		mg/L		106	90 - 110
Nitrate Nitrite as N	2.65	2.63		mg/L		99	90 - 110
Nitrite as N	1.52	1.43		mg/L		94	90 - 110

Lab Sample ID: 440-19095-E-1 MS

Matrix: Water

Analysis Batch: 42849

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	31		11.3	42.8		mg/L		103	80 - 120
Nitrate Nitrite as N	31		26.5	58.0		mg/L		102	80 - 120
Nitrite as N	ND		15.2	15.2		mg/L		100	80 - 120

Lab Sample ID: 440-19095-E-1 MSD

Matrix: Water

Analysis Batch: 42849

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	31		11.3	40.0	LN	mg/L		78	80 - 120	7	20
Nitrate Nitrite as N	31		26.5	54.7		mg/L		89	80 - 120	6	20
Nitrite as N	ND		15.2	14.7		mg/L		96	80 - 120	3	20

Lab Sample ID: MB 440-42850/2

Matrix: Water

Analysis Batch: 42850

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.40	mg/L			08/03/12 10:17	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 440-42850/2
Matrix: Water
Analysis Batch: 42850

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.40	mg/L			08/03/12 10:17	1

Lab Sample ID: LCS 440-42850/3
Matrix: Water
Analysis Batch: 42850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.08		mg/L		102	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: 440-19090-I-1 MS
Matrix: Water
Analysis Batch: 42850

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	110		50.0	151	LN	mg/L		79	80 - 120
Sulfate	750		100	793	BB	mg/L		48	80 - 120

Lab Sample ID: 440-19090-I-1 MSD
Matrix: Water
Analysis Batch: 42850

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	110		50.0	154		mg/L		85	80 - 120	2	20
Sulfate	750		100	797	BB	mg/L		52	80 - 120	0	20

Lab Sample ID: 440-19095-E-1 MS
Matrix: Water
Analysis Batch: 42850

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	180		50.0	226		mg/L		83	80 - 120
Sulfate	140		100	236		mg/L		96	80 - 120

Lab Sample ID: 440-19095-E-1 MSD
Matrix: Water
Analysis Batch: 42850

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	180		50.0	213	LN	mg/L		55	80 - 120	6	20
Sulfate	140		100	225		mg/L		85	80 - 120	5	20

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 440-42783/5
Matrix: Water
Analysis Batch: 42783

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	0.95	ug/L			08/03/12 08:01	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 314.0 - Perchlorate (IC) (Continued)

Lab Sample ID: LCS 440-42783/4
Matrix: Water
Analysis Batch: 42783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	25.0	28.3		ug/L		113	85 - 115

Lab Sample ID: 440-19129-A-1 MS
Matrix: Water
Analysis Batch: 42783

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	ND		25.0	29.9		ug/L		120	80 - 120

Lab Sample ID: 440-19129-A-1 MSD
Matrix: Water
Analysis Batch: 42783

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	ND		25.0	30.2	LM	ug/L		121	80 - 120	1	20

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Lab Sample ID: G2H07000053B
Matrix: Water
Analysis Batch: 2220053

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2220053_P

Analyte	MB Result	MB Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000060	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total TCDD	ND		0.000010	0.0000060	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000073	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total PeCDD	ND		0.000050	0.0000073	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,4,7,8-HxCDD	0.0000079	J	0.000050	0.0000037	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,6,7,8-HxCDD	0.0000096	J	0.000050	0.0000038	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,7,8,9-HxCDD	0.0000095	J	0.000050	0.0000031	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total HxCDD	0.000027	J	0.000050	0.0000035	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,4,6,7,8-HpCDD	0.000018	J	0.000050	0.0000026	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total HpCDD	0.000018	J	0.000050	0.0000026	ug/L		08/07/12 09:00	08/13/12 23:48	1
OCDD	0.000042	J	0.00010	0.0000070	ug/L		08/07/12 09:00	08/13/12 23:48	1
2,3,7,8-TCDF	ND		0.000010	0.0000021	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total TCDF	ND		0.000010	0.0000021	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,7,8-PeCDF	ND		0.000050	0.000011	ug/L		08/07/12 09:00	08/13/12 23:48	1
2,3,4,7,8-PeCDF	ND		0.000050	0.000011	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total PeCDF	ND		0.000050	0.000011	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,4,7,8-HxCDF	0.0000045	J Q	0.000050	0.0000060	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,6,7,8-HxCDF	0.0000042	J	0.000050	0.0000058	ug/L		08/07/12 09:00	08/13/12 23:48	1
2,3,4,6,7,8-HxCDF	0.000011	J	0.000050	0.0000051	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,7,8,9-HxCDF	0.0000079	J Q	0.000050	0.0000063	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total HxCDF	0.000027	J Q	0.000050	0.0000058	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,4,6,7,8-HpCDF	0.0000077	J Q	0.000050	0.0000045	ug/L		08/07/12 09:00	08/13/12 23:48	1
1,2,3,4,7,8,9-HpCDF	0.000012	J	0.000050	0.0000041	ug/L		08/07/12 09:00	08/13/12 23:48	1
Total HpCDF	0.000020	J Q	0.000050	0.0000043	ug/L		08/07/12 09:00	08/13/12 23:48	1
OCDF	0.000029	J	0.00010	0.0000049	ug/L		08/07/12 09:00	08/13/12 23:48	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Lab Sample ID: G2H07000053B

Matrix: Water

Analysis Batch: 2220053

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2220053_P

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
37Cl4-2,3,7,8-TCDD	98		35 - 197	08/07/12 09:00	08/13/12 23:48	1
Internal Standard	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-2,3,7,8-TCDD	58		25 - 164	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,7,8-PeCDD	66		25 - 181	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,4,7,8-HxCDD	74		32 - 141	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,6,7,8-HxCDD	77		28 - 130	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,4,6,7,8-HpCDD	91		23 - 140	08/07/12 09:00	08/13/12 23:48	1
13C-OCDD	89		17 - 157	08/07/12 09:00	08/13/12 23:48	1
13C-2,3,7,8-TCDF	53		24 - 169	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,7,8-PeCDF	54		24 - 185	08/07/12 09:00	08/13/12 23:48	1
13C-2,3,4,7,8-PeCDF	60		21 - 178	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,6,7,8-HxCDF	69		26 - 123	08/07/12 09:00	08/13/12 23:48	1
13C-2,3,4,6,7,8-HxCDF	77		28 - 136	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,7,8,9-HxCDF	69		29 - 147	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,4,7,8,9-HpCDF	86		26 - 138	08/07/12 09:00	08/13/12 23:48	1
13C-1,2,3,4,7,8-HxCDF	70		26 - 152	08/07/12 09:00	08/13/12 23:48	1

Lab Sample ID: G2H07000053C

Matrix: Water

Analysis Batch: 2220053

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2220053_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,7,8-PeCDD	0.00100	0.00114		ug/L		114	70 - 142
1,2,3,4,7,8-HxCDD	0.00100	0.00111	B	ug/L		111	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00116	B	ug/L		116	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00117	B	ug/L		117	64 - 162
1,2,3,4,6,7,8-HpCDD	0.00100	0.00114	B	ug/L		114	70 - 140
OCDD	0.00200	0.00228	B	ug/L		114	78 - 144
2,3,7,8-TCDF	0.000200	0.000224		ug/L		112	75 - 158
1,2,3,7,8-PeCDF	0.00100	0.00124		ug/L		124	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00113		ug/L		113	68 - 160
1,2,3,4,7,8-HxCDF	0.00100	0.00108	B	ug/L		108	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00118	B	ug/L		118	84 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00109	B	ug/L		109	70 - 156
1,2,3,7,8,9-HxCDF	0.00100	0.00112	B	ug/L		112	78 - 130
1,2,3,4,6,7,8-HpCDF	0.00100	0.00109	B	ug/L		109	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00110	B	ug/L		110	78 - 138
OCDF	0.00200	0.00212	B	ug/L		106	63 - 170

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
37Cl4-2,3,7,8-TCDD	92		31 - 191

Internal Standard	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	47		20 - 175
13C-1,2,3,7,8-PeCDD	60		21 - 227

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Lab Sample ID: G2H07000053C

Matrix: Water

Analysis Batch: 2220053

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2220053_P

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,7,8-HxCDD	76		21 - 193
13C-1,2,3,6,7,8-HxCDD	76		25 - 163
13C-1,2,3,4,6,7,8-HpCDD	86		26 - 166
13C-OCDD	85		13 - 199
13C-2,3,7,8-TCDF	41		22 - 152
13C-1,2,3,7,8-PeCDF	54		21 - 192
13C-2,3,4,7,8-PeCDF	59		13 - 328
13C-1,2,3,6,7,8-HxCDF	70		21 - 159
13C-2,3,4,6,7,8-HxCDF	74		22 - 176
13C-1,2,3,7,8,9-HxCDF	71		17 - 205
13C-1,2,3,4,6,7,8-HpCDF	80		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	80		20 - 186
13C-1,2,3,4,7,8-HxCDF	71		19 - 202

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-43762/1-A

Matrix: Water

Analysis Batch: 44173

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 43762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		08/07/12 21:56	08/08/12 19:00	1

Lab Sample ID: LCS 440-43762/2-A

Matrix: Water

Analysis Batch: 44173

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 43762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	494		ug/L		99	85 - 115

Lab Sample ID: 440-19096-1 MS

Matrix: Water

Analysis Batch: 44173

Client Sample ID: Outfall 019

Prep Type: Total Recoverable

Prep Batch: 43762

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		500	485		ug/L		97	70 - 130

Lab Sample ID: 440-19096-1 MSD

Matrix: Water

Analysis Batch: 44173

Client Sample ID: Outfall 019

Prep Type: Total Recoverable

Prep Batch: 43762

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	494		ug/L		99	70 - 130	2	20

Lab Sample ID: MB 440-43017/1-B

Matrix: Water

Analysis Batch: 43993

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 43746

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		08/07/12 19:51	08/08/12 15:31	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-43017/2-B
Matrix: Water
Analysis Batch: 43993

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 43746

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	481		ug/L		96	85 - 115

Lab Sample ID: 440-19090-I-1-E MS
Matrix: Water
Analysis Batch: 43993

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 43746

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		500	460		ug/L		92	70 - 130

Lab Sample ID: 440-19090-I-1-F MSD
Matrix: Water
Analysis Batch: 43993

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 43746

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	454		ug/L		91	70 - 130	1	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-43720/1-A
Matrix: Water
Analysis Batch: 44466

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 43720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		08/07/12 17:29	08/09/12 21:17	1
Copper	ND		2.0	0.50	ug/L		08/07/12 17:29	08/09/12 21:17	1
Lead	ND		1.0	0.20	ug/L		08/07/12 17:29	08/09/12 21:17	1

Lab Sample ID: MB 440-43720/1-A
Matrix: Water
Analysis Batch: 45206

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 43720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		2.0	0.50	ug/L		08/07/12 17:29	08/14/12 12:03	1

Lab Sample ID: LCS 440-43720/2-A
Matrix: Water
Analysis Batch: 44466

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 43720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	80.4		ug/L		100	85 - 115
Copper	80.0	83.6		ug/L		105	85 - 115
Lead	80.0	84.1		ug/L		105	85 - 115

Lab Sample ID: LCS 440-43720/2-A
Matrix: Water
Analysis Batch: 45206

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 43720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	80.0	80.5		ug/L		101	85 - 115

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-19096-1 MS

Matrix: Water

Analysis Batch: 44466

Client Sample ID: Outfall 019

Prep Type: Total Recoverable

Prep Batch: 43720

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	Limits
Cadmium	ND		80.0	75.7		ug/L		95	70 - 130	
Copper	ND		80.0	74.4		ug/L		93	70 - 130	
Lead	ND		80.0	77.0		ug/L		96	70 - 130	

Lab Sample ID: 440-19096-1 MS

Matrix: Water

Analysis Batch: 45206

Client Sample ID: Outfall 019

Prep Type: Total Recoverable

Prep Batch: 43720

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	Limits
Selenium	0.96	J,DX	80.0	81.7		ug/L		101	70 - 130	

Lab Sample ID: 440-19096-1 MSD

Matrix: Water

Analysis Batch: 44466

Client Sample ID: Outfall 019

Prep Type: Total Recoverable

Prep Batch: 43720

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Cadmium	ND		80.0	74.8		ug/L		94	70 - 130	1	20	
Copper	ND		80.0	73.6		ug/L		92	70 - 130	1	20	
Lead	ND		80.0	73.8		ug/L		92	70 - 130	4	20	

Lab Sample ID: 440-19096-1 MSD

Matrix: Water

Analysis Batch: 45206

Client Sample ID: Outfall 019

Prep Type: Total Recoverable

Prep Batch: 43720

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Selenium	0.96	J,DX	80.0	81.9		ug/L		101	70 - 130	0	20	

Lab Sample ID: MB 440-43017/1-E

Matrix: Water

Analysis Batch: 44839

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 44228

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		1.0	0.10	ug/L		08/09/12 12:03	08/11/12 17:00	1
Copper	ND		2.0	0.50	ug/L		08/09/12 12:03	08/11/12 17:00	1
Lead	ND		1.0	0.20	ug/L		08/09/12 12:03	08/11/12 17:00	1
Selenium	ND		2.0	0.50	ug/L		08/09/12 12:03	08/11/12 17:00	1

Lab Sample ID: LCS 440-43017/2-E

Matrix: Water

Analysis Batch: 44839

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 44228

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	Limits
Cadmium	80.0	73.6		ug/L		92	85 - 115	
Copper	80.0	81.2		ug/L		101	85 - 115	
Lead	80.0	82.2		ug/L		103	85 - 115	
Selenium	80.0	81.8		ug/L		102	85 - 115	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 440-43017/15-B
Matrix: Water
Analysis Batch: 44839

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 44228

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	80.0	76.1		ug/L		95	85 - 115	3	20
Copper	80.0	79.6		ug/L		100	85 - 115	2	20
Lead	80.0	83.1		ug/L		104	85 - 115	1	20
Selenium	80.0	81.5		ug/L		102	85 - 115	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-42941/1-A
Matrix: Water
Analysis Batch: 43600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		08/06/12 11:25	08/06/12 18:01	1

Lab Sample ID: LCS 440-42941/2-A
Matrix: Water
Analysis Batch: 43600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42941

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00749		mg/L		94	85 - 115

Lab Sample ID: 440-19090-F-1-B MS
Matrix: Water
Analysis Batch: 43600

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42941

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00768		mg/L		96	70 - 130

Lab Sample ID: 440-19090-F-1-C MSD
Matrix: Water
Analysis Batch: 43600

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42941

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00763		mg/L		95	70 - 130	1	20

Lab Sample ID: MB 440-43017/1-D
Matrix: Water
Analysis Batch: 44349

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 43920

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		08/08/12 16:50	08/09/12 15:38	1

Lab Sample ID: LCS 440-43017/2-D
Matrix: Water
Analysis Batch: 44349

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 43920

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00794		mg/L		99	85 - 115

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 440-19096-1 MS
Matrix: Water
Analysis Batch: 44349

Client Sample ID: Outfall 019
Prep Type: Dissolved
Prep Batch: 43920

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00782		mg/L		98	70 - 130

Lab Sample ID: 440-19096-1 MSD
Matrix: Water
Analysis Batch: 44349

Client Sample ID: Outfall 019
Prep Type: Dissolved
Prep Batch: 43920

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00793		mg/L		99	70 - 130	1	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-44856/1-A
Matrix: Water
Analysis Batch: 44862

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44856

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0	1.4	mg/L		08/13/12 08:16	08/13/12 08:35	1

Lab Sample ID: LCS 440-44856/2-A
Matrix: Water
Analysis Batch: 44862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44856

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	20.0	18.8		mg/L		94	78 - 114

Lab Sample ID: LCSD 440-44856/3-A
Matrix: Water
Analysis Batch: 44862

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44856

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	20.0	18.5		mg/L		93	78 - 114	2	11

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 440-42917/6
Matrix: Water
Analysis Batch: 42917

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	ND		0.10	0.040	NTU			08/03/12 13:16	1

Lab Sample ID: 440-19004-B-4 DU
Matrix: Water
Analysis Batch: 42917

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	ND		ND		NTU		NC	20

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-42804/1
Matrix: Water
Analysis Batch: 42804

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			08/03/12 07:27	1

Lab Sample ID: LCS 440-42804/2
Matrix: Water
Analysis Batch: 42804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	984		mg/L		98	90 - 110

Lab Sample ID: 440-19090-A-1 DU
Matrix: Water
Analysis Batch: 42804

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1600		1640		mg/L		0.2	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-43430/1
Matrix: Water
Analysis Batch: 43430

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		10	10	mg/L			08/06/12 19:22	1

Lab Sample ID: LCS 440-43430/2
Matrix: Water
Analysis Batch: 43430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	995		mg/L		100	85 - 115

Lab Sample ID: 440-19164-B-1 DU
Matrix: Water
Analysis Batch: 43430

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	16		16.0		mg/L		0	10

Method: SM 4500 CN E - Cyanide, Total (Low Level)

