APPENDIX G

Section 18

Outfall 019 – May 2 & 3, 2012

Test America Analytical Laboratory Report

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 440-10462-1
Client Project/Site: Monthly Outfall 019

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

Attn: Bronwyn Kelly

Authorized for release by:
6/3/2012 3:51:42 PM

Debby Wilson
Project Manager I
debby.wilson@testamericainc.com

LINKS

Review your project results through
Total Access

Have a Question?
Ask The Expert

Visit us at:
www.testamericainc.com

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.

Debby Wilson

Debby Wilson

Project Manager I

6/3/2012 3:51:43 PM

Table of Contents

Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-10462-1	Outfall 019 Grab	Water	05/02/12 09:40	05/02/12 18:30
440-10462-2	Trip Blank	Water	05/02/12 09:40	05/02/12 18:30
440-10651-1	Outfall 019 Composite	Water	05/03/12 09:30	05/03/12 18:15
440-10651-2	Trip Blank	Water	05/04/12 14:35	05/03/12 18:15

TestAmerica Irvine
6/3/2012

Job ID: 440-10462-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-10462-1

Comments
No additional comments.

Receipt
The samples were received on 5/2/2012 6:30 PM and 5/3/2012 6:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5º C and 4.4º 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 24637. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 625: Surrogate recovery for the following sample(s) was outside control limits: Outfall 019 Composite (440-10651-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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 23485 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 and nitrite in batch 23484 were outside control limits due to matrix effects. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
Method(s) 245.1: The continuing calibration verification (CCV) for mercury associated with batch 440-24653 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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 25058. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

Subcontract non-Sister
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019

TestAmerica Job ID: 440-10462-1

Client Sample ID: Outfall 019 Grab
Date Collected: 05/02/12 09:40
Date Received: 05/02/12 18:30

Lab Sample ID: 440-10462-1
Matrix: Water

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			05/10/12 01:33	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			05/10/12 01:33	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			05/10/12 01:33	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			05/10/12 01:33	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			05/10/12 01:33	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			05/10/12 01:33	1
Benzene	ND		0.50	0.28	ug/L			05/10/12 01:33	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			05/10/12 01:33	1
Chloroform	ND		0.50	0.33	ug/L			05/10/12 01:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			05/10/12 01:33	1
Tetrachloroethene	ND		0.50	0.32	ug/L			05/10/12 01:33	1
Toluene	ND		0.50	0.36	ug/L			05/10/12 01:33	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			05/10/12 01:33	1
Vinyl chloride	ND		0.50	0.40	ug/L			05/10/12 01:33	1
Trichloroethene	ND		0.50	0.26	ug/L			05/10/12 01:33	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			05/10/12 01:33	1
Xylenes, Total	ND		1.5	0.90	ug/L			05/10/12 01:33	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		80 - 120					05/10/12 01:33	1
Dibromofluoromethane (Surr)	94		80 - 120					05/10/12 01:33	1
Toluene-d8 (Surr)	97		80 - 120					05/10/12 01:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		4.7	1.3	mg/L		05/10/12 08:01	05/10/12 08:39	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Settleable Solids	ND		0.10	0.10	mL/L/Hr			05/03/12 10:26	1

Client Sample ID: Trip Blank
Date Collected: 05/02/12 09:40
Date Received: 05/02/12 18:30

Lab Sample ID: 440-10462-2
Matrix: Water

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			05/10/12 02:01	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			05/10/12 02:01	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			05/10/12 02:01	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			05/10/12 02:01	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			05/10/12 02:01	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			05/10/12 02:01	1
Benzene	ND		0.50	0.28	ug/L			05/10/12 02:01	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			05/10/12 02:01	1
Chloroform	ND		0.50	0.33	ug/L			05/10/12 02:01	1
Ethylbenzene	ND		0.50	0.25	ug/L			05/10/12 02:01	1
Tetrachloroethene	ND		0.50	0.32	ug/L			05/10/12 02:01	1
Toluene	ND		0.50	0.36	ug/L			05/10/12 02:01	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			05/10/12 02:01	1
Vinyl chloride	ND		0.50	0.40	ug/L			05/10/12 02:01	1
Trichloroethene	ND		0.50	0.26	ug/L			05/10/12 02:01	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			05/10/12 02:01	1

TestAmerica Irvine
6/3/2012

Client Sample ID: Trip Blank

Lab Sample ID: 440-10462-2

Date Collected: 05/02/12 09:40

Matrix: Water

Date Received: 05/02/12 18:30

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			05/10/12 02:01	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		80 - 120					05/10/12 02:01	1
Dibromofluoromethane (Surr)	97		80 - 120					05/10/12 02:01	1
Toluene-d8 (Surr)	97		80 - 120					05/10/12 02:01	1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-10651-1

Date Collected: 05/03/12 09:30

Matrix: Water

Date Received: 05/03/12 18:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		5.69	0.0948	ug/L		05/08/12 18:54	05/11/12 05:09	1
Bis(2-ethylhexyl) phthalate	ND		4.74	1.61	ug/L		05/08/12 18:54	05/11/12 05:09	1
N-Nitrosodimethylamine	ND		4.74	0.0948	ug/L		05/08/12 18:54	05/11/12 05:09	1
Pentachlorophenol	ND		4.74	0.379	ug/L		05/08/12 18:54	05/11/12 05:09	1
2,4-Dinitrotoluene	ND		4.74	0.190	ug/L		05/08/12 18:54	05/11/12 05:09	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	114		40 - 120				05/08/12 18:54	05/11/12 05:09	1
2-Fluorobiphenyl	99		50 - 120				05/08/12 18:54	05/11/12 05:09	1
2-Fluorophenol	78		30 - 120				05/08/12 18:54	05/11/12 05:09	1
Nitrobenzene-d5	91		45 - 120				05/08/12 18:54	05/11/12 05:09	1
Phenol-d6	91		35 - 120				05/08/12 18:54	05/11/12 05:09	1
Terphenyl-d14	130	AY	50 - 125				05/08/12 18:54	05/11/12 05:09	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		05/10/12 11:25	05/10/12 22:40	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		35 - 115				05/10/12 11:25	05/10/12 22:40	1
DCB Decachlorobiphenyl (Surr)	80		45 - 120				05/10/12 11:25	05/10/12 22:40	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24**		5.0	4.0	mg/L			05/04/12 05:09	10
Nitrate as N	**0.17**		0.11	0.080	mg/L			05/04/12 04:55	1
Nitrate Nitrite as N	ND		0.26	0.19	mg/L			05/04/12 04:55	1
Sulfate	**180**		5.0	4.0	mg/L			05/04/12 05:09	10
Nitrite as N	ND		0.15	0.11	mg/L			05/04/12 04:55	1

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**0.96**	**J,DX**	4.0	0.95	ug/L			05/08/12 13:47	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		0.0000094	0.0000045	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total TCDD	ND		0.0000094	0.0000045	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,7,8-PeCDD	ND		0.000047	0.0000022	ug/L		05/18/12 16:00	05/24/12 03:01	1

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019

TestAmerica Job ID: 440-10462-1

Client Sample ID: Outfall 019 Composite

Date Collected: 05/03/12 09:30

Date Received: 05/03/12 18:15

Lab Sample ID: 440-10651-1

Matrix: Water

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

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	ND		0.000047	0.0000022	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,4,7,8-HxCDD	ND		0.000047	0.0000021	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,6,7,8-HxCDD	ND		0.000047	0.0000022	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,7,8,9-HxCDD	ND		0.000047	0.0000020	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total HxCDD	ND		0.000047	0.0000021	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,4,6,7,8-HpCDD	ND		0.000047	0.0000026	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total HpCDD	ND		0.000047	0.0000026	ug/L		05/18/12 16:00	05/24/12 03:01	1
OCDD	**0.0000061**	**B J**	0.000094	0.0000040	ug/L		05/18/12 16:00	05/24/12 03:01	1
2,3,7,8-TCDF	ND		0.0000094	0.0000031	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total TCDF	ND		0.0000094	0.0000031	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,7,8-PeCDF	ND		0.000047	0.0000018	ug/L		05/18/12 16:00	05/24/12 03:01	1
2,3,4,7,8-PeCDF	ND		0.000047	0.0000017	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total PeCDF	ND		0.000047	0.0000017	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,4,7,8-HxCDF	ND		0.000047	0.0000013	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,6,7,8-HxCDF	ND		0.000047	0.0000013	ug/L		05/18/12 16:00	05/24/12 03:01	1
2,3,4,6,7,8-HxCDF	ND		0.000047	0.0000013	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,7,8,9-HxCDF	ND		0.000047	0.0000019	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total HxCDF	ND		0.000047	0.0000014	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,4,6,7,8-HpCDF	ND		0.000047	0.0000019	ug/L		05/18/12 16:00	05/24/12 03:01	1
1,2,3,4,7,8,9-HpCDF	ND		0.000047	0.0000030	ug/L		05/18/12 16:00	05/24/12 03:01	1
Total HpCDF	ND		0.000047	0.0000023	ug/L		05/18/12 16:00	05/24/12 03:01	1
OCDF	ND		0.000094	0.0000032	ug/L		05/18/12 16:00	05/24/12 03:01	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197				05/18/12 16:00	05/24/12 03:01	1

Internal Standard	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	80		25 - 164				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,7,8-PeCDD	88		25 - 181				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,4,7,8-HxCDD	92		32 - 141				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,6,7,8-HxCDD	77		28 - 130				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,4,6,7,8-HpCDD	75		23 - 140				05/18/12 16:00	05/24/12 03:01	1
13C-OCDD	63		17 - 157				05/18/12 16:00	05/24/12 03:01	1
13C-2,3,7,8-TCDF	72		24 - 169				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,7,8-PeCDF	83		24 - 185				05/18/12 16:00	05/24/12 03:01	1
13C-2,3,4,7,8-PeCDF	80		21 - 178				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,4,7,8-HxCDF	84		26 - 152				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,6,7,8-HxCDF	73		26 - 123				05/18/12 16:00	05/24/12 03:01	1
13C-2,3,4,6,7,8-HxCDF	80		28 - 136				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,7,8,9-HxCDF	69		29 - 147				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,4,6,7,8-HpCDF	72		28 - 143				05/18/12 16:00	05/24/12 03:01	1
13C-1,2,3,4,7,8,9-HpCDF	66		26 - 138				05/18/12 16:00	05/24/12 03:01	1

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		05/09/12 15:35	05/10/12 21:42	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		05/11/12 10:58	05/11/12 20:05	1

TestAmerica Irvine

6/3/2012

Client Sample ID: Outfall 019 Composite
Date Collected: 05/03/12 09:30
Date Received: 05/03/12 18:15

Lab Sample ID: 440-10651-1
Matrix: Water

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		05/09/12 15:40	05/16/12 01:16	1
Copper	1.1	J,DX	2.0	0.50	ug/L		05/09/12 15:40	05/16/12 01:16	1
Lead	ND		1.0	0.20	ug/L		05/09/12 15:40	05/16/12 01:16	1
Selenium	ND		2.0	0.50	ug/L		05/09/12 15:40	05/16/12 01:16	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		05/11/12 11:02	05/15/12 10:49	1
Copper	0.60	J,DX	2.0	0.50	ug/L		05/11/12 11:02	05/15/12 10:49	1
Lead	ND		1.0	0.20	ug/L		05/11/12 11:02	05/15/12 10:49	1
Selenium	1.1	J,DX MB	2.0	0.50	ug/L		05/11/12 11:02	05/15/12 10:49	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		05/04/12 13:48	05/08/12 17:09	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		05/14/12 17:07	05/14/12 20:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	0.22		0.10	0.040	NTU			05/04/12 11:14	1
Total Dissolved Solids	540		10	10	mg/L			05/08/12 09:09	1
Total Suspended Solids	ND		10	10	mg/L			05/04/12 22:01	1
Cyanide, Total	ND		5.0	3.0	ug/L		05/15/12 10:28	05/15/12 13:56	1
Ammonia (as N)	ND		0.400	0.157	mg/L		05/09/12 20:53	05/09/12 21:00	1
Total Organic Carbon	3.3		1.0	0.75	mg/L			05/04/12 05:33	1
Methylene Blue Active Substances	ND		0.10	0.050	mg/L			05/04/12 17:19	1
Biochemical Oxygen Demand	ND		2.0	0.50	mg/L			05/04/12 10:58	1

Method: Gamma Spec K-40 CS-137 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-0.662	U	20		pCi/L		05/08/12 00:00	05/10/12 00:00	1
Potassium-40	9.67	U	25		pCi/L		05/08/12 00:00	05/10/12 00:00	1

Method: Gross Alpha and Beta - Gross Alpha/Beta

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	0.13	U	3		pCi/L		05/11/12 00:00	05/14/12 16:25	1
Gross Beta	2.15	J	4		pCi/L		05/11/12 00:00	05/14/12 16:25	1

Method: Radium 226 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	-0.032	U	1		pCi/L		05/23/12 00:00	05/23/12 13:39	1

Method: Radium 228 - RAD-226-228 combined

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	0.026	U	1		pCi/L		05/14/12 00:00	05/14/12 12:59	1

Method: Strontium 90 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.018	U	2		pCi/L		05/09/12 00:00	05/09/12 10:54	1

1 2 3 4 5 6 7 8 9 10 11 12 13

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019

Client Sample ID: Outfall 019 Composite
Date Collected: 05/03/12 09:30
Date Received: 05/03/12 18:15

Lab Sample ID: 440-10651-1
Matrix: Water

Method: Tritium - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	-104	U	500		pCi/L		05/09/12 00:00	05/09/12 19:29	1

Method: Uranium, Combined - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0.018	J	1		pCi/L		05/14/12 00:00	05/14/12 03:32	1

Client Sample ID: Trip Blank
Date Collected: 05/04/12 14:35
Date Received: 05/03/12 18:15

Lab Sample ID: 440-10651-2
Matrix: Water

Method: Gamma Spec K-40 CS-137 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-0.305	U	20		pCi/L		05/08/12 00:00	05/14/12 00:00	1
Potassium-40	4.95	U	25		pCi/L		05/08/12 00:00	05/14/12 00:00	1

Method: Gross Alpha and Beta - Gross Alpha/Beta

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.072	U	3		pCi/L		05/11/12 00:00	05/14/12 07:38	1
Gross Beta	-0.302	U	4		pCi/L		05/11/12 00:00	05/14/12 07:38	1

Method: Radium 226 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	0.195	U	1		pCi/L		05/23/12 00:00	05/23/12 13:39	1

Method: Radium 228 - RAD-226-228 combined

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	-0.071	U	1		pCi/L		05/14/12 00:00	05/14/12 12:59	1

Method: Strontium 90 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.027	U	2		pCi/L		05/09/12 00:00	05/09/12 10:54	1

Method: Uranium, Combined - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0	U	1		pCi/L		05/14/12 00:00	05/14/12 10:53	1

TestAmerica Irvine
6/3/2012

Lab Chronicle

Client Sample ID: Outfall 019 Grab

Date Collected: 05/02/12 09:40

Date Received: 05/02/12 18:30

Lab Sample ID: 440-10462-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	24948	05/10/12 01:33	RM	TAL IRV
Total/NA	Analysis	SM 2540F		1	23516	05/03/12 10:26	RR	TAL IRV
Total/NA	Prep	1664A			25044	05/10/12 08:01	DA	TAL IRV
Total/NA	Analysis	1664A		1	25058	05/10/12 08:39	DA	TAL IRV

Client Sample ID: Trip Blank

Date Collected: 05/02/12 09:40

Date Received: 05/02/12 18:30

Lab Sample ID: 440-10462-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	24948	05/10/12 02:01	RM	TAL IRV

Client Sample ID: Outfall 019 Composite

Date Collected: 05/03/12 09:30

Date Received: 05/03/12 18:15

Lab Sample ID: 440-10651-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	625			24637	05/08/12 18:54	DM	TAL IRV
Total/NA	Analysis	625		1	25208	05/11/12 05:09	AI	TAL IRV
Total/NA	Prep	608			25133	05/10/12 11:25	AB	TAL IRV
Total/NA	Analysis	608 Pesticides		1	25282	05/10/12 22:40	CN	TAL IRV
Total/NA	Analysis	300.0		1	23484	05/04/12 04:55	NN	TAL IRV
Total/NA	Analysis	300.0		10	23485	05/04/12 05:09	NN	TAL IRV
Total/NA	Analysis	314.0		1	24398	05/08/12 13:47	MN	TAL IRV
Total	Prep	1613			2139121_P	05/18/12 16:00		TAL KNX
Total	Analysis	1613B		1	2139121	05/24/12 03:01	PMP	TAL KNX
Total/NA	Prep	245.1			23864	05/04/12 13:48	SN	TAL IRV
Total/NA	Analysis	245.1		1	24653	05/08/12 17:09	DB	TAL IRV
Total Recoverable	Prep	200.2			24891	05/09/12 15:35	SC	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1	25413	05/10/12 21:42	DP	TAL IRV
Dissolved	Prep	200.2			25427	05/11/12 10:58	EN	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1	25682	05/11/12 20:05	TK	TAL IRV
Dissolved	Prep	245.1			25976	05/14/12 17:07	DB	TAL IRV
Dissolved	Analysis	245.1		1	26024	05/14/12 20:00	DB	TAL IRV
Dissolved	Prep	200.2			25428	05/11/12 11:02	EN	TAL IRV
Dissolved	Analysis	200.8		1	26175	05/15/12 10:49	NH	TAL IRV
Total Recoverable	Prep	200.2			24893	05/09/12 15:40	SC	TAL IRV
Total Recoverable	Analysis	200.8		1	26440	05/16/12 01:16	RC	TAL IRV
Total/NA	Analysis	SM 5310B		1	23741	05/04/12 05:33	FZ	TAL IRV
Total/NA	Analysis	SM5210B		1	23766	05/04/12 10:58	QPD	TAL IRV
Total/NA	Analysis	180.1		1	23831	05/04/12 11:14	RR	TAL IRV
Total/NA	Analysis	SM 5540C		1	23935	05/04/12 17:19	NEA	TAL IRV
Total/NA	Analysis	SM 2540D		1	23971	05/04/12 22:01	DK	TAL IRV

TestAmerica Irvine

6/3/2012

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019

TestAmerica Job ID: 440-10462-1

Client Sample ID: Outfall 019 Composite

Lab Sample ID: 440-10651-1

Date Collected: 05/03/12 09:30
Date Received: 05/03/12 18:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	24460	05/08/12 09:09	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			24965	05/09/12 20:53	RW	TAL IRV
Total/NA	Analysis	SM 4500 NH3 C		1	24999	05/09/12 21:00	RW	TAL IRV
Total/NA	Prep	Distill/CN			26161	05/15/12 10:28	PQI	TAL IRV
Total/NA	Analysis	SM 4500 CN E		1	26221	05/15/12 13:56	PQI	TAL IRV
Total/NA	Prep	General Prep		1	8614_P	05/08/12 00:00		Eber-Rich
Total/NA	Analysis	Gamma Spec K-40 CS-137		1	8614	05/10/12 00:00	LS	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/11/12 00:00		Eber-Rich
Total/NA	Analysis	Gross Alpha and Beta		1	8614	05/14/12 16:25	DVP	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/23/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 226		1	8614	05/23/12 13:39	TM	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/14/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 228		1	8614	05/14/12 12:59	ASM	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/09/12 00:00		Eber-Rich
Total/NA	Analysis	Strontium 90		1	8614	05/09/12 10:54	SK	Eber-Rich
Total/NA	Analysis	Tritium		1	8614	05/09/12 19:29	WL	Eber-Rich
Total/NA	Analysis	Uranium, Combined		1	8614	05/14/12 03:32	LS	Eber-Rich

Client Sample ID: Trip Blank

Lab Sample ID: 440-10651-2

Date Collected: 05/04/12 14:35
Date Received: 05/03/12 18:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	General Prep		1	8614_P	05/08/12 00:00		Eber-Rich
Total/NA	Analysis	Gamma Spec K-40 CS-137		1	8614	05/14/12 00:00	LS	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/11/12 00:00		Eber-Rich
Total/NA	Analysis	Gross Alpha and Beta		1	8614	05/14/12 07:38	DVP	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/23/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 226		1	8614	05/23/12 13:39	TM	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/14/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 228		1	8614	05/14/12 12:59	ASM	Eber-Rich
Total/NA	Prep	General Prep		1	8614_P	05/09/12 00:00		Eber-Rich
Total/NA	Analysis	Strontium 90		1	8614	05/09/12 10:54	SK	Eber-Rich
Total/NA	Analysis	Uranium, Combined		1	8614	05/14/12 10:53	LS	Eber-Rich

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 KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: MB 440-24948/4
Matrix: Water
Analysis Batch: 24948

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			05/09/12 20:48	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			05/09/12 20:48	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			05/09/12 20:48	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			05/09/12 20:48	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			05/09/12 20:48	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			05/09/12 20:48	1
Benzene	ND		0.50	0.28	ug/L			05/09/12 20:48	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			05/09/12 20:48	1
Chloroform	ND		0.50	0.33	ug/L			05/09/12 20:48	1
Ethylbenzene	ND		0.50	0.25	ug/L			05/09/12 20:48	1
Tetrachloroethene	ND		0.50	0.32	ug/L			05/09/12 20:48	1
Toluene	ND		0.50	0.36	ug/L			05/09/12 20:48	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			05/09/12 20:48	1
Vinyl chloride	ND		0.50	0.40	ug/L			05/09/12 20:48	1
Trichloroethene	ND		0.50	0.26	ug/L			05/09/12 20:48	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			05/09/12 20:48	1
Xylenes, Total	ND		1.5	0.90	ug/L			05/09/12 20:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		80 - 120		05/09/12 20:48	1
Dibromofluoromethane (Surr)	86		80 - 120		05/09/12 20:48	1
Toluene-d8 (Surr)	96		80 - 120		05/09/12 20:48	1

Lab Sample ID: LCS 440-24948/5
Matrix: Water
Analysis Batch: 24948

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	22.4		ug/L		90	65 - 135
1,1,2-Trichloroethane	25.0	22.7		ug/L		91	70 - 125
1,1-Dichloroethane	25.0	23.5		ug/L		94	70 - 125
1,1-Dichloroethene	25.0	24.2		ug/L		97	70 - 125
1,2-Dichloroethane	25.0	23.0		ug/L		92	60 - 140
Benzene	25.0	23.5		ug/L		94	70 - 120
Carbon tetrachloride	25.0	24.8		ug/L		99	65 - 140
Chloroform	25.0	21.9		ug/L		88	70 - 130
Ethylbenzene	25.0	25.7		ug/L		103	75 - 125
Tetrachloroethene	25.0	26.2		ug/L		105	70 - 125
Toluene	25.0	24.8		ug/L		99	70 - 120
Trichlorofluoromethane	25.0	25.9		ug/L		103	65 - 145
Vinyl chloride	25.0	23.7		ug/L		95	55 - 135
Trichloroethene	25.0	25.2		ug/L		101	70 - 125
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	70 - 125
m,p-Xylene	50.0	53.4		ug/L		107	75 - 125
o-Xylene	25.0	26.3		ug/L		105	75 - 125
Xylenes, Total	75.0	79.7		ug/L		106	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: LCS 440-24948/5
Matrix: Water
Analysis Batch: 24948

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	87		80 - 120
Toluene-d8 (Surr)	96		80 - 120

Lab Sample ID: 440-10920-F-1 MS
Matrix: Water
Analysis Batch: 24948

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		
1,1,1-Trichloroethane	ND		25.0	22.0		ug/L		88	65 - 140		
1,1,2-Trichloroethane	ND		25.0	23.2		ug/L		93	65 - 130		
1,1-Dichloroethane	ND		25.0	23.7		ug/L		95	65 - 130		
1,1-Dichloroethene	ND		25.0	22.8		ug/L		91	60 - 130		
1,2-Dichloroethane	ND		25.0	23.6		ug/L		94	60 - 140		
Benzene	ND		25.0	23.2		ug/L		93	65 - 125		
Carbon tetrachloride	ND		25.0	23.1		ug/L		92	65 - 140		
Chloroform	ND		25.0	22.8		ug/L		91	65 - 135		
Ethylbenzene	ND		25.0	24.1		ug/L		96	65 - 130		
Tetrachloroethene	ND		25.0	23.7		ug/L		95	65 - 130		
Toluene	ND		25.0	24.6		ug/L		98	70 - 125		
Trichlorofluoromethane	ND		25.0	24.1		ug/L		96	60 - 145		
Vinyl chloride	ND		25.0	24.0		ug/L		96	45 - 140		
Trichloroethene	ND		25.0	24.0		ug/L		96	65 - 125		
cis-1,2-Dichloroethene	ND		25.0	25.4		ug/L		101	65 - 130		
m,p-Xylene	ND		50.0	50.5		ug/L		101	65 - 130		
o-Xylene	ND		25.0	25.4		ug/L		102	65 - 125		
Xylenes, Total	ND		75.0	75.9		ug/L		101	60 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	93		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 440-10920-F-1 MSD
Matrix: Water
Analysis Batch: 24948

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
1,1,1-Trichloroethane	ND		25.0	21.7		ug/L		87	65 - 140	2	20
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		92	65 - 130	1	25
1,1-Dichloroethane	ND		25.0	23.5		ug/L		94	65 - 130	1	20
1,1-Dichloroethene	ND		25.0	22.7		ug/L		91	60 - 130	0	20
1,2-Dichloroethane	ND		25.0	23.7		ug/L		95	60 - 140	0	20
Benzene	ND		25.0	22.7		ug/L		91	65 - 125	2	20
Carbon tetrachloride	ND		25.0	22.6		ug/L		90	65 - 140	2	25
Chloroform	ND		25.0	22.5		ug/L		90	65 - 135	1	20
Ethylbenzene	ND		25.0	23.9		ug/L		95	65 - 130	1	20
Tetrachloroethene	ND		25.0	23.7		ug/L		95	65 - 130	0	20
Toluene	ND		25.0	23.8		ug/L		95	70 - 125	3	20
Trichlorofluoromethane	ND		25.0	23.7		ug/L		95	60 - 145	1	25

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: 440-10920-F-1 MSD
Matrix: Water
Analysis Batch: 24948

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
Vinyl chloride	ND		25.0	23.3		ug/L		93	45 - 140	3	30
Trichloroethene	ND		25.0	23.4		ug/L		94	65 - 125	2	20
cis-1,2-Dichloroethene	ND		25.0	25.2		ug/L		101	65 - 130	1	20
m,p-Xylene	ND		50.0	49.7		ug/L		99	65 - 130	2	25
o-Xylene	ND		25.0	24.9		ug/L		100	65 - 125	2	20
Xylenes, Total	ND		75.0	74.6		ug/L		99	60 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	97		80 - 120

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

Lab Sample ID: MB 440-24637/1-A
Matrix: Water
Analysis Batch: 25208

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24637

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		6.00	0.100	ug/L		05/08/12 18:54	05/10/12 17:10	1
Bis(2-ethylhexyl) phthalate	ND		5.00	1.70	ug/L		05/08/12 18:54	05/10/12 17:10	1
N-Nitrosodimethylamine	ND		5.00	0.100	ug/L		05/08/12 18:54	05/10/12 17:10	1
Pentachlorophenol	ND		5.00	0.400	ug/L		05/08/12 18:54	05/10/12 17:10	1
2,4-Dinitrotoluene	ND		5.00	0.200	ug/L		05/08/12 18:54	05/10/12 17:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	103		40 - 120				05/08/12 18:54	05/10/12 17:10	1
2-Fluorobiphenyl	94		50 - 120				05/08/12 18:54	05/10/12 17:10	1
2-Fluorophenol	77		30 - 120				05/08/12 18:54	05/10/12 17:10	1
Nitrobenzene-d5	92		45 - 120				05/08/12 18:54	05/10/12 17:10	1
Phenol-d6	86		35 - 120				05/08/12 18:54	05/10/12 17:10	1
Terphenyl-d14	97		50 - 125				05/08/12 18:54	05/10/12 17:10	1

Lab Sample ID: LCS 440-24637/2-A
Matrix: Water
Analysis Batch: 25208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24637

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	10.0	9.913		ug/L		99	55 - 120
Bis(2-ethylhexyl) phthalate	10.0	11.57		ug/L		116	65 - 130
N-Nitrosodimethylamine	10.0	8.416		ug/L		84	45 - 120
Pentachlorophenol	10.0	9.149		ug/L		91	24 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	99		40 - 120
2-Fluorobiphenyl	96		50 - 120
2-Fluorophenol	75		30 - 120
Nitrobenzene-d5	90		45 - 120

TestAmerica Irvine
6/3/2012

1 2 3 4 5 6 7 8 9 10 11 12 13

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

Lab Sample ID: LCS 440-24637/2-A
Matrix: Water
Analysis Batch: 25208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24637

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d6	87		35 - 120
Terphenyl-d14	103		50 - 125

Lab Sample ID: LCSD 440-24637/3-A
Matrix: Water
Analysis Batch: 25208

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24637

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,6-Trichlorophenol	10.0	9.607		ug/L		96	55 - 120	3	30
Bis(2-ethylhexyl) phthalate	10.0	10.63		ug/L		106	65 - 130	8	20
N-Nitrosodimethylamine	10.0	8.416		ug/L		84	45 - 120	0	20
Pentachlorophenol	10.0	8.899		ug/L		89	24 - 121	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol	94		40 - 120
2-Fluorobiphenyl	96		50 - 120
2-Fluorophenol	69		30 - 120
Nitrobenzene-d5	92		45 - 120
Phenol-d6	79		35 - 120
Terphenyl-d14	98		50 - 125

Method: 608 Pesticides - Organochlorine Pesticides Low level

Lab Sample ID: MB 440-25133/1-A
Matrix: Water
Analysis Batch: 25282

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25133

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0050	0.0025	ug/L		05/10/12 11:25	05/10/12 21:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		35 - 115				05/10/12 11:25	05/10/12 21:03	1
DCB Decachlorobiphenyl (Surr)	82		45 - 120				05/10/12 11:25	05/10/12 21:03	1

Lab Sample ID: LCS 440-25133/2-A
Matrix: Water
Analysis Batch: 25282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.500	0.482		ug/L		96	45 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	83		35 - 115
DCB Decachlorobiphenyl (Surr)	81		45 - 120

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: 440-11160-A-2-A MS
Matrix: Water
Analysis Batch: 25282

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25133

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	ND		0.500	0.477		ug/L		95	40 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	71		35 - 115
DCB Decachlorobiphenyl (Surr)	85		45 - 120