Lab Sample ID: MB 440-45318/1-A
Matrix: Water
Analysis Batch: 45347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45318

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.0050	0.0030	mg/L		08/14/12 17:24	08/14/12 23:09	1

QC Sample Results

Client: MWH Americas Inc
 Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: SM 4500 CN E - Cyanide, Total (Low Level) (Continued)

Lab Sample ID: LCS 440-45318/2-A
 Matrix: Water
 Analysis Batch: 45347

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 45318

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.106		mg/L		106	90 - 110

Lab Sample ID: 440-19424-B-2-B MS
 Matrix: Water
 Analysis Batch: 45347

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 45318

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		0.100	ND	LN	mg/L		0	70 - 115

Lab Sample ID: 440-19424-B-2-C MSD
 Matrix: Water
 Analysis Batch: 45347

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 45318

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.100	ND	LN	mg/L		0	70 - 115	NC	15

Method: SM 4500 NH3 C - Ammonia

Lab Sample ID: MB 440-44053/1-A
 Matrix: Water
 Analysis Batch: 44055

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 44053

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.400	0.157	mg/L		08/08/12 16:00	08/08/12 19:15	1

Lab Sample ID: LCS 440-44053/2-A
 Matrix: Water
 Analysis Batch: 44055

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 44053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	10.0	10.08		mg/L		101	85 - 115

Lab Sample ID: 440-19095-D-1-A MS
 Matrix: Water
 Analysis Batch: 44055

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 44053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.280	J,DX	10.0	10.64		mg/L		104	70 - 120

Lab Sample ID: 440-19095-D-1-B MSD
 Matrix: Water
 Analysis Batch: 44055

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 44053

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	0.280	J,DX	10.0	10.36		mg/L		101	70 - 120	3	15

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 440-43475/7

Matrix: Water

Analysis Batch: 43475

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.75	mg/L			08/06/12 14:05	1

Lab Sample ID: LCS 440-43475/6

Matrix: Water

Analysis Batch: 43475

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.5		mg/L		105	90 - 110

Lab Sample ID: 440-19096-1 MS

Matrix: Water

Analysis Batch: 43475

Client Sample ID: Outfall 019

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.90	J,DX	5.00	6.93	LM	mg/L		121	80 - 120

Lab Sample ID: 440-19096-1 MSD

Matrix: Water

Analysis Batch: 43475

Client Sample ID: Outfall 019

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Total Organic Carbon	0.90	J,DX	5.00	6.14		mg/L		105	80 - 120	12	20

Method: SM 5540C - Methylene Blue Active Substances (MBAS)

Lab Sample ID: MB 440-42743/4

Matrix: Water

Analysis Batch: 42743

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.10	0.050	mg/L			08/02/12 18:41	1

Lab Sample ID: LCS 440-42743/3

Matrix: Water

Analysis Batch: 42743

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Blue Active Substances	0.250	0.240		mg/L		96	90 - 110

Lab Sample ID: 440-19008-A-2 MS

Matrix: Water

Analysis Batch: 42743

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Blue Active Substances	0.062	J,DX	0.250	0.286		mg/L		90	50 - 125

QC Sample Results

Client: MWH Americas Inc
 Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: SM 5540C - Methylene Blue Active Substances (MBAS) (Continued)

Lab Sample ID: 440-19008-A-2 MSD
 Matrix: Water
 Analysis Batch: 42743

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methylene Blue Active Substances	0.062	J,DX	0.250	0.309		mg/L		99	50 - 125	8	20

Method: SM5210B - BOD, 5 Day

Lab Sample ID: USB 440-42865/1 USB
 Matrix: Water
 Analysis Batch: 42865

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	0.50	mg/L			08/03/12 10:07	1

Lab Sample ID: LCS 440-42865/4
 Matrix: Water
 Analysis Batch: 42865

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	199	192		mg/L		96	85 - 115

Lab Sample ID: LCSD 440-42865/5
 Matrix: Water
 Analysis Batch: 42865

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biochemical Oxygen Demand	199	193		mg/L		97	85 - 115	1	20

Method: 5174 -

Lab Sample ID: S208035-04
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0	U	1		pCi/L		08/20/12 00:00	08/20/12 00:00	1

Lab Sample ID: S208035-03
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium, Total	56.5	58.1		pCi/L		103	80 - 120

Lab Sample ID: S208035-05
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Uranium, Total	0.132	J	0.142	J	pCi/L		7	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 900 - 900

Lab Sample ID: S208035-04
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.099	U	3		pCi/L		08/15/12 00:00	08/21/12 15:32	1
Gross Beta	-0.352	U	4		pCi/L		08/15/12 00:00	08/21/12 15:32	1

Lab Sample ID: S208035-03
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gross Alpha	33.7	39.2	U	pCi/L		116	70 - 130
Gross Beta	28.1	28.5	U	pCi/L		101	70 - 130

Lab Sample ID: S208035-05
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Gross Alpha	-0.162	U	0.22	U	pCi/L		0	
Gross Beta	3.28	J	2.38	U	pCi/L		32	

Method: 901.1 - 901.1

Lab Sample ID: S208035-04
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	2.94	U	20		pCi/L		08/15/12 00:00	08/21/12 00:00	1
Potassium-40	6.85	U	25		pCi/L		08/15/12 00:00	08/21/12 00:00	1

Lab Sample ID: S208035-03
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cesium-137	486	471	U	pCi/L		97	80 - 120
Cobalt-60	414	375	U	pCi/L		91	80 - 120

Lab Sample ID: S208035-05
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Cesium-137	-1.32	U	0.62	U	pCi/L		0	
Potassium-40	8.51	U	12.2	U	pCi/L		0	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 903.1 - 903.1

Lab Sample ID: S208035-04
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	-0.169	U	1		pCi/L		08/31/12 00:00	08/31/12 11:28	1

Lab Sample ID: S208035-03
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Radium-226	50.1	53		pCi/L		106	80 - 120

Lab Sample ID: S208035-05
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Radium-226	0.285	U	0.344	U	pCi/L		0	

Method: 904 - 904

Lab Sample ID: S208035-04
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	0.039	U	1		pCi/L		08/30/12 00:00	08/30/12 16:06	1

Lab Sample ID: S208035-03
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Radium-228	4.23	4.1		pCi/L		97	60 - 140

Lab Sample ID: S208035-05
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Radium-228	0.212	U	0.172	U	pCi/L		0	

Method: 905 - 905

Lab Sample ID: S208035-04
Matrix: WATER
Analysis Batch: 8624

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.073	U	2		pCi/L		08/25/12 00:00	08/25/12 12:58	1

QC Sample Results

Client: MWH Americas Inc
 Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Method: 905 - 905 (Continued)

Lab Sample ID: S208035-03
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Strontium-90	16.9	14.5		pCi/L		86	80 - 120

Lab Sample ID: S208035-05
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	Limit
Strontium-90	0.046	U	-0.045	U	pCi/L		0	

Method: 906 - 906

Lab Sample ID: S208035-04
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	0	U	500		pCi/L		08/29/12 00:00	08/30/12 02:47	1

Lab Sample ID: S208035-03
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Tritium	2170	2140		pCi/L		99	80 - 120

Lab Sample ID: S208035-05
 Matrix: WATER
 Analysis Batch: 8624

Client Sample ID: OUTFALL 019 (440-19096-1 DU)
 Prep Type: Total/NA
 Prep Batch: 8624_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	Limit
Tritium	-50.4	U	-5.32	U	pCi/L		0	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

GC/MS VOA

Analysis Batch: 44431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-18989-1	Outfall 019 Grab	Total/NA	Water	624	
440-18989-2	Trip Blank	Total/NA	Water	624	
440-19636-C-1 MS	Matrix Spike	Total/NA	Water	624	
440-19636-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	624	
LCS 440-44431/5	Lab Control Sample	Total/NA	Water	624	
MB 440-44431/4	Method Blank	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 43715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	625	
LCS 440-43715/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 440-43715/3-A	Lab Control Sample Dup	Total/NA	Water	625	
MB 440-43715/1-A	Method Blank	Total/NA	Water	625	

Analysis Batch: 44344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	625	43715
LCS 440-43715/2-A	Lab Control Sample	Total/NA	Water	625	43715
LCSD 440-43715/3-A	Lab Control Sample Dup	Total/NA	Water	625	43715

Analysis Batch: 45075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-43715/1-A	Method Blank	Total/NA	Water	625	43715

GC Semi VOA

Prep Batch: 43155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	608	
LCS 440-43155/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 440-43155/3-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 440-43155/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 43241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	608 Pesticides	43155
LCS 440-43155/2-A	Lab Control Sample	Total/NA	Water	608 Pesticides	43155
LCSD 440-43155/3-A	Lab Control Sample Dup	Total/NA	Water	608 Pesticides	43155
MB 440-43155/1-A	Method Blank	Total/NA	Water	608 Pesticides	43155

HPLC/IC

Analysis Batch: 42783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	314.0	
440-19129-A-1 MS	Matrix Spike	Total/NA	Water	314.0	
440-19129-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	314.0	
LCS 440-42783/4	Lab Control Sample	Total/NA	Water	314.0	
MB 440-42783/5	Method Blank	Total/NA	Water	314.0	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

HPLC/IC (Continued)

Analysis Batch: 42849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19095-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-19095-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-19096-1	Outfall 019	Total/NA	Water	300.0	
LCS 440-42849/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-42849/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 42850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19090-I-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-19090-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-19095-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-19095-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-19096-1	Outfall 019	Total/NA	Water	300.0	
LCS 440-42850/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-42850/2	Method Blank	Total/NA	Water	300.0	

Specialty Organics

Analysis Batch: 2220053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total	Water	1613B	
G2H070000053B	Method Blank	Total	Water	1613B	
G2H070000053C	Lab Control Sample	Total	Water	1613B	

Prep Batch: 2220053_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total	Water	3542	
G2H070000053B	Method Blank	Total	Water	3542	
G2H070000053C	Lab Control Sample	Total	Water	3542	

Metals

Prep Batch: 42941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19090-F-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-19090-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
440-19096-1	Outfall 019	Total/NA	Water	245.1	
LCS 440-42941/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 440-42941/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 43600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19090-F-1-B MS	Matrix Spike	Total/NA	Water	245.1	42941
440-19090-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	42941
440-19096-1	Outfall 019	Total/NA	Water	245.1	42941
LCS 440-42941/2-A	Lab Control Sample	Total/NA	Water	245.1	42941
MB 440-42941/1-A	Method Blank	Total/NA	Water	245.1	42941

Prep Batch: 43720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total Recoverable	Water	200.2	
440-19096-1 MS	Outfall 019	Total Recoverable	Water	200.2	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Metals (Continued)

Prep Batch: 43720 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1 MSD	Outfall 019	Total Recoverable	Water	200.2	
LCS 440-43720/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-43720/1-A	Method Blank	Total Recoverable	Water	200.2	

Prep Batch: 43746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19090-I-1-E MS	Matrix Spike	Dissolved	Water	200.2	
440-19090-I-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	
440-19096-1	Outfall 019	Dissolved	Water	200.2	
LCS 440-43017/2-B	Lab Control Sample	Dissolved	Water	200.2	
MB 440-43017/1-B	Method Blank	Dissolved	Water	200.2	

Prep Batch: 43762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total Recoverable	Water	200.2	
440-19096-1 MS	Outfall 019	Total Recoverable	Water	200.2	
440-19096-1 MSD	Outfall 019	Total Recoverable	Water	200.2	
LCS 440-43762/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-43762/1-A	Method Blank	Total Recoverable	Water	200.2	

Prep Batch: 43920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Dissolved	Water	245.1	
440-19096-1 MS	Outfall 019	Dissolved	Water	245.1	
440-19096-1 MSD	Outfall 019	Dissolved	Water	245.1	
LCS 440-43017/2-D	Lab Control Sample	Dissolved	Water	245.1	
MB 440-43017/1-D	Method Blank	Dissolved	Water	245.1	

Analysis Batch: 43993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19090-I-1-E MS	Matrix Spike	Dissolved	Water	200.7 Rev 4.4	43746
440-19090-I-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	200.7 Rev 4.4	43746
440-19096-1	Outfall 019	Dissolved	Water	200.7 Rev 4.4	43746
LCS 440-43017/2-B	Lab Control Sample	Dissolved	Water	200.7 Rev 4.4	43746
MB 440-43017/1-B	Method Blank	Dissolved	Water	200.7 Rev 4.4	43746

Analysis Batch: 44173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total Recoverable	Water	200.7 Rev 4.4	43762
440-19096-1 MS	Outfall 019	Total Recoverable	Water	200.7 Rev 4.4	43762
440-19096-1 MSD	Outfall 019	Total Recoverable	Water	200.7 Rev 4.4	43762
LCS 440-43762/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	43762
MB 440-43762/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	43762

Prep Batch: 44228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Dissolved	Water	200.2	
LCS 440-43017/2-E	Lab Control Sample	Dissolved	Water	200.2	
LCSD 440-43017/15-B	Lab Control Sample Dup	Dissolved	Water	200.2	
MB 440-43017/1-E	Method Blank	Dissolved	Water	200.2	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Metals (Continued)

Analysis Batch: 44349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Dissolved	Water	245.1	43920
440-19096-1 MS	Outfall 019	Dissolved	Water	245.1	43920
440-19096-1 MSD	Outfall 019	Dissolved	Water	245.1	43920
LCS 440-43017/2-D	Lab Control Sample	Dissolved	Water	245.1	43920
MB 440-43017/1-D	Method Blank	Dissolved	Water	245.1	43920

Analysis Batch: 44466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total Recoverable	Water	200.8	43720
440-19096-1 MS	Outfall 019	Total Recoverable	Water	200.8	43720
440-19096-1 MSD	Outfall 019	Total Recoverable	Water	200.8	43720
LCS 440-43720/2-A	Lab Control Sample	Total Recoverable	Water	200.8	43720
MB 440-43720/1-A	Method Blank	Total Recoverable	Water	200.8	43720

Analysis Batch: 44839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Dissolved	Water	200.8	44228
LCS 440-43017/2-E	Lab Control Sample	Dissolved	Water	200.8	44228
LCSD 440-43017/15-B	Lab Control Sample Dup	Dissolved	Water	200.8	44228
MB 440-43017/1-E	Method Blank	Dissolved	Water	200.8	44228

Analysis Batch: 45206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total Recoverable	Water	200.8	43720
440-19096-1 MS	Outfall 019	Total Recoverable	Water	200.8	43720
440-19096-1 MSD	Outfall 019	Total Recoverable	Water	200.8	43720
LCS 440-43720/2-A	Lab Control Sample	Total Recoverable	Water	200.8	43720
MB 440-43720/1-A	Method Blank	Total Recoverable	Water	200.8	43720

General Chemistry

Analysis Batch: 42505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-18989-1	Outfall 019 Grab	Total/NA	Water	SM 2540F	

Analysis Batch: 42743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19008-A-2 MS	Matrix Spike	Total/NA	Water	SM 5540C	
440-19008-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5540C	
LCS 440-42743/3	Lab Control Sample	Total/NA	Water	SM 5540C	
MB 440-42743/4	Method Blank	Total/NA	Water	SM 5540C	

Analysis Batch: 42768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	SM 5540C	

Analysis Batch: 42804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19090-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-19096-1	Outfall 019	Total/NA	Water	SM 2540C	
LCS 440-42804/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-42804/1	Method Blank	Total/NA	Water	SM 2540C	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

General Chemistry (Continued)

Analysis Batch: 42865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	SM5210B	
LCS 440-42865/4	Lab Control Sample	Total/NA	Water	SM5210B	
LCS 440-42865/5	Lab Control Sample Dup	Total/NA	Water	SM5210B	
USB 440-42865/1 USB	Method Blank	Total/NA	Water	SM5210B	

Analysis Batch: 42917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19004-B-4 DU	Duplicate	Total/NA	Water	180.1	
440-19096-1	Outfall 019	Total/NA	Water	180.1	
MB 440-42917/6	Method Blank	Total/NA	Water	180.1	

Analysis Batch: 43430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	SM 2540D	
440-19164-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	
LCS 440-43430/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-43430/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 43475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	SM 5310B	
440-19096-1 MS	Outfall 019	Total/NA	Water	SM 5310B	
440-19096-1 MSD	Outfall 019	Total/NA	Water	SM 5310B	
LCS 440-43475/6	Lab Control Sample	Total/NA	Water	SM 5310B	
MB 440-43475/7	Method Blank	Total/NA	Water	SM 5310B	

Prep Batch: 44053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19095-D-1-A MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-19095-D-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-19096-1	Outfall 019	Total/NA	Water	SM 4500 NH3 B	
LCS 440-44053/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
MB 440-44053/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 44055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19095-D-1-A MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 C	44053
440-19095-D-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 C	44053
440-19096-1	Outfall 019	Total/NA	Water	SM 4500 NH3 C	44053
LCS 440-44053/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 C	44053
MB 440-44053/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 C	44053

Prep Batch: 44856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-18989-1	Outfall 019 Grab	Total/NA	Water	1664A	
LCS 440-44856/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCS 440-44856/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-44856/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 44862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-18989-1	Outfall 019 Grab	Total/NA	Water	1664A	44856

QC Association Summary

Client: MWH Americas Inc
 Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

General Chemistry (Continued)

Analysis Batch: 44862 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-44856/2-A	Lab Control Sample	Total/NA	Water	1664A	44856
LCSD 440-44856/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	44856
MB 440-44856/1-A	Method Blank	Total/NA	Water	1664A	44856

Prep Batch: 45318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	Distill/CN	
440-19424-B-2-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
440-19424-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	
LCS 440-45318/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 440-45318/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 45347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-1	Outfall 019	Total/NA	Water	SM 4500 CN E	45318
440-19424-B-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	45318
440-19424-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	45318
LCS 440-45318/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	45318
MB 440-45318/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	45318

Subcontract

Analysis Batch: 8624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-2	Trip Blank	Total/NA	Water	900	8624_P
440-19096-2	Trip Blank	Total/NA	Water	904	8624_P
440-19096-2	Trip Blank	Total/NA	Water	901.1	8624_P
440-19096-2	Trip Blank	Total/NA	Water	903.1	8624_P
440-19096-2	Trip Blank	Total/NA	Water	905	8624_P
440-19096-2	Trip Blank	Total/NA	Water	5174	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	900	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	904	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	901.1	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	906	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	903.1	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	905	8624_P
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	5174	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	900	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	904	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	901.1	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	906	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	903.1	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	905	8624_P
S208035-03	Lab Control Sample	Total/NA	WATER	5174	8624_P
S208035-04	Method Blank	Total/NA	WATER	900	8624_P
S208035-04	Method Blank	Total/NA	WATER	904	8624_P
S208035-04	Method Blank	Total/NA	WATER	901.1	8624_P
S208035-04	Method Blank	Total/NA	WATER	906	8624_P
S208035-04	Method Blank	Total/NA	WATER	903.1	8624_P
S208035-04	Method Blank	Total/NA	WATER	905	8624_P
S208035-04	Method Blank	Total/NA	WATER	5174	8624_P
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	900	8624_P

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Subcontract (Continued)

Analysis Batch: 8624 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	904	8624_P
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	901.1	8624_P
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	906	8624_P
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	903.1	8624_P
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	905	8624_P
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	5174	8624_P

Prep Batch: 8624_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19096-2	Trip Blank	Total/NA	Water	General Prep	
S208035-01	OUTFALL 019 (440-19096-1	Total/NA	WATER	General Prep	
S208035-03	Lab Control Sample	Total/NA	WATER	General Prep	
S208035-04	Method Blank	Total/NA	WATER	General Prep	
S208035-05	OUTFALL 019 (440-19096-1 DU	Total/NA	WATER	General Prep	

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS)
BB	Sample > 4X spike concentration
LM	MS and/or MSD above acceptance limits. See Blank Spike (LCS)

DIOXIN

Qualifier	Qualifier Description
J	Estimated result. Result is less than the reporting limit.
Q	Estimated maximum possible concentration (EMPC).
B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

General Chemistry

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
LM	MS and/or MSD above acceptance limits. See Blank Spike (LCS)
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS)

Subcontract

Qualifier	Qualifier Description
U	The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
J	The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: MWH Americas Inc
 Project/Site: Monthly outfall 019 Grab

TestAmerica Job ID: 440-18989-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0671	10-13-12
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAC	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	09-30-12
New Mexico	State Program	6	N/A	01-31-12
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAC	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14

Laboratory: TestAmerica West Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-14
Alaska (UST)	State Program	10	UST-055	12-18-12
Arizona	State Program	9	AZ0708	08-11-13
Arkansas DEQ	State Program	6	88-0691	06-17-13
California	NELAC	9	1119CA	01-31-13
Colorado	State Program	8	N/A	08-31-13
Connecticut	State Program	1	PH-0691	06-30-13
Florida	NELAC	4	E87570	06-30-13
Guam	State Program	9	N/A	08-31-12
Hawaii	State Program	9	N/A	01-31-13
Illinois	NELAC	5	200060	03-17-13
Kansas	NELAC	7	E-10375	10-31-12
Louisiana	NELAC	6	30612	06-30-13
Michigan	State Program	5	9947	01-31-13
Nevada	State Program	9	CA44	09-30-12
New Jersey	NELAC	2	CA005	06-30-13
New York	NELAC	2	11666	04-01-13
Northern Mariana Islands	State Program	9	MP0007	01-31-13
Oregon	NELAC	10	CA200005	03-28-13
Pennsylvania	NELAC	3	68-01272	03-31-13
South Carolina	State Program	4	87014	06-30-13
Texas	NELAC	6	T104704399-08-TX	05-31-13
US Fish & Wildlife	Federal		LE148388-0	02-28-13
USDA	Federal		P330-11-00436	12-30-14
Utah	NELAC	8	QUAN1	01-31-13
Washington	State Program	10	C581	05-05-13
West Virginia	State Program	3	9930C	12-31-12
West Virginia DEP	State Program	3	334	07-31-13
Wisconsin	State Program	5	998204680	08-31-12
Wyoming	State Program	8	8TMS-Q	01-31-13

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EBERLINE ANALYTICAL

SDG 8623

SDG 8624
Contact Joseph Verville

WORK SUMMARY, cont.

Client Test America, Inc.
Contract 44005647

LAB SAMPLE	CLIENT SAMPLE ID				SUF-				
COLLECTED	LOCATION	MATRIX		TEST	FIX	ANALYZED	REVIEWED	BY	METHOD
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD
S208035-05	Duplicate (S208035-01)		8624-005	80A/80		08/21/12	08/31/12	BW	Gross Alpha in Water
08/02/12	SSFL	WATER	8624-005	80B/80		08/21/12	08/31/12	BW	Gross Beta in Water
08/10/12			8624-005	AC		08/30/12	08/31/12	BW	Radium-228 in Water
			8624-005	GAM		08/18/12	08/31/12	MWT	Gamma Emitters in Water
			8624-005	H		08/30/12	08/31/12	BW	Tritium in Water
			8624-005	RA		08/31/12	08/31/12	BW	Radium-226 in Water
			8624-005	SR		08/25/12	08/30/12	BW	Strontium-90 in Water
			8624-005	U_T		08/20/12	08/30/12	TSC	Uranium, Total

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

WORK SUMMARY
Page 2
SUMMARY DATA SECTION
Page 7

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 09/06/12

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Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-18989-1

Login Number: 18989

List Number: 1

Creator: Robb, Kathleen

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	Rick Banaga
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-18989-1

Login Number: 19096

List Number: 1

Creator: King, Ronald

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	Rick Banago
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



APPENDIX F

Section 7

Outfall 019 – September 5 & 6, 2012

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-22440-1

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: 440-22440-1
 Project Manager: B. Kelly
 Matrix: Water
 QC Level: IV
 No. of Samples: 2
 No. of Reanalyses/Dilutions: 0
 Laboratory: TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 019 (Composite)	440-22632-1	S209021-01 G2I100425-001	Water	9/6/2012 11:10:00 AM	180.1, 200.7, 200.7 Diss, 900. 901.1, 903.1, 904, 905, 906, 245.1, 245.1 Diss, 314.0, 1613B, SM 2540D

II. Sample Management

No anomalies were observed regarding sample management. The temperature upon receipt was not noted by Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. 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: October 15, 2012

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects reported above the EDL for all HxCDF and HpCDF isomers and their totals, and OCDD and OCDF. Some method blank results were reported as EMPCs; however, the reviewer deemed it appropriate to evaluate all method blank results for the purpose of qualifying sample results. Sample results for the individual isomer blank contaminants were qualified as nondetected “U,” at the level of

contamination. Total HxCDF was qualified as estimated, "J," as only a portion of the total was considered method blank contamination. Total HpCDF was qualified as nondetected, "U," as all peaks comprising the total were also present in the method blank at comparable concentrations. The method blank concentration of OCDD was insufficient to qualify the sample result.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: This SDG had no identified field duplicate samples.
- Internal Standards Performance: The labeled internal standard recoveries for the sample were within the acceptance criteria listed in Table 7 of Method 1613 for all internal standards.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any reportable sample concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J." Any detects reported between the 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.

EMPC results previously qualified as nondetected for method blank contamination were not further qualified as EMPCs. Remaining individual isomers reported as EMPCs were qualified as estimated nondetects, "UJ," at the level of the EMPC. Totals containing one or more isomers reported as an EMPC were qualified as estimated, "J."

B. EPA METHODS 200.7 and 245.1—Metals and Mercury

Reviewed By: P. Meeks

Date Reviewed: October 11, 2012

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Method 200.7, 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 $\leq 5\%$, and all masses of interest were calibrated to ≤ 0.1 amu and ≤ 0.9 amu at 10% peak height.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. CRDL/CRI 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-established control limits. There were no target compounds present in the ICSEA solution at concentrations indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: Recoveries were within method-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 dissolved mercury and zinc. Recoveries and RPDs were within method-established QC limits.
- 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 CCB and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- 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. EPA METHOD 314.0—Perchlorate

Reviewed By: P. Meeks

Date Reviewed: October 12, 2012

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-20, Rev. 0)*, *EPA Method 314.0*, and the *National Functional Guidelines for Inorganic Data Review (10/04)*.

- Holding Times: The analytical holding time, 28 days, was met.
- Calibration: Calibration criteria were met. The initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110%. The IPC recovery was within the method-established control limit of 80-120% and the ICCS recovery was within the method-established control limit of 75-125%.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: The recovery was within the method-established QC limits of 85-115%.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- **Sample Result Verification:** Calculations were verified and the sample result reported on the sample result summary was verified against the raw data. No transcription errors or calculation errors were noted. 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.

D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: October 12, 2012

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

- **Holding Times:** The tritium sample was analyzed within 180 days of collection. All remaining aliquots were preserved within the five-day holding time.
- **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, nondetected gross alpha in the sample was qualified as estimated, "UJ." 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:** There were no analytes detected in the method blanks or the KPA CCBs.
- **Blank Spikes and Laboratory Control Samples:** Radium-226 was recovered below the control limit at 82%; therefore, nondetected radium-226 in the sample was qualified as estimated, "UJ." Remaining recoveries were within laboratory-established control limits.

- **Laboratory Duplicates:** Laboratory duplicate analyses were performed on the sample in this SDG for all analytes. All RPDs were within the laboratory-established control limits.
- **Matrix Spike/Matrix Spike Duplicate:** No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- **Sample Result Verification:** An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.
- **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: October 12, 2012

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

- **Holding Times:** The analytical holding time, 48 hours from collection, was met.
- **Calibration:** The turbidity ICV was recovered at 122%; however, as turbidity was nondetected (see Blanks section), no qualification was required. The CCV recoveries were within 90-110%.
- **Blanks:** Turbidity was reported in a bracketing CCB at 0.050 NTU; therefore, turbidity detected in the sample was qualified as nondetected, “U” at the level of contamination.
- **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 result reported on the sample result summary was verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either “J+” or “J-”; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms 440-22440-1

Analysis Method 1613B

Sample Name Outfall 019 Composite Matrix Type: Water Validation Level: IV
 Lab Sample Name: 440-22632-1 Sample Date: 9/6/2012 11:10:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	0.000013	0.000050	0.0000012	ug/L	J	J	DNQ
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.000050	0.0000007	ug/L	J B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000050	0.0000009	ug/L	J B	U	B
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000050	0.0000007	ug/L	J Q	UJ	*III
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.000050	0.0000007	ug/L	J B	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	0.000001	0.000050	0.0000007	ug/L	J	J	DNQ
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000050	0.0000007	ug/L	J Q B	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000050	0.0000006	ug/L	J Q	UJ	*III
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000050	0.0000006	ug/L	J Q B	U	B
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000050	0.0000011	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	0.000002	0.000050	0.0000006	ug/L	J	J	DNQ
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000050	0.0000006	ug/L	J Q B	U	B
2,3,4,7,8-PeCDF	57117-31-4	0.000001	0.000050	0.0000006	ug/L	J	J	DNQ
2,3,7,8-TCDD	1746-01-6	ND	0.000010	0.0000004	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.000010	0.000010	ug/L		U	
2,3,7,8-TCDF	51207-31-9	0.000000	0.000010	0.0000003	ug/L	J Q	R	D
OCDD	3268-87-9	0.00017	0.00010	0.0000017	ug/L	B		
OCDF	39001-02-0	ND	0.00010	0.0000009	ug/L	J B	U	B
Total HpCDD	37871-00-4	0.000026	0.000050	0.0000012	ug/L	J	J	DNQ
Total HpCDF	38998-75-3	ND	0.000050	0.0000008	ug/L	J B	U	B
Total HxCDD	34465-46-8	ND	0.000050	0.0000006	ug/L	J Q	UJ	*III
Total HxCDF	55684-94-1	0.000026	0.000050	0.0000006	ug/L	J Q B	J	B, DNQ, *III
Total PeCDD	36088-22-9	ND	0.000050	0.0000011	ug/L		U	
Total PeCDF	30402-15-4	0.000003	0.000050	0.0000006	ug/L	J	J	DNQ
Total TCDD	41903-57-5	ND	0.000010	0.0000004	ug/L		U	
Total TCDF	55722-27-5	0.000000	0.000010	0.0000003	ug/L	J Q	J	DNQ, *III

Analysis Method 180.1

Sample Name Outfall 019 Composite Matrix Type: Water Validation Level: IV
 Lab Sample Name: 440-22632-1 Sample Date: 9/6/2012 11:10:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	STL00189	0.15	0.10	0.040	NTU		U	B

Analysis Method 245.1

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/L		U	
Mercury, Dissolved	7439-97-6	ND	0.20	0.10	ug/L		U	

Analysis Method 314.0

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	ND	4.0	0.95	ug/L		U	

Analysis Method 900

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Beta	12587472	1.62	4	2.16	pCi/L	U	U	
Gross Alpha	12587461	0.749	3	1.68	pCi/L	U	UJ	C

Analysis Method 901.1

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cs-137	10045973	-0.762	20	1.99	pCi/L	U	U	
K-40	13966002	-7.85	25	26.8	pCi/L	U	U	

Analysis Method 903.1

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Ra-226	13982633	0.244	1	0.572	pCi/L	U	UJ	L

Analysis Method 904

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Ra-228	15262201	0.037	1	0.414	pCi/L	U	U	

Analysis Method 905

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Sr-90	10098972	-0.096	2	0.835	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 019 Composite	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	440-22632-1	Sample Date:	9/6/2012 11:10:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	18.7	500	147	pCi/L	U	U	

APPENDIX F

Section 8

Outfall 019 – September 5 & 6, 2012

Test America Analytical Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-22440-1

Client Project/Site: Monthly Outfall 19 Grab

Revision: 1

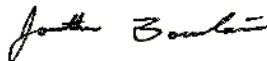
For:

MWH Americas Inc

618 Michillinda Avenue, Suite 200

Arcadia, California 91007

Attn: Bronwyn Kelly



Authorized for release by:

10/11/2012 5:34:24 PM

Jonathan Bousseilaire

Project Manager I

jonathan.bousseilaire@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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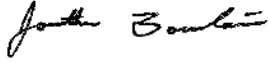
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I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate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



Jonathan Bousseilaire
Project Manager I
10/11/2012 5:34:24 PM



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Sample Summary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-22440-1	Outfall 019	Water	09/05/12 11:25	09/05/12 18:55
440-22440-2	Trip Blanks	Water	09/05/12 11:25	09/05/12 18:55
440-22632-1	Outfall 019 Composite	Water	09/06/12 11:10	09/06/12 18:05
440-22632-2	Trip Blank-Eberline	Water	09/07/12 12:00	09/06/12 18:05

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Case Narrative

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Job ID: 440-22440-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-22440-1

Comments

No additional comments.

Receipt

The samples were received on 9/5/2012 6:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

GC/MS VOA

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Job ID: 440-22632-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-22632-1

Comments

No additional comments.

Receipt

The samples were received on 9/6/2012 6:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 4.6° C.