Lab Sample ID: 440-11160-A-2-B MSD
Matrix: Water
Analysis Batch: 25282

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25133

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	ND		0.500	0.454		ug/L		91	40 - 120	5	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	67		35 - 115
DCB Decachlorobiphenyl (Surr)	83		45 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-23484/2
Matrix: Water
Analysis Batch: 23484

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			05/03/12 09:52	1
Nitrate Nitrite as N	ND		0.26	0.19	mg/L			05/03/12 09:52	1
Nitrite as N	ND		0.15	0.11	mg/L			05/03/12 09:52	1

Lab Sample ID: LCS 440-23484/3
Matrix: Water
Analysis Batch: 23484

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	1.07		mg/L		95	90 - 110
Nitrate Nitrite as N	2.65	2.57		mg/L		97	90 - 110
Nitrite as N	1.52	1.50		mg/L		99	90 - 110

Lab Sample ID: 440-10585-J-14 MS
Matrix: Water
Analysis Batch: 23484

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	8.0		11.3	17.9		mg/L		88	80 - 120
Nitrate Nitrite as N	ND		26.5	36.4	AY	mg/L		137	80 - 120
Nitrite as N	ND		15.2	18.5	AY	mg/L		121	80 - 120

TestAmerica Irvine
6/3/2012

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-10585-J-14 MSD
Matrix: Water
Analysis Batch: 23484

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	8.0		11.3	16.8	AY	mg/L		78	80 - 120	6	20
Nitrate Nitrite as N	ND		26.5	35.0	LM	mg/L		132	80 - 120	4	20
Nitrite as N	ND		15.2	18.2		mg/L		119	80 - 120	2	20

Lab Sample ID: MB 440-23485/2
Matrix: Water
Analysis Batch: 23485

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			05/03/12 09:52	1
Sulfate	ND		0.50	0.40	mg/L			05/03/12 09:52	1

Lab Sample ID: LCS 440-23485/3
Matrix: Water
Analysis Batch: 23485

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	4.69		mg/L		94	90 - 110
Sulfate	10.0	9.51		mg/L		95	90 - 110

Lab Sample ID: 440-10585-J-14 MS
Matrix: Water
Analysis Batch: 23485

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	20	J,DX	50.0	62.9	AY	mg/L		126	80 - 120
Sulfate	100		100	187		mg/L		85	80 - 120

Lab Sample ID: 440-10585-J-14 MSD
Matrix: Water
Analysis Batch: 23485

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	20	J,DX	50.0	61.9	LM	mg/L		124	80 - 120	2	20
Sulfate	100		100	181	AY	mg/L		79	80 - 120	3	20

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 440-24398/5
Matrix: Water
Analysis Batch: 24398

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			05/08/12 07:51	1

Lab Sample ID: LCS 440-24398/4
Matrix: Water
Analysis Batch: 24398

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	26.1		ug/L		105	85 - 115

TestAmerica Irvine
6/3/2012

Lab Sample ID: MRL 440-24398/2 MRL
Matrix: Water
Analysis Batch: 24398

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			4.00	4.16		ug/L		104			

Lab Sample ID: 440-10390-A-1 MS
Matrix: Water
Analysis Batch: 24398

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	7.7		25.0	32.3		ug/L		98	80 - 120

Lab Sample ID: 440-10390-A-1 MSD
Matrix: Water
Analysis Batch: 24398

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	7.7		25.0	32.8		ug/L		100	80 - 120	2	20

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

Lab Sample ID: H2E180000121B
Matrix: Water
Analysis Batch: 2139121

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2139121_P

Analyte	MB Result	MB Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	8.1	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total TCDD	ND		0.000010	8.1	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,7,8-PeCDD	ND		0.000050	4.3	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total PeCDD	ND		0.000050	4.3	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,4,7,8-HxCDD	ND		0.000050	4.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,6,7,8-HxCDD	ND		0.000050	4.6	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,7,8,9-HxCDD	ND		0.000050	4.3	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total HxCDD	ND		0.000050	4.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,4,6,7,8-HpCDD	ND		0.000050	5.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total HpCDD	ND		0.000050	5.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
OCDD	0.000014	J	0.00010	8.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
2,3,7,8-TCDF	ND		0.000010	5.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total TCDF	ND		0.000010	5.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,7,8-PeCDF	ND		0.000050	3.3	ug/L		05/18/12 16:00	05/24/12 01:00	1
2,3,4,7,8-PeCDF	ND		0.000050	3.2	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total PeCDF	ND		0.000050	3.2	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,4,7,8-HxCDF	ND		0.000050	2.9	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,6,7,8-HxCDF	ND		0.000050	2.9	ug/L		05/18/12 16:00	05/24/12 01:00	1
2,3,4,6,7,8-HxCDF	ND		0.000050	3.1	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,7,8,9-HxCDF	ND		0.000050	4.1	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total HxCDF	ND		0.000050	3.2	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,4,6,7,8-HpCDF	ND		0.000050	4.2	ug/L		05/18/12 16:00	05/24/12 01:00	1
1,2,3,4,7,8,9-HpCDF	ND		0.000050	6.5	ug/L		05/18/12 16:00	05/24/12 01:00	1
Total HpCDF	ND		0.000050	5.1	ug/L		05/18/12 16:00	05/24/12 01:00	1
OCDF	ND		0.00010	7.7	ug/L		05/18/12 16:00	05/24/12 01:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	88		35 - 197		05/18/12 16:00	05/24/12 01:00	1

TestAmerica Irvine
6/3/2012

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019

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

Lab Sample ID: H2E180000121B
Matrix: Water
Analysis Batch: 2139121

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2139121_P

Internal Standard	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	78		25 - 164	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,7,8-PeCDD	86		25 - 181	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,4,7,8-HxCDD	96		32 - 141	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,6,7,8-HxCDD	82		28 - 130	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,4,6,7,8-HpCDD	78		23 - 140	05/18/12 16:00	05/24/12 01:00	1
13C-OCDD	66		17 - 157	05/18/12 16:00	05/24/12 01:00	1
13C-2,3,7,8-TCDF	71		24 - 169	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,7,8-PeCDF	81		24 - 185	05/18/12 16:00	05/24/12 01:00	1
13C-2,3,4,7,8-PeCDF	74		21 - 178	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,4,7,8-HxCDF	88		26 - 152	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,6,7,8-HxCDF	79		26 - 123	05/18/12 16:00	05/24/12 01:00	1
13C-2,3,4,6,7,8-HxCDF	84		28 - 136	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,7,8,9-HxCDF	79		29 - 147	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,4,6,7,8-HpCDF	75		28 - 143	05/18/12 16:00	05/24/12 01:00	1
13C-1,2,3,4,7,8,9-HpCDF	69		26 - 138	05/18/12 16:00	05/24/12 01:00	1

Lab Sample ID: H2E180000121C
Matrix: Water
Analysis Batch: 2139121

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2139121_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
2,3,7,8-TCDD	0.000200	0.000218		ug/L		109	67 - 158	
1,2,3,7,8-PeCDD	0.00100	0.00106		ug/L		106	70 - 142	
1,2,3,4,7,8-HxCDD	0.00100	0.00101		ug/L		101	70 - 164	
1,2,3,6,7,8-HxCDD	0.00100	0.000973		ug/L		97	76 - 134	
1,2,3,7,8,9-HxCDD	0.00100	0.00108		ug/L		108	64 - 162	
1,2,3,4,6,7,8-HpCDD	0.00100	0.000998		ug/L		100	70 - 140	
OCDD	0.00200	0.00202	B	ug/L		101	78 - 144	
2,3,7,8-TCDF	0.000200	0.000193		ug/L		96	75 - 158	
1,2,3,7,8-PeCDF	0.00100	0.000990		ug/L		99	80 - 134	
2,3,4,7,8-PeCDF	0.00100	0.00102		ug/L		102	68 - 160	
1,2,3,4,7,8-HxCDF	0.00100	0.00104		ug/L		104	72 - 134	
1,2,3,6,7,8-HxCDF	0.00100	0.00104		ug/L		104	84 - 130	
2,3,4,6,7,8-HxCDF	0.00100	0.00102		ug/L		102	70 - 156	
1,2,3,7,8,9-HxCDF	0.00100	0.00105		ug/L		105	78 - 130	
1,2,3,4,6,7,8-HpCDF	0.00100	0.00105		ug/L		105	82 - 122	
1,2,3,4,7,8,9-HpCDF	0.00100	0.00103		ug/L		103	78 - 138	
OCDF	0.00200	0.00181		ug/L		90	63 - 170	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	100		31 - 191

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	83		20 - 175
13C-1,2,3,7,8-PeCDD	96		21 - 227
13C-1,2,3,4,7,8-HxCDD	86		21 - 193
13C-1,2,3,6,7,8-HxCDD	69		25 - 163
13C-1,2,3,4,6,7,8-HpCDD	82		26 - 166

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: H2E180000121C
Matrix: Water
Analysis Batch: 2139121

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2139121_P

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-OCDD	80		13 - 199
13C-2,3,7,8-TCDF	82		22 - 152
13C-1,2,3,7,8-PeCDF	95		21 - 192
13C-2,3,4,7,8-PeCDF	90		13 - 328
13C-1,2,3,4,7,8-HxCDF	77		19 - 202
13C-1,2,3,6,7,8-HxCDF	66		21 - 159
13C-2,3,4,6,7,8-HxCDF	81		22 - 176
13C-1,2,3,7,8,9-HxCDF	81		17 - 205
13C-1,2,3,4,6,7,8-HpCDF	69		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	78		20 - 186

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-24891/1-A
Matrix: Water
Analysis Batch: 25413

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 24891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		05/09/12 15:35	05/10/12 21:13	1

Lab Sample ID: LCS 440-24891/2-A
Matrix: Water
Analysis Batch: 25413

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 24891

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	512		ug/L		102	85 - 115

Lab Sample ID: 440-10582-E-1-C MS
Matrix: Water
Analysis Batch: 25413

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 24891

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	64		500	582		ug/L		103	70 - 130

Lab Sample ID: 440-10582-E-1-D MSD
Matrix: Water
Analysis Batch: 25413

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 24891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	64		500	584		ug/L		104	70 - 130	0	20

Lab Sample ID: MB 440-24119/1-B
Matrix: Water
Analysis Batch: 25682

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 25427

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		05/11/12 10:58	05/11/12 19:47	1

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: LCS 440-24119/2-B
Matrix: Water
Analysis Batch: 25682

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 25427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc			500	523		ug/L		105	85 - 115

Lab Sample ID: 440-10605-K-1-C MS
Matrix: Water
Analysis Batch: 25682

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 25427

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		500	497		ug/L		99	70 - 130

Lab Sample ID: 440-10605-K-1-D MSD
Matrix: Water
Analysis Batch: 25682

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 25427

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	478		ug/L		96	70 - 130	4	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-24893/1-A
Matrix: Water
Analysis Batch: 26457

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 24893

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		05/09/12 15:37	05/15/12 19:37	1
Copper	ND		2.0	0.50	ug/L		05/09/12 15:37	05/15/12 19:37	1
Lead	ND		1.0	0.20	ug/L		05/09/12 15:37	05/15/12 19:37	1
Selenium	ND		2.0	0.50	ug/L		05/09/12 15:37	05/15/12 19:37	1

Lab Sample ID: LCS 440-24893/2-A
Matrix: Water
Analysis Batch: 26457

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 24893

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium			80.0	81.4		ug/L		102	85 - 115
Copper			80.0	82.5		ug/L		103	85 - 115
Lead			80.0	83.0		ug/L		104	85 - 115
Selenium			80.0	79.9		ug/L		100	85 - 115

Lab Sample ID: 440-11004-I-1-C MS
Matrix: Water
Analysis Batch: 26440

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 24893

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		80.0	82.1		ug/L		103	70 - 130
Copper	8.4		80.0	89.9		ug/L		102	70 - 130
Lead	1.2	J,DX	80.0	79.8		ug/L		98	70 - 130
Selenium	160		80.0	242		ug/L		102	70 - 130

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: 440-11004-I-1-D MSD
Matrix: Water
Analysis Batch: 26440

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 24893

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		80.0	80.2		ug/L		100	70 - 130	2	20
Copper	8.4		80.0	90.4		ug/L		102	70 - 130	1	20
Lead	1.2	J,DX	80.0	75.4		ug/L		93	70 - 130	6	20
Selenium	160		80.0	247		ug/L		108	70 - 130	2	20

Lab Sample ID: MB 440-24119/1-C
Matrix: Water
Analysis Batch: 26175

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 25428

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		05/11/12 11:02	05/15/12 10:43	1
Copper	ND		2.0	0.50	ug/L		05/11/12 11:02	05/15/12 10:43	1
Lead	ND		1.0	0.20	ug/L		05/11/12 11:02	05/15/12 10:43	1
Selenium	0.678	J,DX	2.0	0.50	ug/L		05/11/12 11:02	05/15/12 10:43	1

Lab Sample ID: LCS 440-24119/2-C
Matrix: Water
Analysis Batch: 26175

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 25428

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	83.6		ug/L		104	85 - 115
Copper	80.0	85.1		ug/L		106	85 - 115
Lead	80.0	86.0		ug/L		107	85 - 115
Selenium	80.0	83.3		ug/L		104	85 - 115

Lab Sample ID: 440-10651-1 MS
Matrix: Water
Analysis Batch: 26175

Client Sample ID: Outfall 019 Composite
Prep Type: Dissolved
Prep Batch: 25428

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		80.0	80.9		ug/L		101	70 - 130
Copper	0.60	J,DX	80.0	78.4		ug/L		97	70 - 130
Lead	ND		80.0	93.8		ug/L		117	70 - 130
Selenium	1.1	J,DX MB	80.0	81.2		ug/L		100	70 - 130

Lab Sample ID: 440-10651-1 MSD
Matrix: Water
Analysis Batch: 26175

Client Sample ID: Outfall 019 Composite
Prep Type: Dissolved
Prep Batch: 25428

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		80.0	81.9		ug/L		102	70 - 130	1	20
Copper	0.60	J,DX	80.0	78.8		ug/L		98	70 - 130	0	20
Lead	ND		80.0	80.5		ug/L		101	70 - 130	15	20
Selenium	1.1	J,DX MB	80.0	84.0		ug/L		104	70 - 130	3	20

TestAmerica Irvine
6/3/2012

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-23864/1-A
Matrix: Water
Analysis Batch: 24653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		05/04/12 13:48	05/08/12 16:36	1

Lab Sample ID: LCS 440-23864/2-A
Matrix: Water
Analysis Batch: 24653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23864

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			8.00	8.41		ug/L		105	85 - 115		

Lab Sample ID: 440-10194-A-1-B MS
Matrix: Water
Analysis Batch: 24653

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23864

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		8.00	8.17		ug/L		102	70 - 130		

Lab Sample ID: 440-10194-A-1-C MSD
Matrix: Water
Analysis Batch: 24653

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 23864

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		8.00	8.13		ug/L		102	70 - 130	1	20

Lab Sample ID: LCS 440-25976/2-B
Matrix: Water
Analysis Batch: 26024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			8.00	8.39		ug/L		105	85 - 115		

Lab Sample ID: MB 440-24119/1-E
Matrix: Water
Analysis Batch: 26024

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 25976

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		05/14/12 17:07	05/14/12 19:55	1

Lab Sample ID: 440-10651-1 MS
Matrix: Water
Analysis Batch: 26024

Client Sample ID: Outfall 019 Composite
Prep Type: Dissolved
Prep Batch: 25976

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		8.00	8.13		ug/L		102	70 - 130		

Lab Sample ID: 440-10651-1 MSD
Matrix: Water
Analysis Batch: 26024

Client Sample ID: Outfall 019 Composite
Prep Type: Dissolved
Prep Batch: 25976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		8.00	7.77		ug/L		97	70 - 130	5	20

TestAmerica Irvine
6/3/2012

QC Sample Results

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-25044/1-A
Matrix: Water
Analysis Batch: 25058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25044

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0	1.4	mg/L		05/10/12 08:01	05/10/12 08:39	1

Lab Sample ID: LCS 440-25044/2-A
Matrix: Water
Analysis Batch: 25058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25044

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	20.0	20.5		mg/L		103	78 - 114

Lab Sample ID: LCSD 440-25044/3-A
Matrix: Water
Analysis Batch: 25058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25044

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	20.0	20.9		mg/L		105	78 - 114	2	11

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 440-23831/6
Matrix: Water
Analysis Batch: 23831

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			05/04/12 11:14	1

Lab Sample ID: MRL 440-23831/3 MRL
Matrix: Water
Analysis Batch: 23831

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.100	0.120	J,DX	NTU		120	

Lab Sample ID: 440-10651-1 DU
Matrix: Water
Analysis Batch: 23831

Client Sample ID: Outfall 019 Composite
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Turbidity	0.22		0.200		NTU		10	20

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

Lab Sample ID: MB 440-24460/1
Matrix: Water
Analysis Batch: 24460

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			05/08/12 09:09	1

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

Lab Sample ID: LCS 440-24460/2
Matrix: Water
Analysis Batch: 24460

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	980		mg/L		98	90 - 110	

Lab Sample ID: 440-10918-C-1 DU
Matrix: Water
Analysis Batch: 24460

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	1700			1660		mg/L			2	10

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

Lab Sample ID: MB 440-23971/1
Matrix: Water
Analysis Batch: 23971

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			05/04/12 22:01	1

Lab Sample ID: LCS 440-23971/2
Matrix: Water
Analysis Batch: 23971

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	1000		mg/L		100	85 - 115	

Lab Sample ID: 440-10466-A-1 DU
Matrix: Water
Analysis Batch: 23971

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	4700			4650		mg/L			0	10

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

Lab Sample ID: MB 440-26161/1-A
Matrix: Water
Analysis Batch: 26221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 26161

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		5.0	3.0	ug/L		05/15/12 10:28	05/15/12 13:55	1

Lab Sample ID: LCS 440-26161/2-A
Matrix: Water
Analysis Batch: 26221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 26161

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Cyanide, Total			100	92.8		ug/L		93	90 - 110	

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

Lab Sample ID: 510-78572-A-2-E MS
Matrix: Water
Analysis Batch: 26221

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 26161

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	18		100	121		ug/L		103	70 - 115		

Lab Sample ID: 510-78572-A-2-F MSD
Matrix: Water
Analysis Batch: 26221

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 26161

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	18		100	123		ug/L		105	70 - 115	2	15

Method: SM 4500 NH3 C - Ammonia

Lab Sample ID: MB 440-24965/1-A
Matrix: Water
Analysis Batch: 24999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.400	0.157	mg/L		05/09/12 20:53	05/09/12 21:00	1

Lab Sample ID: LCS 440-24965/2-A
Matrix: Water
Analysis Batch: 24999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24965

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: 440-10410-D-1-B MS
Matrix: Water
Analysis Batch: 24999

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24965

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia (as N)	ND		10.0	9.520		mg/L		95	70 - 120		

Lab Sample ID: 440-10410-F-1-B MSD
Matrix: Water
Analysis Batch: 24999

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 24965

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	ND		10.0	9.240		mg/L		92	70 - 120	3	15

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

Lab Sample ID: MB 440-23741/5
Matrix: Water
Analysis Batch: 23741

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			05/04/12 04:31	1

TestAmerica Irvine
6/3/2012

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

Lab Sample ID: LCS 440-23741/6
Matrix: Water
Analysis Batch: 23741

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	9.70		mg/L		97	90 - 110

Lab Sample ID: 440-10564-A-1 MS
Matrix: Water
Analysis Batch: 23741

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
Total Organic Carbon	7.1		5.00	11.5		mg/L		89	80 - 120

Lab Sample ID: 440-10564-A-1 MSD
Matrix: Water
Analysis Batch: 23741

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
Total Organic Carbon	7.1		5.00	11.5		mg/L		88	80 - 120	0	20

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

Lab Sample ID: MB 440-23935/3
Matrix: Water
Analysis Batch: 23935

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			05/04/12 17:18	1

Lab Sample ID: LCS 440-23935/4
Matrix: Water
Analysis Batch: 23935

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	0.256		mg/L		102	90 - 110

Lab Sample ID: 440-10651-1 MS
Matrix: Water
Analysis Batch: 23935

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	0.264		mg/L		106	50 - 125

Lab Sample ID: 440-10651-1 MSD
Matrix: Water
Analysis Batch: 23935

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	0.251		mg/L		100	50 - 125	5	20

QC Sample Results

Method: SM5210B - BOD, 5 Day

Lab Sample ID: USB 440-23766/1 USB
Matrix: Water
Analysis Batch: 23766

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			05/04/12 08:44	1

Lab Sample ID: LCS 440-23766/4
Matrix: Water
Analysis Batch: 23766

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	196		mg/L		98	85 - 115	

Lab Sample ID: LCSD 440-23766/5
Matrix: Water
Analysis Batch: 23766

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	200		mg/L		101	85 - 115	2	20

Method: Gross Alpha and Beta - Gross Alpha/Beta

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	-0.058	U	2		pCi/L		05/09/12 00:00	05/09/12 10:54	1

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	-38.7	U	500		pCi/L		05/09/12 00:00	05/09/12 19:29	1

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-0.067	U	20		pCi/L		05/08/12 00:00	05/10/12 00:00	1
Potassium-40	-16	U	25		pCi/L		05/08/12 00:00	05/10/12 00:00	1

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0	U	1		pCi/L		05/14/12 00:00	05/14/12 11:08	1

TestAmerica Irvine
6/3/2012

QC Sample Results

Method: Gross Alpha and Beta - Gross Alpha/Beta (Continued)

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	0.091	U	1		pCi/L		05/14/12 00:00	05/14/12 12:59	1

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.097	U	3		pCi/L		05/11/12 00:00	05/14/12 16:25	1
Gross Beta	-0.41	U	4		pCi/L		05/11/12 00:00	05/14/12 16:25	1

Lab Sample ID: S205027-04
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	-0.078	U	1		pCi/L		05/23/12 00:00	05/23/12 13:39	1

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Strontium-90	9.34	8.36		pCi/L		90	80 - 120

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tritium	2210	2060		pCi/L		93	80 - 120

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cesium-137	122	117		pCi/L		96	80 - 120
Cobalt-60	108	91.8		pCi/L		85	80 - 120

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gross Alpha	33.7	38.1		pCi/L		113	70 - 130
Gross Beta	28.3	28.3		pCi/L		100	70 - 130

TestAmerica Irvine
6/3/2012

Method: Gross Alpha and Beta - Gross Alpha/Beta (Continued)

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Uranium, Total			62	62.2		pCi/L		100	80 - 120		

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Radium-228			5.27	4.74		pCi/L		90	60 - 140		

Lab Sample ID: S205027-03
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Radium-226			55.7	54.1		pCi/L		97	80 - 120		

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Strontium-90	0.018	U	0.183	U	pCi/L			0	

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Tritium	-104	U	-5.37	U	pCi/L			0	

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Cesium-137	-0.662	U	-0.746	U	pCi/L			0	
Potassium-40	9.67	U	-8.12	U	pCi/L			0	

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Uranium, Total	0.018	J	0.014	J	pCi/L			25	

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Radium-228	0.026	U	-0.002	U	pCi/L			0	

TestAmerica Irvine
6/3/2012

Method: Gross Alpha and Beta - Gross Alpha/Beta (Continued)

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Gross Alpha	0.13	U	0.551	U	pCi/L		0	
Gross Beta	2.15	J	2.03	J	pCi/L		6	

Lab Sample ID: S205027-05
Matrix: WATER
Analysis Batch: 8614

Client Sample ID: OUTFALL 019 (440-10651-1 DU
Prep Type: Total/NA
Prep Batch: 8614_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Radium-226	-0.032	U	-0.272	U	pCi/L		0	

GC/MS VOA

Analysis Batch: 24948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10462-1	Outfall 019 Grab	Total/NA	Water	624	
440-10462-2	Trip Blank	Total/NA	Water	624	
440-10920-F-1 MS	Matrix Spike	Total/NA	Water	624	
440-10920-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	624	
LCS 440-24948/5	Lab Control Sample	Total/NA	Water	624	
MB 440-24948/4	Method Blank	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 24637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	625	
LCS 440-24637/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 440-24637/3-A	Lab Control Sample Dup	Total/NA	Water	625	
MB 440-24637/1-A	Method Blank	Total/NA	Water	625	

Analysis Batch: 25208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	625	24637
LCS 440-24637/2-A	Lab Control Sample	Total/NA	Water	625	24637
LCSD 440-24637/3-A	Lab Control Sample Dup	Total/NA	Water	625	24637
MB 440-24637/1-A	Method Blank	Total/NA	Water	625	24637

GC Semi VOA

Prep Batch: 25133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	608	
440-11160-A-2-A MS	Matrix Spike	Total/NA	Water	608	
440-11160-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	608	
LCS 440-25133/2-A	Lab Control Sample	Total/NA	Water	608	
MB 440-25133/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 25282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	608 Pesticides	25133
440-11160-A-2-A MS	Matrix Spike	Total/NA	Water	608 Pesticides	25133
440-11160-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	608 Pesticides	25133
LCS 440-25133/2-A	Lab Control Sample	Total/NA	Water	608 Pesticides	25133
MB 440-25133/1-A	Method Blank	Total/NA	Water	608 Pesticides	25133

HPLC/IC

Analysis Batch: 23484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10585-J-14 MS	Matrix Spike	Total/NA	Water	300.0	
440-10585-J-14 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-10651-1	Outfall 019 Composite	Total/NA	Water	300.0	
LCS 440-23484/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-23484/2	Method Blank	Total/NA	Water	300.0	

TestAmerica Irvine
6/3/2012

HPLC/IC (Continued)

Analysis Batch: 23485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10585-J-14 MS	Matrix Spike	Total/NA	Water	300.0	
440-10585-J-14 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-10651-1	Outfall 019 Composite	Total/NA	Water	300.0	
LCS 440-23485/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-23485/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 24398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10390-A-1 MS	Matrix Spike	Total/NA	Water	314.0	
440-10390-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	314.0	
440-10651-1	Outfall 019 Composite	Total/NA	Water	314.0	
LCS 440-24398/4	Lab Control Sample	Total/NA	Water	314.0	
MB 440-24398/5	Method Blank	Total/NA	Water	314.0	
MRL 440-24398/2 MRL	Lab Control Sample	Total/NA	Water	314.0	

Specialty Organics

Analysis Batch: 2139121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total	Water	1613B	
H2E180000121B	Method Blank	Total	Water	1613B	
H2E180000121C	Lab Control Sample	Total	Water	1613B	

Prep Batch: 2139121_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total	Water	1613	
H2E180000121B	Method Blank	Total	Water	1613	
H2E180000121C	Lab Control Sample	Total	Water	1613	

Metals

Prep Batch: 23864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10194-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-10194-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
440-10651-1	Outfall 019 Composite	Total/NA	Water	245.1	
LCS 440-23864/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 440-23864/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 24653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10194-A-1-B MS	Matrix Spike	Total/NA	Water	245.1	23864
440-10194-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	23864
440-10651-1	Outfall 019 Composite	Total/NA	Water	245.1	23864
LCS 440-23864/2-A	Lab Control Sample	Total/NA	Water	245.1	23864
MB 440-23864/1-A	Method Blank	Total/NA	Water	245.1	23864

Prep Batch: 24891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10582-E-1-C MS	Matrix Spike	Total Recoverable	Water	200.2	
440-10582-E-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	
440-10651-1	Outfall 019 Composite	Total Recoverable	Water	200.2	

Metals (Continued)

Prep Batch: 24891 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-24891/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-24891/1-A	Method Blank	Total Recoverable	Water	200.2	

Prep Batch: 24893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total Recoverable	Water	200.2	
440-11004-I-1-C MS	Matrix Spike	Total Recoverable	Water	200.2	
440-11004-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.2	
LCS 440-24893/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-24893/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 25413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10582-E-1-C MS	Matrix Spike	Total Recoverable	Water	200.7 Rev 4.4	24891
440-10582-E-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.7 Rev 4.4	24891
440-10651-1	Outfall 019 Composite	Total Recoverable	Water	200.7 Rev 4.4	24891
LCS 440-24891/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	24891
MB 440-24891/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	24891

Prep Batch: 25427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10605-K-1-C MS	Matrix Spike	Dissolved	Water	200.2	
440-10605-K-1-D MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	
440-10651-1	Outfall 019 Composite	Dissolved	Water	200.2	
LCS 440-24119/2-B	Lab Control Sample	Dissolved	Water	200.2	
MB 440-24119/1-B	Method Blank	Dissolved	Water	200.2	

Prep Batch: 25428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Dissolved	Water	200.2	
440-10651-1 MS	Outfall 019 Composite	Dissolved	Water	200.2	
440-10651-1 MSD	Outfall 019 Composite	Dissolved	Water	200.2	
LCS 440-24119/2-C	Lab Control Sample	Dissolved	Water	200.2	
MB 440-24119/1-C	Method Blank	Dissolved	Water	200.2	

Analysis Batch: 25682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10605-K-1-C MS	Matrix Spike	Dissolved	Water	200.7 Rev 4.4	25427
440-10605-K-1-D MSD	Matrix Spike Duplicate	Dissolved	Water	200.7 Rev 4.4	25427
440-10651-1	Outfall 019 Composite	Dissolved	Water	200.7 Rev 4.4	25427
LCS 440-24119/2-B	Lab Control Sample	Dissolved	Water	200.7 Rev 4.4	25427
MB 440-24119/1-B	Method Blank	Dissolved	Water	200.7 Rev 4.4	25427

Prep Batch: 25976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Dissolved	Water	245.1	
440-10651-1 MS	Outfall 019 Composite	Dissolved	Water	245.1	
440-10651-1 MSD	Outfall 019 Composite	Dissolved	Water	245.1	
LCS 440-25976/2-B	Lab Control Sample	Total/NA	Water	245.1	
MB 440-24119/1-E	Method Blank	Dissolved	Water	245.1	

Metals (Continued)

Analysis Batch: 26024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Dissolved	Water	245.1	25976
440-10651-1 MS	Outfall 019 Composite	Dissolved	Water	245.1	25976
440-10651-1 MSD	Outfall 019 Composite	Dissolved	Water	245.1	25976
LCS 440-25976/2-B	Lab Control Sample	Total/NA	Water	245.1	25976
MB 440-24119/1-E	Method Blank	Dissolved	Water	245.1	25976

Analysis Batch: 26175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Dissolved	Water	200.8	25428
440-10651-1 MS	Outfall 019 Composite	Dissolved	Water	200.8	25428
440-10651-1 MSD	Outfall 019 Composite	Dissolved	Water	200.8	25428
LCS 440-24119/2-C	Lab Control Sample	Dissolved	Water	200.8	25428
MB 440-24119/1-C	Method Blank	Dissolved	Water	200.8	25428