GC/MS Semi VOA

Method(s) 625: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 50430. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

HPLC

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for chloride and sulfate in batch 50071 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 608: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 51507. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Case Narrative

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Job ID: 440-22632-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

Subcontract non-Sister

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

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Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Outfall 019

Lab Sample ID: 440-22440-1

Date Collected: 09/05/12 11:25

Matrix: Water

Date Received: 09/05/12 18:55

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.30	ug/L			09/13/12 16:28	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			09/13/12 16:28	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			09/13/12 16:28	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			09/13/12 16:28	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			09/13/12 16:28	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			09/13/12 16:28	1
Benzene	ND		0.50	0.28	ug/L			09/13/12 16:28	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			09/13/12 16:28	1
Chloroform	ND		0.50	0.33	ug/L			09/13/12 16:28	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/13/12 16:28	1
Tetrachloroethene	ND		0.50	0.32	ug/L			09/13/12 16:28	1
Toluene	ND		0.50	0.36	ug/L			09/13/12 16:28	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			09/13/12 16:28	1
Vinyl chloride	ND		0.50	0.40	ug/L			09/13/12 16:28	1
Trichloroethene	ND		0.50	0.26	ug/L			09/13/12 16:28	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			09/13/12 16:28	1
Xylenes, Total	ND		1.5	0.90	ug/L			09/13/12 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		80 - 120		09/13/12 16:28	1
Dibromofluoromethane (Surr)	107		80 - 120		09/13/12 16:28	1
Toluene-d8 (Surr)	110		80 - 120		09/13/12 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		4.7	1.3	mg/L		09/17/12 07:02	09/17/12 07:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Settleable Solids	ND		0.10	0.10	mL/L/Hr			09/06/12 14:03	1

Client Sample ID: Trip Blanks

Lab Sample ID: 440-22440-2

Date Collected: 09/05/12 11:25

Matrix: Water

Date Received: 09/05/12 18:55

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.30	ug/L			09/13/12 16:00	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			09/13/12 16:00	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			09/13/12 16:00	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			09/13/12 16:00	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			09/13/12 16:00	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			09/13/12 16:00	1
Benzene	ND		0.50	0.28	ug/L			09/13/12 16:00	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			09/13/12 16:00	1
Chloroform	ND		0.50	0.33	ug/L			09/13/12 16:00	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/13/12 16:00	1
Tetrachloroethene	ND		0.50	0.32	ug/L			09/13/12 16:00	1
Toluene	ND		0.50	0.36	ug/L			09/13/12 16:00	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			09/13/12 16:00	1
Vinyl chloride	ND		0.50	0.40	ug/L			09/13/12 16:00	1
Trichloroethene	ND		0.50	0.26	ug/L			09/13/12 16:00	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			09/13/12 16:00	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Trip Blanks

Lab Sample ID: 440-22440-2

Date Collected: 09/05/12 11:25

Matrix: Water

Date Received: 09/05/12 18:55

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		1.5	0.90	ug/L			09/13/12 16:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		80 - 120					09/13/12 16:00	1
Dibromofluoromethane (Surr)	105		80 - 120					09/13/12 16:00	1
Toluene-d8 (Surr)	110		80 - 120					09/13/12 16:00	1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-22632-1

Date Collected: 09/06/12 11:10

Matrix: Water

Date Received: 09/06/12 18:05

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		5.66	0.0943	ug/L		09/07/12 10:21	09/10/12 19:45	1
Bis(2-ethylhexyl) phthalate	ND		4.72	1.60	ug/L		09/07/12 10:21	09/10/12 19:45	1
N-Nitrosodimethylamine	ND		4.72	0.0943	ug/L		09/07/12 10:21	09/10/12 19:45	1
Pentachlorophenol	ND		4.72	0.377	ug/L		09/07/12 10:21	09/10/12 19:45	1
2,4-Dinitrotoluene	ND		4.72	0.189	ug/L		09/07/12 10:21	09/10/12 19:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	96		40 - 120				09/07/12 10:21	09/10/12 19:45	1
2-Fluorobiphenyl	98		50 - 120				09/07/12 10:21	09/10/12 19:45	1
2-Fluorophenol	70		30 - 120				09/07/12 10:21	09/10/12 19:45	1
Nitrobenzene-d5	79		45 - 120				09/07/12 10:21	09/10/12 19:45	1
Phenol-d6	78		35 - 120				09/07/12 10:21	09/10/12 19:45	1
Terphenyl-d14	96		50 - 125				09/07/12 10:21	09/10/12 19:45	1

Method: 608 Pesticides - Organochlorine Pesticides Low level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0047	0.0024	ug/L		09/12/12 15:13	09/13/12 14:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		35 - 115				09/12/12 15:13	09/13/12 14:24	1
DCB Decachlorobiphenyl (Surr)	82		45 - 120				09/12/12 15:13	09/13/12 14:24	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		5.0	4.0	mg/L			09/07/12 08:22	10
Nitrate as N	ND		0.11	0.080	mg/L			09/07/12 08:08	1
Nitrate Nitrite as N	ND		0.26	0.11	mg/L			09/07/12 08:08	1
Sulfate	160		5.0	4.0	mg/L			09/07/12 08:22	10
Nitrite as N	ND		0.15	0.11	mg/L			09/07/12 08:08	1

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	0.95	ug/L			09/07/12 13:02	1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.00000044	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
Total TCDD	ND		0.000010	0.00000044	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,7,8-PeCDD	ND		0.000050	0.0000011	ug/L		09/13/12 10:00	09/20/12 01:11	1.01

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-22632-1

Date Collected: 09/06/12 11:10

Matrix: Water

Date Received: 09/06/12 18:05

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	ND		0.000050	0.0000011	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,4,7,8-HxCDD	0.0000013	J Q	0.000050	0.00000072	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,6,7,8-HxCDD	0.0000015	J	0.000050	0.00000071	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,7,8,9-HxCDD	0.0000015	J Q	0.000050	0.00000062	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
Total HxCDD	0.0000043	J Q	0.000050	0.00000068	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,4,6,7,8-HpCDD	0.0000013	J	0.000050	0.00000012	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
Total HpCDD	0.000026	J	0.000050	0.00000012	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
OCDD	0.00017	B	0.00010	0.00000017	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
2,3,7,8-TCDF	0.00000043	J Q	0.000010	0.00000034	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
2,3,7,8-TCDF	ND		0.000010	0.0000010	ug/L		09/13/12 10:00	09/21/12 15:37	1.01
Total TCDF	0.00000043	J Q	0.000010	0.00000034	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,7,8-PeCDF	0.0000020	J	0.000050	0.00000066	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
2,3,4,7,8-PeCDF	0.0000011	J	0.000050	0.00000068	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
Total PeCDF	0.0000031	J	0.000050	0.00000067	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,4,7,8-HxCDF	0.0000073	J B	0.000050	0.00000078	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,6,7,8-HxCDF	0.0000016	J Q B	0.000050	0.00000073	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
2,3,4,6,7,8-HxCDF	0.0000016	J Q B	0.000050	0.00000060	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,7,8,9-HxCDF	0.0000024	J Q B	0.000050	0.00000066	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
Total HxCDF	0.000026	J Q B	0.000050	0.00000069	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,4,6,7,8-HpCDF	0.000010	J B	0.000050	0.00000072	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
1,2,3,4,7,8,9-HpCDF	0.000014	J B	0.000050	0.00000099	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
Total HpCDF	0.000042	J B	0.000050	0.00000084	ug/L		09/13/12 10:00	09/20/12 01:11	1.01
OCDF	0.000035	J B	0.00010	0.00000098	ug/L		09/13/12 10:00	09/20/12 01:11	1.01

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	107		35 - 197	09/13/12 10:00	09/20/12 01:11	1.01
37Cl4-2,3,7,8-TCDD	109		35 - 197	09/13/12 10:00	09/21/12 15:37	1.01

Internal Standard	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	40		25 - 164	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,7,8-PeCDD	47		25 - 181	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,4,7,8-HxCDD	50		32 - 141	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,6,7,8-HxCDD	48		28 - 130	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140	09/13/12 10:00	09/20/12 01:11	1.01
13C-OCDD	45		17 - 157	09/13/12 10:00	09/20/12 01:11	1.01
13C-2,3,7,8-TCDF	45		24 - 169	09/13/12 10:00	09/20/12 01:11	1.01
13C-2,3,7,8-TCDF	37		24 - 169	09/13/12 10:00	09/21/12 15:37	1.01
13C-1,2,3,7,8-PeCDF	46		24 - 185	09/13/12 10:00	09/20/12 01:11	1.01
13C-2,3,4,7,8-PeCDF	50		21 - 178	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,6,7,8-HxCDF	46		26 - 123	09/13/12 10:00	09/20/12 01:11	1.01
13C-2,3,4,6,7,8-HxCDF	49		28 - 136	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,7,8,9-HxCDF	49		29 - 147	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,4,6,7,8-HpCDF	45		28 - 143	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,4,7,8,9-HpCDF	49		26 - 138	09/13/12 10:00	09/20/12 01:11	1.01
13C-1,2,3,4,7,8-HxCDF	49		26 - 152	09/13/12 10:00	09/20/12 01:11	1.01

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		09/13/12 12:35	09/17/12 22:29	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-22632-1

Date Collected: 09/06/12 11:10

Matrix: Water

Date Received: 09/06/12 18:05

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		09/12/12 14:11	09/13/12 19:23	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		09/13/12 09:54	09/13/12 17:57	1
Copper	ND		2.0	0.50	ug/L		09/13/12 09:54	09/13/12 17:57	1
Lead	ND		1.0	0.20	ug/L		09/13/12 09:54	09/13/12 17:57	1
Selenium	ND		2.0	0.50	ug/L		09/13/12 09:54	09/13/12 17:57	1

Method: 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		09/12/12 14:09	09/12/12 17:50	1
Copper	ND		2.0	0.50	ug/L		09/12/12 14:09	09/12/12 17:50	1
Lead	ND		1.0	0.20	ug/L		09/12/12 14:09	09/12/12 17:50	1
Selenium	ND		2.0	0.50	ug/L		09/12/12 14:09	09/12/12 17:50	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		09/10/12 17:55	09/11/12 15:32	1

Method: 245.1 - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		09/14/12 12:25	09/14/12 16:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	0.15		0.10	0.040	NTU			09/07/12 08:39	1
Total Dissolved Solids	580		10	10	mg/L			09/12/12 09:14	1
Total Suspended Solids	ND		10	10	mg/L			09/13/12 19:09	1
Cyanide, Total	ND		5.0	3.0	ug/L		09/11/12 16:48	09/11/12 21:38	1
Ammonia (as N)	0.280	J,DX	0.400	0.157	mg/L		09/12/12 20:41	09/12/12 20:47	1
Total Organic Carbon	ND		1.0	0.75	mg/L			09/07/12 09:07	1
Methylene Blue Active Substances	ND		0.10	0.050	mg/L			09/07/12 22:11	1
Biochemical Oxygen Demand	ND		2.0	0.50	mg/L			09/07/12 09:30	1

Method: 5174 -

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
U Total	0.365	J	1		pCi/L		09/19/12 00:00	09/19/12 00:00	1

Method: 900 - 900

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Beta	1.62	U	4		pCi/L		09/17/12 00:00	09/18/12 15:33	1
GrossAlpha	0.749	U	3		pCi/L		09/17/12 00:00	09/18/12 15:33	1

Method: 901.1 - 901.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cs-137	-0.762	U	20		pCi/L		09/11/12 00:00	09/12/12 00:00	1
K-40	-7.85	U	25		pCi/L		09/11/12 00:00	09/12/12 00:00	1

Method: 903.1 - 903.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ra-226	0.244	U	1		pCi/L		09/24/12 00:00	09/24/12 12:33	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-22632-1

Date Collected: 09/06/12 11:10

Matrix: Water

Date Received: 09/06/12 18:05

Method: 904 - 904

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ra-228	0.037	U	1		pCi/L		09/24/12 00:00	09/24/12 15:36	1

Method: 905 - 905

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sr-90	-0.096	U	2		pCi/L		09/25/12 00:00	09/25/12 13:28	1

Method: 906 - 906

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	18.7	U	500		pCi/L		09/15/12 00:00	09/21/12 15:49	1

Client Sample ID: Trip Blank-Eberline

Lab Sample ID: 440-22632-2

Date Collected: 09/07/12 12:00

Matrix: Water

Date Received: 09/06/12 18:05

Method: 5174 -

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
U Total	0	U	1		pCi/L		09/19/12 00:00	09/19/12 00:00	1

Method: 900 - 900

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Beta	-0.291	U	4		pCi/L		09/17/12 00:00	09/18/12 15:33	1
GrossAlpha	0.014	U	3		pCi/L		09/17/12 00:00	09/18/12 15:33	1

Method: 901.1 - 901.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cs-137	-0.714	U	20		pCi/L		09/11/12 00:00	09/12/12 00:00	1
K-40	7.91	U	25		pCi/L		09/11/12 00:00	09/12/12 00:00	1

Method: 903.1 - 903.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ra-226	0.043	U	1		pCi/L		09/24/12 00:00	09/24/12 12:33	1

Method: 904 - 904

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ra-228	-0.095	U	1		pCi/L		09/24/12 00:00	09/24/12 15:36	1

Method: 905 - 905

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sr-90	0.038	U	2		pCi/L		09/25/12 00:00	09/25/12 13:28	1

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Outfall 019

Date Collected: 09/05/12 11:25

Date Received: 09/05/12 18:55

Lab Sample ID: 440-22440-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	10 mL	10 mL	51644	09/13/12 16:28	CP	TAL IRV
Total/NA	Analysis	SM 2540F		1	1000 mL	1000 mL	50212	09/06/12 14:03	DAE	TAL IRV
Total/NA	Prep	1664A			1055 mL	1000 mL	52397	09/17/12 07:02	DA	TAL IRV
Total/NA	Analysis	1664A		1			52398	09/17/12 07:16	DA	TAL IRV

Client Sample ID: Trip Blanks

Date Collected: 09/05/12 11:25

Date Received: 09/05/12 18:55

Lab Sample ID: 440-22440-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	10 mL	10 mL	51644	09/13/12 16:00	CP	TAL IRV

Client Sample ID: Outfall 019 Composite

Date Collected: 09/06/12 11:10

Date Received: 09/06/12 18:05

Lab Sample ID: 440-22632-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			1060 mL	2 mL	50430	09/07/12 10:21	AG	TAL IRV
Total/NA	Analysis	625		1			50942	09/10/12 19:45	DF	TAL IRV
Total/NA	Prep	608			1060 mL	2 mL	51507	09/12/12 15:13	AB	TAL IRV
Total/NA	Analysis	608 Pesticides		1			51739	09/13/12 14:24	CN	TAL IRV
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	50070	09/07/12 08:08	NN	TAL IRV
Total/NA	Analysis	300.0		10	1 mL	1.0 mL	50071	09/07/12 08:22	KS	TAL IRV
Total/NA	Analysis	314.0		1	1 mL	1.0 mL	50341	09/07/12 13:02	NN	TAL IRV
Total	Prep	3542			989.23 mL	20 uL	2256103_P	09/13/12 10:00	TL	TAL WSC
Total	Analysis	1613B		1.01			2256103	09/20/12 01:11	LLH	TAL WSC
Total	Analysis	1613B		1.01			2256103	09/21/12 15:37	LLH	TAL WSC
Total/NA	Prep	245.1			20 mL	20 mL	50489	09/10/12 17:55	SN	TAL IRV
Total/NA	Analysis	245.1		1			51258	09/11/12 15:32	DB	TAL IRV
Dissolved	Prep	200.2			50 mL	50 mL	51484	09/12/12 14:09	SC	TAL IRV
Dissolved	Analysis	200.8		1			51565	09/12/12 17:50	YS	TAL IRV
Total Recoverable	Prep	200.2			50 mL	50 mL	51710	09/13/12 09:54	ND	TAL IRV
Total Recoverable	Analysis	200.8		1			51892	09/13/12 17:57	YS	TAL IRV
Dissolved	Prep	200.2			50 mL	50 mL	51487	09/12/12 14:11	SC	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1			51956	09/13/12 19:23	VS	TAL IRV
Dissolved	Prep	245.1			20 mL	20 mL	52001	09/14/12 12:25	MM	TAL IRV
Dissolved	Analysis	245.1		1			52166	09/14/12 16:09	DB	TAL IRV
Total Recoverable	Prep	200.2			50 mL	50 mL	51774	09/13/12 12:35	ND	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			52703	09/17/12 22:29	VS	TAL IRV
Total/NA	Analysis	180.1		1			50407	09/07/12 08:39	DAE	TAL IRV
Total/NA	Analysis	SM5210B		1			50415	09/07/12 09:30	TAI	TAL IRV
Total/NA	Analysis	SM 5540C		1	100 mL	100 mL	50629	09/07/12 22:11	CC	TAL IRV
Total/NA	Analysis	SM 5310B		1			50643	09/07/12 09:07		TAL IRV

Lab Chronicle

Client: MWH Americas Inc
 Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-22632-1

Date Collected: 09/06/12 11:10

Matrix: Water

Date Received: 09/06/12 18:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/CN			50 mL	50 mL	51262	09/11/12 16:48	SL	TAL IRV
Total/NA	Analysis	SM 4500 CN E		1			51319	09/11/12 21:38	SL	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51390	09/12/12 09:14	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	51595	09/12/12 20:41	NC	TAL IRV
Total/NA	Analysis	SM 4500 NH3 C		1			51600	09/12/12 20:47	NC	TAL IRV
Total/NA	Analysis	SM 2540D		1	100 mL	100 mL	51888	09/13/12 19:09	DK	TAL IRV
Total/NA	Analysis	5174		1			8625	09/19/12 00:00		
Total/NA	Prep	General Prep		1			8625_P	09/19/12 00:00		
Total/NA	Prep	General Prep		1			8625_P	09/17/12 00:00		
Total/NA	Analysis	900		1			8625	09/18/12 15:33		
Total/NA	Prep	General Prep		1			8625_P	09/11/12 00:00		
Total/NA	Analysis	901.1		1			8625	09/12/12 00:00		
Total/NA	Analysis	903.1		1			8625	09/24/12 12:33		
Total/NA	Prep	General Prep		1			8625_P	09/24/12 00:00		
Total/NA	Analysis	904		1			8625	09/24/12 15:36		
Total/NA	Prep	General Prep		1			8625_P	09/25/12 00:00		
Total/NA	Analysis	905		1			8625	09/25/12 13:28		
Total/NA	Prep	General Prep		1			8625_P	09/15/12 00:00		
Total/NA	Analysis	906		1			8625	09/21/12 15:49		