Analysis Batch: 26440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total Recoverable	Water	200.8	24893
440-11004-I-1-C MS	Matrix Spike	Total Recoverable	Water	200.8	24893
440-11004-I-1-D MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	24893

Analysis Batch: 26457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-24893/2-A	Lab Control Sample	Total Recoverable	Water	200.8	24893
MB 440-24893/1-A	Method Blank	Total Recoverable	Water	200.8	24893

General Chemistry

Analysis Batch: 23516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10462-1	Outfall 019 Grab	Total/NA	Water	SM 2540F	

Analysis Batch: 23741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10564-A-1 MS	Matrix Spike	Total/NA	Water	SM 5310B	
440-10564-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310B	
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 5310B	
LCS 440-23741/6	Lab Control Sample	Total/NA	Water	SM 5310B	
MB 440-23741/5	Method Blank	Total/NA	Water	SM 5310B	

Analysis Batch: 23766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM5210B	
LCS 440-23766/4	Lab Control Sample	Total/NA	Water	SM5210B	
LCSD 440-23766/5	Lab Control Sample Dup	Total/NA	Water	SM5210B	
USB 440-23766/1 USB	Method Blank	Total/NA	Water	SM5210B	

Analysis Batch: 23831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	180.1	
440-10651-1 DU	Outfall 019 Composite	Total/NA	Water	180.1	
MB 440-23831/6	Method Blank	Total/NA	Water	180.1	
MRL 440-23831/3 MRL	Lab Control Sample	Total/NA	Water	180.1	

TestAmerica Irvine
6/3/2012

QC Association Summary

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019

TestAmerica Job ID: 440-10462-1

General Chemistry (Continued)

Analysis Batch: 23935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 5540C	
440-10651-1 MS	Outfall 019 Composite	Total/NA	Water	SM 5540C	
440-10651-1 MSD	Outfall 019 Composite	Total/NA	Water	SM 5540C	
LCS 440-23935/4	Lab Control Sample	Total/NA	Water	SM 5540C	
MB 440-23935/3	Method Blank	Total/NA	Water	SM 5540C	

Analysis Batch: 23971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10466-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 2540D	
LCS 440-23971/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-23971/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 24460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 2540C	
440-10918-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	
LCS 440-24460/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-24460/1	Method Blank	Total/NA	Water	SM 2540C	

Prep Batch: 24965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10410-D-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-10410-F-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 B	
LCS 440-24965/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
MB 440-24965/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 24999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10410-D-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 C	24965
440-10410-F-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 C	24965
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 4500 NH3 C	24965
LCS 440-24965/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 C	24965
MB 440-24965/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 C	24965

Prep Batch: 25044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10462-1	Outfall 019 Grab	Total/NA	Water	1664A	
LCS 440-25044/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-25044/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-25044/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 25058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10462-1	Outfall 019 Grab	Total/NA	Water	1664A	25044
LCS 440-25044/2-A	Lab Control Sample	Total/NA	Water	1664A	25044
LCSD 440-25044/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	25044
MB 440-25044/1-A	Method Blank	Total/NA	Water	1664A	25044

TestAmerica Irvine

6/3/2012

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019

TestAmerica Job ID: 440-10462-1

General Chemistry (Continued)

Prep Batch: 26161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	Distill/CN	
510-78572-A-2-E MS	Matrix Spike	Total/NA	Water	Distill/CN	
510-78572-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	
LCS 440-26161/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 440-26161/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 26221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	SM 4500 CN E	26161
510-78572-A-2-E MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	26161
510-78572-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	26161
LCS 440-26161/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	26161
MB 440-26161/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	26161

Subcontract

Analysis Batch: 8614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	Gamma Spec K-40 CS-137	8614_P
440-10651-1	Outfall 019 Composite	Total/NA	Water	Gross Alpha and Beta	8614_P
440-10651-1	Outfall 019 Composite	Total/NA	Water	Radium 226	8614_P
440-10651-1	Outfall 019 Composite	Total/NA	Water	Radium 228	8614_P
440-10651-1	Outfall 019 Composite	Total/NA	Water	Strontium 90	8614_P
440-10651-1	Outfall 019 Composite	Total/NA	Water	Tritium	8614_P
440-10651-1	Outfall 019 Composite	Total/NA	Water	Uranium, Combined	8614_P
440-10651-2	Trip Blank	Total/NA	Water	Gamma Spec K-40 CS-137	8614_P
440-10651-2	Trip Blank	Total/NA	Water	Gross Alpha and Beta	8614_P
440-10651-2	Trip Blank	Total/NA	Water	Radium 226	8614_P
440-10651-2	Trip Blank	Total/NA	Water	Radium 228	8614_P
440-10651-2	Trip Blank	Total/NA	Water	Strontium 90	8614_P
440-10651-2	Trip Blank	Total/NA	Water	Uranium, Combined	8614_P
S205027-03	Lab Control Sample	Total/NA	WATER	Gross Alpha and Beta	8614_P
S205027-04	Method Blank	Total/NA	WATER	Gross Alpha and Beta	8614_P
S205027-05	OUTFALL 019 (440-10651-1 DU	Total/NA	WATER	Gross Alpha and Beta	8614_P

Prep Batch: 8614_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-10651-1	Outfall 019 Composite	Total/NA	Water	General Prep	
440-10651-2	Trip Blank	Total/NA	Water	General Prep	
S205027-03	Lab Control Sample	Total/NA	WATER	General Prep	
S205027-04	Method Blank	Total/NA	WATER	General Prep	
S205027-05	OUTFALL 019 (440-10651-1 DU	Total/NA	WATER	General Prep	

TestAmerica Irvine

6/3/2012

Definitions/Glossary

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
AY	Matrix Interference suspected

HPLC/IC

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

DIOXIN

Qualifier	Qualifier Description
B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J	Estimated result. Result is less than the reporting limit.

Metals

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
MB	Analyte present in the method blank

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

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080
TestAmerica Knoxville	Arkansas DEQ	State Program	6	88-0688
TestAmerica Knoxville	California	State Program	9	2423
TestAmerica Knoxville	Colorado	State Program	8	N/A
TestAmerica Knoxville	Connecticut	State Program	1	PH-0223
TestAmerica Knoxville	Florida	NELAC	4	E87177
TestAmerica Knoxville	Georgia	State Program	4	906
TestAmerica Knoxville	Hawaii	State Program	9	N/A
TestAmerica Knoxville	Indiana	State Program	5	C-TN-02
TestAmerica Knoxville	Iowa	State Program	7	375
TestAmerica Knoxville	Kansas	NELAC	7	E-10349
TestAmerica Knoxville	Kentucky	State Program	4	90101
TestAmerica Knoxville	L-A-B	DoD ELAP		L2311
TestAmerica Knoxville	Louisiana	NELAC	6	83979
TestAmerica Knoxville	Louisiana	NELAC	6	LA110001
TestAmerica Knoxville	Maryland	State Program	3	277
TestAmerica Knoxville	Michigan	State Program	5	9933
TestAmerica Knoxville	Nevada	State Program	9	TN00009
TestAmerica Knoxville	New Jersey	NELAC	2	TN001
TestAmerica Knoxville	New York	NELAC	2	10781
TestAmerica Knoxville	North Carolina DENR	State Program	4	64
TestAmerica Knoxville	North Carolina DHHS	State Program	4	21705
TestAmerica Knoxville	Ohio VAP	State Program	5	CL0059
TestAmerica Knoxville	Oklahoma	State Program	6	9415
TestAmerica Knoxville	Pennsylvania	NELAC	3	68-00576
TestAmerica Knoxville	South Carolina	State Program	4	84001
TestAmerica Knoxville	Tennessee	State Program	4	2014
TestAmerica Knoxville	Texas	NELAC	6	T104704380-TX
TestAmerica Knoxville	USDA	Federal		P330-11-00035
TestAmerica Knoxville	Utah	NELAC	8	QUAN3
TestAmerica Knoxville	Virginia	NELAC	3	165
TestAmerica Knoxville	Virginia	State Program	3	165
TestAmerica Knoxville	Washington	State Program	10	C593
TestAmerica Knoxville	West Virginia	State Program	3	9955C
TestAmerica Knoxville	West Virginia DEP	State Program	3	345
TestAmerica Knoxville	Wisconsin	State Program	5	998044300

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

EBERLINE ANALYTICAL CORPORATION
2030 Wright Avenue
Richmond, California 94804-3849
Phone (510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

May 30, 2012

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

Reference: **Test America-Irvine 44002624**
Eberline Analytical Report S205027-8614
Sample Delivery Group 8614

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Project No. 44002624. The samples were received on May 5, 2012.

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

Sincerely,

Joseph Verville
Client Services Manager

NJV/mw

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

1.0   General Comments

Sample delivery group 8614 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The samples were received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

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

2.0   Quality Control

Quality Control Samples consisted of laboratory control samples (LCS), method blanks, and duplicate analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0   Method Errors

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

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

Eberline Analytical
Report No. S205027-8614

Test America
Test America Project No. 44002624

Case Narrative, page 2

May 30, 2012

4.0   Analysis Notes

4.1   Gross Alpha/Gross Beta Analysis – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.2   Tritium Analysis – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.3   Strontium-90 Analysis – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.4   Radium-226 Analysis – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.5   Radium-228 Analysis - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits

4.6   Total Uranium Analysis - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.7   Gamma Spectroscopy – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0   Case Narrative Certification Statement

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

Joseph Verville
Client Services Manager

Date   5/30/12

E B E R L I N E   A N A L Y T I C A L
SDG 8614

SDG <u>8614</u> Contact <u>Joseph Verville</u>	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

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

T A B L E   O F   C O N T E N T S

Prepared by _____

Reviewed by _____

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-TOC</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

REPORT GUIDE

ABOUT THE DATA SUMMARY SECTION

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

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

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

PREPARATION BATCH SUMMARY

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

WORK SUMMARY

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

METHOD BLANKS

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

LAB CONTROL SAMPLES

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

DUPLICATES

REPORT GUIDES
Page 1
SUMMARY DATA SECTION
Page 1

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

SDG 8614		Client Test America, Inc.
Contact Joseph Verville	**G U I D E , c o n t .**	Contract 44002624

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

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

MATRIX SPIKES

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

DATA SHEETS

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

METHOD SUMMARIES

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

REPORT GUIDES

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

REPORT GUIDES
Page 2
SUMMARY DATA SECTION
Page 2

EBERLINE ANALYTICAL

SDG 8614

LAB SAMPLE SUMMARY

SDG 8614

Contact Joseph Verville

Client Test America, Inc.

Contract 44002624

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S205027-01	OUTFALL 019 (440-10651-1	Boeing-SSFL	WATER			440-5154.1	05/03/12 09:30
S205027-02	TRIP-BLANK (440-10651-2)	Boeing-SSFL	WATER			440-5154.1	05/04/12 14:35
S205027-03	Lab Control Sample		WATER				
S205027-04	Method Blank		WATER				
S205027-05	Duplicate (S205027-01)	Boeing-SSFL	WATER				05/03/12 09:30

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LS

Version 3.06

Report date 05/29/12

EBERLINE ANALYTICAL

SDG 8614

QC SUMMARY

SDG <u>8614</u>
Contact <u>Joseph Verville</u>

Client <u>Test America, Inc.</u>
Contract <u>44002624</u>

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8614	440-5154.1	OUTFALL 019 (440-10651-1	WATER		10.0 L		05/05/12	2	S205027-01	8614-001
		TRIP-BLANK (440-10651-2)	WATER		10.0 L		05/05/12	1	S205027-02	8614-002
		Method Blank	WATER						S205027-04	8614-004
		Lab Control Sample	WATER						S205027-03	8614-003
		Duplicate (S205027-01)	WATER		10.0 L		05/05/12	2	S205027-05	8614-005

QC SUMMARY
Page 1
SUMMARY DATA SECTION
Page 4

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-QS</u>
Version <u>3.06</u>
Report date <u>05/29/12</u>

EBERLINE ANALYTICAL

SDG 8614

PREP BATCH SUMMARY

SDG 8614
Contact Joseph Verville

Client Test America, Inc.
Contract 44002624

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALI-FIERS
Beta Counting												
AC	WATER	Radium-228 in Water	7271-148	10.4	2			1	1	1/1		
SR	WATER	Strontium-90 in Water	7271-148	10.4	2			1	1	1/1		
Gas Proportional Counting												
80A	WATER	Gross Alpha in Water	7271-148	20.6	2			1	1	1/1		
80B	WATER	Gross Beta in Water	7271-148	11.0	2			1	1	1/1		
Gamma Spectroscopy												
GAM	WATER	Gamma Emitters in Water	7271-148	7.0	2			1	1	1/1		
Kinetic Phosphorimetry												
U_T	WATER	Uranium, Total	7271-148		2			1	1	1/1		
Liquid Scintillation Counting												
H	WATER	Tritium in Water	7271-148	10.0	1			1	1	1/1		
Radon Counting												
RA	WATER	Radium-226 in Water	7271-148	16.4	2			1	1	1/1		

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-PBS
Version	3.06
Report date	05/29/12

PREP BATCH SUMMARY
Page 1
SUMMARY DATA SECTION
Page 5

EBERLINE ANALYTICAL

SDG 8614

LAB WORK SUMMARY

SDG _8614_			Client _Test America, Inc._
Contact _Joseph Verville_			Contract _44002624_

LAB SAMPLE	CLIENT SAMPLE ID				SUF-				
COLLECTED	LOCATION	MATRIX							
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD
S205027-01	OUTFALL 019 (440-10651-1		8614-001	80A/80		05/14/12	05/15/12	BW	Gross Alpha in Water
05/03/12	Boeing-SSFL	WATER	8614-001	80B/80		05/14/12	05/15/12	BW	Gross Beta in Water
05/05/12	440-5154.1		8614-001	AC		05/14/12	05/15/12	BW	Radium-228 in Water
			8614-001	GAM		05/10/12	05/15/12	MWT	Gamma Emitters in Water
			8614-001	H		05/09/12	05/15/12	BW	Tritium in Water
			8614-001	RA		05/23/12	05/24/12	BW	Radium-226 in Water
			8614-001	SR		05/09/12	05/15/12	BW	Strontium-90 in Water
			8614-001	U_T		05/14/12	05/14/12	CSS	Uranium, Total
S205027-02	TRIP-BLANK (440-10651-2)		8614-002	80A/80		05/14/12	05/15/12	BW	Gross Alpha in Water
05/04/12	Boeing-SSFL	WATER	8614-002	80B/80		05/14/12	05/15/12	BW	Gross Beta in Water
05/05/12	440-5154.1		8614-002	AC		05/14/12	05/15/12	BW	Radium-228 in Water
			8614-002	GAM		05/14/12	05/15/12	MWT	Gamma Emitters in Water
			8614-002	RA		05/23/12	05/24/12	BW	Radium-226 in Water
			8614-002	SR		05/09/12	05/15/12	BW	Strontium-90 in Water
			8614-002	U_T		05/14/12	05/14/12	CSS	Uranium, Total
S205027-03	Lab Control Sample		8614-003	80A/80		05/14/12	05/15/12	BW	Gross Alpha in Water
		WATER	8614-003	80B/80		05/14/12	05/15/12	BW	Gross Beta in Water
			8614-003	AC		05/14/12	05/15/12	BW	Radium-228 in Water
			8614-003	GAM		05/10/12	05/15/12	MWT	Gamma Emitters in Water
			8614-003	H		05/09/12	05/15/12	BW	Tritium in Water
			8614-003	RA		05/23/12	05/24/12	BW	Radium-226 in Water
			8614-003	SR		05/09/12	05/15/12	BW	Strontium-90 in Water
			8614-003	U_T		05/14/12	05/14/12	CSS	Uranium, Total
S205027-04	Method Blank		8614-004	80A/80		05/14/12	05/15/12	BW	Gross Alpha in Water
		WATER	8614-004	80B/80		05/14/12	05/15/12	BW	Gross Beta in Water
			8614-004	AC		05/14/12	05/15/12	BW	Radium-228 in Water
			8614-004	GAM		05/10/12	05/15/12	MWT	Gamma Emitters in Water
			8614-004	H		05/09/12	05/15/12	BW	Tritium in Water
			8614-004	RA		05/23/12	05/24/12	BW	Radium-226 in Water
			8614-004	SR		05/09/12	05/15/12	BW	Strontium-90 in Water
			8614-004	U_T		05/14/12	05/14/12	CSS	Uranium, Total

Lab id	_EAS_
Protocol	_TA_
Version	_Ver 1.0_
Form	_DVD-LWS_
Version	_3.06_
Report date	_05/29/12_

WORK SUMMARY
Page 1
SUMMARY DATA SECTION
Page 6

EBERLINE ANALYTICAL

SDG 8614

WORK SUMMARY, cont.

SDG 8614
Contact Joseph Verville

Client Test America, Inc.
Contract 44002624

LAB SAMPLE	CLIENT SAMPLE ID				SUF-				
COLLECTED	LOCATION		MATRIX						
RECEIVED	CUSTODY	SAS no		PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD

S205027-05	Duplicate (S205027-01)			8614-005	80A/80		05/14/12	05/15/12	BW	Gross Alpha in Water
05/03/12	Boeing-SSFL		WATER	8614-005	80B/80		05/14/12	05/15/12	BW	Gross Beta in Water
05/05/12				8614-005	AC		05/14/12	05/15/12	BW	Radium-228 in Water
				8614-005	GAM		05/11/12	05/15/12	MWT	Gamma Emitters in Water
				8614-005	H		05/09/12	05/15/12	BW	Tritium in Water
				8614-005	RA		05/23/12	05/24/12	BW	Radium-226 in Water
				8614-005	SR		05/09/12	05/15/12	BW	Strontium-90 in Water
				8614-005	U_T		05/14/12	05/14/12	CSS	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	05/29/12

EBERLINE ANALYTICAL
SDG 8614

8614-004   Method Blank

METHOD BLANK

SDG 8614	Client Test America, Inc.
Contact Joseph Verville	Contract 44002624
Lab sample id S205027-04	Client sample id Method Blank
Dept sample id 8614-004	Material/Matrix _____ WATER

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	-0.097	0.25	0.522	3.00	U	80A
Gross Beta	12587472	-0.410	0.58	0.987	4.00	U	80B
Tritium	10028178	-38.7	100	179	500	U	H
Radium-226	13982633	-0.078	0.31	0.586	1.00	U	RA
Radium-228	15262201	0.091	0.18	0.419	1.00	U	AC
Strontium-90	10098972	-0.058	0.16	0.402	2.00	U	SR
Uranium, Total		0	0.003	0.007	1.00	U	U_T
Potassium-40	13966002	-16.0	18	34.2	25.0	U	GAM
Cesium-137	10045973	-0.067	0.92	1.72	20.0	U	GAM

QC-BLANK #81733

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/29/12

METHOD BLANKS
Page 1
SUMMARY DATA SECTION
Page 8

EBERLINE ANALYTICAL

SDG 8614

8614-003

LAB CONTROL SAMPLE

SDG <u>8614</u>	Client <u>Test America, Inc.</u>
Contact <u>Joseph Verville</u>	Contract <u>44002624</u>
Lab sample id <u>S205027-03</u>	Client sample id <u>Lab Control Sample</u>
Dept sample id <u>8614-003</u>	Material/Matrix <u>WATER</u>

ANALYTE	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	REC %	2σ LMTS (TOTAL)	PROTOCOL LIMITS
Gross Alpha	38.1	2.0	0.524	3.00		80A	33.7	1.3	113	76-124	70-130
Gross Beta	28.3	1.2	0.807	4.00		80B	28.3	1.1	100	88-112	70-130
Tritium	2060	160	179	500		H	2210	88	93	88-112	80-120
Radium-226	54.1	2.3	0.714	1.00		RA	55.7	2.2	97	83-117	80-120
Radium-228	4.74	0.26	0.342	1.00		AC	5.27	0.21	90	89-111	60-140
Strontium-90	8.36	0.58	0.317	2.00		SR	9.34	0.37	90	88-112	80-120
Uranium, Total	62.2	7.3	0.069	1.00		U_T	62.0	2.5	100	88-112	80-120
Cobalt-60	91.8	13	3.25	10.0		GAM	108	4.3	85	86-114	80-120
Cesium-137	117	4.6	4.05	20.0		GAM	122	4.9	96	91-109	80-120

QC-LCS #81732

LAB CONTROL SAMPLES

    Page 1

SUMMARY DATA SECTION

    Page 9

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-LCS</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

EBERLINE ANALYTICAL

SDG 8614

DUPLICATE

SDG 8614		Client Test America, Inc.
Contact Joseph Verville		Contract 44002624
DUPLICATE	**ORIGINAL**	
Lab sample id S205027-05	Lab sample id S205027-01	Client sample id OUTFALL 019 (440-10651-1
Dept sample id 8614-005	Dept sample id 8614-001	Location/Matrix Boeing-SSFL WATER
	Received 05/05/12	Collected/Volume 05/03/12 09:30 10.0 L
		Chain of custody id 440-5154.1

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI-FIERS	RPD %	3σ TOT	DER σ
Gross Alpha	0.551	0.65	1.22	3.00	U	80A	0.130	0.68	1.24	U	–		0.9
Gross Beta	2.03	0.82	1.25	4.00	J	80B	2.15	0.94	1.45	J	6	93	0.2
Tritium	-5.37	110	182	500	U	H	-104	100	179	U	–		1.3
Radium-226	-0.272	0.35	0.696	1.00	U	RA	-0.032	0.33	0.622	U	–		1.0
Radium-228	-0.002	0.16	0.392	1.00	U	AC	0.026	0.14	0.374	U	–		0.3
Strontium-90	0.183	0.41	0.851	2.00	U	SR	0.018	0.41	0.957	U	–		0.6
Uranium, Total	0.014	0.004	0.007	1.00	J	U_T	0.018	0.004	0.007	J	25	53	1.4
Potassium-40	-8.12	19	33.0	25.0	U	GAM	9.67	14	23.4	U	–		1.5
Cesium-137	-0.746	1.5	1.62	20.0	U	GAM	-0.662	1.2	1.85	U	–		0.1

QC-DUP#1 81734

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	05/29/12

DUPLICATES

Page 1

SUMMARY DATA SECTION

Page 10

EBERLINE ANALYTICAL
SDG 8614

8614-001

OUTFALL 019 (440-10651-1

DATA SHEET

SDG 8614	Client Test America, Inc.	
Contact Joseph Verville	Contract 44002624	
Lab sample id S205027-01	Client sample id OUTFALL 019 (440-10651-1	
Dept sample id 8614-001	Location/Matrix Boeing-SSFL	WATER
Received 05/05/12	Collected/Volume 05/03/12 09:30 10.0 L	
	Chain of custody id 440-5154.1	

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	0.130	0.68	1.24	3.00	U	80A
Gross Beta	12587472	2.15	0.94	1.45	4.00	J	80B
Tritium	10028178	-104	100	179	500	U	H
Radium-226	13982633	-0.032	0.33	0.622	1.00	U	RA
Radium-228	15262201	0.026	0.14	0.374	1.00	U	AC
Strontium-90	10098972	0.018	0.41	0.957	2.00	U	SR
Uranium, Total		0.018	0.004	0.007	1.00	J	U_T
Potassium-40	13966002	9.67	14	23.4	25.0	U	GAM
Cesium-137	10045973	-0.662	1.2	1.85	20.0	U	GAM

DATA SHEETS
Page 1
SUMMARY DATA SECTION
Page 11

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	05/29/12

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

SDG 8614

8614-002   TRIP-BLANK (440-10651-2)

D A T A   S H E E T

SDG <u>8614</u>	Client <u>Test America, Inc.</u>
Contact <u>Joseph Verville</u>	Contract <u>44002624</u>
Lab sample id <u>S205027-02</u>	Client sample id <u>TRIP-BLANK (440-10651-2)</u>
Dept sample id <u>8614-002</u>	Location/Matrix <u>Boeing-SSFL</u> <u>WATER</u>
Received <u>05/05/12</u>	Collected/Volume <u>05/04/12 14:35</u> <u>10.0 L</u>
	Chain of custody id <u>440-5154.1</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	-0.072	0.13	0.294	3.00	U	80A
Gross Beta	12587472	-0.302	0.56	0.940	4.00	U	80B
Radium-226	13982633	0.195	0.31	0.534	1.00	U	RA
Radium-228	15262201	-0.071	0.11	0.319	1.00	U	AC
Strontium-90	10098972	0.027	0.42	0.983	2.00	U	SR
Uranium, Total		0	0.003	0.007	1.00	U	U_T
Potassium-40	13966002	4.95	12	21.6	25.0	U	GAM
Cesium-137	10045973	-0.305	1.0	1.66	20.0	U	GAM

DATA SHEETS
Page 2
SUMMARY DATA SECTION
Page 12

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-DS</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

EBERLINE ANALYTICAL

SDG 8614

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

```
Test  AC   Matrix WATER
SDG  8614
Contact  Joseph Verville
```

```
Client  Test America, Inc.
Contract  44002624
```

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-228	
Preparation batch 7271-148						
S205027-01			8614-001	OUTFALL 019 (440-10651-1	U	
S205027-02			8614-002	TRIP-BLANK (440-10651-2)	U	
S205027-03			8614-003	Lab Control Sample	ok	
S205027-04			8614-004	Method Blank	U	
S205027-05			8614-005	Duplicate (S205027-01)	-	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148 2σ prep error 10.4 % Reference Lab Notebook No. 7271 pg.012																
S205027-01			OUTFALL 019 (440-10651-1	0.374	1.80			77		150			11	05/14/12	05/14	GRB-201
S205027-02			TRIP-BLANK (440-10651-2)	0.319	1.80			76		150			10	05/14/12	05/14	GRB-202
S205027-03			Lab Control Sample	0.342	1.80			75		150				05/14/12	05/14	GRB-204
S205027-04			Method Blank	0.419	1.80			77		150				05/14/12	05/14	GRB-206
S205027-05			Duplicate (S205027-01)	0.392	1.80			77		150			11	05/14/12	05/14	GRB-207

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

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

```
AVERAGES ± 2 SD    MDA   0.369 ±  0.079
FOR 5 SAMPLES      YIELD  76  ±   2
```

```
Lab id  EAS
Protocol  TA
Version  Ver 1.0
Form  DVD-LMS
Version  3.06
Report date  05/29/12
```

EBERLINE ANALYTICAL

SDG 8614

Test SR   Matrix WATER
SDG 8614
Contact Joseph Verville

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER

BETA COUNTING

Client Test America, Inc.
Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90	
Preparation batch 7271-148						
S205027-01			8614-001	OUTFALL 019 (440-10651-1	U	
S205027-02			8614-002	TRIP-BLANK (440-10651-2)	U	
S205027-03			8614-003	Lab Control Sample	ok	
S205027-04			8614-004	Method Blank	U	
S205027-05			8614-005	Duplicate (S205027-01)	-	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148		2σ prep error 10.4 %	Reference Lab Notebook No. 7271 pg.012													
S205027-01			OUTFALL 019 (440-10651-1	0.957	0.500			83	50				6	05/09/12	05/09	GRB-221
S205027-02			TRIP-BLANK (440-10651-2)	0.983	0.500			78	50				5	05/09/12	05/09	GRB-222
S205027-03			Lab Control Sample	0.317	1.00			83	80					05/09/12	05/09	GRB-207
S205027-04			Method Blank	0.402	1.00			81	50					05/09/12	05/09	GRB-223
S205027-05			Duplicate (S205027-01)	0.851	0.500			83	50				6	05/09/12	05/09	GRB-224
Nominal values and limits from method				2.00	1.00			30-105	50				180			

PROCEDURES	REFERENCE	905.0
	CP-380	Strontium in Water Samples, rev 5

AVERAGES ± 2 SD	MDA	0.702 ± 0.636
FOR 5 SAMPLES	YIELD	82 ± 4

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/29/12

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 14

EBERLINE ANALYTICAL

SDG 8614

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER	
SDG 8614	
Contact Joseph Verville	

Client Test America, Inc.	
Contract 44002624	

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha
Preparation batch 7271-148					
S205027-01	80		8614-001	OUTFALL 019 (440-10651-1	U
S205027-02	80		8614-002	TRIP-BLANK (440-10651-2)	U
S205027-03	80		8614-003	Lab Control Sample	ok
S205027-04	80		8614-004	Method Blank	U
S205027-05	80		8614-005	Duplicate (S205027-01)	- U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148 2σ prep error 20.6 % Reference Lab Notebook No. 7271 pg.012																
S205027-01	80		OUTFALL 019 (440-10651-1	1.24	0.200			106		400			11	05/11/12	05/14	GRB-101
S205027-02	80		TRIP-BLANK (440-10651-2)	0.294	0.300			1		400			10	05/11/12	05/14	GRB-103
S205027-03	80		Lab Control Sample	0.524	0.300			61		400				05/11/12	05/14	GRB-104
S205027-04	80		Method Blank	0.522	0.300			60		400				05/11/12	05/14	GRB-103
S205027-05	80		Duplicate (S205027-01)	1.22	0.200			106		400			11	05/11/12	05/14	GRB-104
Nominal values and limits from method				3.00	0.300			0-250	100				180			

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

AVERAGES ± 2 SD	MDA	0.760 ±	0.878
FOR 5 SAMPLES	RESIDUE	67 ±	87

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	05/29/12

METHOD SUMMARIES

Page 3

SUMMARY DATA SECTION

Page 15

EBERLINE ANALYTICAL

SDG 8614

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Client Test America, Inc.
Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta	
Preparation batch 7271-148						
S205027-01	80		8614-001	OUTFALL 019 (440-10651-1	2.15	J
S205027-02	80		8614-002	TRIP-BLANK (440-10651-2)	U	
S205027-03	80		8614-003	Lab Control Sample	ok	
S205027-04	80		8614-004	Method Blank	U	
S205027-05	80		8614-005	Duplicate (S205027-01)	ok	J

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148			2σ prep error 11.0 % Reference Lab Notebook No. 7271 pg.012													
S205027-01	80		OUTFALL 019 (440-10651-1	1.45	0.200			106		400			11	05/11/12	05/14	GRB-101
S205027-02	80		TRIP-BLANK (440-10651-2)	0.940	0.300			1		400			10	05/11/12	05/14	GRB-103
S205027-03	80		Lab Control Sample	0.807	0.300			61		400				05/11/12	05/14	GRB-104
S205027-04	80		Method Blank	0.987	0.300			60		400				05/11/12	05/14	GRB-103
S205027-05	80		Duplicate (S205027-01)	1.25	0.200			106		400			11	05/11/12	05/14	GRB-104

Nominal values and limits from method   4.00 0.300   0-250 100   180

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

AVERAGES ± 2 SD	MDA	1.09	±	0.518
FOR 5 SAMPLES	RESIDUE	67	±	87

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	05/29/12

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER

GAMMA SPECTROSCOPY

Client Test America, Inc.

Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7271-148						
S205027-01			8614-001	OUTFALL 019 (440-10651-1		U
S205027-02			8614-002	TRIP-BLANK (440-10651-2)		U
S205027-03			8614-003	Lab Control Sample	ok	ok
S205027-04			8614-004	Method Blank		U
S205027-05			8614-005	Duplicate (S205027-01)	-	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148 2σ prep error 7.0 % Reference Lab Notebook No. 7271 pg.012																
S205027-01			OUTFALL 019 (440-10651-1		2.00					400			7	05/08/12	05/10	MB,G8,0
S205027-02			TRIP-BLANK (440-10651-2)		2.00					400			10	05/08/12	05/14	MB,G8,0
S205027-03			Lab Control Sample		2.00					400				05/08/12	05/10	MB,G3,0
S205027-04			Method Blank		2.00					400				05/08/12	05/10	MB,G4,0
S205027-05			Duplicate (S205027-01)		2.00					400			8	05/08/12	05/11	MB,G2,0

Nominal values and limits from method   6.00   2.00   400   180

PROCEDURES	REFERENCE	901.1
	DWP-100	Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	05/29/12

EBERLINE ANALYTICAL

SDG 8614

| Test U T Matrix WATER |
| SDG 8614 |
| Contact Joseph Verville |

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY

| Client Test America, Inc. |
| Contract 44002624 |

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Uranium, Total
Preparation batch 7271-148					
S205027-01			8614-001	OUTFALL 019 (440-10651-1	0.018 J
S205027-02			8614-002	TRIP-BLANK (440-10651-2)	U
S205027-03			8614-003	Lab Control Sample	ok
S205027-04			8614-004	Method Blank	U
S205027-05			8614-005	Duplicate (S205027-01)	ok J

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148		2σ prep error		Reference Lab Notebook No. 7271 pg.012												
S205027-01			OUTFALL 019 (440-10651-1	0.007	0.0200								11	05/14/12	05/14	KPA-001
S205027-02			TRIP-BLANK (440-10651-2)	0.007	0.0200								10	05/14/12	05/14	KPA-001
S205027-03			Lab Control Sample	0.069	0.0200									05/14/12	05/14	KPA-001
S205027-04			Method Blank	0.007	0.0200									05/14/12	05/14	KPA-001
S205027-05			Duplicate (S205027-01)	0.007	0.0200								11	05/14/12	05/14	KPA-001

| Nominal values and limits from method | | | | 1.00 | 0.0200 | | | | | | | | 180 | | | |

| PROCEDURES   REFERENCE   D5174 |

| AVERAGES ± 2 SD | MDA | 0.019 ± 0.055 |
| FOR 5 SAMPLES | YIELD | _____ ± _____ |

| Lab id EAS |
| Protocol TA |
| Version Ver 1.0 |
| Form DVD-LMS |
| Version 3.06 |
| Report date 05/29/12 |

| Test H   Matrix WATER |
| SDG 8614 |
| Contact Joseph Verville |

EBERLINE ANALYTICAL
SDG 8614

LAB METHOD SUMMARY
TRITIUM IN WATER
LIQUID SCINTILLATION COUNTING

| Client Test America, Inc. |
| Contract 44002624 |

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium
Preparation batch 7271-148					
S205027-01			8614-001	OUTFALL 019 (440-10651-1	U
S205027-03			8614-003	Lab Control Sample	ok
S205027-04			8614-004	Method Blank	U
S205027-05			8614-005	Duplicate (S205027-01)	- U

Nominal values and limits from method   RDLs (pCi/L)   500

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148			2σ prep error 10.0 % Reference Lab Notebook No. 7271 pg.012													
S205027-01			OUTFALL 019 (440-10651-1	179	0.0100			100		150			6	05/09/12	05/09	LSC-006
S205027-03			Lab Control Sample	179	0.100			10		150				05/09/12	05/09	LSC-006
S205027-04			Method Blank	179	0.100			10		150				05/09/12	05/09	LSC-006
S205027-05			Duplicate (S205027-01)	182	0.0100			100		150			6	05/09/12	05/09	LSC-006
Nominal values and limits from method				500	0.0100					100			180			

| PROCEDURES | REFERENCE | 906.0 |
| | DWP-212 | Tritium in Drinking Water by Distillation, rev 8 |

| AVERAGES ± 2 SD | MDA 180   ± 3.00 |
| FOR 4 SAMPLES | YIELD 55   ± 104 |

| Lab id EAS |
| Protocol TA |
| Version Ver 1.0 |
| Form DVD-LMS |
| Version 3.06 |
| Report date 05/29/12 |

METHOD SUMMARIES
Page 7
SUMMARY DATA SECTION
Page 19

EBERLINE ANALYTICAL

SDG 8614

Test RA Matrix WATER
SDG 8614
Contact Joseph Verville

LAB METHOD SUMMARY

RADIUM-226 IN WATER

RADON COUNTING

Client Test America, Inc.
Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226	
Preparation batch 7271-148						
S205027-01			8614-001	OUTFALL 019 (440-10651-1	U	
S205027-02			8614-002	TRIP-BLANK (440-10651-2)	U	
S205027-03			8614-003	Lab Control Sample	ok	
S205027-04			8614-004	Method Blank	U	
S205027-05			8614-005	Duplicate (S205027-01)	-	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-148 2σ prep error 16.4 % Reference Lab Notebook No. 7271 pg.012																
S205027-01			OUTFALL 019 (440-10651-1	0.622	0.100			100		121			20	05/23/12	05/23	RN-010
S205027-02			TRIP-BLANK (440-10651-2)	0.534	0.100			100		121			19	05/23/12	05/23	RN-012
S205027-03			Lab Control Sample	0.714	0.100			100		121				05/23/12	05/23	RN-009
S205027-04			Method Blank	0.586	0.100			100		121				05/23/12	05/23	RN-015
S205027-05			Duplicate (S205027-01)	0.696	0.100			100		121			20	05/23/12	05/23	RN-016
Nominal values and limits from method				1.00	0.100					100			180			

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

AVERAGES ± 2 SD	MDA	0.630 ± 0.150
FOR 5 SAMPLES	YIELD	100 ± 0

METHOD SUMMARIES

Page 8

SUMMARY DATA SECTION

Page 20

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 05/29/12

SDG 8614		Client Test America, Inc.
Contact Joseph Verville	**R E P O R T G U I D E**	Contract 44002624

S A M P L E   S U M M A R Y

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

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

The following notes apply to these reports:

*   LAB SAMPLE ID is the lab's primary identification for a sample.

*   DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.

*   CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.

*   QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

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

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

E B E R L I N E   A N A L Y T I C A L
SDG 8614

SDG <u>8614</u> Contact <u>Joseph Verville</u>	**R E P O R T G U I D E**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

P R E P A R A T I O N   B A T C H   S U M M A R Y

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

The following notes apply to this report:

* The preparation batches are shown in the same order as the Method Summary Reports are printed.

* Only analyses of planchets relevant to the SDG are included.

* Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.

* The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

X Some data has been manually entered or modified. Transcription errors are possible.

P One or more results are 'preliminary'. The data is not ready for final reporting.

2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

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

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

REPORT GUIDES
Page 2
SUMMARY DATA SECTION
Page 22

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

SDG 8614

| SDG 8614 | | Client Test America, Inc. |
| Contact Joseph Verville | R E P O R T   G U I D E | Contract 44002624 |

W O R K   S U M M A R Y

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

The following notes apply to this report:

*   TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.

*   SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.

*   The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.

*   PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.

*   For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

*   The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

REPORT GUIDES
Page 3
SUMMARY DATA SECTION
Page 23

SDG 8614	**R E P O R T G U I D E**	Client Test America, Inc.
Contact Joseph Verville		Contract 44002624

D A T A   S H E E T

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

The following notes apply to this report:

* TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.

* The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

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

* ERRORs can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.

* A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.

* When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

REPORT GUIDES
Page 4
SUMMARY DATA SECTION
Page 24

DATA SHEET

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

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

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

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

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

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

P   The RESULT is 'preliminary'.

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

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

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

The following values are underlined to indicate possible problems:

*   An MDA is underlined if it is bigger than its RDL.

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

SDG 8614		Client Test America, Inc.
Contact Joseph Verville	GUIDE, cont.	Contract 44002624

DATA SHEET

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

* A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.

* When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

	Lab id EAS
	Protocol TA
	Version Ver 1.0
	Form DVD-RG
	Version 3.06
	Report date 05/29/12

REPORT GUIDES
Page 6
SUMMARY DATA SECTION
Page 26

SDG 8614
Contact Joseph Verville

R E P O R T   G U I D E

Client Test America, Inc.
Contract 44002624

L A B   C O N T R O L   S A M P L E

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

The following notes apply to this report:

* All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.

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

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

* REC (Recovery) is RESULT divided by ADDED expressed as a percent.

* The first, computed limits for the recovery reflect:

   1. The error of RESULT, including that introduced by rounding the result prior to printing.

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

   2. The error of ADDED.

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

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

* The recovery is underlined if it is outside either of these ranges.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 05/29/12

REPORT GUIDES
Page 7
SUMMARY DATA SECTION
Page 27

EBERLINE ANALYTICAL
SDG 8614

SDG <u>8614</u> Contact <u>Joseph Verville</u>	**REPORT GUIDE**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

DUPLICATE

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

The following notes apply to this report:

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

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

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

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

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

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

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

  This value reported for this limit is at most 999.

* The second limit for the RPD is the larger of:

  1. A fixed percentage specified in the protocol.

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

REPORT GUIDES
Page 8
SUMMARY DATA SECTION
Page 28

SDG 8614		Client Test America, Inc.
Contact Joseph Verville	G U I D E , c o n t .	Contract 44002624

D U P L I C A T E

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

* The RPD is underlined if it is greater than either limit.

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

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

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

REPORT GUIDES
    Page 9
SUMMARY DATA SECTION
    Page 29

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 05/29/12

EBERLINE ANALYTICAL
SDG 8614

SDG <u>8614</u> Contact <u>Joseph Verville</u>	R E P O R T G U I D E	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

M A T R I X   S P I K E

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

The following notes apply to this report:

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

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

   2. The error of ADDED.

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

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

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

SDG 8614		
Contact Joseph Verville	**G U I D E , c o n t .**	Client Test America, Inc.
		Contract 44002624

M A T R I X   S P I K E

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

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

REPORT GUIDES
Page 11
SUMMARY DATA SECTION
Page 31

EBERLINE ANALYTICAL

SDG 8614

SDG 8614	**R E P O R T G U I D E**	Client Test America, Inc.
Contact Joseph Verville		Contract 44002624

M E T H O D   S U M M A R Y

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

The following notes apply to this report:

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

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

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

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

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

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

* Non-U results for Method Blanks are underlined to indicate
  possible contamination of other samples in the preparation
  batch. The Method Blank Report has supporting data.

* Lab Control Sample and Matrix Spike results are shown as: ok, No
  data, LOW or HIGH, with the last two underlined. 'No data'
  means no amount ADDED was specified. 'LOW' and 'HIGH'

REPORT GUIDES
    Page 12
SUMMARY DATA SECTION
    Page 32

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

EBERLINE ANALYTICAL

SDG 8614

SDG <u>8614</u> Contact <u>Joseph Verville</u>	**GUIDE, cont.**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

METHOD SUMMARY

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

* Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.

* If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

  MDAs are underlined if greater than the printed RDL.

* Aliquots are underlined if less than the nominal value specified for the method.

* Prepareation factors are underlined if greater than the nominal value specified for the method.

* Dilution factors are underlined if greater than the nominal value specified for the method.

* Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.

* Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.

* Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

* Count times are underlined if less than the nominal value

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>05/29/12</u>

REPORT GUIDES
Page 13
SUMMARY DATA SECTION
Page 33

METHOD SUMMARY

specified for the method.

* Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.

* Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.

* Days Held are underlined if greater than the holding time specified in the protocol.

* Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

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

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

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

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

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

REPORT GUIDES
Page 14
SUMMARY DATA SECTION
Page 34

G U I D E ,   c o n t .

M E T H O D   S U M M A R Y

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

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

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

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	05/29/12

TestAmerica Irvine

17461 Derian Ave Suite 100
Irvine, CA 92614
Phone (949) 261-1022 Fax (949) 260-3297

82-05-027

8614

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lab PM: Wilson, Debby	Carrier Tracking No(s):
E-Mail: debby.wilson@testamericainc.com	

COC No.: 440-5154.1
Page: Page 1 of 1
Job #: 440-104462-1

Client Information (Sub Contract Lab)

Company: Eberline Services

Client Contact
Shipping/Receiving

Address: 2030 Wright Avenue,
City: Richmond
State, Zip: CA, 94804
Phone:
Email:

Site: Boeing SSFL
Project Name: Monthly Outfall 019

Sampler:
Phone:

Due Date Requested: 5/17/2012
TAT Requested (days):

PO #:
WO #:
Project #: 44002624
SSOW#:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform NS/MSD (Y/N) or NCS	SUBCONTRACT/ Gross Alpha	SUBCONTRACT/ Gross Beta	SUBCONTRACT/ Radium Combined	SUBCONTRACT/ Strontium 90	SUBCONTRACT/ Tritium	SUBCONTRACT/ Uranium, Combined	SUBCONTRACT/ Gamma Spec K-40 CS-137	Total Number of containers
Outfall 019 Composite (440-10651-1)	5/3/12	09:30 Pacific	C	Water				X	X	X	X	X	X	X	2

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)
	Other:

Possible Hazard Identification

☐ Unconfirmed   ☐ Possible Hazard

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Special Instructions/QC Requirements:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client   ☐ Disposal By Lab   ☐ Archive For _____ Months

Special Instructions/Note:

	Date/Time	Company		Received by:	Date/Time	Company
Relinquished by: ~ Bender	5/4/12 12:00	TAS		Received by: FedEx	5/4/12 12:00	
Relinquished by: FED EX	Date/Time:	Company		Received by: ApM lulawly	Date/Time: 5/7/12 10:00	Company CBGRLINE
Relinquished by:	Date/Time:	Company		Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Page 80 of 87   6/3/2012

TestAmerica Irvine

17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)

Company:	Eberline Services
Address:	2030 Wright Avenue,
City:	Richmond
State, Zip:	CA, 94804
Phone:	
Email:	
Site:	Boeing SSFL
Project Name:	Monthly Outfall 019 Composite

Sampler:	
Client Contact Shipping/Receiving	Phone:
Due Date Requested:	5/17/2012
TAT Requested (days):	
WO #:	
PO #:	
Project #:	44002624
SSOW#:	

Lab PM:	Wilson, Debby
E-Mail:	debby.wilson@testamericainc.com
Carrier Tracking No(s):	

COC No.: 440-5154.1
Page: Page 1 of 1
Job #: 440-10651-1

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ Gross Alpha	SUBCONTRACT/ Gross Beta	SUBCONTRACT/ Radium Combined	SUBCONTRACT/ Strontium 90	SUBCONTRACT/ Uranium, Combined	SUBCONTRACT/ Gamma Spec K-40 CS-137	Total Number of containers
Trip Blank (440-10651-2)	5/4/12	14:35 Pacific		Water		X	X	X	X	X	X	X	X	X

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client   ☐ Disposal By Lab   ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Preservation Codes:

A - HCL	M - Hexane	
B - NaOH	N - None	
C - Zn Acetate	O - AsNaO2	
D - Nitric Acid	P - Na2O4S	
E - NaHSO4	Q - Na2SO3	
F - MeOH	R - Na2S2O3	
G - Amchlor	S - H2SO4	
H - Ascorbic Acid	T - TSP Dodecahydrate	
I - Ice	U - Acetone	
J - DI Water	V - MCAA	
K - EDTA	W - pH 4-5	
L - EDA	Z - other (specify)	

Other:

Special Instructions/Note:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:

		Date/Time:			Date/Time:	
Relinquished by: [signature]		5/4/12 1700	Company TAI	Received by: [signature]	Date/Time: 5/4/12 1720	Company FedEx
Relinquished by: FEDEX		Date/Time:	Company	Received by: [signature] FedEx Receiving	Date/Time: 5/5/12 10:00	Company EBERLINE
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

RICHMOND, CA LABORATORY
SAMPLE RECEIPT CHECKLIST

EBERLINE SERVICES

Client: _TEST AMERICA_   City _IRVINE_   State _CA_

Date/Time received _5/5/12 10:00_   CoC No. _440-5154.1_

Container I.D. No. _Ice Chest_ Requested TAT (Days) _STAND_ P.O. Received Yes [ ]   No [ ]

INSPECTION

1. Custody seals on shipping container intact?   Yes [✓] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed?   Yes [✓] No [ ] N/A [ ]
3. Custody seals on sample containers intact?   Yes [ ] No [ ] N/A [✓]
4. Custody seals on sample containers dated & signed?   Yes [ ] No [ ] N/A [✓] N/A ✓
5. Packing material is: Wet [ ]   Dry [ ]
6. Number of samples in shipping container: ____2____   Sample Matrix __WATER__
7. Number of containers per sample: _____   (Or see CoC __✓__)
8. Samples are in correct container   Yes [✓]   No [ ]
9. Paperwork agrees with samples?   Yes [✓]   No [ ]
10. Samples have: Tape [ ] Hazard labels [ ] Rad labels [ ] Appropriate sample labels [✓]
11. Samples are: In good condition [✓]   Leaking [ ]   Broken Container [ ]   Missing [ ]
12. Samples are: Preserved [✓] Not preserved [✓] pH _2/6_ Preservative _____
13. Describe any anomalies:
    _____
    _____
    _____
14. Was P.M. notified of any anomalies?   Yes [ ]   No [ ]   Date _____
15. Inspected by _____JR_____   Date: _5/7/12_ Time: _10:20_

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
All Samples <80							

Ion Chamber Ser. No. _____   Calibration date _____

Alpha Meter Ser. No. _____   Calibration date _____

Beta/Gamma Meter Ser. No. _100482_   Calibration date _6 DEC 2011_

Form SCP-02, 07-30-07

"over 55 years of quality nuclear services"

440 - 10462

CHAIN OF CUSTODY FORM

Test America Version 7/19/2010

Client Name/Address:	Project:
MWH-Arcadia	Boeing-SSFL NPDES
618 Michillinda Ave, Suite 200	**Monthly Outfall 019**
Arcadia, CA 91007	**GRAB** EFFLUENT

Test America Contact: Debby Wilson

Project Manager: Bronwyn Kelly

Sampler: Rick BANAGA

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

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs (624)	Oil & Grease (1664-HEM)	Settleable Solids	Comments
Outfall 019	W	VOAs	5	5-3-2012 09:40	HCl	1A, 1B, 1C, 1D, 1E	X			
Outfall 019	W	1L Amber	2		HCl	2A, 2B		X		
Outfall 019	W	1L Poly	1		None	3			X	
Trip Blanks	W	VOAs	3	5-3-2012 09:40	HCl	4A, 4B, 4C	X			

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

Temp °F = 57
pH = 7.2
DO = 4.35 mg/L

Time of readings = 09:40

These Samples are the Grab Portion of Outfall 019 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time: 5-3-2012 12:55	Received By	Date/Time: 5-3-2012 12:55
Relinquished By	Date/Time: 5-3-12 16:30	Received By	Date/Time: 5/3/12 18:30
Relinquished By	Date/Time:	Received By	

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

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

Data Requirements: (Check)
No Level IV: ___ All Level IV: ___ NPDES Level IV: X 4°C

6/3/2012

440-10051

Test America Version 7/19/2010

CHAIN OF CUSTODY FORM

| Client Name/Address:
MWH-Arcadia
618 Michillinda Ave, Suite 200
Arcadia, CA 91007 | Project:
Boeing-SSFL NPDES
Monthly Outfall 019
COMPOSITE EFFLUENT |

Test America Contact: Debby Wilson

Project Manager: Bronwyn Kelly

Sampler: Rick BANAGA

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

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn	TCDD (and all congeners)	BOD₅ (20 degrees C)	Surfactants (MBAS)	Cl, SO₄, NO₃+NO₂-N, Perchlorate	Nitrate-N, Nitrite-N	Turbidity, TDS, TSS	Ammonia-N (350.2)	Alpha BHC (608)	2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, PCP (SVOCs 625)	Comments
Outfall 019	W	1L Poly	1	5-3-2012 09:30	HNO₃	5A	X										
Outfall 019 Dup	W	1L Poly	1		HNO₃	5B	X										
Outfall 019	W	1L Amber	2		None	6A, 6B		X								
Outfall 019	W	1L Poly	1		None	7			X							
Outfall 019	W	500 mL Poly	2		None	8A, 8B				X						
Outfall 019	W	500 mL Poly	2		None	9A, 9B					X					
Outfall 019	W	500 mL Poly	1		None	10						X				
Outfall 019	W	500 mL Poly	2		None	11A, 11B							X			
Outfall 019	W	500 mL Poly	1		H₂SO₄	12								X		
Outfall 019	W	1L Amber	2		None	13A, 13B									X	
Outfall 019	W	1L Amber	2	5-3-2012 09:36	None	14A, 14B										X

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 019 for this storm event.
These must be added to the same work order for COC Page 1 of 3 for Outfall 019 for the same event.

Relinquished By	Date/Time: 5-3-2012 12:50	Received By	Date/Time: 5-3-12 12:58
Relinquished By	Date/Time: 5-3-12 18:15	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time: 5/03/12 18:15

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

Sample Integrity: (Check)
Intact: X On Ice: X 1.5°C

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

03 M02

6/3/2012

CHAIN OF CUSTODY FORM

Test America version 7/19/2010

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007	Project: Boeing-SSFL NPDES **Monthly Outfall 019** COMPOSITE *EFFLUENT*
Test America Contact: Debby Wilson	

Project Manager: Bronwyn Kelly	Phone Number:
Sampler: *Rick Banach*	(626) 568-6691 Fax Number: (626) 568-6515

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn	Total Organic Carbon	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Cyanide	Comments
Outfall 019	W	1L Poly	1	5-3-2012 09:30	None	15	X					Filter w/in 24hrs of receipt at lab
Outfall 019	W	250 mL Glass	1	↓	HCl	16		X				
Outfall 019	W	2.5 Gal Cube	1	5-3-2012 09:30	None	17A			X			Unfiltered and unpreserved analysis
		500 mL Amber	1		None	17B						
Outfall 019	W	1 Gal Cube	1		None	18				X		Only test on 1st and 2nd rain events of the year
Outfall 019	W	500 mL Poly	1	5-3-2012 09:30	NaOH	19					X	

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 019 for this storm event.
These must be added to the same workorder for COC Page 1 of 3 for Outfall 019 for the same event.

Relinquished By	Date/Time: 5-3-2012 12:50	Received By	Date/Time: 5-3-12 12:50	Turn-around time: (Check) 24 Hour: ___ 72 Hour: ___ 10 Day: ___ 48 Hour: ___ 5 Day: ___ Normal: X
Relinquished By	Date/Time: 5-3-12 - 18:15	Received By	Date/Time:	Sample Integrity: (Check) Intact: X On Ice: X 1.5
Relinquished By	Date/Time:	Received By	Date/Time: 5/3/12 18:15	Data Requirements: (Check) No Level IV: ___ All Level IV: ___ NPDES Level IV: X

6/3/2012

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-10462-1

Login Number: 10462
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	True	
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	
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	

TestAmerica Irvine

6/3/2012

Login Sample Receipt Checklist

Login Number: 10651

List Source: TestAmerica Irvine

List Number: 1

Creator: Perez, Angel

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	
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	

APPENDIX G

Section 19

Outfall 019 – June 7, 2012

MECX Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-13854-1

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:	440-13854-1
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
Outfall 019	440-14006-1	G2F090420-001, S206035-01	Water	6/7/2012 10:15:00 AM	1613B, 180.1, 200.7 tot/diss, 245.1 tot/diss, 314.0, 900, 901.1, 903.1, 904, 905, 906, ASTM D-5174

II. Sample Management

No anomalies were observed regarding sample management. A portion of the samples were received at TestAmerica-Irvine nominally above the control limit, at 6.8°C ; however, as the samples had insufficient time to cool, no qualifications were required. The remaining samples were received at TestAmerica-Irvine and all samples shipped to TestAmerica-West Sacramento were received within the control limits of 4°C±2°C. The temperature upon receipt was not noted by Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. 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. As the samples were couriered to TestAmerica-Irvine, custody seals were not necessary. Custody seals were present on the coolers upon arrival at TestAmerica-West Sacramento and Eberline. 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: July 17, 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.

    o 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%.

    o Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. The case narrative for this SDG noted that due to a computer error, an end static mass resolution check was not generated within the 12-hour window. As the sample was analyzed following an acceptable resolution check, and the resolution check analyzed following discovery of the computer error was acceptable, the sample data was not considered to be adversely impacted, and no qualifications were assigned.

- Calibration: Calibration criteria were met.

    o Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 15 native compounds (calibration by isotope dilution) and ≤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.

    o 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 below the estimated detection limit (EDL) for total TCDF and 1,2,3,4,7,8,9-HpCDF, and detects reported at or above the EDL for OCDD, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 2,3,4,6,7,8-HxCDF, total HxCDF, 1,2,3,4,7,8,9-HpCDF, and total HpCDF. Several of the 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. The result for 1,2,3,4,7,8-HxCDF was qualified as nondetected "U," at the level of contamination. Remaining method blank contaminants were not detected in the associated sample. Total HpCDF was assigned a laboratory qualifier of "B;" however, as the peak comprising the sample total was not the same single peak comprising the method blank total, the sample result was not qualified.

- 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.

  The reported EMPC result for 1,2,3,4,7,8-HxCDF previously qualified as nondetected for method blank contamination was not further qualified as an EMPC. The result for 1,2,3,4,6,7,8-HpCDF reported as an EMPC was qualified as an estimated nondetect, "UJ," as was total HpCDF, at the level of the EMPC. Total HxCDF containing an isomer reported as an EMPC was qualified as estimated, "J."

B. EPA METHODS 200.7 and 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: July 20, 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, 245.1*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

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

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP metals and 85-115% for mercury. 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 80-120%. Zinc was not detected in the ICSA solution.

- 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: MSD/MSD analyses were performed on total zinc and dissolved mercury. Recoveries and RPDs were within method-established QC limits.

- Serial Dilution: No serial dilution analyses were performed.

- 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:

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

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

C.   EPA METHOD 314.0—Perchlorate

Reviewed By: P. Meeks
Date Reviewed: July 20, 2012

The sample listed in Table 1 for this analysis were 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 value was $\geq$0.995 and all initial and continuing calibration recoveries affecting sample results were within 90-110%. The IPC recovery was within the method-established control limits of 80-120% and the ICCS recovery was within method-established control limits of 75-125%.

- Blanks: The method blank and CCBs had no detects.

- Blank Spikes and Laboratory Control Samples: Recoveries were 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 results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.

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

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

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

VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: July 20, 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 <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: The recoveries were within laboratory-established control limits.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG for all analytes. All results 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 by the laboratory 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:

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

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

D.   VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: July 20, 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 for turbidity, was met.

- Calibration: The ICVs and CCVs were recovered within 90-110%.

- Blanks: The turbidity method blank and CCBs had no detects.

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

- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.

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

- Sample Result Verification: 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:

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

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

Validated Sample Result Forms 440-13854-1

Analysis Method   1613B

Sample Name	Outfall 019		**Matrix Type:**	Water		**Validation Level:**	IV
Lab Sample Name:	440-14006-1		**Sample Date:**	6/7/2012 10:15:00 AM			

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.000050	0.0000067	ug/L		U	
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.000050	0.0000014	ug/L	JQ	UJ	*III
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000050	0.0000023	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000050	0.0000050	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.000050	0.0000006	ug/L	JQB	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.000050	0.0000046	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000050	0.0000005	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000050	0.0000042	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000050	0.0000008	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000050	0.0000039	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000050	0.0000020	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000050	0.0000005	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000050	0.0000024	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.000010	0.0000029	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.000010	0.0000017	ug/L		U	
OCDD	3268-87-9	ND	0.00010	0.0000079	ug/L		U	
OCDF	39001-02-0	ND	0.00010	0.0000047	ug/L		U	
Total HpCDD	37871-00-4	ND	0.000050	0.0000067	ug/L		U	
Total HpCDF	38998-75-3	ND	0.000050	0.0000018	ug/L	JQB	UJ	*III
Total HxCDD	34465-46-8	ND	0.000050	0.0000041	ug/L		U	
Total HxCDF	55684-94-1	0.000002	0.000050	0.0000006	ug/L	JQB	J	DNQ, *III
Total PeCDD	36088-22-9	ND	0.000050	0.0000039	ug/L		U	
Total PeCDF	30402-15-4	ND	0.000050	0.0000020	ug/L		U	
Total TCDD	41903-57-5	ND	0.000010	0.0000029	ug/L		U	
Total TCDF	55722-27-5	ND	0.000010	0.0000017	ug/L		U	

Analysis Method   180.1

Sample Name	Outfall 019		**Matrix Type:**	Water		**Validation Level:**	IV
Lab Sample Name:	440-14006-1		**Sample Date:**	6/7/2012 10:15:00 AM			

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	STL00189	0.080	0.10	0.040	NTU	J	J	DNQ

Analysis Method   200.7 Rev 4.4

Sample Name	Outfall 019			Matrix Type:	Water			Validation Level:	IV
Lab Sample Name:	440-14006-1			Sample Date:	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Zinc	7440-66-6	ND	20	6.0	ug/L		U	
Zinc, Dissolved	7440-66-6	ND	20	6.0	ug/L		U	

Analysis Method   245.1

Sample Name	Outfall 019			Matrix Type:	Water			Validation Level:	IV
Lab Sample Name:	440-14006-1			Sample Date:	6/7/2012 10:15:00 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			Matrix Type:	Water			Validation Level:	IV
Lab Sample Name:	440-14006-1			Sample Date:	6/7/2012 10:15:00 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	IB	U	

Analysis Method   Gamma Spec K-40 CS-137

Sample Name	Outfall 019			Matrix Type:	Water			Validation Level:	IV
Lab Sample Name:	440-14006-1			Sample Date:	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	-0.669	20	2.66	pCi/L	U	U	
Potassium-40	13966002	-7.29	25	24	pCi/L	U	U	

Analysis Method   Gross Alpha and Beta

Sample Name	Outfall 019			Matrix Type:	Water			Validation Level:	IV
Lab Sample Name:	440-14006-1			Sample Date:	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	-0.149	3	1.44	pCi/L	U	UJ	C
Gross Beta	12587472	1.54	4	1.87	pCi/L	U	U	

Analysis Method Radium 226

Sample Name	Outfall 019			**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-14006-1			**Sample Date:**	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.566	1	0.544	pCi/L	J	J	DNQ

Analysis Method Radium 228

Sample Name	Outfall 019			**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-14006-1			**Sample Date:**	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.136	1	0.434	pCi/L	U	U	

Analysis Method Strontium 90

Sample Name	Outfall 019			**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-14006-1			**Sample Date:**	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.025	2	0.726	pCi/L	U	U	

Analysis Method Tritium

Sample Name	Outfall 019			**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-14006-1			**Sample Date:**	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	-4.64	500	146	pCi/L	U	U	

Analysis Method Uranium, Combined

Sample Name	Outfall 019			**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-14006-1			**Sample Date:**	6/7/2012 10:15:00 AM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total		0.036	1	0.016	pCi/L	J	J	DNQ

APPENDIX G

Section 20

Outfall 019 – June 6 & 7, 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: 440-13854-1
Client Project/Site: Monthly Outfall 019 GRAB

For:

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

Attn: Bronwyn Kelly

Debby Wilson

Authorized for release by:
7/13/2012 6:27:04 PM

Debby Wilson
Project Manager I
debby.wilson@testamericainc.com

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.