Client Sample ID: Trip Blank-Eberline

Lab Sample ID: 440-22632-2

Date Collected: 09/07/12 12:00

Matrix: Water

Date Received: 09/06/12 18:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	5174		1			8625	09/19/12 00:00		
Total/NA	Prep	General Prep		1			8625_P	09/19/12 00:00		
Total/NA	Prep	General Prep		1			8625_P	09/17/12 00:00		
Total/NA	Analysis	900		1			8625	09/18/12 15:33		
Total/NA	Prep	General Prep		1			8625_P	09/11/12 00:00		
Total/NA	Analysis	901.1		1			8625	09/12/12 00:00		
Total/NA	Analysis	903.1		1			8625	09/24/12 12:33		
Total/NA	Prep	General Prep		1			8625_P	09/24/12 00:00		
Total/NA	Analysis	904		1			8625	09/24/12 15:36		
Total/NA	Prep	General Prep		1			8625_P	09/25/12 00:00		
Total/NA	Analysis	905		1			8625	09/25/12 13:28		

Laboratory References:

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Eber-Rich = Eberline - Richmond, 2030 Wright Avenue, Richmond, CA 94804

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-51644/4

Matrix: Water

Analysis Batch: 51644

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.30	ug/L			09/13/12 09:20	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			09/13/12 09:20	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			09/13/12 09:20	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			09/13/12 09:20	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			09/13/12 09:20	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			09/13/12 09:20	1
Benzene	ND		0.50	0.28	ug/L			09/13/12 09:20	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			09/13/12 09:20	1
Chloroform	ND		0.50	0.33	ug/L			09/13/12 09:20	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/13/12 09:20	1
Tetrachloroethene	ND		0.50	0.32	ug/L			09/13/12 09:20	1
Toluene	ND		0.50	0.36	ug/L			09/13/12 09:20	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			09/13/12 09:20	1
Vinyl chloride	ND		0.50	0.40	ug/L			09/13/12 09:20	1
Trichloroethene	ND		0.50	0.26	ug/L			09/13/12 09:20	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			09/13/12 09:20	1
Xylenes, Total	ND		1.5	0.90	ug/L			09/13/12 09:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		80 - 120		09/13/12 09:20	1
Dibromofluoromethane (Surr)	101		80 - 120		09/13/12 09:20	1
Toluene-d8 (Surr)	109		80 - 120		09/13/12 09:20	1

Lab Sample ID: LCS 440-51644/5

Matrix: Water

Analysis Batch: 51644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	27.3		ug/L		109	65 - 135
1,1,2-Trichloroethane	25.0	24.3		ug/L		97	70 - 125
1,1-Dichloroethane	25.0	23.0		ug/L		92	70 - 125
1,1-Dichloroethene	25.0	24.1		ug/L		96	70 - 125
1,2-Dichloroethane	25.0	29.4		ug/L		118	60 - 140
Benzene	25.0	25.1		ug/L		101	70 - 120
Carbon tetrachloride	25.0	33.0		ug/L		132	65 - 140
Chloroform	25.0	25.4		ug/L		102	70 - 130
Ethylbenzene	25.0	27.0		ug/L		108	75 - 125
Tetrachloroethene	25.0	27.6		ug/L		110	70 - 125
Toluene	25.0	28.0		ug/L		112	70 - 120
Trichlorofluoromethane	25.0	31.5		ug/L		126	65 - 145
Vinyl chloride	25.0	30.1		ug/L		120	55 - 135
Trichloroethene	25.0	26.9		ug/L		108	70 - 125
cis-1,2-Dichloroethene	25.0	24.3		ug/L		97	70 - 125
m,p-Xylene	50.0	54.6		ug/L		109	75 - 125
o-Xylene	25.0	26.7		ug/L		107	75 - 125
Xylenes, Total	75.0	81.3		ug/L		108	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-51644/5

Matrix: Water

Analysis Batch: 51644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	105		80 - 120
Toluene-d8 (Surr)	111		80 - 120

Lab Sample ID: 440-22143-B-2 MS

Matrix: Water

Analysis Batch: 51644

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
1,1,1-Trichloroethane	ND		25.0	28.4		ug/L		113	65 - 140
1,1,2-Trichloroethane	ND		25.0	26.4		ug/L		106	65 - 130
1,1-Dichloroethane	ND		25.0	23.7		ug/L		95	65 - 130
Trichlorotrifluoroethane(F-113)	ND		25.0	20.4		ug/L		82	
1,1-Dichloroethene	ND		25.0	26.1		ug/L		104	60 - 130
1,2-Dichloroethane	ND		25.0	31.9		ug/L		128	60 - 140
Benzene	ND		25.0	25.9		ug/L		104	65 - 125
Carbon tetrachloride	ND		25.0	34.4		ug/L		138	65 - 140
Chloroform	ND		25.0	27.0		ug/L		108	65 - 135
Ethylbenzene	ND		25.0	28.1		ug/L		112	65 - 130
Tetrachloroethene	ND		25.0	29.0		ug/L		116	65 - 130
Toluene	ND		25.0	28.8		ug/L		115	70 - 125
Trichlorofluoromethane	ND		25.0	32.5		ug/L		130	60 - 145
Vinyl chloride	ND		25.0	29.5		ug/L		118	45 - 140
Trichloroethene	ND		25.0	28.3		ug/L		113	65 - 125
cis-1,2-Dichloroethene	ND		25.0	25.6		ug/L		102	65 - 130
m,p-Xylene	ND		50.0	57.0		ug/L		114	65 - 130
o-Xylene	ND		25.0	27.9		ug/L		112	65 - 125
Xylenes, Total	ND		75.0	84.9		ug/L		113	60 - 130

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
Toluene-d8 (Surr)	110		80 - 120

Lab Sample ID: 440-22143-B-2 MSD

Matrix: Water

Analysis Batch: 51644

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier						
1,1,1-Trichloroethane	ND		25.0	27.6		ug/L		110	65 - 140	3	20
1,1,2-Trichloroethane	ND		25.0	27.2		ug/L		109	65 - 130	3	25
1,1-Dichloroethane	ND		25.0	23.4		ug/L		93	65 - 130	1	20
Trichlorotrifluoroethane(F-113)	ND		25.0	20.6		ug/L		82		1	
1,1-Dichloroethene	ND		25.0	25.9		ug/L		104	60 - 130	1	20
1,2-Dichloroethane	ND		25.0	32.3		ug/L		129	60 - 140	1	20
Benzene	ND		25.0	26.1		ug/L		105	65 - 125	1	20
Carbon tetrachloride	ND		25.0	33.9		ug/L		136	65 - 140	2	25
Chloroform	ND		25.0	26.6		ug/L		106	65 - 135	2	20
Ethylbenzene	ND		25.0	27.6		ug/L		110	65 - 130	2	20
Tetrachloroethene	ND		25.0	28.0		ug/L		112	65 - 130	3	20

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-22143-B-2 MSD

Matrix: Water

Analysis Batch: 51644

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Toluene	ND		25.0	29.0		ug/L		116	70 - 125	0	20
Trichlorofluoromethane	ND		25.0	31.4		ug/L		126	60 - 145	3	25
Vinyl chloride	ND		25.0	29.0		ug/L		116	45 - 140	2	30
Trichloroethene	ND		25.0	28.4		ug/L		113	65 - 125	0	20
cis-1,2-Dichloroethene	ND		25.0	25.3		ug/L		101	65 - 130	1	20
m,p-Xylene	ND		50.0	55.7		ug/L		111	65 - 130	2	25
o-Xylene	ND		25.0	27.3		ug/L		109	65 - 125	2	20
Xylenes, Total	ND		75.0	83.0		ug/L		111	60 - 130	2	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	111		80 - 120

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-50430/1-A

Matrix: Water

Analysis Batch: 50942

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 50430

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4,6-Trichlorophenol	ND		6.00	0.100	ug/L		09/07/12 10:21	09/10/12 16:36	1
Bis(2-ethylhexyl) phthalate	ND		5.00	1.70	ug/L		09/07/12 10:21	09/10/12 16:36	1
N-Nitrosodimethylamine	ND		5.00	0.100	ug/L		09/07/12 10:21	09/10/12 16:36	1
Pentachlorophenol	ND		5.00	0.400	ug/L		09/07/12 10:21	09/10/12 16:36	1
2,4-Dinitrotoluene	ND		5.00	0.200	ug/L		09/07/12 10:21	09/10/12 16:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol	78		40 - 120	09/07/12 10:21	09/10/12 16:36	1
2-Fluorobiphenyl	90		50 - 120	09/07/12 10:21	09/10/12 16:36	1
2-Fluorophenol	57		30 - 120	09/07/12 10:21	09/10/12 16:36	1
Nitrobenzene-d5	66		45 - 120	09/07/12 10:21	09/10/12 16:36	1
Phenol-d6	62		35 - 120	09/07/12 10:21	09/10/12 16:36	1
Terphenyl-d14	88		50 - 125	09/07/12 10:21	09/10/12 16:36	1

Lab Sample ID: LCS 440-50430/2-A

Matrix: Water

Analysis Batch: 50942

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 50430

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
2,4,6-Trichlorophenol	10.0	7.077		ug/L		71	20 - 139
Bis(2-ethylhexyl) phthalate	10.0	9.425		ug/L		94	61 - 126
N-Nitrosodimethylamine	10.0	6.282		ug/L		63	20 - 143
Pentachlorophenol	10.0	8.564		ug/L		86	20 - 137

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	82		40 - 120
2-Fluorobiphenyl	72		50 - 120

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-50430/2-A
Matrix: Water
Analysis Batch: 50942

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50430

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	61		30 - 120
Nitrobenzene-d5	73		45 - 120
Phenol-d6	67		35 - 120
Terphenyl-d14	87		50 - 125

Lab Sample ID: LCSD 440-50430/3-A
Matrix: Water
Analysis Batch: 50942

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50430

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,6-Trichlorophenol	10.0	7.921		ug/L		79	20 - 139	11	30
Bis(2-ethylhexyl) phthalate	10.0	8.739		ug/L		87	61 - 126	8	20
N-Nitrosodimethylamine	10.0	7.005		ug/L		70	20 - 143	11	20
Pentachlorophenol	10.0	9.138		ug/L		91	20 - 137	6	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol	91		40 - 120
2-Fluorobiphenyl	77		50 - 120
2-Fluorophenol	72		30 - 120
Nitrobenzene-d5	87		45 - 120
Phenol-d6	80		35 - 120
Terphenyl-d14	94		50 - 125

Method: 608 Pesticides - Organochlorine Pesticides Low level

Lab Sample ID: MB 440-51507/1-A
Matrix: Water
Analysis Batch: 51739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0050	0.0025	ug/L		09/12/12 15:13	09/13/12 13:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		35 - 115	09/12/12 15:13	09/13/12 13:15	1
DCB Decachlorobiphenyl (Surr)	73		45 - 120	09/12/12 15:13	09/13/12 13:15	1

Lab Sample ID: LCS 440-51507/2-A
Matrix: Water
Analysis Batch: 51739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51507

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	82		35 - 115
DCB Decachlorobiphenyl (Surr)	84		45 - 120

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 608 Pesticides - Organochlorine Pesticides Low level (Continued)

Lab Sample ID: LCSD 440-51507/3-A

Matrix: Water

Analysis Batch: 51739

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	0.500	0.479		ug/L		96	45 - 115	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	79		35 - 115
DCB Decachlorobiphenyl (Surr)	80		45 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-50070/2

Matrix: Water

Analysis Batch: 50070

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.080	mg/L			09/06/12 08:39	1
Nitrate Nitrite as N	ND		0.26	0.11	mg/L			09/06/12 08:39	1
Nitrite as N	ND		0.15	0.11	mg/L			09/06/12 08:39	1

Lab Sample ID: LCS 440-50070/19

Matrix: Water

Analysis Batch: 50070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.13		mg/L		100	90 - 110
Nitrate Nitrite as N	2.65	2.69		mg/L		101	90 - 110
Nitrite as N	1.52	1.56		mg/L		102	90 - 110

Lab Sample ID: LCS 440-50070/3

Matrix: Water

Analysis Batch: 50070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.09		mg/L		96	90 - 110
Nitrate Nitrite as N	2.65	2.58		mg/L		97	90 - 110
Nitrite as N	1.52	1.49		mg/L		98	90 - 110

Lab Sample ID: 440-22622-A-1 MS

Matrix: Water

Analysis Batch: 50070

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.3		5.65	2.45	LN	mg/L		21	80 - 120
Nitrate Nitrite as N	1.3		13.3	4.39	LN	mg/L		23	80 - 120
Nitrite as N	ND		7.61	1.94	LN	mg/L		26	80 - 120

Lab Sample ID: 440-22622-A-1 MSD

Matrix: Water

Analysis Batch: 50070

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	1.3		5.65	2.26	LN	mg/L		17	80 - 120	8	20

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-22622-A-1 MSD
Matrix: Water
Analysis Batch: 50070

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Nitrate Nitrite as N	1.3		13.3	4.10	LN	mg/L		21	80 - 120	7	20
Nitrite as N	ND		7.61	1.84	LN	mg/L		24	80 - 120	6	20

Lab Sample ID: MB 440-50071/2
Matrix: Water
Analysis Batch: 50071

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	ND		0.50	0.40	mg/L			09/06/12 08:39	1
Sulfate	ND		0.50	0.40	mg/L			09/06/12 08:39	1

Lab Sample ID: LCS 440-50071/3
Matrix: Water
Analysis Batch: 50071

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Chloride	5.00	4.73		mg/L		95	90 - 110
Sulfate	10.0	9.82		mg/L		98	90 - 110

Lab Sample ID: 440-22622-A-1 MS
Matrix: Water
Analysis Batch: 50071

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	
Chloride	77		25.0	85.9	LN	mg/L		35	80 - 120	
Sulfate	33		50.0	43.9	LN	mg/L		21	80 - 120	

Lab Sample ID: 440-22622-A-1 MSD
Matrix: Water
Analysis Batch: 50071

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloride	77		25.0	80.3	LN	mg/L		13	80 - 120	7	20
Sulfate	33		50.0	41.3	LN	mg/L		16	80 - 120	6	20

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 440-50341/5
Matrix: Water
Analysis Batch: 50341

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perchlorate	ND		4.0	0.95	ug/L			09/07/12 07:56	1

Lab Sample ID: LCS 440-50341/8
Matrix: Water
Analysis Batch: 50341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Perchlorate	25.0	25.0		ug/L		100	85 - 115

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 314.0 - Perchlorate (IC) (Continued)

Lab Sample ID: 440-22594-A-1 MS
Matrix: Water
Analysis Batch: 50341

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	ND		25.0	23.6		ug/L		94	80 - 120

Lab Sample ID: 440-22594-A-1 MSD
Matrix: Water
Analysis Batch: 50341

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	ND		25.0	23.3		ug/L		93	80 - 120	1	20

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B)

Lab Sample ID: G2I120000103B
Matrix: Water
Analysis Batch: 2256103

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2256103_P

Analyte	MB Result	MB Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.00000089	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total TCDD	0.0000031	J Q	0.000010	0.00000089	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000012	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total PeCDD	ND		0.000050	0.0000012	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,4,7,8-HxCDD	ND		0.000050	0.0000010	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.00000093	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.00000084	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total HxCDD	ND		0.000050	0.00000084	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,4,6,7,8-HpCDD	ND		0.000050	0.0000012	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total HpCDD	ND		0.000050	0.0000012	ug/L		09/13/12 10:00	09/19/12 23:46	1
OCDD	0.0000028	J Q	0.00010	0.0000017	ug/L		09/13/12 10:00	09/19/12 23:46	1
2,3,7,8-TCDF	ND		0.000010	0.00000066	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total TCDF	ND		0.000010	0.00000066	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,7,8-PeCDF	ND		0.000050	0.00000087	ug/L		09/13/12 10:00	09/19/12 23:46	1
2,3,4,7,8-PeCDF	ND		0.000050	0.00000085	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total PeCDF	ND		0.000050	0.00000085	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,4,7,8-HxCDF	0.0000063	J	0.000050	0.00000098	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,6,7,8-HxCDF	0.0000013	J	0.000050	0.00000090	ug/L		09/13/12 10:00	09/19/12 23:46	1
2,3,4,6,7,8-HxCDF	0.0000010	J Q	0.000050	0.00000074	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,7,8,9-HxCDF	0.0000011	J Q	0.000050	0.00000081	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total HxCDF	0.0000019	J Q	0.000050	0.00000086	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,4,6,7,8-HpCDF	0.0000067	J	0.000050	0.00000084	ug/L		09/13/12 10:00	09/19/12 23:46	1
1,2,3,4,7,8,9-HpCDF	0.0000099	J	0.000050	0.0000012	ug/L		09/13/12 10:00	09/19/12 23:46	1
Total HpCDF	0.000025	J	0.000050	0.00000098	ug/L		09/13/12 10:00	09/19/12 23:46	1
OCDF	0.000012	J	0.00010	0.0000012	ug/L		09/13/12 10:00	09/19/12 23:46	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	110		35 - 197	09/13/12 10:00	09/19/12 23:46	1