Debby Wilson

Debby Wilson

Project Manager I

7/13/2012 6:27:04 PM

Table of Contents

TestAmerica Irvine
7/13/2012

1
2
3
4
5
6
7
8
9
10
11
12
13

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-13854-1	Outfall 019	Water	06/06/12 10:30	06/06/12 17:15
440-13854-2	Trip Blanks	Water	06/06/12 10:30	06/06/12 17:15
440-14006-1	Outfall 019	Water	06/07/12 10:15	06/07/12 17:40
440-14006-2	Trip Blank	Water	06/08/12 13:00	06/07/12 17:40

TestAmerica Irvine

7/13/2012

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

Job ID: 440-13854-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-13854-1

Comments
No additional comments.

Receipt
The samples were received on 6/6/2012 5:15 PM and 6/7/2012 5:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.6º C and 6.8º 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 32450. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 625: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 32450 exceeded control limits for the following analytes: Bis(2-ethylhexyl) phthalate, 2,4-Dinitrotoluene. Samples are past hold time. Results indicated a low bias for failing analytes.

No other analytical or quality issues were noted.

IC
Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for sulfate in batch 31287 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 continuing calibration verification (CCV) for perchlorate associated with batch 31949 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other analytical or quality issues were noted.

GC Semi VOA
No 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 440-32455. 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
No analytical or quality issues were noted.

WATER, 1613B, Dioxins/Furans with Totals
Sample: 1
Some analytes in this sample and the associated method blank (MB) have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

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

Job ID: 440-13854-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

Organic Prep

No analytical or quality issues were noted.

Client Sample ID: Outfall 019

Date Collected: 06/06/12 10:30

Date Received: 06/06/12 17:15

Lab Sample ID: 440-13854-1

Matrix: Water

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			06/16/12 00:58	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			06/16/12 00:58	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			06/16/12 00:58	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			06/16/12 00:58	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			06/16/12 00:58	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			06/16/12 00:58	1
Benzene	ND		0.50	0.28	ug/L			06/16/12 00:58	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			06/16/12 00:58	1
Chloroform	ND		0.50	0.33	ug/L			06/16/12 00:58	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/16/12 00:58	1
Tetrachloroethene	ND		0.50	0.32	ug/L			06/16/12 00:58	1
Toluene	ND		0.50	0.36	ug/L			06/16/12 00:58	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			06/16/12 00:58	1
Vinyl chloride	ND		0.50	0.40	ug/L			06/16/12 00:58	1
Trichloroethene	ND		0.50	0.26	ug/L			06/16/12 00:58	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			06/16/12 00:58	1
Xylenes, Total	ND		1.5	0.90	ug/L			06/16/12 00:58	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120					06/16/12 00:58	1
Dibromofluoromethane (Surr)	104		80 - 120					06/16/12 00:58	1
Toluene-d8 (Surr)	105		80 - 120					06/16/12 00:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		4.8	1.3	mg/L		06/15/12 11:39	06/15/12 12:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Settleable Solids	ND		0.10	0.10	mL/L/Hr			06/07/12 12:52	1

Client Sample ID: Trip Blanks

Date Collected: 06/06/12 10:30

Date Received: 06/06/12 17:15

Lab Sample ID: 440-13854-2

Matrix: Water

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			06/16/12 01:27	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			06/16/12 01:27	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			06/16/12 01:27	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			06/16/12 01:27	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			06/16/12 01:27	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			06/16/12 01:27	1
Benzene	ND		0.50	0.28	ug/L			06/16/12 01:27	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			06/16/12 01:27	1
Chloroform	ND		0.50	0.33	ug/L			06/16/12 01:27	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/16/12 01:27	1
Tetrachloroethene	ND		0.50	0.32	ug/L			06/16/12 01:27	1
Toluene	ND		0.50	0.36	ug/L			06/16/12 01:27	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			06/16/12 01:27	1
Vinyl chloride	ND		0.50	0.40	ug/L			06/16/12 01:27	1
Trichloroethene	ND		0.50	0.26	ug/L			06/16/12 01:27	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			06/16/12 01:27	1

TestAmerica Irvine

7/13/2012

Client Sample Results

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

Client Sample ID: Trip Blanks
Lab Sample ID: 440-13854-2

Date Collected: 06/06/12 10:30
Matrix: Water

Date Received: 06/06/12 17:15

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			06/16/12 01:27	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120					06/16/12 01:27	1
Dibromofluoromethane (Surr)	102		80 - 120					06/16/12 01:27	1
Toluene-d8 (Surr)	104		80 - 120					06/16/12 01:27	1

Client Sample ID: Outfall 019
Lab Sample ID: 440-14006-1

Date Collected: 06/07/12 10:15
Matrix: Water

Date Received: 06/07/12 17:40

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		06/12/12 19:32	06/15/12 04:56	1
Bis(2-ethylhexyl) phthalate	ND	LR	4.72	1.60	ug/L		06/12/12 19:32	06/15/12 04:56	1
N-Nitrosodimethylamine	ND		4.72	0.0943	ug/L		06/12/12 19:32	06/15/12 04:56	1
Pentachlorophenol	ND		4.72	0.377	ug/L		06/12/12 19:32	06/15/12 04:56	1
2,4-Dinitrotoluene	ND	LR	4.72	0.189	ug/L		06/12/12 19:32	06/15/12 04:56	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	91		40 - 120				06/12/12 19:32	06/15/12 04:56	1
2-Fluorobiphenyl	69		50 - 120				06/12/12 19:32	06/15/12 04:56	1
2-Fluorophenol	67		30 - 120				06/12/12 19:32	06/15/12 04:56	1
Nitrobenzene-d5	75		45 - 120				06/12/12 19:32	06/15/12 04:56	1
Phenol-d6	73		35 - 120				06/12/12 19:32	06/15/12 04:56	1
Terphenyl-d14	61		50 - 125				06/12/12 19:32	06/15/12 04:56	1

Method: 608 Pesticides - Organochlorine Pesticides Low level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0048	0.0024	ug/L		06/10/12 11:56	06/11/12 16:47	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		35 - 115				06/10/12 11:56	06/11/12 16:47	1
DCB Decachlorobiphenyl (Surr)	87		45 - 120				06/10/12 11:56	06/11/12 16:47	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46**		25	20	mg/L			06/08/12 00:57	50
Nitrate as N	ND		0.11	0.080	mg/L			06/08/12 00:43	1
Nitrate Nitrite as N	ND		0.26	0.11	mg/L			06/08/12 00:43	1
Sulfate	**180**		25	20	mg/L			06/08/12 00:57	50
Nitrite as N	ND		0.15	0.11	mg/L			06/08/12 00:43	1

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND	IB	4.0	0.95	ug/L			06/11/12 18:01	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	0.0000029	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total TCDD	ND		0.000010	0.0000029	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,7,8-PeCDD	ND		0.000050	0.0000039	ug/L		06/13/12 09:00	06/16/12 16:00	0.96

TestAmerica Irvine

7/13/2012

Client Sample ID: Outfall 019

Date Collected: 06/07/12 10:15

Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-1

Matrix: Water

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

Analyte	Result	Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	ND		0.000050	0.0000039	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,4,7,8-HxCDD	ND		0.000050	0.0000050	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000046	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000042	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total HxCDD	ND		0.000050	0.0000041	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,4,6,7,8-HpCDD	ND		0.000050	0.0000067	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total HpCDD	ND		0.000050	0.0000067	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
OCDD	ND		0.00010	0.0000079	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
2,3,7,8-TCDF	ND		0.000010	0.0000017	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total TCDF	ND		0.000010	0.0000017	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,7,8-PeCDF	ND		0.000050	0.0000020	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
2,3,4,7,8-PeCDF	ND		0.000050	0.0000024	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total PeCDF	ND		0.000050	0.0000020	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,4,7,8-HxCDF	**0.0000020**	**J Q B**	0.000050	0.00000065	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,6,7,8-HxCDF	ND		0.000050	0.00000058	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
2,3,4,6,7,8-HxCDF	ND		0.000050	0.00000059	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,7,8,9-HxCDF	ND		0.000050	0.00000083	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total HxCDF	**0.0000028**	**J Q B**	0.000050	0.00000065	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,4,6,7,8-HpCDF	**0.0000017**	**J Q**	0.000050	0.0000014	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
1,2,3,4,7,8,9-HpCDF	ND		0.000050	0.0000023	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
Total HpCDF	**0.0000017**	**J Q B**	0.000050	0.0000018	ug/L		06/13/12 09:00	06/16/12 16:00	0.96
OCDF	ND		0.00010	0.0000047	ug/L		06/13/12 09:00	06/16/12 16:00	0.96

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	101		35 - 197				06/13/12 09:00	06/16/12 16:00	0.96

Internal Standard	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	49		25 - 164				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,7,8-PeCDD	47		25 - 181				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,4,7,8-HxCDD	44		32 - 141				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,6,7,8-HxCDD	54		28 - 130				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,4,6,7,8-HpCDD	64		23 - 140				06/13/12 09:00	06/16/12 16:00	0.96
13C-OCDD	58		17 - 157				06/13/12 09:00	06/16/12 16:00	0.96
13C-2,3,7,8-TCDF	48		24 - 169				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,7,8-PeCDF	49		24 - 185				06/13/12 09:00	06/16/12 16:00	0.96
13C-2,3,4,7,8-PeCDF	49		21 - 178				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,6,7,8-HxCDF	53		26 - 123				06/13/12 09:00	06/16/12 16:00	0.96
13C-2,3,4,6,7,8-HxCDF	54		28 - 136				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,7,8,9-HxCDF	55		29 - 147				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,4,7,8,9-HpCDF	62		26 - 138				06/13/12 09:00	06/16/12 16:00	0.96
13C-1,2,3,4,7,8-HxCDF	49		26 - 152				06/13/12 09:00	06/16/12 16:00	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		06/13/12 11:33	06/15/12 20:42	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		06/12/12 20:39	06/15/12 13:50	1

TestAmerica Irvine

7/13/2012

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

Client Sample ID: Outfall 019

Date Collected: 06/07/12 10:15

Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-1

Matrix: Water

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		06/14/12 16:48	06/19/12 21:05	1
Copper	**0.66**	**J,DX**	2.0	0.50	ug/L		06/14/12 16:48	06/18/12 13:06	1
Lead	ND		1.0	0.20	ug/L		06/14/12 16:48	06/19/12 21:05	1
Selenium	ND		2.0	0.50	ug/L		06/14/12 16:48	06/19/12 21:05	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		06/12/12 20:46	06/14/12 06:36	1
Copper	ND		2.0	0.50	ug/L		06/12/12 20:46	06/14/12 06:36	1
Lead	ND		1.0	0.20	ug/L		06/12/12 20:46	06/14/12 06:36	1
Selenium	**0.60**	**J,DX**	2.0	0.50	ug/L		06/12/12 20:46	06/14/12 06:36	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		06/11/12 11:05	06/11/12 16:38	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		06/11/12 11:05	06/11/12 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Turbidity	**0.080**	**J,DX**	0.10	0.040	NTU			06/08/12 11:03	1
Total Dissolved Solids	**530**		10	10	mg/L			06/08/12 05:20	1
Total Suspended Solids	ND		10	10	mg/L			06/08/12 19:24	1
Cyanide, Total	ND		5.0	3.0	ug/L		06/12/12 09:08	06/12/12 09:48	1
Ammonia (as N)	**0.280**	**J,DX**	0.400	0.157	mg/L		06/13/12 18:20	06/13/12 20:00	1
Total Organic Carbon	ND		1.0	0.75	mg/L			06/11/12 09:24	1
Methylene Blue Active Substances	ND		0.10	0.050	mg/L			06/08/12 20:41	1
Biochemical Oxygen Demand	ND		2.0	0.50	mg/L			06/08/12 10:00	1

Method: Gamma Spec K-40 CS-137 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-0.669	U	20		pCi/L		06/14/12 00:00	06/14/12 00:00	1
Potassium-40	-7.29	U	25		pCi/L		06/14/12 00:00	06/14/12 00:00	1

Method: Gross Alpha and Beta - Gross Alpha/Beta

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.149	U	3		pCi/L		06/18/12 00:00	06/19/12 08:43	1
Gross Beta	1.54	U	4		pCi/L		06/18/12 00:00	06/19/12 08:43	1

Method: Radium 226 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	0.566	J	1		pCi/L		06/26/12 00:00	06/26/12 13:09	1

Method: Radium 228 - RAD-226-228 combined

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	0.136	U	1		pCi/L		06/25/12 00:00	06/25/12 15:29	1

Method: Strontium 90 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.025	U	2		pCi/L		06/25/12 00:00	06/25/12 09:24	1

TestAmerica Irvine

7/13/2012

Client Sample Results

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

Client Sample ID: Outfall 019
Date Collected: 06/07/12 10:15
Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-1
Matrix: Water

Method: Tritium - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	-4.64	U	500		pCi/L		06/25/12 00:00	06/28/12 07:26	1

Method: Uranium, Combined - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0.036	J	1		pCi/L		06/26/12 00:00	06/26/12 00:00	1

Client Sample ID: Trip Blank
Date Collected: 06/08/12 13:00
Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-2
Matrix: Water

Method: Gamma Spec K-40 CS-137 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-1.54	U	20		pCi/L		06/14/12 00:00	06/14/12 00:00	1
Potassium-40	-5.98	U	25		pCi/L		06/14/12 00:00	06/14/12 00:00	1

Method: Gross Alpha and Beta - Gross Alpha/Beta

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	-0.024	U	3		pCi/L		06/18/12 00:00	06/19/12 08:43	1
Gross Beta	-0.348	U	4		pCi/L		06/18/12 00:00	06/19/12 08:43	1

Method: Radium 226 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	0.453	U	1		pCi/L		06/26/12 00:00	06/26/12 13:09	1

Method: Radium 228 - RAD-226-228 combined

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	-0.081	U	1		pCi/L		06/25/12 00:00	06/25/12 15:29	1

Method: Strontium 90 - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.099	U	2		pCi/L		06/25/12 00:00	06/25/12 09:24	1

Method: Uranium, Combined - General Sub Contract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0	U	1		pCi/L		06/26/12 00:00	06/26/12 00:00	1

TestAmerica Irvine
7/13/2012

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

Client Sample ID: Outfall 019
Date Collected: 06/06/12 10:30
Date Received: 06/06/12 17:15

Lab Sample ID: 440-13854-1
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	33234	06/16/12 00:58	YK	TAL IRV
Total/NA	Analysis	SM 2540F		1	1000 mL	1000 mL	31382	06/07/12 12:52	RR	TAL IRV
Total/NA	Prep	1664A			1050 mL	1000 mL	33063	06/15/12 11:39	DA	TAL IRV
Total/NA	Analysis	1664A		1			33087	06/15/12 12:55	DA	TAL IRV

Client Sample ID: Trip Blanks
Date Collected: 06/06/12 10:30
Date Received: 06/06/12 17:15

Lab Sample ID: 440-13854-2
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	33234	06/16/12 01:27	YK	TAL IRV

Client Sample ID: Outfall 019
Date Collected: 06/07/12 10:15
Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-1
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	32450	06/12/12 19:32	DM	TAL IRV
Total/NA	Analysis	625		1			32992	06/15/12 04:56	AI	TAL IRV
Total/NA	Prep	608			1050 mL	2 mL	31914	06/10/12 11:56	AB	TAL IRV
Total/NA	Analysis	608 Pesticides		1			32000	06/11/12 16:47	DD	TAL IRV
Total/NA	Analysis	300.0		1	1 mL	1.0 mL	31286	06/08/12 00:43	NN	TAL IRV
Total/NA	Analysis	300.0		50	1 mL	1.0 mL	31287	06/08/12 00:57	NN	TAL IRV
Total/NA	Analysis	314.0		1	5 mL	1.0 mL	31949	06/11/12 18:01	MN	TAL IRV
Total	Prep	3542			1037.11 mL	20 uL	2165070_P	06/13/12 09:00	TL	TAL WSC
Total	Analysis	1613B		0.96			2165070	06/16/12 16:00	SO	TAL WSC
Dissolved	Prep	245.1			20 mL	20 mL	31758	06/11/12 11:05	SN	TAL IRV
Dissolved	Analysis	245.1		1			32155	06/11/12 15:41	DB	TAL IRV
Total/NA	Prep	245.1			20 mL	20 mL	31759	06/11/12 11:05	SN	TAL IRV
Total/NA	Analysis	245.1		1			32155	06/11/12 16:38	DB	TAL IRV
Dissolved	Prep	200.2			50 mL	50 mL	32455	06/12/12 20:46	SC	TAL IRV
Dissolved	Analysis	200.8		1			32803	06/14/12 06:36	NH	TAL IRV
Dissolved	Prep	200.2			50 mL	50 mL	32454	06/12/12 20:39	SC	TAL IRV
Dissolved	Analysis	200.7 Rev 4.4		1			33248	06/15/12 13:50	VS	TAL IRV
Total Recoverable	Prep	200.2			50 mL	50 mL	32585	06/13/12 11:33	SC	TAL IRV
Total Recoverable	Analysis	200.7 Rev 4.4		1			33338	06/15/12 20:42	NH	TAL IRV
Total Recoverable	Prep	200.2			50 mL	50 mL	32948	06/14/12 16:48	SC	TAL IRV
Total Recoverable	Analysis	200.8		1			33620	06/18/12 13:06	RC	TAL IRV
Total Recoverable	Analysis	200.8		1			34122	06/19/12 21:05	NH	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	31545	06/08/12 05:20	XL	TAL IRV
Total/NA	Analysis	180.1		1			31655	06/08/12 11:03	RR	TAL IRV
Total/NA	Analysis	SM5210B		1			31687	06/08/12 10:00	QPD	TAL IRV
Total/NA	Analysis	SM 2540D		1	100 mL	100 mL	31765	06/08/12 19:24	CH	TAL IRV

TestAmerica Irvine
7/13/2012

Lab Chronicle

Client Sample ID: Outfall 019
Date Collected: 06/07/12 10:15
Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-1
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	SM 5540C		1	100	mL	100	mL	31783	06/08/12 20:41	NEA	TAL IRV
Total/NA	Analysis	SM 5310B		1	10	mL	10	mL	32047	06/11/12 09:24		TAL IRV
Total/NA	Prep	Distill/CN			50	mL	50	mL	32250	06/12/12 09:08	YH	TAL IRV
Total/NA	Analysis	SM 4500 CN E		1					32263	06/12/12 09:48	YH	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50	mL	50	mL	32708	06/13/12 18:20	PQI	TAL IRV
Total/NA	Analysis	SM 4500 NH3 C		1					32726	06/13/12 20:00	PQI	TAL IRV
Total/NA	Analysis	Gamma Spec K-40 CS-137		1					8617	06/14/12 00:00		Eber-Rich
Total/NA	Prep	General Prep		1					8617_P	06/14/12 00:00		Eber-Rich
Total/NA	Prep	General Prep		1					8617_P	06/18/12 00:00		Eber-Rich
Total/NA	Analysis	Gross Alpha and Beta		1					8617	06/19/12 08:43		Eber-Rich
Total/NA	Prep	General Prep		1					8617_P	06/26/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 226		1					8617	06/26/12 13:09		Eber-Rich
Total/NA	Prep	General Prep		1					8617_P	06/25/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 228		1					8617	06/25/12 15:29		Eber-Rich
Total/NA	Analysis	Strontium 90		1					8617	06/25/12 09:24		Eber-Rich
Total/NA	Analysis	Tritium		1					8617	06/28/12 07:26		Eber-Rich
Total/NA	Analysis	Uranium, Combined		1					8617	06/26/12 00:00		Eber-Rich

Client Sample ID: Trip Blank
Date Collected: 06/08/12 13:00
Date Received: 06/07/12 17:40

Lab Sample ID: 440-14006-2
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	Gamma Spec K-40 CS-137		1			8617	06/14/12 00:00		Eber-Rich
Total/NA	Prep	General Prep		1			8617_P	06/14/12 00:00		Eber-Rich
Total/NA	Prep	General Prep		1			8617_P	06/18/12 00:00		Eber-Rich
Total/NA	Analysis	Gross Alpha and Beta		1			8617	06/19/12 08:43		Eber-Rich
Total/NA	Prep	General Prep		1			8617_P	06/26/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 226		1			8617	06/26/12 13:09		Eber-Rich
Total/NA	Prep	General Prep		1			8617_P	06/25/12 00:00		Eber-Rich
Total/NA	Analysis	Radium 228		1			8617	06/25/12 15:29		Eber-Rich
Total/NA	Analysis	Strontium 90		1			8617	06/25/12 09:24		Eber-Rich
Total/NA	Analysis	Uranium, Combined		1			8617	06/26/12 00:00		Eber-Rich

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

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

Lab Sample ID: MB 440-33234/4
Matrix: Water
Analysis Batch: 33234

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			06/15/12 21:13	1
1,1,2-Trichloroethane	ND		0.50	0.30	ug/L			06/15/12 21:13	1
1,1-Dichloroethane	ND		0.50	0.40	ug/L			06/15/12 21:13	1
Trichlorotrifluoroethane(F-113)	ND		5.0	0.50	ug/L			06/15/12 21:13	1
1,1-Dichloroethene	ND		0.50	0.42	ug/L			06/15/12 21:13	1
1,2-Dichloroethane	ND		0.50	0.28	ug/L			06/15/12 21:13	1
Benzene	ND		0.50	0.28	ug/L			06/15/12 21:13	1
Carbon tetrachloride	ND		0.50	0.28	ug/L			06/15/12 21:13	1
Chloroform	ND		0.50	0.33	ug/L			06/15/12 21:13	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/15/12 21:13	1
Tetrachloroethene	ND		0.50	0.32	ug/L			06/15/12 21:13	1
Toluene	ND		0.50	0.36	ug/L			06/15/12 21:13	1
Trichlorofluoromethane	ND		0.50	0.34	ug/L			06/15/12 21:13	1
Vinyl chloride	ND		0.50	0.40	ug/L			06/15/12 21:13	1
Trichloroethene	ND		0.50	0.26	ug/L			06/15/12 21:13	1
cis-1,2-Dichloroethene	ND		0.50	0.32	ug/L			06/15/12 21:13	1
Xylenes, Total	ND		1.5	0.90	ug/L			06/15/12 21:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120			06/15/12 21:13	1
Dibromofluoromethane (Surr)	101		80 - 120			06/15/12 21:13	1
Toluene-d8 (Surr)	104		80 - 120			06/15/12 21:13	1

Lab Sample ID: LCS 440-33234/5
Matrix: Water
Analysis Batch: 33234

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	26.6		ug/L		106	65 - 135
1,1,2-Trichloroethane	25.0	24.9		ug/L		100	70 - 125
1,1-Dichloroethane	25.0	26.0		ug/L		104	70 - 125
1,1-Dichloroethene	25.0	25.7		ug/L		103	70 - 125
1,2-Dichloroethane	25.0	27.1		ug/L		109	60 - 140
Benzene	25.0	23.9		ug/L		96	70 - 120
Carbon tetrachloride	25.0	27.3		ug/L		109	65 - 140
Chloroform	25.0	27.0		ug/L		108	70 - 130
Ethylbenzene	25.0	26.0		ug/L		104	75 - 125
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 125
Toluene	25.0	25.4		ug/L		102	70 - 120
Trichlorofluoromethane	25.0	27.5		ug/L		110	65 - 145
Vinyl chloride	25.0	24.1		ug/L		96	55 - 135
Trichloroethene	25.0	28.0		ug/L		112	70 - 125
cis-1,2-Dichloroethene	25.0	27.6		ug/L		110	70 - 125
m,p-Xylene	50.0	56.0		ug/L		112	75 - 125
o-Xylene	25.0	28.8		ug/L		115	75 - 125
Xylenes, Total	75.0	84.8		ug/L		113	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		80 - 120

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

Lab Sample ID: LCS 440-33234/5
Matrix: Water
Analysis Batch: 33234

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: 440-13774-D-1 MS
Matrix: Water
Analysis Batch: 33234

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
1,1,1-Trichloroethane	ND		25.0	26.6		ug/L		106	65 - 140
1,1,2-Trichloroethane	ND		25.0	25.6		ug/L		103	65 - 130
1,1-Dichloroethane	ND		25.0	26.6		ug/L		106	65 - 130
1,1-Dichloroethene	ND		25.0	26.8		ug/L		107	60 - 130
1,2-Dichloroethane	ND		25.0	27.5		ug/L		110	60 - 140
Benzene	ND		25.0	24.4		ug/L		97	65 - 125
Carbon tetrachloride	ND		25.0	27.3		ug/L		109	65 - 140
Chloroform	72		25.0	98.2		ug/L		106	65 - 135
Ethylbenzene	ND		25.0	25.8		ug/L		103	65 - 130
Tetrachloroethene	ND		25.0	26.2		ug/L		105	65 - 130
Toluene	ND		25.0	26.0		ug/L		104	70 - 125
Trichlorofluoromethane	ND		25.0	28.1		ug/L		112	60 - 145
Vinyl chloride	ND		25.0	24.0		ug/L		96	45 - 140
Trichloroethene	ND		25.0	28.2		ug/L		113	65 - 125
cis-1,2-Dichloroethene	ND		25.0	28.1		ug/L		112	65 - 130
m,p-Xylene	ND		50.0	55.3		ug/L		111	65 - 130
o-Xylene	ND		25.0	28.9		ug/L		116	65 - 125
Xylenes, Total	ND		75.0	84.2		ug/L		112	60 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 440-13774-D-1 MSD
Matrix: Water
Analysis Batch: 33234

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
1,1,1-Trichloroethane	ND		25.0	26.4		ug/L		105	65 - 140	1	20
1,1,2-Trichloroethane	ND		25.0	26.5		ug/L		106	65 - 130	3	25
1,1-Dichloroethane	ND		25.0	25.7		ug/L		103	65 - 130	3	20
1,1-Dichloroethene	ND		25.0	26.2		ug/L		105	60 - 130	2	20
1,2-Dichloroethane	ND		25.0	27.4		ug/L		110	60 - 140	0	20
Benzene	ND		25.0	24.5		ug/L		98	65 - 125	0	20
Carbon tetrachloride	ND		25.0	27.8		ug/L		111	65 - 140	2	25
Chloroform	72		25.0	93.1		ug/L		85	65 - 135	5	20
Ethylbenzene	ND		25.0	26.7		ug/L		107	65 - 130	3	20
Tetrachloroethene	ND		25.0	27.0		ug/L		108	65 - 130	3	20
Toluene	ND		25.0	26.4		ug/L		105	70 - 125	2	20
Trichlorofluoromethane	ND		25.0	27.9		ug/L		111	60 - 145	1	25

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

Lab Sample ID: 440-13774-D-1 MSD
Matrix: Water
Analysis Batch: 33234

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
Vinyl chloride	ND		25.0	24.3		ug/L		97	45 - 140	1	30
Trichloroethene	ND		25.0	28.9		ug/L		115	65 - 125	2	20
cis-1,2-Dichloroethene	ND		25.0	28.0		ug/L		112	65 - 130	0	20
m,p-Xylene	ND		50.0	56.4		ug/L		113	65 - 130	2	25
o-Xylene	ND		25.0	29.5		ug/L		118	65 - 125	2	20
Xylenes, Total	ND		75.0	85.9		ug/L		115	60 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	103		80 - 120

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

Lab Sample ID: MB 440-32450/1-A
Matrix: Water
Analysis Batch: 32992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		6.00	0.100	ug/L		06/12/12 19:32	06/15/12 03:08	1
Bis(2-ethylhexyl) phthalate	ND		5.00	1.70	ug/L		06/12/12 19:32	06/15/12 03:08	1
N-Nitrosodimethylamine	ND		5.00	0.100	ug/L		06/12/12 19:32	06/15/12 03:08	1
Pentachlorophenol	ND		5.00	0.400	ug/L		06/12/12 19:32	06/15/12 03:08	1
2,4-Dinitrotoluene	ND		5.00	0.200	ug/L		06/12/12 19:32	06/15/12 03:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	82		40 - 120		06/12/12 19:32	06/15/12 03:08	1
2-Fluorobiphenyl	75		50 - 120		06/12/12 19:32	06/15/12 03:08	1
2-Fluorophenol	77		30 - 120		06/12/12 19:32	06/15/12 03:08	1
Nitrobenzene-d5	80		45 - 120		06/12/12 19:32	06/15/12 03:08	1
Phenol-d6	79		35 - 120		06/12/12 19:32	06/15/12 03:08	1
Terphenyl-d14	72		50 - 125		06/12/12 19:32	06/15/12 03:08	1

Lab Sample ID: LCS 440-32450/2-A
Matrix: Water
Analysis Batch: 32992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,6-Trichlorophenol	10.0	6.307		ug/L		63	55 - 120
Bis(2-ethylhexyl) phthalate	10.0	6.206	LR	ug/L		62	65 - 130
N-Nitrosodimethylamine	10.0	6.189		ug/L		62	45 - 120
Pentachlorophenol	10.0	7.158		ug/L		72	24 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	66		40 - 120
2-Fluorobiphenyl	69		50 - 120
2-Fluorophenol	62		30 - 120
Nitrobenzene-d5	71		45 - 120