Internal Standard	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	50		25 - 164	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,7,8-PeCDD	59		25 - 181	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,4,7,8-HxCDD	71		32 - 141	09/13/12 10:00	09/19/12 23:46	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Lab Sample ID: G21120000103B

Matrix: Water

Analysis Batch: 2256103

Client Sample ID: Method Blank

Prep Type: Total

Prep Batch: 2256103_P

Internal Standard	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C-1,2,3,6,7,8-HxCDD	69		28 - 130	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,4,6,7,8-HpCDD	66		23 - 140	09/13/12 10:00	09/19/12 23:46	1
13C-OCDD	67		17 - 157	09/13/12 10:00	09/19/12 23:46	1
13C-2,3,7,8-TCDF	51		24 - 169	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,7,8-PeCDF	58		24 - 185	09/13/12 10:00	09/19/12 23:46	1
13C-2,3,4,7,8-PeCDF	60		21 - 178	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,6,7,8-HxCDF	69		26 - 123	09/13/12 10:00	09/19/12 23:46	1
13C-2,3,4,6,7,8-HxCDF	71		28 - 136	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,7,8,9-HxCDF	68		29 - 147	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,4,6,7,8-HpCDF	64		28 - 143	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,4,7,8,9-HpCDF	68		26 - 138	09/13/12 10:00	09/19/12 23:46	1
13C-1,2,3,4,7,8-HxCDF	72		26 - 152	09/13/12 10:00	09/19/12 23:46	1

Lab Sample ID: G21120000103C

Matrix: Water

Analysis Batch: 2256103

Client Sample ID: Lab Control Sample

Prep Type: Total

Prep Batch: 2256103_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,7,8-PeCDD	0.00100	0.00113		ug/L		113	70 - 142
1,2,3,4,7,8-HxCDD	0.00100	0.00117		ug/L		117	70 - 164
1,2,3,6,7,8-HxCDD	0.00100	0.00105		ug/L		105	76 - 134
1,2,3,7,8,9-HxCDD	0.00100	0.00104		ug/L		104	64 - 162
1,2,3,4,6,7,8-HpCDD	0.00100	0.00110		ug/L		110	70 - 140
OCDD	0.00200	0.00219	B	ug/L		110	78 - 144
2,3,7,8-TCDF	0.000200	0.000255		ug/L		127	75 - 158
1,2,3,7,8-PeCDF	0.00100	0.00113		ug/L		113	80 - 134
2,3,4,7,8-PeCDF	0.00100	0.00108		ug/L		108	68 - 160
1,2,3,4,7,8-HxCDF	0.00100	0.00108	B	ug/L		108	72 - 134
1,2,3,6,7,8-HxCDF	0.00100	0.00111	B	ug/L		111	84 - 130
2,3,4,6,7,8-HxCDF	0.00100	0.00109	B	ug/L		109	70 - 156
1,2,3,7,8,9-HxCDF	0.00100	0.00112	B	ug/L		112	78 - 130
1,2,3,4,6,7,8-HpCDF	0.00100	0.00114	B	ug/L		114	82 - 122
1,2,3,4,7,8,9-HpCDF	0.00100	0.00110	B	ug/L		110	78 - 138
OCDF	0.00200	0.00210	B	ug/L		105	63 - 170

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
37Cl4-2,3,7,8-TCDD	110		31 - 191

Internal Standard	LCS LCS		Limits
	%Recovery	Qualifier	
13C-2,3,7,8-TCDD	57		20 - 175
13C-1,2,3,7,8-PeCDD	58		21 - 227
13C-1,2,3,4,7,8-HxCDD	64		21 - 193
13C-1,2,3,6,7,8-HxCDD	66		25 - 163
13C-1,2,3,4,6,7,8-HpCDD	64		26 - 166
13C-OCDD	63		13 - 199
13C-2,3,7,8-TCDF	59		22 - 152
13C-1,2,3,7,8-PeCDF	60		21 - 192

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 1613B - Dioxins/Furans, HRGC/HRMS (1613B) (Continued)

Lab Sample ID: G21120000103C
Matrix: Water
Analysis Batch: 2256103

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2256103_P

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,4,7,8-PeCDF	62		13 - 328
13C-1,2,3,6,7,8-HxCDF	64		21 - 159
13C-2,3,4,6,7,8-HxCDF	66		22 - 176
13C-1,2,3,7,8,9-HxCDF	64		17 - 205
13C-1,2,3,4,6,7,8-HpCDF	59		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	66		20 - 186
13C-1,2,3,4,7,8-HxCDF	66		19 - 202

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-51774/1-A
Matrix: Water
Analysis Batch: 52703

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 51774

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		09/13/12 12:35	09/17/12 22:24	1

Lab Sample ID: LCS 440-51774/2-A
Matrix: Water
Analysis Batch: 52703

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 51774

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	525		ug/L		105	85 - 115

Lab Sample ID: 440-22632-1 MS
Matrix: Water
Analysis Batch: 52703

Client Sample ID: Outfall 019 Composite
Prep Type: Total Recoverable
Prep Batch: 51774

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		500	540		ug/L		108	70 - 130

Lab Sample ID: 440-22632-1 MSD
Matrix: Water
Analysis Batch: 52703

Client Sample ID: Outfall 019 Composite
Prep Type: Total Recoverable
Prep Batch: 51774

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	544		ug/L		109	70 - 130	1	20

Lab Sample ID: MB 440-50499/1-D
Matrix: Water
Analysis Batch: 51956

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 51487

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		09/12/12 14:11	09/13/12 19:10	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-50499/2-D
Matrix: Water
Analysis Batch: 51956

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 51487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	470		ug/L		94	85 - 115

Lab Sample ID: 440-22618-I-1-C MS ^2
Matrix: Water
Analysis Batch: 52077

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 51487

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		500	527		ug/L		105	70 - 130

Lab Sample ID: 440-22618-I-1-D MSD ^2
Matrix: Water
Analysis Batch: 52077

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 51487

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	518		ug/L		104	70 - 130	2	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-51710/1-A
Matrix: Water
Analysis Batch: 51892

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 51710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		09/13/12 09:54	09/13/12 17:53	1
Copper	ND		2.0	0.50	ug/L		09/13/12 09:54	09/13/12 17:53	1
Lead	ND		1.0	0.20	ug/L		09/13/12 09:54	09/13/12 17:53	1
Selenium	ND		2.0	0.50	ug/L		09/13/12 09:54	09/13/12 17:53	1

Lab Sample ID: LCS 440-51710/2-A
Matrix: Water
Analysis Batch: 51892

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 51710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	76.6		ug/L		96	85 - 115
Copper	80.0	76.4		ug/L		95	85 - 115
Lead	80.0	78.7		ug/L		98	85 - 115
Selenium	80.0	81.9		ug/L		102	85 - 115

Lab Sample ID: 440-22632-1 MS
Matrix: Water
Analysis Batch: 51892

Client Sample ID: Outfall 019 Composite
Prep Type: Total Recoverable
Prep Batch: 51710

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		80.0	73.9		ug/L		92	70 - 130
Copper	ND		80.0	70.7		ug/L		88	70 - 130
Lead	ND		80.0	75.5		ug/L		94	70 - 130
Selenium	ND		80.0	78.7		ug/L		98	70 - 130

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 440-22632-1 MSD

Matrix: Water

Analysis Batch: 51892

Client Sample ID: Outfall 019 Composite

Prep Type: Total Recoverable

Prep Batch: 51710

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Cadmium	ND		80.0	75.2		ug/L		94	70 - 130	2	20
Copper	ND		80.0	72.1		ug/L		90	70 - 130	2	20
Lead	ND		80.0	76.8		ug/L		96	70 - 130	2	20
Selenium	ND		80.0	78.9		ug/L		99	70 - 130	0	20

Lab Sample ID: MB 440-50499/1-C

Matrix: Water

Analysis Batch: 51565

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 51484

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	ND		1.0	0.10	ug/L		09/12/12 14:09	09/12/12 17:37	1
Copper	1.31	J,DX	2.0	0.50	ug/L		09/12/12 14:09	09/12/12 17:37	1
Lead	ND		1.0	0.20	ug/L		09/12/12 14:09	09/12/12 17:37	1
Selenium	ND		2.0	0.50	ug/L		09/12/12 14:09	09/12/12 17:37	1

Lab Sample ID: LCS 440-50499/2-C

Matrix: Water

Analysis Batch: 51565

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 51484

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Cadmium	80.0	81.8		ug/L		102	85 - 115
Copper	80.0	81.3		ug/L		102	85 - 115
Lead	80.0	83.4		ug/L		104	85 - 115
Selenium	80.0	86.1		ug/L		108	85 - 115

Lab Sample ID: 440-22615-A-2-D MS

Matrix: Water

Analysis Batch: 51565

Client Sample ID: Matrix Spike

Prep Type: Dissolved

Prep Batch: 51484

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Cadmium	ND		80.0	77.5		ug/L		97	70 - 130
Copper	2.6	MB	80.0	76.8		ug/L		93	70 - 130
Lead	ND		80.0	75.9		ug/L		95	70 - 130
Selenium	ND		80.0	79.0		ug/L		99	70 - 130

Lab Sample ID: 440-22615-A-2-E MSD

Matrix: Water

Analysis Batch: 51565

Client Sample ID: Matrix Spike Duplicate

Prep Type: Dissolved

Prep Batch: 51484

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Cadmium	ND		80.0	75.8		ug/L		95	70 - 130	2	20
Copper	2.6	MB	80.0	74.0		ug/L		89	70 - 130	4	20
Lead	ND		80.0	76.6		ug/L		96	70 - 130	1	20
Selenium	ND		80.0	78.1		ug/L		98	70 - 130	1	20

QC Sample Results

Client: MWH Americas Inc
 Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-50489/1-A
 Matrix: Water
 Analysis Batch: 51258

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 50489

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		09/10/12 17:55	09/11/12 14:50	1

Lab Sample ID: LCS 440-50489/2-A
 Matrix: Water
 Analysis Batch: 51258

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 50489

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	8.00	7.81		ug/L		98	85 - 115

Lab Sample ID: 440-22568-G-1-B MS
 Matrix: Water
 Analysis Batch: 51258

Client Sample ID: Matrix Spike
 Prep Type: Total/NA
 Prep Batch: 50489

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		8.00	7.75		ug/L		97	70 - 130

Lab Sample ID: 440-22568-G-1-C MSD
 Matrix: Water
 Analysis Batch: 51258

Client Sample ID: Matrix Spike Duplicate
 Prep Type: Total/NA
 Prep Batch: 50489

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		8.00	7.75		ug/L		97	70 - 130	0	20

Lab Sample ID: MB 440-50499/1-E
 Matrix: Water
 Analysis Batch: 52166

Client Sample ID: Method Blank
 Prep Type: Dissolved
 Prep Batch: 52001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		09/14/12 12:25	09/14/12 16:04	1

Lab Sample ID: LCS 440-50499/2-E
 Matrix: Water
 Analysis Batch: 52166

Client Sample ID: Lab Control Sample
 Prep Type: Dissolved
 Prep Batch: 52001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	8.00	7.46		ug/L		93	85 - 115

Lab Sample ID: 440-22632-1 MS
 Matrix: Water
 Analysis Batch: 52166

Client Sample ID: Outfall 019 Composite
 Prep Type: Dissolved
 Prep Batch: 52001

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		8.00	8.04		ug/L		100	70 - 130

Lab Sample ID: 440-22632-1 MSD
 Matrix: Water
 Analysis Batch: 52166

Client Sample ID: Outfall 019 Composite
 Prep Type: Dissolved
 Prep Batch: 52001

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		8.00	7.67		ug/L		96	70 - 130	5	20

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-52397/1-A
Matrix: Water
Analysis Batch: 52398

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52397

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0	1.4	mg/L		09/17/12 07:02	09/17/12 07:16	1

Lab Sample ID: LCS 440-52397/2-A
Matrix: Water
Analysis Batch: 52398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	20.0	19.0		mg/L		95	78 - 114

Lab Sample ID: LCSD 440-52397/3-A
Matrix: Water
Analysis Batch: 52398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52397

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	20.0	17.7		mg/L		88	78 - 114	7	11

Lab Sample ID: 440-22898-A-1-A MS
Matrix: Water
Analysis Batch: 52398

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52397

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	ND		19.8	16.4		mg/L		83	78 - 114

Lab Sample ID: 440-22898-B-1-A MSD
Matrix: Water
Analysis Batch: 52398

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52397

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	ND		20.2	17.7		mg/L		88	78 - 114	7	18

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 440-50407/6
Matrix: Water
Analysis Batch: 50407

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	ND		0.10	0.040	NTU			09/07/12 08:39	1

Lab Sample ID: 440-22630-A-3 DU
Matrix: Water
Analysis Batch: 50407

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	0.13		0.110		NTU		17	20

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-51390/1
Matrix: Water
Analysis Batch: 51390

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			09/12/12 09:14	1

Lab Sample ID: LCS 440-51390/2
Matrix: Water
Analysis Batch: 51390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1020		mg/L		102	90 - 110

Lab Sample ID: 440-22752-B-1 DU
Matrix: Water
Analysis Batch: 51390

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	900		883		mg/L		2	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-51888/1
Matrix: Water
Analysis Batch: 51888

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		10	10	mg/L			09/13/12 19:09	1

Lab Sample ID: LCS 440-51888/2
Matrix: Water
Analysis Batch: 51888

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	995		mg/L		100	85 - 115

Lab Sample ID: 440-22960-I-1 DU
Matrix: Water
Analysis Batch: 51888

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	24		25.0		mg/L		4	10

Method: SM 4500 CN E - Cyanide, Total (Low Level)

Lab Sample ID: MB 440-51262/1-A
Matrix: Water
Analysis Batch: 51319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51262

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		5.0	3.0	ug/L		09/11/12 16:48	09/11/12 21:38	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: SM 4500 CN E - Cyanide, Total (Low Level) (Continued)

Lab Sample ID: LCS 440-51262/2-A
Matrix: Water
Analysis Batch: 51319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	100	101		ug/L		101	90 - 110

Lab Sample ID: 440-22696-H-1-B MS
Matrix: Water
Analysis Batch: 51319

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 51262

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		100	105		ug/L		105	70 - 115

Lab Sample ID: 440-22696-H-1-C MSD
Matrix: Water
Analysis Batch: 51319

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 51262

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		100	97.3		ug/L		97	70 - 115	7	15

Method: SM 4500 NH3 C - Ammonia

Lab Sample ID: MB 440-51595/1-A
Matrix: Water
Analysis Batch: 51600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51595

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.400	0.157	mg/L		09/12/12 20:41	09/12/12 20:47	1

Lab Sample ID: LCS 440-51595/2-A
Matrix: Water
Analysis Batch: 51600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51595

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	10.0	9.520		mg/L		95	85 - 115

Lab Sample ID: 440-22632-1 MS
Matrix: Water
Analysis Batch: 51600

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA
Prep Batch: 51595

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.280	J,DX	10.0	8.400		mg/L		81	70 - 120

Lab Sample ID: 440-22632-1 MSD
Matrix: Water
Analysis Batch: 51600

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA
Prep Batch: 51595

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	0.280	J,DX	10.0	8.680		mg/L		84	70 - 120	3	15

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 440-50643/7
Matrix: Water
Analysis Batch: 50643

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.75	mg/L			09/07/12 08:50	1

Lab Sample ID: LCS 440-50643/6
Matrix: Water
Analysis Batch: 50643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.65		mg/L		97	90 - 110

Lab Sample ID: 440-22632-1 MS
Matrix: Water
Analysis Batch: 50643

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	ND		5.00	5.45		mg/L		109	80 - 120

Lab Sample ID: 440-22632-1 MSD
Matrix: Water
Analysis Batch: 50643

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Total Organic Carbon	ND		5.00	5.53		mg/L		111	80 - 120	2	20

Method: SM 5540C - Methylene Blue Active Substances (MBAS)

Lab Sample ID: MB 440-50629/4
Matrix: Water
Analysis Batch: 50629

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Blue Active Substances	ND		0.10	0.050	mg/L			09/07/12 22:11	1

Lab Sample ID: LCS 440-50629/3
Matrix: Water
Analysis Batch: 50629

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Blue Active Substances	0.250	0.250		mg/L		100	90 - 110

Lab Sample ID: 440-22632-1 MS
Matrix: Water
Analysis Batch: 50629

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Blue Active Substances	ND		0.250	0.245		mg/L		98	50 - 125

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: SM 5540C - Methylene Blue Active Substances (MBAS) (Continued)

Lab Sample ID: 440-22632-1 MSD
Matrix: Water
Analysis Batch: 50629

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methylene Blue Active Substances	ND		0.250	0.247		mg/L		99	50 - 125	1	20

Method: SM5210B - BOD, 5 Day

Lab Sample ID: USB 440-50415/1 USB
Matrix: Water
Analysis Batch: 50415

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	0.50	mg/L			09/07/12 09:30	1

Lab Sample ID: LCS 440-50415/4
Matrix: Water
Analysis Batch: 50415

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	199	194		mg/L		98	85 - 115

Lab Sample ID: LCSD 440-50415/5
Matrix: Water
Analysis Batch: 50415

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biochemical Oxygen Demand	199	195		mg/L		98	85 - 115	1	20

Method: 5174 -

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
U Total	0	U	1		pCi/L		09/19/12 00:00	09/19/12 00:00	1

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
U Total	56.5	59.4		pCi/L		105	80 - 120

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
U Total	0.365	J	0.378	J	pCi/L		3	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 900 - 900

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Beta	0.076	U	4		pCi/L		09/17/12 00:00	09/25/12 17:23	1
GrossAlpha	-0.29	U	3		pCi/L		09/17/12 00:00	09/25/12 17:23	1

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gross Beta	33.7	29.7		pCi/L		88	70 - 130
GrossAlpha	37	37.1		pCi/L		100	70 - 130

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Gross Beta	1.62	U	2.55	U	pCi/L		0	
GrossAlpha	0.749	U	0.356	U	pCi/L		0	

Method: 901.1 - 901.1

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cs-137	-2.67	U	20		pCi/L		09/11/12 00:00	09/13/12 00:00	1
K-40	-64.4	U	25		pCi/L		09/11/12 00:00	09/13/12 00:00	1

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt-60	492	455		pCi/L		92	80 - 120
Cs-137	582	618		pCi/L		106	80 - 120

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Cs-137	-0.762	U	-2.17	U	pCi/L		0	
K-40	-7.85	U	-15.3	U	pCi/L		0	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 903.1 - 903.1

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ra-226	-0.031	U	1		pCi/L		09/24/12 00:00	09/24/12 12:33	1

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ra-226	50.1	41.2		pCi/L		82	80 - 120

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Ra-226	0.244	U	0.195	U	pCi/L		0	

Method: 904 - 904

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ra-228	-0.066	U	1		pCi/L		09/24/12 00:00	09/24/12 15:36	1

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ra-228	4.2	4.07		pCi/L		97	60 - 140

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Ra-228	0.037	U	0.192	U	pCi/L		0	

Method: 905 - 905

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sr-90	0.475	U	2		pCi/L		09/25/12 00:00	09/25/12 13:28	1

QC Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Method: 905 - 905 (Continued)

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sr-90	16.8	18.3		pCi/L		109	80 - 120

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	Limit
Sr-90	-0.096	U	0.054	U	pCi/L		0	

Method: 906 - 906

Lab Sample ID: S209021-04
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	46	U	500		pCi/L		09/15/12 00:00	09/21/12 15:49	1

Lab Sample ID: S209021-03
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Tritium	2160	2010		pCi/L		93	80 - 120

Lab Sample ID: S209021-05
Matrix: WATER
Analysis Batch: 8625

Client Sample ID: OUTFALL 019(440-22632-1) DU
Prep Type: Total/NA
Prep Batch: 8625_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	Limit
Tritium	18.7	U	9.54	U	pCi/L		0	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

GC/MS VOA

Analysis Batch: 51644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22143-B-2 MS	Matrix Spike	Total/NA	Water	624	
440-22143-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	624	
440-22440-1	Outfall 019	Total/NA	Water	624	
440-22440-2	Trip Blanks	Total/NA	Water	624	
LCS 440-51644/5	Lab Control Sample	Total/NA	Water	624	
MB 440-51644/4	Method Blank	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 50430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	625	
LCS 440-50430/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 440-50430/3-A	Lab Control Sample Dup	Total/NA	Water	625	
MB 440-50430/1-A	Method Blank	Total/NA	Water	625	

Analysis Batch: 50942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	625	50430
LCS 440-50430/2-A	Lab Control Sample	Total/NA	Water	625	50430
LCSD 440-50430/3-A	Lab Control Sample Dup	Total/NA	Water	625	50430
MB 440-50430/1-A	Method Blank	Total/NA	Water	625	50430

GC Semi VOA

Prep Batch: 51507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	608	
LCS 440-51507/2-A	Lab Control Sample	Total/NA	Water	608	
LCSD 440-51507/3-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 440-51507/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 51739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	608 Pesticides	51507
LCS 440-51507/2-A	Lab Control Sample	Total/NA	Water	608 Pesticides	51507
LCSD 440-51507/3-A	Lab Control Sample Dup	Total/NA	Water	608 Pesticides	51507
MB 440-51507/1-A	Method Blank	Total/NA	Water	608 Pesticides	51507

HPLC/IC

Analysis Batch: 50070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22622-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-22622-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-22632-1	Outfall 019 Composite	Total/NA	Water	300.0	
LCS 440-50070/19	Lab Control Sample	Total/NA	Water	300.0	
LCS 440-50070/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-50070/2	Method Blank	Total/NA	Water	300.0	

QC Association Summary

Client: MWH Americas Inc
 Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

HPLC/IC (Continued)

Analysis Batch: 50071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22622-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-22622-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-22632-1	Outfall 019 Composite	Total/NA	Water	300.0	
LCS 440-50071/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-50071/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 50341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22594-A-1 MS	Matrix Spike	Total/NA	Water	314.0	
440-22594-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	314.0	
440-22632-1	Outfall 019 Composite	Total/NA	Water	314.0	
LCS 440-50341/8	Lab Control Sample	Total/NA	Water	314.0	
MB 440-50341/5	Method Blank	Total/NA	Water	314.0	

Specialty Organics

Analysis Batch: 2256103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total	Water	1613B	
G21120000103B	Method Blank	Total	Water	1613B	
G21120000103C	Lab Control Sample	Total	Water	1613B	

Prep Batch: 2256103_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total	Water	3542	
G21120000103B	Method Blank	Total	Water	3542	
G21120000103C	Lab Control Sample	Total	Water	3542	

Metals

Prep Batch: 50489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22568-G-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-22568-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
440-22632-1	Outfall 019 Composite	Total/NA	Water	245.1	
LCS 440-50489/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 440-50489/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 51258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22568-G-1-B MS	Matrix Spike	Total/NA	Water	245.1	50489
440-22568-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	50489
440-22632-1	Outfall 019 Composite	Total/NA	Water	245.1	50489
LCS 440-50489/2-A	Lab Control Sample	Total/NA	Water	245.1	50489
MB 440-50489/1-A	Method Blank	Total/NA	Water	245.1	50489

Prep Batch: 51484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22615-A-2-D MS	Matrix Spike	Dissolved	Water	200.2	
440-22615-A-2-E MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	
440-22632-1	Outfall 019 Composite	Dissolved	Water	200.2	
LCS 440-50499/2-C	Lab Control Sample	Dissolved	Water	200.2	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Metals (Continued)

Prep Batch: 51484 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-50499/1-C	Method Blank	Dissolved	Water	200.2	

Prep Batch: 51487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22618-I-1-C MS ^2	Matrix Spike	Dissolved	Water	200.2	
440-22618-I-1-D MSD ^2	Matrix Spike Duplicate	Dissolved	Water	200.2	
440-22632-1	Outfall 019 Composite	Dissolved	Water	200.2	
LCS 440-50499/2-D	Lab Control Sample	Dissolved	Water	200.2	
MB 440-50499/1-D	Method Blank	Dissolved	Water	200.2	

Analysis Batch: 51565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22615-A-2-D MS	Matrix Spike	Dissolved	Water	200.8	51484
440-22615-A-2-E MSD	Matrix Spike Duplicate	Dissolved	Water	200.8	51484
440-22632-1	Outfall 019 Composite	Dissolved	Water	200.8	51484
LCS 440-50499/2-C	Lab Control Sample	Dissolved	Water	200.8	51484
MB 440-50499/1-C	Method Blank	Dissolved	Water	200.8	51484

Prep Batch: 51710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total Recoverable	Water	200.2	
440-22632-1 MS	Outfall 019 Composite	Total Recoverable	Water	200.2	
440-22632-1 MSD	Outfall 019 Composite	Total Recoverable	Water	200.2	
LCS 440-51710/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-51710/1-A	Method Blank	Total Recoverable	Water	200.2	

Prep Batch: 51774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total Recoverable	Water	200.2	
440-22632-1 MS	Outfall 019 Composite	Total Recoverable	Water	200.2	
440-22632-1 MSD	Outfall 019 Composite	Total Recoverable	Water	200.2	
LCS 440-51774/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-51774/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 51892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total Recoverable	Water	200.8	51710
440-22632-1 MS	Outfall 019 Composite	Total Recoverable	Water	200.8	51710
440-22632-1 MSD	Outfall 019 Composite	Total Recoverable	Water	200.8	51710
LCS 440-51710/2-A	Lab Control Sample	Total Recoverable	Water	200.8	51710
MB 440-51710/1-A	Method Blank	Total Recoverable	Water	200.8	51710

Analysis Batch: 51956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Dissolved	Water	200.7 Rev 4.4	51487
LCS 440-50499/2-D	Lab Control Sample	Dissolved	Water	200.7 Rev 4.4	51487
MB 440-50499/1-D	Method Blank	Dissolved	Water	200.7 Rev 4.4	51487

Prep Batch: 52001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Dissolved	Water	245.1	
440-22632-1 MS	Outfall 019 Composite	Dissolved	Water	245.1	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Metals (Continued)

Prep Batch: 52001 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1 MSD	Outfall 019 Composite	Dissolved	Water	245.1	
LCS 440-50499/2-E	Lab Control Sample	Dissolved	Water	245.1	
MB 440-50499/1-E	Method Blank	Dissolved	Water	245.1	

Analysis Batch: 52077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22618-I-1-C MS ^2	Matrix Spike	Dissolved	Water	200.7 Rev 4.4	51487
440-22618-I-1-D MSD ^2	Matrix Spike Duplicate	Dissolved	Water	200.7 Rev 4.4	51487

Analysis Batch: 52166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Dissolved	Water	245.1	52001
440-22632-1 MS	Outfall 019 Composite	Dissolved	Water	245.1	52001
440-22632-1 MSD	Outfall 019 Composite	Dissolved	Water	245.1	52001
LCS 440-50499/2-E	Lab Control Sample	Dissolved	Water	245.1	52001
MB 440-50499/1-E	Method Blank	Dissolved	Water	245.1	52001

Analysis Batch: 52703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total Recoverable	Water	200.7 Rev 4.4	51774
440-22632-1 MS	Outfall 019 Composite	Total Recoverable	Water	200.7 Rev 4.4	51774
440-22632-1 MSD	Outfall 019 Composite	Total Recoverable	Water	200.7 Rev 4.4	51774
LCS 440-51774/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	51774
MB 440-51774/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	51774

General Chemistry

Analysis Batch: 50212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22440-1	Outfall 019	Total/NA	Water	SM 2540F	

Analysis Batch: 50407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22630-A-3 DU	Duplicate	Total/NA	Water	180.1	
440-22632-1	Outfall 019 Composite	Total/NA	Water	180.1	
MB 440-50407/6	Method Blank	Total/NA	Water	180.1	

Analysis Batch: 50415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM5210B	
LCS 440-50415/4	Lab Control Sample	Total/NA	Water	SM5210B	
LCSD 440-50415/5	Lab Control Sample Dup	Total/NA	Water	SM5210B	
USB 440-50415/1 USB	Method Blank	Total/NA	Water	SM5210B	

Analysis Batch: 50629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 5540C	
440-22632-1 MS	Outfall 019 Composite	Total/NA	Water	SM 5540C	
440-22632-1 MSD	Outfall 019 Composite	Total/NA	Water	SM 5540C	
LCS 440-50629/3	Lab Control Sample	Total/NA	Water	SM 5540C	
MB 440-50629/4	Method Blank	Total/NA	Water	SM 5540C	

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

General Chemistry (Continued)

Analysis Batch: 50643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 5310B	
440-22632-1 MS	Outfall 019 Composite	Total/NA	Water	SM 5310B	
440-22632-1 MSD	Outfall 019 Composite	Total/NA	Water	SM 5310B	
LCS 440-50643/6	Lab Control Sample	Total/NA	Water	SM 5310B	
MB 440-50643/7	Method Blank	Total/NA	Water	SM 5310B	

Prep Batch: 51262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	Distill/CN	
440-22696-H-1-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
440-22696-H-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	
LCS 440-51262/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 440-51262/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 51319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 4500 CN E	51262
440-22696-H-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	51262
440-22696-H-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	51262
LCS 440-51262/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	51262
MB 440-51262/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	51262

Analysis Batch: 51390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 2540C	
440-22752-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 440-51390/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-51390/1	Method Blank	Total/NA	Water	SM 2540C	

Prep Batch: 51595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 B	
440-22632-1 MS	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 B	
440-22632-1 MSD	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 B	
LCS 440-51595/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
MB 440-51595/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 51600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 C	51595
440-22632-1 MS	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 C	51595
440-22632-1 MSD	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 C	51595
LCS 440-51595/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 C	51595
MB 440-51595/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 C	51595

Analysis Batch: 51888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	SM 2540D	
440-22960-I-1 DU	Duplicate	Total/NA	Water	SM 2540D	
LCS 440-51888/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-51888/1	Method Blank	Total/NA	Water	SM 2540D	

QC Association Summary

Client: MWH Americas Inc
 Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

General Chemistry (Continued)

Prep Batch: 52397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22440-1	Outfall 019	Total/NA	Water	1664A	
440-22898-A-1-A MS	Matrix Spike	Total/NA	Water	1664A	
440-22898-B-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	1664A	
LCS 440-52397/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCS 440-52397/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-52397/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 52398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22440-1	Outfall 019	Total/NA	Water	1664A	52397
440-22898-A-1-A MS	Matrix Spike	Total/NA	Water	1664A	52397
440-22898-B-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	1664A	52397
LCS 440-52397/2-A	Lab Control Sample	Total/NA	Water	1664A	52397
LCS 440-52397/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	52397
MB 440-52397/1-A	Method Blank	Total/NA	Water	1664A	52397

Subcontract

Analysis Batch: 8625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	900	8625_P
440-22632-1	Outfall 019 Composite	Total/NA	Water	904	8625_P
440-22632-1	Outfall 019 Composite	Total/NA	Water	901.1	8625_P
440-22632-1	Outfall 019 Composite	Total/NA	Water	906	8625_P
440-22632-1	Outfall 019 Composite	Total/NA	Water	903.1	8625_P
440-22632-1	Outfall 019 Composite	Total/NA	Water	905	8625_P
440-22632-1	Outfall 019 Composite	Total/NA	Water	5174	8625_P
440-22632-2	Trip Blank-Eberline	Total/NA	Water	900	8625_P
440-22632-2	Trip Blank-Eberline	Total/NA	Water	904	8625_P
440-22632-2	Trip Blank-Eberline	Total/NA	Water	901.1	8625_P
440-22632-2	Trip Blank-Eberline	Total/NA	Water	903.1	8625_P
440-22632-2	Trip Blank-Eberline	Total/NA	Water	905	8625_P
440-22632-2	Trip Blank-Eberline	Total/NA	Water	5174	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	900	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	904	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	901.1	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	906	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	903.1	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	905	8625_P
S209021-03	Lab Control Sample	Total/NA	WATER	5174	8625_P
S209021-04	Method Blank	Total/NA	WATER	900	8625_P
S209021-04	Method Blank	Total/NA	WATER	904	8625_P
S209021-04	Method Blank	Total/NA	WATER	901.1	8625_P
S209021-04	Method Blank	Total/NA	WATER	906	8625_P
S209021-04	Method Blank	Total/NA	WATER	903.1	8625_P
S209021-04	Method Blank	Total/NA	WATER	905	8625_P
S209021-04	Method Blank	Total/NA	WATER	5174	8625_P
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	900	8625_P
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	904	8625_P
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	901.1	8625_P
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	906	8625_P
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	903.1	8625_P

QC Association Summary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Subcontract (Continued)

Analysis Batch: 8625 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	905	8625_P
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	5174	8625_P

Prep Batch: 8625_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-22632-1	Outfall 019 Composite	Total/NA	Water	General Prep	
440-22632-2	Trip Blank-Eberline	Total/NA	Water	General Prep	
S209021-03	Lab Control Sample	Total/NA	WATER	General Prep	
S209021-04	Method Blank	Total/NA	WATER	General Prep	
S209021-05	OUTFALL 019(440-22632-1) DU	Total/NA	WATER	General Prep	