TestAmerica Irvine

7/13/2012

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

Lab Sample ID: LCS 440-32450/2-A
Matrix: Water
Analysis Batch: 32992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32450

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Phenol-d6	66		35 - 120
Terphenyl-d14	67		50 - 125

Lab Sample ID: LCSD 440-32450/3-A
Matrix: Water
Analysis Batch: 32992

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 32450

		Spike	LCSD	LCSD				%Rec.		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,6-Trichlorophenol		10.0	7.406		ug/L		74	55 - 120	16	30
Bis(2-ethylhexyl) phthalate		10.0	7.229		ug/L		72	65 - 130	15	20
N-Nitrosodimethylamine		10.0	7.178		ug/L		72	45 - 120	15	20
Pentachlorophenol		10.0	7.988		ug/L		80	24 - 121	11	25

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol	75		40 - 120
2-Fluorobiphenyl	77		50 - 120
2-Fluorophenol	72		30 - 120
Nitrobenzene-d5	79		45 - 120
Phenol-d6	79		35 - 120
Terphenyl-d14	76		50 - 125

Method: 608 Pesticides - Organochlorine Pesticides Low level

Lab Sample ID: MB 440-31914/1-A
Matrix: Water
Analysis Batch: 32000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31914

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0050	0.0025	ug/L		06/10/12 11:56	06/11/12 13:58	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		35 - 115			06/10/12 11:56	06/11/12 13:58	1
DCB Decachlorobiphenyl (Surr)	92		45 - 120			06/10/12 11:56	06/11/12 13:58	1

Lab Sample ID: LCS 440-31914/2-A
Matrix: Water
Analysis Batch: 32000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31914

		Spike	LCS	LCS				%Rec.		
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits		
alpha-BHC		0.500	0.455		ug/L		91	45 - 115		

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	79		35 - 115
DCB Decachlorobiphenyl (Surr)	87		45 - 120

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

Lab Sample ID: 440-13922-A-1-A MS   **Client Sample ID: Matrix Spike**
Matrix: Water   **Prep Type: Total/NA**
Analysis Batch: 32000   **Prep Batch: 31914**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	ND		0.500	0.364		ug/L		73	40 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	61		35 - 115
DCB Decachlorobiphenyl (Surr)	80		45 - 120

Lab Sample ID: 440-13922-A-1-B MSD   **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water   **Prep Type: Total/NA**
Analysis Batch: 32000   **Prep Batch: 31914**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	ND		0.500	0.398		ug/L		80	40 - 120	9	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	63		35 - 115
DCB Decachlorobiphenyl (Surr)	82		45 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-31286/2   **Client Sample ID: Method Blank**
Matrix: Water   **Prep Type: Total/NA**
Analysis Batch: 31286

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.080	mg/L			06/07/12 09:16	1
Nitrate Nitrite as N	ND		0.26	0.11	mg/L			06/07/12 09:16	1
Nitrite as N	ND		0.15	0.11	mg/L			06/07/12 09:16	1

Lab Sample ID: LCS 440-31286/3   **Client Sample ID: Lab Control Sample**
Matrix: Water   **Prep Type: Total/NA**
Analysis Batch: 31286

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	2.64		mg/L		100	90 - 110
Nitrite as N	1.52	1.51		mg/L		99	90 - 110

Lab Sample ID: 440-13943-A-2 MS   **Client Sample ID: Matrix Spike**
Matrix: Water   **Prep Type: Total/NA**
Analysis Batch: 31286

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.2		1.13	2.12		mg/L		84	80 - 120
Nitrate Nitrite as N	1.2		2.65	3.75		mg/L		96	80 - 120
Nitrite as N	ND		1.52	1.63		mg/L		107	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-13943-A-2 MSD
Matrix: Water
Analysis Batch: 31286

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	1.2		1.13	2.25		mg/L		95	80 - 120	6	20
Nitrate Nitrite as N	1.2		2.65	3.93		mg/L		103	80 - 120	5	20
Nitrite as N	ND		1.52	1.68		mg/L		111	80 - 120	3	20

Lab Sample ID: MB 440-31287/2
Matrix: Water
Analysis Batch: 31287

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			06/07/12 09:16	1
Sulfate	ND		0.50	0.40	mg/L			06/07/12 09:16	1

Lab Sample ID: LCS 440-31287/3
Matrix: Water
Analysis Batch: 31287

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	4.80		mg/L		96	90 - 110
Sulfate	10.0	9.77		mg/L		98	90 - 110

Lab Sample ID: 440-13943-A-2 MS
Matrix: Water
Analysis Batch: 31287

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	8.5		5.00	12.9		mg/L		89	80 - 120
Sulfate	ND		10.0	9.50		mg/L		95	80 - 120

Lab Sample ID: 440-13943-A-2 MSD
Matrix: Water
Analysis Batch: 31287

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	8.5		5.00	13.0		mg/L		90	80 - 120	0	20
Sulfate	ND		10.0	9.46		mg/L		95	80 - 120	0	20

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 440-31949/5
Matrix: Water
Analysis Batch: 31949

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			06/11/12 06:57	1

Lab Sample ID: LCS 440-31949/4
Matrix: Water
Analysis Batch: 31949

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	24.5		ug/L		98	85 - 115

TestAmerica Irvine
7/13/2012

Lab Sample ID: MRL 440-31949/2 MRL
Matrix: Water
Analysis Batch: 31949

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			4.00	3.04	J,DX	ug/L		76			

Lab Sample ID: 440-13823-F-1 MS
Matrix: Water
Analysis Batch: 31949

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	2.5	J,DX	25.0	29.8		ug/L		109	80 - 120		

Lab Sample ID: 440-13823-F-1 MSD
Matrix: Water
Analysis Batch: 31949

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	2.5	J,DX	25.0	29.3		ug/L		107	80 - 120	2	20

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

Lab Sample ID: G2F130000070B
Matrix: Water
Analysis Batch: 2165070

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2165070_P

Analyte	MB Result	MB Qualifier	ML	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		0.000010	0.0000047	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total TCDD	ND		0.000010	0.0000047	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,7,8-PeCDD	ND		0.000050	0.0000069	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total PeCDD	ND		0.000050	0.0000069	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,4,7,8-HxCDD	ND		0.000050	0.0000078	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,6,7,8-HxCDD	ND		0.000050	0.0000066	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,7,8,9-HxCDD	ND		0.000050	0.0000065	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total HxCDD	ND		0.000050	0.0000065	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,4,6,7,8-HpCDD	ND		0.000050	0.0000091	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total HpCDD	ND		0.000050	0.0000091	ug/L		06/13/12 09:00	06/15/12 23:17	1
OCDD	0.000012	J Q	0.00010	0.0000094	ug/L		06/13/12 09:00	06/15/12 23:17	1
2,3,7,8-TCDF	ND		0.000010	0.0000039	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total TCDF	0.0000020	J	0.000010	0.0000039	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,7,8-PeCDF	ND		0.000050	0.0000038	ug/L		06/13/12 09:00	06/15/12 23:17	1
2,3,4,7,8-PeCDF	ND		0.000050	0.0000043	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total PeCDF	ND		0.000050	0.0000038	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,4,7,8-HxCDF	0.0000042	J Q	0.000050	0.0000021	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,6,7,8-HxCDF	0.0000032	J	0.000050	0.0000019	ug/L		06/13/12 09:00	06/15/12 23:17	1
2,3,4,6,7,8-HxCDF	0.0000019	J Q	0.000050	0.0000019	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,7,8,9-HxCDF	ND		0.000050	0.0000027	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total HxCDF	0.000012	J Q	0.000050	0.0000021	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,4,6,7,8-HpCDF	ND		0.000050	0.0000086	ug/L		06/13/12 09:00	06/15/12 23:17	1
1,2,3,4,7,8,9-HpCDF	0.0000048	J Q	0.000050	0.0000060	ug/L		06/13/12 09:00	06/15/12 23:17	1
Total HpCDF	0.0000048	J Q	0.000050	0.0000045	ug/L		06/13/12 09:00	06/15/12 23:17	1
OCDF	ND		0.00010	0.0000083	ug/L		06/13/12 09:00	06/15/12 23:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	99		35 - 197		06/13/12 09:00	06/15/12 23:17	1

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

Lab Sample ID: G2F130000070B
Matrix: Water
Analysis Batch: 2165070

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 2165070_P

Internal Standard	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	44		25 - 164	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,7,8-PeCDD	47		25 - 181	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,4,7,8-HxCDD	44		32 - 141	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,6,7,8-HxCDD	50		28 - 130	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,4,6,7,8-HpCDD	55		23 - 140	06/13/12 09:00	06/15/12 23:17	1
13C-OCDD	52		17 - 157	06/13/12 09:00	06/15/12 23:17	1
13C-2,3,7,8-TCDF	44		24 - 169	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,7,8-PeCDF	45		24 - 185	06/13/12 09:00	06/15/12 23:17	1
13C-2,3,4,7,8-PeCDF	44		21 - 178	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,6,7,8-HxCDF	50		26 - 123	06/13/12 09:00	06/15/12 23:17	1
13C-2,3,4,6,7,8-HxCDF	50		28 - 136	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,7,8,9-HxCDF	53		29 - 147	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,4,6,7,8-HpCDF	53		28 - 143	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,4,7,8,9-HpCDF	52		26 - 138	06/13/12 09:00	06/15/12 23:17	1
13C-1,2,3,4,7,8-HxCDF	44		26 - 152	06/13/12 09:00	06/15/12 23:17	1

Lab Sample ID: G2F130000070C
Matrix: Water
Analysis Batch: 2165070

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2165070_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDD	0.000200	0.000222		ug/L		111	67 - 158		
1,2,3,7,8-PeCDD	0.00100	0.00116		ug/L		116	70 - 142		
1,2,3,4,7,8-HxCDD	0.00100	0.00122		ug/L		122	70 - 164		
1,2,3,6,7,8-HxCDD	0.00100	0.00114		ug/L		114	76 - 134		
1,2,3,7,8,9-HxCDD	0.00100	0.00124		ug/L		124	64 - 162		
1,2,3,4,6,7,8-HpCDD	0.00100	0.00108		ug/L		108	70 - 140		
OCDD	0.00200	0.00235	B	ug/L		117	78 - 144		
2,3,7,8-TCDF	0.000200	0.000247		ug/L		124	75 - 158		
1,2,3,7,8-PeCDF	0.00100	0.00110		ug/L		110	80 - 134		
2,3,4,7,8-PeCDF	0.00100	0.00115		ug/L		115	68 - 160		
1,2,3,4,7,8-HxCDF	0.00100	0.00116	B	ug/L		116	72 - 134		
1,2,3,6,7,8-HxCDF	0.00100	0.00116	B	ug/L		116	84 - 130		
2,3,4,6,7,8-HxCDF	0.00100	0.00110	B	ug/L		110	70 - 156		
1,2,3,7,8,9-HxCDF	0.00100	0.00115		ug/L		115	78 - 130		
1,2,3,4,6,7,8-HpCDF	0.00100	0.00111		ug/L		111	82 - 122		
1,2,3,4,7,8,9-HpCDF	0.00100	0.00112	B	ug/L		112	78 - 138		
OCDF	0.00200	0.00228		ug/L		114	63 - 170		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	96		31 - 191

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-2,3,7,8-TCDD	40		20 - 175
13C-1,2,3,7,8-PeCDD	42		21 - 227
13C-1,2,3,4,7,8-HxCDD	39		21 - 193
13C-1,2,3,6,7,8-HxCDD	48		25 - 163
13C-1,2,3,4,6,7,8-HpCDD	51		26 - 166

TestAmerica Irvine
7/13/2012

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

Lab Sample ID: G2F130000070C
Matrix: Water
Analysis Batch: 2165070

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 2165070_P

Internal Standard	LCS %Recovery	LCS Qualifier	Limits
13C-OCDD	47		13 - 199
13C-2,3,7,8-TCDF	38		22 - 152
13C-1,2,3,7,8-PeCDF	40		21 - 192
13C-2,3,4,7,8-PeCDF	41		13 - 328
13C-1,2,3,6,7,8-HxCDF	45		21 - 159
13C-2,3,4,6,7,8-HxCDF	46		22 - 176
13C-1,2,3,7,8,9-HxCDF	47		17 - 205
13C-1,2,3,4,6,7,8-HpCDF	49		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	50		20 - 186
13C-1,2,3,4,7,8-HxCDF	42		19 - 202

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 440-32585/1-A
Matrix: Water
Analysis Batch: 33338

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 32585

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		06/13/12 11:33	06/15/12 20:02	1

Lab Sample ID: LCS 440-32585/2-A
Matrix: Water
Analysis Batch: 33338

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 32585

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	500		ug/L		100	85 - 115

Lab Sample ID: 440-14006-1 MS
Matrix: Water
Analysis Batch: 33338

Client Sample ID: Outfall 019
Prep Type: Total Recoverable
Prep Batch: 32585

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: 440-14006-1 MSD
Matrix: Water
Analysis Batch: 33338

Client Sample ID: Outfall 019
Prep Type: Total Recoverable
Prep Batch: 32585

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	524		ug/L		105	70 - 130	3	20

Lab Sample ID: MB 440-31679/1-D
Matrix: Water
Analysis Batch: 33248

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 32454

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		20	6.0	ug/L		06/12/12 20:39	06/15/12 13:07	1

TestAmerica Irvine
7/13/2012

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

Lab Sample ID: LCS 440-31679/2-D
Matrix: Water
Analysis Batch: 33248

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 32454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	500	474		ug/L		95	85 - 115

Lab Sample ID: 440-14010-A-1-E MS
Matrix: Water
Analysis Batch: 33248

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 32454

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	ND		500	470		ug/L		94	70 - 130

Lab Sample ID: 440-14010-A-1-F MSD
Matrix: Water
Analysis Batch: 33248

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 32454

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	ND		500	471		ug/L		94	70 - 130	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 440-32948/1-A
Matrix: Water
Analysis Batch: 33620

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.50	ug/L		06/14/12 16:48	06/18/12 12:56	1

Lab Sample ID: MB 440-32948/1-A
Matrix: Water
Analysis Batch: 34122

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		06/14/12 16:48	06/19/12 20:59	1
Lead	ND		1.0	0.20	ug/L		06/14/12 16:48	06/19/12 20:59	1
Selenium	ND		2.0	0.50	ug/L		06/14/12 16:48	06/19/12 20:59	1

Lab Sample ID: LCS 440-32948/2-A
Matrix: Water
Analysis Batch: 33620

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	80.0	78.7		ug/L		98	85 - 115

Lab Sample ID: LCS 440-32948/2-A
Matrix: Water
Analysis Batch: 34122

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	78.8		ug/L		99	85 - 115
Lead	80.0	81.9		ug/L		102	85 - 115
Selenium	80.0	82.7		ug/L		103	85 - 115

TestAmerica Irvine
7/13/2012

QC Sample Results

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

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

Lab Sample ID: 440-14006-1 MS
Matrix: Water
Analysis Batch: 33620

Client Sample ID: Outfall 019
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	0.66	J,DX	80.0	71.5		ug/L		89	70 - 130

Lab Sample ID: 440-14006-1 MS
Matrix: Water
Analysis Batch: 34122

Client Sample ID: Outfall 019
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		80.0	75.9		ug/L		95	70 - 130
Lead	ND		80.0	78.4		ug/L		98	70 - 130
Selenium	ND		80.0	80.6		ug/L		101	70 - 130

Lab Sample ID: 440-14006-1 MSD
Matrix: Water
Analysis Batch: 33620

Client Sample ID: Outfall 019
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	0.66	J,DX	80.0	72.5		ug/L		90	70 - 130	1	20

Lab Sample ID: 440-14006-1 MSD
Matrix: Water
Analysis Batch: 34122

Client Sample ID: Outfall 019
Prep Type: Total Recoverable
Prep Batch: 32948

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		80.0	76.6		ug/L		96	70 - 130	1	20
Lead	ND		80.0	79.7		ug/L		100	70 - 130	2	20
Selenium	ND		80.0	81.8		ug/L		102	70 - 130	1	20

Lab Sample ID: MB 440-31679/1-E
Matrix: Water
Analysis Batch: 32803

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 32455

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.10	ug/L		06/12/12 20:46	06/14/12 06:28	1
Copper	ND		2.0	0.50	ug/L		06/12/12 20:46	06/14/12 06:28	1
Lead	ND		1.0	0.20	ug/L		06/12/12 20:46	06/14/12 06:28	1
Selenium	ND		2.0	0.50	ug/L		06/12/12 20:46	06/14/12 06:28	1

Lab Sample ID: LCS 440-31679/2-E
Matrix: Water
Analysis Batch: 32803

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 32455

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	80.0	79.4		ug/L		99	85 - 115
Copper	80.0	78.8		ug/L		99	85 - 115
Lead	80.0	76.6		ug/L		96	85 - 115
Selenium	80.0	81.6		ug/L		102	85 - 115

TestAmerica Irvine

7/13/2012

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 440-31759/1-A
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		06/11/12 11:05	06/11/12 16:06	1

Lab Sample ID: LCS 440-31759/2-A
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	8.00	7.98		ug/L		100	85 - 115

Lab Sample ID: 440-13987-C-1-B MS
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31759

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		8.00	7.94		ug/L		99	70 - 130

Lab Sample ID: 440-13987-C-1-C MSD
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31759

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		8.00	8.07		ug/L		101	70 - 130	2	20

Lab Sample ID: MB 440-31679/1-B
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 31758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.10	ug/L		06/11/12 11:05	06/11/12 15:36	1

Lab Sample ID: LCS 440-31679/2-B
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 31758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	8.00	7.85		ug/L		98	85 - 115

Lab Sample ID: 440-14006-1 MS
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Outfall 019
Prep Type: Dissolved
Prep Batch: 31758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		8.00	7.81		ug/L		98	70 - 130

Lab Sample ID: 440-14006-1 MSD
Matrix: Water
Analysis Batch: 32155

Client Sample ID: Outfall 019
Prep Type: Dissolved
Prep Batch: 31758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		8.00	7.93		ug/L		99	70 - 130	2	20

TestAmerica Irvine
7/13/2012

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-33063/1-A
Matrix: Water
Analysis Batch: 33087

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 33063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	ND		5.0	1.4	mg/L		06/15/12 08:31	06/15/12 08:55	1

Lab Sample ID: LCS 440-33063/2-A
Matrix: Water
Analysis Batch: 33087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 33063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	20.0	17.8		mg/L		89	78 - 114

Lab Sample ID: LCSD 440-33063/3-A
Matrix: Water
Analysis Batch: 33087

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 33063

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	20.0	17.7		mg/L		89	78 - 114	1	11

Lab Sample ID: 440-14090-A-1-A MS
Matrix: Water
Analysis Batch: 33087

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 33063

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	ND		19.4	18.5		mg/L		95	78 - 114

Method: 180.1 - Turbidity, Nephelometric

Lab Sample ID: MB 440-31655/6
Matrix: Water
Analysis Batch: 31655

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			06/08/12 11:03	1

Lab Sample ID: MRL 440-31655/3 MRL
Matrix: Water
Analysis Batch: 31655

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Turbidity	0.100	0.100	J,DX	NTU		100	

Lab Sample ID: 440-13943-A-4 DU
Matrix: Water
Analysis Batch: 31655

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

TestAmerica Irvine

7/13/2012

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

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

Lab Sample ID: MB 440-31545/1
Matrix: Water
Analysis Batch: 31545

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			06/08/12 05:20	1

Lab Sample ID: LCS 440-31545/2
Matrix: Water
Analysis Batch: 31545

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	976		mg/L		98	90 - 110	

Lab Sample ID: 440-13981-E-1 DU
Matrix: Water
Analysis Batch: 31545

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	2400			2390		mg/L			2	10

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

Lab Sample ID: MB 440-31765/1
Matrix: Water
Analysis Batch: 31765

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			06/08/12 19:24	1

Lab Sample ID: LCS 440-31765/2
Matrix: Water
Analysis Batch: 31765

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	986		mg/L		99	85 - 115	

Lab Sample ID: 440-14000-A-2 DU
Matrix: Water
Analysis Batch: 31765

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	310			297		mg/L			4	10

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

Lab Sample ID: MB 440-32250/1-A
Matrix: Water
Analysis Batch: 32263

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32250

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		5.0	3.0	ug/L		06/12/12 09:08	06/12/12 09:47	1

TestAmerica Irvine
7/13/2012

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

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

Lab Sample ID: LCS 440-32250/2-A
Matrix: Water
Analysis Batch: 32263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32250

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	100	97.3		ug/L		97	90 - 110

Lab Sample ID: 440-14055-A-3-A MS
Matrix: Water
Analysis Batch: 32263

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32250

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND		100	98.5		ug/L		99	70 - 115

Lab Sample ID: 440-14055-A-3-B MSD
Matrix: Water
Analysis Batch: 32263

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32250

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		100	104		ug/L		104	70 - 115	6	15

Method: SM 4500 NH3 C - Ammonia

Lab Sample ID: MB 440-32708/1-A
Matrix: Water
Analysis Batch: 32726

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 32708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.400	0.157	mg/L		06/13/12 18:20	06/13/12 20:00	1

Lab Sample ID: LCS 440-32708/2-A
Matrix: Water
Analysis Batch: 32726

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 32708

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	10.0	9.240		mg/L		92	85 - 115

Lab Sample ID: 440-13817-E-1-A MS
Matrix: Water
Analysis Batch: 32726

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 32708

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	10.08		mg/L		98	70 - 120

Lab Sample ID: 440-13817-E-1-B MSD
Matrix: Water
Analysis Batch: 32726

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 32708

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	9.520		mg/L		92	70 - 120	6	15

TestAmerica Irvine
7/13/2012

1 2 3 4 5 6 7 8 9 10 11 12 13

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

Lab Sample ID: MB 440-32047/7
Matrix: Water
Analysis Batch: 32047

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			06/11/12 08:14	1

Lab Sample ID: LCS 440-32047/6
Matrix: Water
Analysis Batch: 32047

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	10.1		mg/L		101	90 - 110

Lab Sample ID: 440-14031-A-1 MS
Matrix: Water
Analysis Batch: 32047

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
Total Organic Carbon	7.1		5.00	12.1		mg/L		100	80 - 120

Lab Sample ID: 440-14031-A-1 MSD
Matrix: Water
Analysis Batch: 32047

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
Total Organic Carbon	7.1		5.00	12.2		mg/L		101	80 - 120	0	20

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

Lab Sample ID: MB 440-31783/3
Matrix: Water
Analysis Batch: 31783

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			06/08/12 20:40	1

Lab Sample ID: LCS 440-31783/4
Matrix: Water
Analysis Batch: 31783

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	0.257		mg/L		103	90 - 110

Lab Sample ID: 440-14006-1 MS
Matrix: Water
Analysis Batch: 31783

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
Methylene Blue Active Substances	ND		0.250	0.231		mg/L		92	50 - 125

TestAmerica Irvine
7/13/2012

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

Lab Sample ID: 440-14006-1 MSD
Matrix: Water
Analysis Batch: 31783

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	RPD Limit
Methylene Blue Active Substances	ND		0.250	0.234		mg/L		94	50 - 125	1	20

Method: SM5210B - BOD, 5 Day

Lab Sample ID: USB 440-31687/1 USB
Matrix: Water
Analysis Batch: 31687

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			06/08/12 10:00	1

Lab Sample ID: LCS 440-31687/4
Matrix: Water
Analysis Batch: 31687

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	199		mg/L		100	85 - 115

Lab Sample ID: LCSD 440-31687/5
Matrix: Water
Analysis Batch: 31687

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	211		mg/L		106	85 - 115	6	20

Method: Gross Alpha and Beta - Gross Alpha/Beta

Lab Sample ID: S206035-04
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cesium-137	-2.3	U	20		pCi/L		06/14/12 00:00	06/14/12 00:00	1
Potassium-40	-14.5	U	25		pCi/L		06/14/12 00:00	06/14/12 00:00	1

Lab Sample ID: S206035-04
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gross Alpha	0.035	U	3		pCi/L		06/18/12 00:00	06/19/12 15:59	1
Gross Beta	0.009	U	4		pCi/L		06/18/12 00:00	06/19/12 15:59	1

Lab Sample ID: S206035-04
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium-90	0.042	U	2		pCi/L		06/25/12 00:00	06/25/12 09:24	1

TestAmerica Irvine
7/13/2012

Method: Gross Alpha and Beta - Gross Alpha/Beta (Continued)

Lab Sample ID: S206035-04 **Client Sample ID: Method Blank**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-228	-0.025	U	1		pCi/L		06/25/12 00:00	06/25/12 15:29	1

Lab Sample ID: S206035-04 **Client Sample ID: Method Blank**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium, Total	0	U	1		pCi/L		06/26/12 00:00	06/26/12 00:00	1

Lab Sample ID: S206035-04 **Client Sample ID: Method Blank**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Radium-226	0.064	U	1		pCi/L		06/26/12 00:00	06/26/12 13:09	1

Lab Sample ID: S206035-04 **Client Sample ID: Method Blank**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tritium	-23.1	U	500		pCi/L		06/25/12 00:00	06/28/12 07:26	1

Lab Sample ID: S206035-03 **Client Sample ID: Lab Control Sample**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cesium-137	146	140		pCi/L		96	80 - 120
Cobalt-60	127	112		pCi/L		88	80 - 120

Lab Sample ID: S206035-03 **Client Sample ID: Lab Control Sample**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gross Alpha	37	42.5		pCi/L		115	70 - 130
Gross Beta	34	32.5		pCi/L		96	70 - 130

Lab Sample ID: S206035-03 **Client Sample ID: Lab Control Sample**
Matrix: WATER **Prep Type: Total/NA**
Analysis Batch: 8617 **Prep Batch: 8617_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Strontium-90	16.9	16		pCi/L		95	80 - 120

Method: Gross Alpha and Beta - Gross Alpha/Beta (Continued)

Lab Sample ID: S206035-03
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Radium-228	5.19	5.07		pCi/L		98	60 - 140	

Lab Sample ID: S206035-03
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Uranium, Total	62.5	61.1		pCi/L		98	80 - 120	

Lab Sample ID: S206035-03
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Radium-226	55.7	56.5		pCi/L		101	80 - 120	

Lab Sample ID: S206035-03
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Tritium	2190	2170		pCi/L		99	80 - 120	

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Cesium-137	-0.669	U	-1.49	U	pCi/L			0	
Potassium-40	-7.29	U	-5.22	U	pCi/L			0	

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Gross Alpha	-0.149	U	0.248	U	pCi/L			0	
Gross Beta	1.54	U	2.07	J	pCi/L			29	

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D		RPD	RPD Limit
Strontium-90	0.025	U	-0.011	U	pCi/L			0	

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

Method: Gross Alpha and Beta - Gross Alpha/Beta (Continued)

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Radium-228	0.136	U	0.075	U	pCi/L		0	

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Uranium, Total	0.036	J	0.03	J	pCi/L		18	

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Radium-226	0.566	J	0.439	U	pCi/L		25	

Lab Sample ID: S206035-05
Matrix: WATER
Analysis Batch: 8617

Client Sample ID: OUTFALL 019 (440-14006-1 DU
Prep Type: Total/NA
Prep Batch: 8617_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	RPD Limit
Tritium	-4.64	U	-10.8	U	pCi/L		0	

TestAmerica Irvine

7/13/2012

GC/MS VOA

Analysis Batch: 33234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13774-D-1 MS	Matrix Spike	Total/NA	Water	624	
440-13774-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	624	
440-13854-1	Outfall 019	Total/NA	Water	624	
440-13854-2	Trip Blanks	Total/NA	Water	624	
LCS 440-33234/5	Lab Control Sample	Total/NA	Water	624	
MB 440-33234/4	Method Blank	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 32450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	625	
LCS 440-32450/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 440-32450/3-A	Lab Control Sample Dup	Total/NA	Water	625	
MB 440-32450/1-A	Method Blank	Total/NA	Water	625	

Analysis Batch: 32992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	625	32450
LCS 440-32450/2-A	Lab Control Sample	Total/NA	Water	625	32450
LCSD 440-32450/3-A	Lab Control Sample Dup	Total/NA	Water	625	32450
MB 440-32450/1-A	Method Blank	Total/NA	Water	625	32450

GC Semi VOA

Prep Batch: 31914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13922-A-1-A MS	Matrix Spike	Total/NA	Water	608	
440-13922-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	608	
440-14006-1	Outfall 019	Total/NA	Water	608	
LCS 440-31914/2-A	Lab Control Sample	Total/NA	Water	608	
MB 440-31914/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 32000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13922-A-1-A MS	Matrix Spike	Total/NA	Water	608 Pesticides	31914
440-13922-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	608 Pesticides	31914
440-14006-1	Outfall 019	Total/NA	Water	608 Pesticides	31914
LCS 440-31914/2-A	Lab Control Sample	Total/NA	Water	608 Pesticides	31914
MB 440-31914/1-A	Method Blank	Total/NA	Water	608 Pesticides	31914

HPLC/IC

Analysis Batch: 31286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13943-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-13943-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-14006-1	Outfall 019	Total/NA	Water	300.0	
LCS 440-31286/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-31286/2	Method Blank	Total/NA	Water	300.0	

TestAmerica Irvine

7/13/2012

QC Association Summary

Client: MWH Americas Inc

Project/Site: Monthly Outfall 019 GRAB

HPLC/IC (Continued)

Analysis Batch: 31287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13943-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-13943-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-14006-1	Outfall 019	Total/NA	Water	300.0	
LCS 440-31287/3	Lab Control Sample	Total/NA	Water	300.0	
MB 440-31287/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 31949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13823-F-1 MS	Matrix Spike	Total/NA	Water	314.0	
440-13823-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	314.0	
440-14006-1	Outfall 019	Total/NA	Water	314.0	
LCS 440-31949/4	Lab Control Sample	Total/NA	Water	314.0	
MB 440-31949/5	Method Blank	Total/NA	Water	314.0	
MRL 440-31949/2 MRL	Lab Control Sample	Total/NA	Water	314.0	

Specialty Organics

Analysis Batch: 2165070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total	Water	1613B	
G2F130000070B	Method Blank	Total	Water	1613B	
G2F130000070C	Lab Control Sample	Total	Water	1613B	

Prep Batch: 2165070_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total	Water	3542	
G2F130000070B	Method Blank	Total	Water	3542	
G2F130000070C	Lab Control Sample	Total	Water	3542	