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
LN	MS and/or MSD below acceptance limits. See Blank Spike (LCS)

DIOXIN

Qualifier	Qualifier Description
J	Estimated result. Result is less than the reporting limit.
Q	Estimated maximum possible concentration (EMPC).
B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Metals

Qualifier	Qualifier Description
MB	Analyte present in the method blank
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

General Chemistry

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL

Subcontract

Qualifier	Qualifier Description
U	The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
J	The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: MWH Americas Inc
 Project/Site: Monthly Outfall 19 Grab

TestAmerica Job ID: 440-22440-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0671	10-13-12
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAC	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	09-30-12
New Mexico	State Program	6	N/A	01-31-12
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAC	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14

Laboratory: TestAmerica West Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-14
Alaska (UST)	State Program	10	UST-055	12-18-12
Arizona	State Program	9	AZ0708	08-11-13
Arkansas DEQ	State Program	6	88-0691	06-17-13
California	NELAC	9	1119CA	01-31-13
Colorado	State Program	8	N/A	08-31-13
Connecticut	State Program	1	PH-0691	06-30-13
Florida	NELAC	4	E87570	06-30-13
Guam	State Program	9	N/A	08-31-13
Hawaii	State Program	9	N/A	01-31-13
Illinois	NELAC	5	200060	03-17-13
Kansas	NELAC	7	E-10375	10-31-12
Louisiana	NELAC	6	30612	06-30-13
Michigan	State Program	5	9947	01-31-13
Nevada	State Program	9	CA44	07-31-13
New Jersey	NELAC	2	CA005	06-30-13
New York	NELAC	2	11666	04-01-13
Northern Mariana Islands	State Program	9	MP0007	01-31-13
Oregon	NELAC	10	CA200005	03-28-13
Pennsylvania	NELAC	3	68-01272	03-31-13
South Carolina	State Program	4	87014	06-30-13
Texas	NELAC	6	T104704399-08-TX	05-31-13
US Fish & Wildlife	Federal		LE148388-0	02-28-13
USDA	Federal		P330-11-00436	12-30-14
Utah	NELAC	8	QUAN1	01-31-13
Washington	State Program	10	C581	05-05-13
West Virginia	State Program	3	9930C	12-31-12
West Virginia DEP	State Program	3	334	07-31-13
Wisconsin	State Program	5	998204680	08-31-13
Wyoming	State Program	8	8TMS-Q	01-31-13

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Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-22440-1

Login Number: 22440

List Number: 1

Creator: Perez, Angel

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	Rick Banaga
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



APPENDIX F

Section 9

Arroyo Simi-Frontier Park – August 9, 2012

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-19900-1

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: 440-19900-1
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
Arroyo Simi-FP	440-19900-1	N/A	Water	8/9/2012 11:45:00 AM	525.2, SM 2340B

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact. 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 SM2340B—Hardness

Reviewed By: P. Meeks

Date Reviewed: September 25, 2012

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, SM2340B*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, six months for ICP metals, was met.
- Calibration: Calibration criteria were met. All initial and continuing calibration recoveries were within 90-110%. CRDL recoveries were within the control limits of 70-130%.
- Blanks: The method blank and CCBs had no applicable detects.
- Interference Check Samples: Recoveries were within the method-established control limits.
- Blank Spikes and Laboratory Control Samples: Recoveries were within method-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- 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.

B. EPA METHOD 525.2—Semivolatile Organic Compounds (SVOCs)

Reviewed By: L. Calvin

Date Reviewed: September 27, 2012

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 525.2*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted within 24 hours of collection and analyzed within 30 days of extraction.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria were met. The initial calibration average RRFs were ≥ 0.05 and %RSD $\leq 30\%$. The continuing calibration RRFs were ≥ 0.05 and recoveries were within the method QC limits of 70-130%.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on the LCS/LCSD results.
- 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 internal standard area counts and retention times were within the method control limits established by the average initial calibration standards of $\pm 30\%$.
- Compound Identification: Compound identification was verified. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this analysis.
- System Performance: Review of the raw data indicated no problems with system performance.

Validated Sample Result Forms 440-19900-1

Analysis Method 525.2

Sample Name Arroyo Simi-FP **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: 440-19900-1 **Sample Date:** 8/9/2012 11:45:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	2921-88-2	ND	1.0	0.080	ug/L		U	
Diazinon	333-41-5	ND	0.25	0.040	ug/L		U	

Analysis Method SM 2340B

Sample Name Arroyo Simi-FP **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: 440-19900-1 **Sample Date:** 8/9/2012 11:45:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness, as CaCO3	STL00009	650	0.33	0.17	mg/L			

APPENDIX F

Section 10

Arroyo Simi-Frontier Park – August 9, 2012

Test America Analytical Laboratory Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-19900-1

Client Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

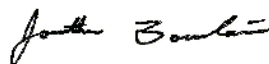
For:

MWH Americas Inc

618 Michillinda Avenue, Suite 200

Arcadia, California 91007

Attn: Bronwyn Kelly



Authorized for release by:

8/23/2012 5:56:29 PM

Jonathan Bousseilaire

Project Manager I

jonathan.bousseilaire@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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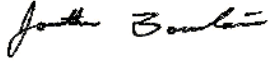
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I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate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



Jonathan Bouselaire
Project Manager I
8/23/2012 5:56:29 PM



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Sample Summary

Client: MWH Americas Inc
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-19900-1	Arroyo Simi-FP	Water	08/09/12 11:45	08/09/12 17:55

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Case Narrative

Client: MWH Americas Inc
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Job ID: 440-19900-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-19900-1

Comments

No additional comments.

Receipt

The sample was received on 8/9/2012 5:55 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

GC/MS Semi VOA

No analytical or quality issues were noted.

GC Semi VOA

Method(s) 608: The following sample(s) required a copper clean-up to reduce matrix interferences caused by sulfur: (LCS 440-44795/5-A), (MB 440-44795/1-A), Arroyo Simi-FP (440-19900-1), Effluent (Composite) (440-19541-3), Effluent (Composite) MS (440-19541-3 MS), Effluent (Composite) MSD (440-19541-3 MSD).

Method(s) 608: The capping continuing calibration verification (CCV) associated with batch 44904 analyzed on 8/14/12 at 20:12 on instrument GC#54 did not meet criteria on both columns. The associated samples were analyzed twice with similar results.

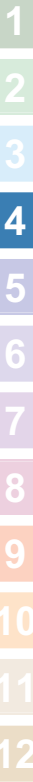
No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.



Client Sample Results

Client: MWH Americas Inc
 Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Client Sample ID: Arroyo Simi-FP

Lab Sample ID: 440-19900-1

Date Collected: 08/09/12 11:45

Matrix: Water

Date Received: 08/09/12 17:55

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.0	0.080	ug/L		08/10/12 15:11	08/13/12 10:19	1
Diazinon	ND		0.25	0.040	ug/L		08/10/12 15:11	08/13/12 10:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,3-Dimethyl-2-nitrobenzene	111		70 - 130				08/10/12 15:11	08/13/12 10:19	1
Perylene-d12	109		70 - 130				08/10/12 15:11	08/13/12 10:19	1
Triphenylphosphate	111		70 - 130				08/10/12 15:11	08/13/12 10:19	1

Method: 608 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.095	0.076	ug/L		08/12/12 13:07	08/14/12 18:19	1
Dieldrin	ND		0.0048	0.0019	ug/L		08/12/12 13:07	08/14/12 18:19	1
Toxaphene	ND		0.48	0.24	ug/L		08/12/12 13:07	08/14/12 18:19	1
4,4'-DDD	ND		0.0048	0.0038	ug/L		08/12/12 13:07	08/14/12 18:19	1
4,4'-DDE	ND		0.0048	0.0029	ug/L		08/12/12 13:07	08/14/12 18:19	1
4,4'-DDT	ND		0.0095	0.0038	ug/L		08/12/12 13:07	08/14/12 18:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		35 - 115				08/12/12 13:07	08/14/12 18:19	1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Aroclor 1221	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Aroclor 1232	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Aroclor 1242	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Aroclor 1248	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Aroclor 1254	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Aroclor 1260	ND		0.48	0.24	ug/L		08/12/12 13:07	08/13/12 14:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82		45 - 120				08/12/12 13:07	08/13/12 14:44	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness, as CaCO3	650		0.33	0.17	mg/L			08/13/12 16:09	1

Lab Chronicle

Client: MWH Americas Inc
 Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Client Sample ID: Arroyo Simi-FP

Lab Sample ID: 440-19900-1

Date Collected: 08/09/12 11:45

Matrix: Water

Date Received: 08/09/12 17:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	525.2			1000 mL	1 mL	44589	08/10/12 15:11	AG	TAL IRV
Total/NA	Analysis	525.2		1			44835	08/13/12 10:19	JM	TAL IRV
Total/NA	Prep	608			1050 mL	2 mL	44795	08/12/12 13:07	AB	TAL IRV
Total/NA	Analysis	608		1			44899	08/13/12 14:44	JM	TAL IRV
Total/NA	Analysis	608		1			44904	08/14/12 18:19	DD	TAL IRV
Total/NA	Analysis	SM 2340B		1			45023	08/13/12 16:09	FR	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



QC Sample Results

Client: MWH Americas Inc
 Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-44589/1-A

Matrix: Water

Analysis Batch: 44835

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44589

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.0	0.080	ug/L		08/10/12 15:11	08/13/12 10:46	1
Diazinon	ND		0.25	0.040	ug/L		08/10/12 15:11	08/13/12 10:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,3-Dimethyl-2-nitrobenzene	111		70 - 130	08/10/12 15:11	08/13/12 10:46	1
Perylene-d12	101		70 - 130	08/10/12 15:11	08/13/12 10:46	1
Triphenylphosphate	119		70 - 130	08/10/12 15:11	08/13/12 10:46	1

Lab Sample ID: LCS 440-44589/2-A

Matrix: Water

Analysis Batch: 45109

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 44589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chlorpyrifos	5.00	5.07		ug/L		101	70 - 130
Diazinon	5.00	4.50		ug/L		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,3-Dimethyl-2-nitrobenzene	94		70 - 130
Perylene-d12	102		70 - 130
Triphenylphosphate	115		70 - 130

Lab Sample ID: LCSD 440-44589/3-A

Matrix: Water

Analysis Batch: 44835

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 44589

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Chlorpyrifos	5.00	5.86		ug/L		117	70 - 130	10	30
Diazinon	5.00	4.30		ug/L		86	70 - 130	27	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,3-Dimethyl-2-nitrobenzene	104		70 - 130
Perylene-d12	118		70 - 130
Triphenylphosphate	112		70 - 130

Method: 608 - Organochlorine Pesticides in Water

Lab Sample ID: MB 440-44795/1-A

Matrix: Water

Analysis Batch: 44904

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44795

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.10	0.080	ug/L		08/12/12 13:07	08/13/12 14:25	1
Dieldrin	ND		0.0050	0.0020	ug/L		08/12/12 13:07	08/13/12 14:25	1
Toxaphene	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 14:25	1
4,4'-DDD	ND		0.0050	0.0040	ug/L		08/12/12 13:07	08/13/12 14:25	1
4,4'-DDE	ND		0.0050	0.0030	ug/L		08/12/12 13:07	08/13/12 14:25	1
4,4'-DDT	ND		0.010	0.0040	ug/L		08/12/12 13:07	08/13/12 14:25	1

QC Sample Results

Client: MWH Americas Inc
 Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Method: 608 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: MB 440-44795/1-A

Matrix: Water

Analysis Batch: 44904

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44795

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	93		35 - 115	08/12/12 13:07	08/13/12 14:25	1

Lab Sample ID: LCS 440-44795/2-A

Matrix: Water

Analysis Batch: 44904

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 44795

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	
Dieldrin	0.500	0.522		ug/L		104	55 - 115	
4,4'-DDD	0.500	0.523		ug/L		105	55 - 120	
4,4'-DDE	0.500	0.540		ug/L		108	50 - 120	
4,4'-DDT	0.500	0.556		ug/L		111	55 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	90		35 - 115

Lab Sample ID: 440-19541-A-3-A MS

Matrix: Water

Analysis Batch: 44904

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 44795

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	
									Limits	
Dieldrin	ND		0.500	0.505		ug/L		101	50 - 120	
4,4'-DDD	ND		0.500	0.518		ug/L		104	50 - 125	
4,4'-DDE	ND		0.500	0.522		ug/L		104	45 - 125	
4,4'-DDT	ND		0.500	0.540		ug/L		108	50 - 125	

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	76		35 - 115

Lab Sample ID: 440-19541-A-3-B MSD

Matrix: Water

Analysis Batch: 44904

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 44795

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
									Limits		RPD	Limit
Dieldrin	ND		0.500	0.507		ug/L		101	50 - 120	NC	30	
4,4'-DDD	ND		0.500	0.517		ug/L		103	50 - 125	NC	30	
4,4'-DDE	ND		0.500	0.528		ug/L		106	45 - 125	NC	30	
4,4'-DDT	ND		0.500	0.531		ug/L		106	50 - 125	NC	30	

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	80		35 - 115

QC Sample Results

Client: MWH Americas Inc
 Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Method: 608 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 440-44795/1-A

Matrix: Water

Analysis Batch: 44899

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 44795

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1
Aroclor 1221	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1
Aroclor 1232	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1
Aroclor 1242	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1
Aroclor 1248	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1
Aroclor 1254	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1
Aroclor 1260	ND		0.50	0.25	ug/L		08/12/12 13:07	08/13/12 12:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	81		45 - 120	08/12/12 13:07	08/13/12 12:59	1

Lab Sample ID: LCS 440-44795/5-A

Matrix: Water

Analysis Batch: 44899

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 44795

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	4.00	3.38		ug/L		85	50 - 115
Aroclor 1260	4.00	3.51		ug/L		88	60 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	83		45 - 120

Lab Sample ID: 440-19541-B-3-A MS

Matrix: Water

Analysis Batch: 44899

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 44795

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	0.000		4.00	3.04		ug/L		76	45 - 120
Aroclor 1260	0.000		4.00	3.28		ug/L		82	55 - 125

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	81		45 - 120

Lab Sample ID: 440-19541-B-3-B MSD

Matrix: Water

Analysis Batch: 44899

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 44795

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016	0.000		4.00	3.04		ug/L		76	45 - 120	0	30
Aroclor 1260	0.000		4.00	3.27		ug/L		82	55 - 125	0	25

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	81		45 - 120

QC Association Summary

Client: MWH Americas Inc
 Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

GC/MS Semi VOA

Prep Batch: 44589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19900-1	Arroyo Simi-FP	Total/NA	Water	525.2	
LCS 440-44589/2-A	Lab Control Sample	Total/NA	Water	525.2	
LCS 440-44589/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MB 440-44589/1-A	Method Blank	Total/NA	Water	525.2	

Analysis Batch: 44835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19900-1	Arroyo Simi-FP	Total/NA	Water	525.2	44589
LCS 440-44589/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	44589
MB 440-44589/1-A	Method Blank	Total/NA	Water	525.2	44589

Analysis Batch: 45109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-44589/2-A	Lab Control Sample	Total/NA	Water	525.2	44589

GC Semi VOA

Prep Batch: 44795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19541-A-3-A MS	Matrix Spike	Total/NA	Water	608	
440-19541-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	608	
440-19541-B-3-A MS	Matrix Spike	Total/NA	Water	608	
440-19541-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	608	
440-19900-1	Arroyo Simi-FP	Total/NA	Water	608	
LCS 440-44795/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 440-44795/5-A	Lab Control Sample	Total/NA	Water	608	
MB 440-44795/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 44899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19541-B-3-A MS	Matrix Spike	Total/NA	Water	608	44795
440-19541-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	608	44795
440-19900-1	Arroyo Simi-FP	Total/NA	Water	608	44795
LCS 440-44795/5-A	Lab Control Sample	Total/NA	Water	608	44795
MB 440-44795/1-A	Method Blank	Total/NA	Water	608	44795

Analysis Batch: 44904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19541-A-3-A MS	Matrix Spike	Total/NA	Water	608	44795
440-19541-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	608	44795
440-19900-1	Arroyo Simi-FP	Total/NA	Water	608	44795
LCS 440-44795/2-A	Lab Control Sample	Total/NA	Water	608	44795
MB 440-44795/1-A	Method Blank	Total/NA	Water	608	44795

Metals

Analysis Batch: 45023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-19900-1	Arroyo Simi-FP	Total/NA	Water	SM 2340B	

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: MWH Americas Inc
Project/Site: Boeing SSFL NPDES Quarterly Arroyo Simi-

TestAmerica Job ID: 440-19900-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0671	10-13-12
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAC	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	07-31-12
New Mexico	State Program	6	N/A	01-31-12
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAC	10	4005	09-12-12
USDA	Federal		P330-09-00080	06-06-14

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Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-19900-1

Login Number: 19900

List Number: 1

Creator: Perez, Angel

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