Metals

Prep Batch: 31758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Dissolved	Water	245.1	
440-14006-1 MS	Outfall 019	Dissolved	Water	245.1	
440-14006-1 MSD	Outfall 019	Dissolved	Water	245.1	
LCS 440-31679/2-B	Lab Control Sample	Dissolved	Water	245.1	
MB 440-31679/1-B	Method Blank	Dissolved	Water	245.1	

Prep Batch: 31759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13987-C-1-B MS	Matrix Spike	Total/NA	Water	245.1	
440-13987-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
440-14006-1	Outfall 019	Total/NA	Water	245.1	
LCS 440-31759/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 440-31759/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 32155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13987-C-1-B MS	Matrix Spike	Total/NA	Water	245.1	31759
440-13987-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	31759
440-14006-1	Outfall 019	Dissolved	Water	245.1	31758

Metals (Continued)

Analysis Batch: 32155 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	245.1	31759
440-14006-1 MS	Outfall 019	Dissolved	Water	245.1	31758
440-14006-1 MSD	Outfall 019	Dissolved	Water	245.1	31758
LCS 440-31679/2-B	Lab Control Sample	Dissolved	Water	245.1	31758
LCS 440-31759/2-A	Lab Control Sample	Total/NA	Water	245.1	31759
MB 440-31679/1-B	Method Blank	Dissolved	Water	245.1	31758
MB 440-31759/1-A	Method Blank	Total/NA	Water	245.1	31759

Prep Batch: 32454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Dissolved	Water	200.2	
440-14010-A-1-E MS	Matrix Spike	Dissolved	Water	200.2	
440-14010-A-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	200.2	
LCS 440-31679/2-D	Lab Control Sample	Dissolved	Water	200.2	
MB 440-31679/1-D	Method Blank	Dissolved	Water	200.2	

Prep Batch: 32455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Dissolved	Water	200.2	
LCS 440-31679/2-E	Lab Control Sample	Dissolved	Water	200.2	
LCSD 440-31679/11-B	Lab Control Sample Dup	Dissolved	Water	200.2	
MB 440-31679/1-E	Method Blank	Dissolved	Water	200.2	

Prep Batch: 32585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total Recoverable	Water	200.2	
440-14006-1 MS	Outfall 019	Total Recoverable	Water	200.2	
440-14006-1 MSD	Outfall 019	Total Recoverable	Water	200.2	
LCS 440-32585/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-32585/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 32803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Dissolved	Water	200.8	32455
LCS 440-31679/2-E	Lab Control Sample	Dissolved	Water	200.8	32455
LCSD 440-31679/11-B	Lab Control Sample Dup	Dissolved	Water	200.8	32455
MB 440-31679/1-E	Method Blank	Dissolved	Water	200.8	32455

Prep Batch: 32948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total Recoverable	Water	200.2	
440-14006-1 MS	Outfall 019	Total Recoverable	Water	200.2	
440-14006-1 MSD	Outfall 019	Total Recoverable	Water	200.2	
LCS 440-32948/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-32948/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 33248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Dissolved	Water	200.7 Rev 4.4	32454
440-14010-A-1-E MS	Matrix Spike	Dissolved	Water	200.7 Rev 4.4	32454
440-14010-A-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	200.7 Rev 4.4	32454
LCS 440-31679/2-D	Lab Control Sample	Dissolved	Water	200.7 Rev 4.4	32454

Metals (Continued)

Analysis Batch: 33248 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-31679/1-D	Method Blank	Dissolved	Water	200.7 Rev 4.4	32454

Analysis Batch: 33338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total Recoverable	Water	200.7 Rev 4.4	32585
440-14006-1 MS	Outfall 019	Total Recoverable	Water	200.7 Rev 4.4	32585
440-14006-1 MSD	Outfall 019	Total Recoverable	Water	200.7 Rev 4.4	32585
LCS 440-32585/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	32585
MB 440-32585/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	32585

Analysis Batch: 33620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total Recoverable	Water	200.8	32948
440-14006-1 MS	Outfall 019	Total Recoverable	Water	200.8	32948
440-14006-1 MSD	Outfall 019	Total Recoverable	Water	200.8	32948
LCS 440-32948/2-A	Lab Control Sample	Total Recoverable	Water	200.8	32948
MB 440-32948/1-A	Method Blank	Total Recoverable	Water	200.8	32948

Analysis Batch: 34122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total Recoverable	Water	200.8	32948
440-14006-1 MS	Outfall 019	Total Recoverable	Water	200.8	32948
440-14006-1 MSD	Outfall 019	Total Recoverable	Water	200.8	32948
LCS 440-32948/2-A	Lab Control Sample	Total Recoverable	Water	200.8	32948
MB 440-32948/1-A	Method Blank	Total Recoverable	Water	200.8	32948

General Chemistry

Analysis Batch: 31382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13854-1	Outfall 019	Total/NA	Water	SM 2540F	

Analysis Batch: 31545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13981-E-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-14006-1	Outfall 019	Total/NA	Water	SM 2540C	
LCS 440-31545/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-31545/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 31655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13943-A-4 DU	Duplicate	Total/NA	Water	180.1	
440-14006-1	Outfall 019	Total/NA	Water	180.1	
MB 440-31655/6	Method Blank	Total/NA	Water	180.1	
MRL 440-31655/3 MRL	Lab Control Sample	Total/NA	Water	180.1	

Analysis Batch: 31687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	SM5210B	
LCS 440-31687/4	Lab Control Sample	Total/NA	Water	SM5210B	
LCSD 440-31687/5	Lab Control Sample Dup	Total/NA	Water	SM5210B	
USB 440-31687/1 USB	Method Blank	Total/NA	Water	SM5210B	

TestAmerica Irvine
7/13/2012

General Chemistry (Continued)

Analysis Batch: 31765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14000-A-2 DU	Duplicate	Total/NA	Water	SM 2540D	
440-14006-1	Outfall 019	Total/NA	Water	SM 2540D	
LCS 440-31765/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-31765/1	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 31783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	SM 5540C	
440-14006-1 MS	Outfall 019	Total/NA	Water	SM 5540C	
440-14006-1 MSD	Outfall 019	Total/NA	Water	SM 5540C	
LCS 440-31783/4	Lab Control Sample	Total/NA	Water	SM 5540C	
MB 440-31783/3	Method Blank	Total/NA	Water	SM 5540C	

Analysis Batch: 32047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	SM 5310B	
440-14031-A-1 MS	Matrix Spike	Total/NA	Water	SM 5310B	
440-14031-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310B	
LCS 440-32047/6	Lab Control Sample	Total/NA	Water	SM 5310B	
MB 440-32047/7	Method Blank	Total/NA	Water	SM 5310B	

Prep Batch: 32250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	Distill/CN	
440-14055-A-3-A MS	Matrix Spike	Total/NA	Water	Distill/CN	
440-14055-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	
LCS 440-32250/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 440-32250/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 32263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	SM 4500 CN E	32250
440-14055-A-3-A MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	32250
440-14055-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	32250
LCS 440-32250/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	32250
MB 440-32250/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	32250

Prep Batch: 32708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13817-E-1-A MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-13817-E-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-14006-1	Outfall 019	Total/NA	Water	SM 4500 NH3 B	
LCS 440-32708/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
MB 440-32708/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 32726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13817-E-1-A MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 C	32708
440-13817-E-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 C	32708
440-14006-1	Outfall 019	Total/NA	Water	SM 4500 NH3 C	32708
LCS 440-32708/2-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 C	32708
MB 440-32708/1-A	Method Blank	Total/NA	Water	SM 4500 NH3 C	32708

General Chemistry (Continued)

Prep Batch: 33063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13854-1	Outfall 019	Total/NA	Water	1664A	
440-14090-A-1-A MS	Matrix Spike	Total/NA	Water	1664A	
LCS 440-33063/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-33063/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-33063/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 33087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-13854-1	Outfall 019	Total/NA	Water	1664A	33063
440-14090-A-1-A MS	Matrix Spike	Total/NA	Water	1664A	33063
LCS 440-33063/2-A	Lab Control Sample	Total/NA	Water	1664A	33063
LCSD 440-33063/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	33063
MB 440-33063/1-A	Method Blank	Total/NA	Water	1664A	33063

Subcontract

Analysis Batch: 8617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	Gamma Spec K-40 CS-137	8617_P
440-14006-1	Outfall 019	Total/NA	Water	Gross Alpha and Beta	8617_P
440-14006-1	Outfall 019	Total/NA	Water	Radium 226	8617_P
440-14006-1	Outfall 019	Total/NA	Water	Radium 228	8617_P
440-14006-1	Outfall 019	Total/NA	Water	Strontium 90	8617_P
440-14006-1	Outfall 019	Total/NA	Water	Tritium	8617_P
440-14006-1	Outfall 019	Total/NA	Water	Uranium, Combined	8617_P
440-14006-2	Trip Blank	Total/NA	Water	Gamma Spec K-40 CS-137	8617_P
440-14006-2	Trip Blank	Total/NA	Water	Gross Alpha and Beta	8617_P
440-14006-2	Trip Blank	Total/NA	Water	Radium 226	8617_P
440-14006-2	Trip Blank	Total/NA	Water	Radium 228	8617_P
440-14006-2	Trip Blank	Total/NA	Water	Strontium 90	8617_P
440-14006-2	Trip Blank	Total/NA	Water	Uranium, Combined	8617_P
S206035-03	Lab Control Sample	Total/NA	WATER	Gross Alpha and Beta	8617_P
S206035-04	Method Blank	Total/NA	WATER	Gross Alpha and Beta	8617_P
S206035-05	OUTFALL 019 (440-14006-1 DU	Total/NA	WATER	Gross Alpha and Beta	8617_P

Prep Batch: 8617_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-14006-1	Outfall 019	Total/NA	Water	General Prep	
440-14006-2	Trip Blank	Total/NA	Water	General Prep	
S206035-03	Lab Control Sample	Total/NA	WATER	General Prep	
S206035-04	Method Blank	Total/NA	WATER	General Prep	
S206035-05	OUTFALL 019 (440-14006-1 DU	Total/NA	WATER	General Prep	

TestAmerica Irvine
7/13/2012

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
LR	LCS/LCSD recovery below method control limits

HPLC/IC

Qualifier	Qualifier Description
J,DX	Estimated value; value < lowest standard (MQL), but >than MDL
IB	CCV recovery above limit; analyte not detected

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

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)

Client: MWH Americas Inc
Project/Site: Monthly Outfall 019 GRAB

TestAmerica Job ID: 440-13854-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080
TestAmerica West Sacramento	A2LA	DoD ELAP		2928-01
TestAmerica West Sacramento	Alaska (UST)	State Program	10	UST-055
TestAmerica West Sacramento	Arizona	State Program	9	AZ0708
TestAmerica West Sacramento	Arkansas DEQ	State Program	6	88-0691
TestAmerica West Sacramento	California	NELAC	9	1119CA
TestAmerica West Sacramento	Colorado	State Program	8	N/A
TestAmerica West Sacramento	Connecticut	State Program	1	PH-0691
TestAmerica West Sacramento	Florida	NELAC	4	E87570
TestAmerica West Sacramento	Georgia	State Program	4	960
TestAmerica West Sacramento	Guam	State Program	9	N/A
TestAmerica West Sacramento	Hawaii	State Program	9	N/A
TestAmerica West Sacramento	Illinois	NELAC	5	200060
TestAmerica West Sacramento	Kansas	NELAC	7	E-10375
TestAmerica West Sacramento	Louisiana	NELAC	6	30612
TestAmerica West Sacramento	Michigan	State Program	5	9947
TestAmerica West Sacramento	Nevada	State Program	9	CA44
TestAmerica West Sacramento	New Jersey	NELAC	2	CA005
TestAmerica West Sacramento	New Mexico	State Program	6	N/A
TestAmerica West Sacramento	New York	NELAC	2	11666
TestAmerica West Sacramento	Northern Mariana Islands	State Program	9	MP0007
TestAmerica West Sacramento	Oregon	NELAC	10	CA200005
TestAmerica West Sacramento	Pennsylvania	NELAC	3	68-01272
TestAmerica West Sacramento	South Carolina	State Program	4	87014
TestAmerica West Sacramento	Texas	NELAC	6	T104704399-08-TX
TestAmerica West Sacramento	US Fish & Wildlife	Federal		LE148388-0
TestAmerica West Sacramento	USDA	Federal		P330-11-00436
TestAmerica West Sacramento	Utah	NELAC	8	QUAN1
TestAmerica West Sacramento	Virginia	State Program	3	178
TestAmerica West Sacramento	Washington	State Program	10	C581
TestAmerica West Sacramento	West Virginia	State Program	3	9930C
TestAmerica West Sacramento	West Virginia DEP	State Program	3	334
TestAmerica West Sacramento	Wisconsin	State Program	5	998204680
TestAmerica West Sacramento	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica Irvine
7/13/2012

EBERLINE ANALYTICAL CORPORATION
2030 Wright Avenue
Richmond, California 94804-3849
Phone (510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

July 10, 2012

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

Reference: Test America-Irvine 44002624
Eberline Analytical Report S206053-8617
Sample Delivery Group 8617

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under
Test America Project No. 44002624. The samples were received on June 11, 2012.

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

Sincerely,

Joseph Verville
Client Services Manager

NJV/

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8617 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The samples were received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

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

2.0 Quality Control

Quality Control Samples consisted of laboratory control samples (LCS), method blanks, and duplicate analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

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

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

Eberline Analytical
Report No. S206035-8617

Test America
Test America Project No. 44002624

Case Narrative, page 2

July 10, 2012

4.0   **Analysis Notes**

4.1   **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.2   **Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.3   **Strontium-90 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.4   **Radium-226 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.5   **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits

4.6   **Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

4.7   **Gamma Spectroscopy** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0   **Case Narrative Certification Statement**

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

_____   ___7/10/12___

Joseph Verville   Date
Client Services Manager

EBERLINE ANALYTICAL
SDG 8617

SDG <u>8617</u>
Contact <u>Joseph Verville</u>

Client <u>Test America, Inc.</u>
Contract <u>44002624</u>

SUMMARY DATA SECTION

TABLE OF CONTENTS

Prepared by

Reviewed by

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-TOC</u>
Version <u>3.06</u>
Report date <u>07/06/12</u>

R E P O R T   G U I D E

Client __Test America, Inc.__
Contract __44002624__

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

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

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

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

PREPARATION BATCH SUMMARY

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

WORK SUMMARY

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

METHOD BLANKS

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

LAB CONTROL SAMPLES

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

DUPLICATES

Lab id __EAS__
Protocol __TA__
Version __Ver 1.0__
Form __DVD-RG__
Version __3.06__
Report date __07/06/12__

REPORT GUIDES
Page 1
SUMMARY DATA SECTION
Page 1

SDG <u>8617</u>
Contact <u>Joseph Verville</u>

G U I D E ,   c o n t .

Client <u>Test America, Inc.</u>
Contract <u>44002624</u>

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

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

MATRIX SPIKES

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

DATA SHEETS

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

METHOD SUMMARIES

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

REPORT GUIDES

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

REPORT GUIDES
Page 2
SUMMARY DATA SECTION
Page 2

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

EBERLINE ANALYTICAL

SDG 8617

LAB SAMPLE SUMMARY

SDG 8617	
Contact Joseph Verville	

Client Test America, Inc.
Contract 44002624

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S206035-01	OUTFALL 019 (440-14006-1	SSFL	WATER			440-14006-1	06/07/12 10:15
S206035-02	TRIP-BLANK (440-14006-2)	SSFL	WATER			440-14006-1	06/08/12 13:00
S206035-03	Lab Control Sample		WATER				
S206035-04	Method Blank		WATER				
S206035-05	Duplicate (S206035-01)	SSFL	WATER				06/07/12 10:15

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 07/06/12

EBERLINE ANALYTICAL

SDG 8617

QC SUMMARY

SDG	8617
Contact	Joseph Verville

Client	Test America, Inc.
Contract	44002624

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8617	440-14006-1	OUTFALL 019 (440-14006-1	WATER		10.0 L		06/09/12	2	S206035-01	8617-001
		TRIP-BLANK (440-14006-2)	WATER		10.0 L		06/09/12	1	S206035-02	8617-002
		Method Blank	WATER						S206035-04	8617-004
		Lab Control Sample	WATER						S206035-03	8617-003
		Duplicate (S206035-01)	WATER		10.0 L		06/09/12	2	S206035-05	8617-005

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-QS
Version	3.06
Report date	07/06/12

PREP BATCH SUMMARY

SDG 8617
Contact Joseph Verville

Client Test America, Inc.
Contract 44002624

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALI-FIERS
Beta Counting												
AC	WATER	Radium-228 in Water	7271-156	10.4	2			1	1	1/1		
SR	WATER	Strontium-90 in Water	7271-156	10.4	2			1	1	1/1		
Gas Proportional Counting												
80A	WATER	Gross Alpha in Water	7271-156	20.6	2			1	1	1/1		
80B	WATER	Gross Beta in Water	7271-156	11.0	2			1	1	1/1		
Gamma Spectroscopy												
GAM	WATER	Gamma Emitters in Water	7271-156	7.0	2			1	1	1/1		
Kinetic Phosphorimetry												
U_T	WATER	Uranium, Total	7271-156		2			1	1	1/1		
Liquid Scintillation Counting												
H	WATER	Tritium in Water	7271-156	10.0	1			1	1	1/1		
Radon Counting												
RA	WATER	Radium-226 in Water	7271-156	16.4	2			1	1	1/1		

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-PBS
Version	3.06
Report date	07/06/12

PREP BATCH SUMMARY

Page 1

SUMMARY DATA SECTION

Page 5

EBERLINE ANALYTICAL

SDG 8617

LAB WORK SUMMARY

SDG 8617
Contact Joseph Verville

Client Test America, Inc.
Contract 44002624

LAB SAMPLE COLLECTED RECEIVED	CLIENT SAMPLE ID LOCATION CUSTODY	MATRIX SAS no	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S206035-01 06/07/12 06/09/12	OUTFALL 019 (440-14006-1 SSFL 440-14006-1	WATER	8617-001 8617-001 8617-001 8617-001 8617-001 8617-001 8617-001 8617-001	80A/80 80B/80 AC GAM H RA SR U_T		06/19/12 06/19/12 06/25/12 06/14/12 06/28/12 06/26/12 06/25/12 06/26/12	06/20/12 06/20/12 06/26/12 06/19/12 07/03/12 07/02/12 06/27/12 06/26/12	BW BW BW MWT BW BW BW TSC	Gross Alpha in Water Gross Beta in Water Radium-228 in Water Gamma Emitters in Water Tritium in Water Radium-226 in Water Strontium-90 in Water Uranium, Total
S206035-02 06/08/12 06/09/12	TRIP-BLANK (440-14006-2) SSFL 440-14006-1	WATER	8617-002 8617-002 8617-002 8617-002 8617-002 8617-002 8617-002	80A/80 80B/80 AC GAM RA SR U_T		06/19/12 06/19/12 06/25/12 06/14/12 06/26/12 06/25/12 06/26/12	06/20/12 06/20/12 06/26/12 06/19/12 07/02/12 06/27/12 06/26/12	BW BW BW MWT BW BW TSC	Gross Alpha in Water Gross Beta in Water Radium-228 in Water Gamma Emitters in Water Radium-226 in Water Strontium-90 in Water Uranium, Total
S206035-03	Lab Control Sample	WATER	8617-003 8617-003 8617-003 8617-003 8617-003 8617-003 8617-003 8617-003	80A/80 80B/80 AC GAM H RA SR U_T		06/19/12 06/19/12 06/25/12 06/14/12 06/28/12 06/26/12 06/25/12 06/26/12	06/20/12 06/20/12 06/26/12 06/19/12 07/03/12 07/02/12 06/27/12 06/26/12	BW BW BW MWT BW BW BW TSC	Gross Alpha in Water Gross Beta in Water Radium-228 in Water Gamma Emitters in Water Tritium in Water Radium-226 in Water Strontium-90 in Water Uranium, Total
S206035-04	Method Blank	WATER	8617-004 8617-004 8617-004 8617-004 8617-004 8617-004 8617-004 8617-004	80A/80 80B/80 AC GAM H RA SR U_T		06/19/12 06/19/12 06/25/12 06/14/12 06/28/12 06/26/12 06/25/12 06/26/12	06/20/12 06/20/12 06/26/12 06/19/12 07/03/12 07/02/12 06/27/12 06/26/12	BW BW BW MWT BW BW BW TSC	Gross Alpha in Water Gross Beta in Water Radium-228 in Water Gamma Emitters in Water Tritium in Water Radium-226 in Water Strontium-90 in Water Uranium, Total

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-LWS
Version	3.06
Report date	07/06/12

WORK SUMMARY
Page 1
SUMMARY DATA SECTION
Page 6

SDG 8617
Contact Joseph Verville

Client Test America, Inc.
Contract 44002624

LAB SAMPLE	CLIENT SAMPLE ID					SUF-				
COLLECTED	LOCATION		MATRIX							
RECEIVED	CUSTODY	SAS no		PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD
S206035-05	Duplicate (S206035-01)			8617-005	80A/80		06/19/12	06/20/12	BW	Gross Alpha in Water
06/07/12	SSFL		WATER	8617-005	80B/80		06/19/12	06/20/12	BW	Gross Beta in Water
06/09/12				8617-005	AC		06/25/12	06/26/12	BW	Radium-228 in Water
				8617-005	GAM		06/15/12	06/19/12	MWT	Gamma Emitters in Water
				8617-005	H		06/28/12	07/03/12	BW	Tritium in Water
				8617-005	RA		06/26/12	07/02/12	BW	Radium-226 in Water
				8617-005	SR		06/25/12	06/27/12	BW	Strontium-90 in Water
				8617-005	U_T		06/26/12	06/26/12	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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 07/06/12

WORK SUMMARY
Page 2
SUMMARY DATA SECTION
Page 7

7/13/2012

E B E R L I N E   A N A L Y T I C A L
SDG 8617

M E T H O D   B L A N K

SDG 8617	Client	Test America, Inc.
Contact Joseph Verville	Contract	44002624

Lab sample id S206035-04	Client sample id	Method Blank
Dept sample id 8617-004	Material/Matrix	WATER

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	0.035	0.25	0.455	3.00	U	80A
Gross Beta	12587472	0.009	0.69	1.13	4.00	U	80B
Tritium	10028178	-23.1	85	146	500	U	H
Radium-226	13982633	0.064	0.32	0.592	1.00	U	RA
Radium-228	15262201	-0.025	0.18	0.463	1.00	U	AC
Strontium-90	10098972	0.042	0.27	0.579	2.00	U	SR
Uranium, Total		0	0.007	0.016	1.00	U	U_T
Potassium-40	13966002	-14.5	19	34.4	25.0	U	GAM
Cesium-137	10045973	-2.30	2.6	4.61	20.0	U	GAM

QC-BLANK #81951

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	07/06/12

METHOD BLANKS
Page 1
SUMMARY DATA SECTION
Page 8

EBERLINE ANALYTICAL

SDG 8617

8617-003   Lab Control Sample

LAB CONTROL SAMPLE

SDG 8617	Client Test America, Inc.
Contact Joseph Verville	Contract 44002624

Lab sample id S206035-03	Client sample id Lab Control Sample
Dept sample id 8617-003	Material/Matrix WATER

ANALYTE	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	REC %	2σ LMTS (TOTAL)	PROTOCOL LIMITS
Gross Alpha	42.5	2.2	0.584	3.00		80A	37.0	1.5	115	75-125	70-130
Gross Beta	32.5	1.3	0.889	4.00		80B	34.0	1.4	96	88-112	70-130
Tritium	2170	140	146	500		H	2190	88	99	88-112	80-120
Radium-226	56.5	2.5	0.777	1.00		RA	55.7	2.2	101	82-118	80-120
Radium-228	5.07	0.31	0.426	1.00		AC	5.19	0.21	98	88-112	60-140
Strontium-90	16.0	1.0	0.460	2.00		SR	16.9	0.68	95	88-112	80-120
Uranium, Total	61.1	7.3	0.161	1.00		U_T	62.5	2.5	98	88-112	80-120
Cobalt-60	112	13	2.97	10.0		GAM	127	5.1	88	87-113	80-120
Cesium-137	140	5.0	4.39	20.0		GAM	146	5.8	96	91-109	80-120

QC-LCS #81950

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-LCS
Version	3.06
Report date	07/06/12

LAB CONTROL SAMPLES
    Page 1
SUMMARY DATA SECTION
    Page 9

EBERLINE ANALYTICAL

SDG 8617

8617-005

DUPLICATE

SDG 8617		Client Test America, Inc.
Contact Joseph Verville		Contract 44002624
DUPLICATE	ORIGINAL	
Lab sample id S206035-05	Lab sample id S206035-01	Client sample id OUTFALL 019 (440-14006-1
Dept sample id 8617-005	Dept sample id 8617-001	Location/Matrix SSFL WATER
	Received 06/09/12	Collected/Volume 06/07/12 10:15 10.0 L
		Chain of custody id 440-14006-1

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI-FIERS	RPD %	3σ TOT	DER σ
Gross Alpha	0.248	0.87	1.48	3.00	U	80A	-0.149	0.73	1.44	U	-		0.7
Gross Beta	2.07	1.1	1.75	4.00	J	80B	1.54	1.2	1.87	U	29	137	0.6
Tritium	-10.8	86	146	500	U	H	-4.64	86	146	U	-		0.1
Radium-226	0.439	0.41	0.649	1.00	U	RA	0.566	0.37	0.544	J	25	169	0.4
Radium-228	0.075	0.27	0.530	1.00	U	AC	0.136	0.17	0.434	U	-		0.4
Strontium-90	-0.011	0.27	0.592	2.00	U	SR	0.025	0.36	0.726	U	-		0.2
Uranium, Total	0.030	0.008	0.016	1.00	J	U_T	0.036	0.008	0.016	J	18	52	1.1
Potassium-40	-5.22	18	32.3	25.0	U	GAM	-7.29	13	24.0	U	-		0.2
Cesium-137	-1.49	1.7	3.03	20.0	U	GAM	-0.669	1.5	2.66	U	-		0.7

QC-DUP#1 81952

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DUP
Version	3.06
Report date	07/06/12

DUPLICATES
Page 1
SUMMARY DATA SECTION
Page 10

E B E R L I N E   A N A L Y T I C A L
SDG 8617

8617-001   OUTFALL 019 (440-14006-1

D A T A   S H E E T

SDG 8617	Client	Test America, Inc.
Contact Joseph Verville	Contract	44002624

Lab sample id S206035-01   Client sample id OUTFALL 019 (440-14006-1
Dept sample id 8617-001   Location/Matrix SSFL   WATER
Received 06/09/12   Collected/Volume 06/07/12 10:15   10.0 L
                              Chain of custody id 440-14006-1

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	-0.149	0.73	1.44	3.00	U	80A
Gross Beta	12587472	1.54	1.2	1.87	4.00	U	80B
Tritium	10028178	-4.64	86	146	500	U	H
Radium-226	13982633	0.566	0.37	0.544	1.00	J	RA
Radium-228	15262201	0.136	0.17	0.434	1.00	U	AC
Strontium-90	10098972	0.025	0.36	0.726	2.00	U	SR
Uranium, Total		0.036	0.008	0.016	1.00	J	U_T
Potassium-40	13966002	-7.29	13	24.0	25.0	U	GAM
Cesium-137	10045973	-0.669	1.5	2.66	20.0	U	GAM

DATA SHEETS
Page 1
SUMMARY DATA SECTION
Page 11

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	07/06/12

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

SDG 8617

8617-002   TRIP-BLANK (440-14006-2)

D A T A   S H E E T

SDG <u>8617</u>	Client <u>Test America, Inc.</u>
Contact <u>Joseph Verville</u>	Contract <u>44002624</u>
Lab sample id <u>S206035-02</u>	Client sample id <u>TRIP-BLANK (440-14006-2)</u>
Dept sample id <u>8617-002</u>	Location/Matrix <u>SSFL</u> <u>WATER</u>
Received <u>06/09/12</u>	Collected/Volume <u>06/08/12 13:00 10.0 L</u>
	Chain of custody id <u>440-14006-1</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	-0.024	0.14	0.320	3.00	U	80A
Gross Beta	12587472	-0.348	0.44	0.760	4.00	U	80B
Radium-226	13982633	0.453	0.44	0.704	1.00	U	RA
Radium-228	15262201	-0.081	0.22	0.421	1.00	U	AC
Strontium-90	10098972	0.099	0.41	0.803	2.00	U	SR
Uranium, Total		0	0.007	0.016	1.00	U	U_T
Potassium-40	13966002	-5.98	12	22.0	25.0	U	GAM
Cesium-137	10045973	-1.54	1.7	3.08	20.0	U	GAM

DATA SHEETS
Page 2
SUMMARY DATA SECTION
Page 12

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-DS</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

EBERLINE ANALYTICAL

SDG 8617

Test AC   Matrix WATER
SDG 8617
Contact Joseph Verville

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

Client Test America, Inc.
Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-228	
Preparation batch 7271-156						
S206035-01			8617-001	OUTFALL 019 (440-14006-1	U	
S206035-02			8617-002	TRIP-BLANK (440-14006-2)	U	
S206035-03			8617-003	Lab Control Sample	ok	
S206035-04			8617-004	Method Blank	U	
S206035-05			8617-005	Duplicate (S206035-01)	-	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156 2σ prep error 10.4 % Reference Lab Notebook No. 7271 pg.156																
S206035-01			OUTFALL 019 (440-14006-1	0.434	1.80			82		150			18	06/25/12	06/25	GRB-221
S206035-02			TRIP-BLANK (440-14006-2)	0.421	1.80			81		150			17	06/25/12	06/25	GRB-222
S206035-03			Lab Control Sample	0.426	1.80			81		150				06/25/12	06/25	GRB-223
S206035-04			Method Blank	0.463	1.80			80		150				06/25/12	06/25	GRB-224
S206035-05			Duplicate (S206035-01)	0.530	1.80			80		150			18	06/25/12	06/25	GRB-229

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

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

AVERAGES ± 2 SD	MDA	0.455 ± 0.090
FOR 5 SAMPLES	YIELD	81 ± 2

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

Page 13

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/06/12

| Test SR   Matrix WATER |
| SDG 8617 |
| Contact Joseph Verville |

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER

BETA COUNTING

| Client Test America, Inc. |
| Contract 44002624 |

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90	
Preparation batch 7271-156						
S206035-01			8617-001	OUTFALL 019 (440-14006-1	U	
S206035-02			8617-002	TRIP-BLANK (440-14006-2)	U	
S206035-03			8617-003	Lab Control Sample	ok	
S206035-04			8617-004	Method Blank	U	
S206035-05			8617-005	Duplicate (S206035-01)	-	U
Nominal values and limits from method			RDLs (pCi/L)		2.00	

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156		2σ prep error 10.4 %	Reference Lab Notebook No. 7271 pg.156													
S206035-01			OUTFALL 019 (440-14006-1	0.726	0.500			90	100				18	06/25/12	06/25	GRB-203
S206035-02			TRIP-BLANK (440-14006-2)	0.803	0.500			83	100				17	06/25/12	06/25	GRB-204
S206035-03			Lab Control Sample	0.460	0.500			85	86					06/25/12	06/25	GRB-229
S206035-04			Method Blank	0.579	0.500			86	76					06/25/12	06/25	GRB-222
S206035-05			Duplicate (S206035-01)	0.592	0.500			86	76				18	06/25/12	06/25	GRB-223
Nominal values and limits from method				2.00	0.500			30-105	50				180			

| PROCEDURES | REFERENCE | 905.0 |
| | CP-380 | Strontium in Water Samples, rev 5 |

| AVERAGES ± 2 SD | MDA | 0.632 ± 0.268 |
| FOR 5 SAMPLES | YIELD | 86 ± 5 |

| Lab id EAS |
| Protocol TA |
| Version Ver 1.0 |
| Form DVD-LMS |
| Version 3.06 |
| Report date 07/06/12 |

EBERLINE ANALYTICAL

SDG 8617

Test 80A Matrix WATER		Client Test America, Inc.
SDG 8617	**LAB METHOD SUMMARY**	Contract 44002624
Contact Joseph Verville	GROSS ALPHA IN WATER	
	GAS PROPORTIONAL COUNTING	

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha	
Preparation batch 7271-156						
S206035-01	80		8617-001	OUTFALL 019 (440-14006-1	U	
S206035-02	80		8617-002	TRIP-BLANK (440-14006-2)	U	
S206035-03	80		8617-003	Lab Control Sample	ok	
S206035-04	80		8617-004	Method Blank	U	
S206035-05	80		8617-005	Duplicate (S206035-01)	-	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156			2σ prep error 20.6 % Reference Lab Notebook No. 7271 pg.156													
S206035-01	80		OUTFALL 019 (440-14006-1	1.44	0.150			84		400			12	06/18/12	06/19	GRB-101
S206035-02	80		TRIP-BLANK (440-14006-2)	0.320	0.300			0		400			11	06/18/12	06/19	GRB-104
S206035-03	80		Lab Control Sample	0.584	0.300			53		400				06/18/12	06/19	GRB-105
S206035-04	80		Method Blank	0.455	0.300			54		400				06/18/12	06/19	GRB-107
S206035-05	80		Duplicate (S206035-01)	1.48	0.150			85		400			12	06/18/12	06/19	GRB-112
Nominal values and limits from method				3.00	0.300			0-250	100				180			

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

AVERAGES ± 2 SD	MDA	0.856 ± 1.12
FOR 5 SAMPLES	RESIDUE	55 ± 69

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-LMS
Version	3.06
Report date	07/06/12

METHOD SUMMARIES
Page 3
SUMMARY DATA SECTION
Page 15

EBERLINE ANALYTICAL

SDG 8617

Test 80B Matrix WATER		Client Test America, Inc.
SDG 8617		Contract 44002624
Contact Joseph Verville		

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta	
Preparation batch 7271-156						
S206035-01	80		8617-001	OUTFALL 019 (440-14006-1	U	
S206035-02	80		8617-002	TRIP-BLANK (440-14006-2)	U	
S206035-03	80		8617-003	Lab Control Sample	ok	
S206035-04	80		8617-004	Method Blank	U	
S206035-05	80		8617-005	Duplicate (S206035-01)	ok	J

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	RESID mg	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156		2σ prep error 11.0 %	Reference Lab Notebook No. 7271 pg.156													
S206035-01	80		OUTFALL 019 (440-14006-1	1.87	0.150			84		400			12	06/18/12	06/19	GRB-101
S206035-02	80		TRIP-BLANK (440-14006-2)	0.760	0.300			0		400			11	06/18/12	06/19	GRB-104
S206035-03	80		Lab Control Sample	0.889	0.300			53		400				06/18/12	06/19	GRB-105
S206035-04	80		Method Blank	1.13	0.300			54		400				06/18/12	06/19	GRB-107
S206035-05	80		Duplicate (S206035-01)	1.75	0.150			85		400			12	06/18/12	06/19	GRB-112
Nominal values and limits from method				4.00	0.300			0-250	100				180			

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

AVERAGES ± 2 SD	MDA	1.28 ± 1.01
FOR 5 SAMPLES	RESIDUE	55 ± 69

METHOD SUMMARIES

Page 4

SUMMARY DATA SECTION

Page 16

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/06/12

Test GAM Matrix WATER
SDG 8617
Contact Joseph Verville

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER

GAMMA SPECTROSCOPY

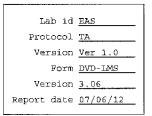| Client Test America, Inc. |
|---|
| Contract 44002624 |

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7271-156						
S206035-01			8617-001	OUTFALL 019 (440-14006-1		U
S206035-02			8617-002	TRIP-BLANK (440-14006-2)		U
S206035-03			8617-003	Lab Control Sample	ok	ok
S206035-04			8617-004	Method Blank		U
S206035-05			8617-005	Duplicate (S206035-01)	-	U
Nominal values and limits from method				RDLs (pCi/L)	10.0	20.0

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156		2σ prep error 7.0 %	Reference Lab Notebook No. 7271 pg.156													
S206035-01			OUTFALL 019 (440-14006-1		2.00					400			7	06/14/12	06/14	MB,G6,0
S206035-02			TRIP-BLANK (440-14006-2)		2.00					400			6	06/14/12	06/14	MB,G8,0
S206035-03			Lab Control Sample		2.00					400				06/14/12	06/14	MB,G3,0
S206035-04			Method Blank		2.00					400				06/14/12	06/14	MB,G2,0
S206035-05			Duplicate (S206035-01)		2.00					400			8	06/14/12	06/15	MB,G2,0
Nominal values and limits from method				6.00	2.00					400			180			

PROCEDURES	REFERENCE	901.1
	DWP-100	Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/06/12

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY

Test U T Matrix WATER
SDG 8617
Contact Joseph Verville

Client Test America, Inc.
Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Uranium, Total	
Preparation batch 7271-156						
S206035-01			8617-001	OUTFALL 019 (440-14006-1	0.036	J
S206035-02			8617-002	TRIP-BLANK (440-14006-2)	U	
S206035-03			8617-003	Lab Control Sample	ok	
S206035-04			8617-004	Method Blank	U	
S206035-05			8617-005	Duplicate (S206035-01)	ok	J

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156		2σ prep error	Reference Lab Notebook No. 7271 pg.156													
S206035-01			OUTFALL 019 (440-14006-1	0.016	0.0200								19	06/26/12	06/26	KPA-001
S206035-02			TRIP-BLANK (440-14006-2)	0.016	0.0200								18	06/26/12	06/26	KPA-001
S206035-03			Lab Control Sample	0.161	0.0200									06/26/12	06/26	KPA-001
S206035-04			Method Blank	0.016	0.0200									06/26/12	06/26	KPA-001
S206035-05			Duplicate (S206035-01)	0.016	0.0200								19	06/26/12	06/26	KPA-001
Nominal values and limits from method				1.00	0.0200								180			

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD	MDA	0.045 ± 0.130
FOR 5 SAMPLES	YIELD	±

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/06/12

EBERLINE ANALYTICAL

SDG 8617

Test H Matrix WATER	
SDG 8617	
Contact Joseph Verville	

LAB METHOD SUMMARY
TRITIUM IN WATER
LIQUID SCINTILLATION COUNTING

Client Test America, Inc.
Contract 44002624

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
Preparation batch 7271-156						
S206035-01			8617-001	OUTFALL 019 (440-14006-1	U	
S206035-03			8617-003	Lab Control Sample	ok	
S206035-04			8617-004	Method Blank	U	
S206035-05			8617-005	Duplicate (S206035-01)	~	U

Nominal values and limits from method	RDLs (pCi/L)	500

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156 2σ prep error 10.0 % Reference Lab Notebook No. 7271 pg.156																
S206035-01			OUTFALL 019 (440-14006-1	146	0.0100			100		150			21	06/25/12	06/28	LSC-007
S206035-03			Lab Control Sample	146	0.100			10		150				06/25/12	06/28	LSC-007
S206035-04			Method Blank	146	0.100			10		150				06/25/12	06/28	LSC-007
S206035-05			Duplicate (S206035-01)	146	0.0100			100		150			21	06/25/12	06/28	LSC-007
Nominal values and limits from method				500	0.0100					100			180			

PROCEDURES	REFERENCE	906.0
	DWP-212	Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD	MDA 146	± 0
FOR 4 SAMPLES	YIELD 55	± 104

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 07/06/12

METHOD SUMMARIES
Page 7
SUMMARY DATA SECTION
Page 19

EBERLINE ANALYTICAL

SDG 8617

| Test RA Matrix WATER |
| SDG 8617 |
| Contact Joseph Verville |

| Client Test America, Inc. |
| Contract 44002624 |

LAB METHOD SUMMARY

RADIUM-226 IN WATER

RADON COUNTING

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226	
Preparation batch 7271-156						
S206035-01			8617-001	OUTFALL 019 (440-14006-1	0.566	J
S206035-02			8617-002	TRIP-BLANK (440-14006-2)	U	
S206035-03			8617-003	Lab Control Sample	ok	
S206035-04			8617-004	Method Blank	U	
S206035-05			8617-005	Duplicate (S206035-01)	ok	U

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

METHOD PERFORMANCE

LAB SAMPLE ID	RAW TEST	SUF-FIX	CLIENT SAMPLE ID	MDA pCi/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 7271-156 2σ prep error 16.4 % Reference Lab Notebook No. 7271 pg.156																
S206035-01			OUTFALL 019 (440-14006-1	0.544	0.100			100		90			19	06/26/12	06/26	RN-012
S206035-02			TRIP-BLANK (440-14006-2)	0.704	0.100			100		90			18	06/26/12	06/26	RN-013
S206035-03			Lab Control Sample	0.777	0.100			100		90				06/26/12	06/26	RN-009
S206035-04			Method Blank	0.592	0.100			100		90				06/26/12	06/26	RN-010
S206035-05			Duplicate (S206035-01)	0.649	0.100			100		90			19	06/26/12	06/26	RN-011
Nominal values and limits from method				1.00	0.100					50			180			

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

| AVERAGES ± 2 SD | MDA | 0.653 ± 0.183 |
| FOR 5 SAMPLES | YIELD | 100 ± 0 |

METHOD SUMMARIES
Page 8
SUMMARY DATA SECTION
Page 20

| Lab id EAS |
| Protocol TA |
| Version Ver 1.0 |
| Form DVD-LMS |
| Version 3.06 |
| Report date 07/06/12 |

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

SDG 8617

SDG <u>8617</u> Contact <u>Joseph Verville</u>	**R E P O R T G U I D E**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

S A M P L E   S U M M A R Y

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

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

The following notes apply to these reports:

* LAB SAMPLE ID is the lab's primary identification for a sample.

* DEPARTMENT SAMPLE ID is an alternate lab id, for example one
  assigned by a radiochemistry department in a lab.

* CLIENT SAMPLE ID is the client's primary identification for a
  sample. It includes any sample preparation done by the client
  that is necessary to identify the sample.

* QC BATCH is a lab assigned code that groups samples to be
  processed and QCed together. These samples should have similar
  matrices.

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

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

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

REPORT GUIDES
Page 1
SUMMARY DATA SECTION
Page 21

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

SDG 8617

SDG 8617		Client Test America, Inc.
Contact Joseph Verville	**R E P O R T G U I D E**	Contract 44002624

P R E P A R A T I O N   B A T C H   S U M M A R Y

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

The following notes apply to this report:

* The preparation batches are shown in the same order as the Method Summary Reports are printed.

* Only analyses of planchets relevant to the SDG are included.

* Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.

* The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

  These qualifiers should be reviewed as follows:

  X Some data has been manually entered or modified. Transcription errors are possible.

  P One or more results are 'preliminary'. The data is not ready for final reporting.

  2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

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

	Lab id EAS
	Protocol TA
	Version Ver 1.0
	Form DVD-RG
	Version 3.06
	Report date 07/06/12

REPORT GUIDES
Page 2
SUMMARY DATA SECTION
Page 22

E B E R L I N E   A N A L Y T I C A L
SDG 8617

R E P O R T   G U I D E

Client Test America, Inc.
Contract 44002624

W O R K   S U M M A R Y

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

The following notes apply to this report:

* TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.

* SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.

* The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.

* PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.

* For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

* The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	07/06/12

E B E R L I N E   A N A L Y T I C A L
SDG 8617

SDG 8617	R E P O R T G U I D E	Client Test America, Inc.
Contact Joseph Verville		Contract 44002624

D A T A   S H E E T

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

The following notes apply to this report:

* TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.

* The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

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

* ERRORs can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.

* A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.

* When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	07/06/12

REPORT GUIDES
Page 4
SUMMARY DATA SECTION
Page 24

| SDG 8617 | G U I D E ,   c o n t . | Client Test America, Inc. |
| Contact Joseph Verville | | Contract 44002624 |

D A T A   S H E E T

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

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

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

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

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

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

P   The RESULT is 'preliminary'.

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

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

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

The following values are underlined to indicate possible problems:

*   An MDA is underlined if it is bigger than its RDL.

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

	Lab id EAS
	Protocol TA
	Version Ver 1.0
	Form DVD-RG
	Version 3.06
	Report date 07/06/12

REPORT GUIDES
     Page 5
SUMMARY DATA SECTION
     Page 25

SDG 8617		Client Test America, Inc.
Contact Joseph Verville	**G U I D E , c o n t .**	Contract 44002624

D A T A   S H E E T

---

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

* A negative RESULT is underlined if it is less than the negative
  of its 2 sigma counting ERROR.

* When reporting a Method Blank, a RESULT is underlined if
  greater than its MDA. If the MDA is blank, the 2 sigma counting
  error is used in the comparison.

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	07/06/12

REPORT GUIDES
Page 6
SUMMARY DATA SECTION
Page 26

E B E R L I N E   A N A L Y T I C A L
SDG 8617

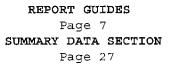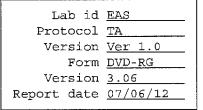|		
SDG <u>8617</u> Contact <u>Joseph Verville</u>	R E P O R T G U I D E	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

L A B   C O N T R O L   S A M P L E

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

The following notes apply to this report:

* All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.

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

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

* REC (Recovery) is RESULT divided by ADDED expressed as a percent.

* The first, computed limits for the recovery reflect:

    1. The error of RESULT, including that introduced by rounding the result prior to printing.

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

    2. The error of ADDED.

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

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

* The recovery is underlined if it is outside either of these ranges.

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

EBERLINE ANALYTICAL
SDG 8617

SDG <u>8617</u> Contact <u>Joseph Verville</u>	**REPORT GUIDE**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

DUPLICATE

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

The following notes apply to this report:

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

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

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

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

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

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

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

  This value reported for this limit is at most 999.

* The second limit for the RPD is the larger of:

  1. A fixed percentage specified in the protocol.

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

```
                                                                    1
          E B E R L I N E   A N A L Y T I C A L                     2
                      SDG 8617                                       3
  ┌─────────────────────────────────┐                  ┌──────────────────────────────┐
  │ SDG 8617                         │  G U I D E ,  c o n t .  │ Client Test America, Inc. │  4
  │ Contact Joseph Verville          │                  │ Contract 44002624            │  5
  └─────────────────────────────────┘                  └──────────────────────────────┘
```

D U P L I C A T E

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

* The RPD is underlined if it is greater than either limit.

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

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

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	07/06/12

REPORT GUIDES
Page 9
SUMMARY DATA SECTION
Page 29

E B E R L I N E   A N A L Y T I C A L
SDG 8617

SDG <u>8617</u> Contact <u>Joseph Verville</u>	**R E P O R T G U I D E**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

M A T R I X   S P I K E

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

The following notes apply to this report:

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

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

   2. The error of ADDED.

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

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

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

REPORT GUIDES
Page 10
SUMMARY DATA SECTION
Page 30

E B E R L I N E   A N A L Y T I C A L
SDG 8617

SDG <u>8617</u> Contact <u>Joseph Verville</u>	G U I D E , c o n t .	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

M A T R I X   S P I K E

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

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

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

REPORT GUIDES
Page 11
SUMMARY DATA SECTION
Page 31

E B E R L I N E   A N A L Y T I C A L
SDG 8617

SDG <u>8617</u> Contact <u>Joseph Verville</u>	R E P O R T G U I D E	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

M E T H O D   S U M M A R Y

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

The following notes apply to this report:

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

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

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

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

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

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

*   Non-U results for Method Blanks are underlined to indicate
    possible contamination of other samples in the preparation
    batch. The Method Blank Report has supporting data.

*   Lab Control Sample and Matrix Spike results are shown as: ok, No
    data, LOW or HIGH, with the last two underlined. 'No data'
    means no amount ADDED was specified. 'LOW' and 'HIGH'

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

REPORT GUIDES
        Page 12
SUMMARY DATA SECTION
        Page 32

EBERLINE ANALYTICAL
SDG 8617

| SDG 8617 | | Client Test America, Inc. |
| Contact Joseph Verville | GUIDE, cont. | Contract 44002624 |

METHOD SUMMARY

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

*   Duplicate sample results are shown as: ok, No data, or OUT, with
    the last two underlined. 'No data' means there was no original
    sample data found for this duplicate. 'OUT' corresponds to when
    the RPD is underlined on the Duplicate Report. See this report
    for supporting data.

*   If the MDA column is labeled 'MAX MDA', there was more than one
    result measured by the reported method and the MDA shown is the
    largest MDA. If not all these results have the same RDL, the
    MAX MDA reflects only those results with RDL equal to the
    smallest one.

    MDAs are underlined if greater than the printed RDL.

*   Aliquots are underlined if less than the nominal value specified
    for the method.

*   Prepareation factors are underlined if greater than the nominal
    value specified for the method.

*   Dilution factors are underlined if greater than the nominal
    value specified for the method.

*   Residues are underlined if outside the range specified for the
    method. Residues are not printed if yields are.

*   Yields, which may be gravimetric, radiometric or some type of
    recovery depending on the method, are underlined if outside the
    range specified for the method.

*   Efficiencies are underlined if outside the range specified for
    the method. Efficiencies are detector and geometry dependent so
    this test is only approximate.

*   Count times are underlined if less than the nominal value

| Lab id EAS |
| Protocol TA |
| Version Ver 1.0 |
| Form DVD-RG |
| Version 3.06 |
| Report date 07/06/12 |

REPORT GUIDES
    Page 13
SUMMARY DATA SECTION
    Page 33

E B E R L I N E   A N A L Y T I C A L
SDG 8617

G U I D E ,   c o n t .

Client Test America, Inc.
Contract 44002624

M E T H O D   S U M M A R Y

specified for the method.

* Resolutions (as FWHM; Full Width at Half Max) are underlined if
  greater than the method specified limit.

* Tracer drifts are underlined if their absolute values are
  greater than the method specified limit. Tracer drifts are
  not printed if percent moistures are.

* Days Held are underlined if greater than the holding time
  specified in the protocol.

* Analysis dates are underlined if before their planchet's
  preparation date or, if a limit is specified, too far after
  it.

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

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

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

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

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

REPORT GUIDES
Page 14
SUMMARY DATA SECTION
Page 34

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	07/06/12

E B E R L I N E   A N A L Y T I C A L
SDG 8617

SDG <u>8617</u> Contact <u>Joseph Verville</u>	**G U I D E , c o n t .**	Client <u>Test America, Inc.</u> Contract <u>44002624</u>

M E T H O D   S U M M A R Y

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

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

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

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

Lab id	<u>EAS</u>
Protocol	<u>TA</u>
Version	<u>Ver 1.0</u>
Form	<u>DVD-RG</u>
Version	<u>3.06</u>
Report date	<u>07/06/12</u>

REPORT GUIDES
Page 15
SUMMARY DATA SECTION
Page 35

TestAmerica

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

86/17   52-06-35

COC No.:	440-7159.1
Page:	Page 1 of 1
Job #:	440-14006-1

Lab PM: Wilson, Debby
E-Mail: debby.wilson@testamericainc.com

Sampler:
Phone:
Carrier Tracking No(s):

Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
Company: Eberline Services
Address: 2030 Wright Avenue,
City: Richmond
State, Zip: CA, 94804
Phone:
PO #:
Email:
WO #:
Project Name: Monthly Outfall 019 COMPOSITE
Project #: 44002624
SSOW#:
Site: Boeing SSFL

Due Date Requested: 6/21/2012
TAT Requested (days):

Analysis Requested

Preservation Codes:
A - HCL   M - Hexane
B - NaOH   N - None
C - Zn Acetate   O - AsNaO2
D - Nitric Acid   P - Na2O4S
E - NaHSO4   Q - Na2SO3
F - MeOH   R - Na2S2SO3
G - Amchlor   S - H2SO4
H - Ascorbic Acid   T - TSP Dodecahydrate
I - Ice   U - Acetone
J - DI Water   V - MCAA
K - EDTA   W - ph 4-5
L - EDA   Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	SUBCONTRACT/ Gross Alpha	SUBCONTRACT/ Gross Beta	SUBCONTRACT/ Radium Combined	SUBCONTRACT/ Strontium 90	SUBCONTRACT/ Tritium	SUBCONTRACT/ Uranium, Combined	SUBCONTRACT/ Gamma Spec K-40 CS-137	Total Number of Containers
Outfall 019 (440-14006-1)	6/7/12	10:15 Pacific		Water	X	X	X	X	X	X	X	
Trip Blank (440-14006-2)	6/8/12	13:00 Pacific		Water	X	X	X	X	X	X	X	2

Special Instructions/Note:

Possible Hazard Identification
☐ Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client   ☐ Disposal By Lab   ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Method of Shipment:

Empty Kit Relinquished by:

	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	6/8/12 17:00	TAI	Ted E.	6/8/12 17:00	
Relinquished by: FED EX			Alex Kleeen	6/9/12	EBRLine
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No   **Custody Seal No.:**

Cooler Temperature(s) °C and Other Remarks:

RICHMOND, CA LABORATORY
SAMPLE RECEIPT CHECKLIST

EBERLINE SERVICES

Client: _TEST AMERICA_   City _IRVINE_   State _CA_

Date/Time received _6/8/12 10:50_ CoC No. _440-7159.1_

Container I.D. No. _Ice Chest_ Requested TAT (Days) _STAND_ P.O. Received   Yes [ ]   No [ ]

INSPECTION

1. Custody seals on shipping container intact?   Yes [✓]   No [ ]   N/A [ ]
2. Custody seals on shipping container dated & signed?   Yes [✓]   No [ ]   N/A [ ]
3. Custody seals on sample containers intact?   Yes [ ]   No [ ]   N/A [✓]
4. Custody seals on sample containers dated & signed?   Yes [ ]   No [ ]   N/A [✓]
5. Packing material is: Wet [ ]   Dry [ ]   N/A ✓
6. Number of samples in shipping container: ___2___ Sample Matrix _WATER_
7. Number of containers per sample: _____   (Or see CoC __✓__)
8. Samples are in correct container   Yes [✓]   No [ ]
9. Paperwork agrees with samples?   Yes [✓]   No [ ]
10. Samples have: Tape [ ]   Hazard labels [ ]   Rad labels [ ]   Appropriate sample labels [✓]
11. Samples are: In good condition [✓]   Leaking [ ]   Broken Container [ ]   Missing [ ]
12. Samples are: Preserved [✓] Not preserved [ ] pH __2__ Preservative _____
13. Describe any anomalies:

_____
_____
_____

14. Was P.M. notified of any anomalies?   Yes [ ]   No [ ]   Date _____
15. Inspected by ___AK___   Date: _6/11/12_ Time: _10:25_

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
All samples <8v							

Ion Chamber Ser. No. _____   Calibration date _____

Alpha Meter Ser. No. _____   Calibration date _____

Beta/Gamma Meter Ser. No. _100482_   Calibration date _6 DEC 2011_

Form SCP-02, 07-30-07   *"over 55 years of quality nuclear services"*

CHAIN OF CUSTODY FORM

Test America version 7/19/2010

Client Name/Address:	Project:
MWH-Arcadia	Boeing-SSFL NPDES
618 Michillinda Ave, Suite 200	**Monthly Outfall 019**
Arcadia, CA 91007	**GRAB**

Test America Contact: Debby Wilson

Project Manager: Bronwyn Kelly

Sampler: *Rick Bangah*

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

ANALYSIS REQUIRED

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

Temp °F = **64°**
pH = **7.3**
DO = **7.23** mg/L

Time of = **10:30** _____ readings

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs (624)	Oil & Grease (1664-HEM)	Settleable Solids	Comments
Outfall 019	W	VOAs	5	6-6-2012 10:30	HCl	1A, 1B, 1C, 1D, 1E	X			
Outfall 019	W	1L Amber	2		HCl	2A, 2B		X		
Outfall 019	W	1L Poly	1	6-6-2012 10:30	None	3			X	
Trip Blanks	W	VOAs	3		HCl	4A, 4B, 4C	X			

These Samples are the Grab Portion of Outfall 019 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:	Turn-around time: (Check)
Ria Bang	6-6-12 12:20	*Matt Orunff*	6-6-12 12:20	24 Hour: ___ 72 Hour: ___ 10 Day: ___
				48 Hour: ___ 5 Day: ___ Normal: ___
Relinquished By	Date/Time:	Received By	Date/Time:	Sample Integrity: (Check)
Matt Orunff	6-6-12 17:15	*R___ W K___*	6-6-12 1:15	Intact: ___ On Ice: ✓
Relinquished By	Date/Time:	Received By	Date/Time:	Data Requirements: (Check)
				No Level IV: ___ All Level IV: ___ NPDES Level IV: X

7/13/2012

Test America *version 7/19/2010*

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia	Boeing-SSFL NPDES
618 Michillinda Ave, Suite 200	Monthly Outfall 019
Arcadia, CA 91007	COMPOSITE
	TIME WEIGHTED
Test America Contact: Debby Wilson	

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

Project Manager: Bronwyn Kelly
Sampler: Rick BANACT

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn	TCDD (and all congeners)	BOD$_5$ (20 degrees C)	Surfactants (MBAS)	Cl⁻, SO$_4$, NO$_3$+NO$_2$-N, Perchlorate	Nitrate-N, Nitrite-N	Turbidity, TDS, TSS	Ammonia-N (350.2)	Alpha BHC (608)	2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, PCP (SVOCs 625)	Comments
Outfall 019	W	1L Poly	1	6-7-2012 10:15	HNO$_3$	5A	X										
Outfall 019 Dup	W	1L Poly	1		HNO$_3$	5B	X										
Outfall 019	W	1L Amber	2		None	6A, 6B		X									
Outfall 019	W	1L Poly	1		None	7			X								
Outfall 019	W	500 mL Poly	2		None	8A, 8B				X							
Outfall 019	W	500 mL Poly	2		None	9A, 9B					X						
Outfall 019	W	500 mL Poly	1		None	10						X					
Outfall 019	W	500 mL Poly	2		None	11A, 11B							X				
Outfall 019	W	500 mL Poly	1		H$_2$SO$_4$	12								X			
Outfall 019	W	1L Amber	2	6-7-2012 10:15	None	13A, 13B									X		
Outfall 019	W	1L Amber	2		None	14A, 14B										X	

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 019 for this storm event. These must be added to the same work order for COC Page 1 of 3 for Outfall 019 for the same event.

Relinquished By	Date/Time: 6-7-2012 14:25	Received By	Date/Time: 6-7-12 14:25
Relinquished By	Date/Time: 6-7-12 17:40	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time: 6/7/12 17:40

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

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

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

CHAIN OF CUSTODY FORM

Test America Version 7/19/2010

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

Test America Contact: Debby Wilson

Project:
Boeing-SSFL NPDES
Monthly Outfall 019
COMPOSITE
TIME WEIGHTED

Project Manager: Bronwyn Kelly
Sampler: *Rick BANAGA*

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

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn	Total Organic Carbon	Gross Alpha(900.0), Gross Beta(900.0), Total Tritium (H-3)(906.0), Sr-90 (905.0), Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Cyanide	Comments
Outfall 019	W	1L Poly	1	6-7-2012 10:15	None	15	X					Filter w/in 24hrs of receipt at lab
Outfall 019	W	250 mL Glass	1	6-7-2012 10:15	HCl	16		X				
Outfall 019	W	2.5 Gal Cube	1	6-7-2012 10:15	None	17A			X			Unfiltered and unpreserved analysis
	W	500 mL Amber	1		None	17B						
Outfall 019	W	1 Gal Cube	1		None	18				X		Only test on 1st and 2nd rain events of the year
Outfall 019	W	500 mL Poly	1	6-7-2012 10:15	NaOH	19					X	

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 019 for this storm event.
These must be added to the same work order for COC Page 1 of 3 for Outfall 019 for the same event.

Relinquished By	Date/Time: 6-7-2012 14:25	Received By	Date/Time: 6-7-12 14:25
Relinquished By	Date/Time: 6-7-12 14:40	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time: 6/7/12 1740

Turn-around time: (Check) 24 Hour: __ 72 Hour: __ 10 Day: X 48 Hour: __ 5 Day: __ Normal: __
Sample Integrity: (Check) Intact: ✓ On Ice: ✓
Data Requirements: (Check) No Level IV: __ All Level IV: __ NPDES Level IV: X

6.8

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-13854-1

Login Number: 13854
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?	True	
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.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-13854-1

Login Number: 14006
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?	True	
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	

APPENDIX G

Section 21

Arroyo Simi-Frontier Park – April 2, 2012

MECX Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-7197-1

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:	440-7197-1
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	440-7197-1	N/A	Water	4/2/2012 12:40:00 PM	SM 9221E, SM 9221F

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. VARIOUS EPA METHODS—e. Coli and Fecal Coliform

Reviewed By: P. Meeks
Date Reviewed: April 17, 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 General Minerals (DVP-6, Rev. 0), Standard Method SM 9221E* and *SM 9221F,* and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The analytical holding time is listed as immediate. As the sample was prepared within six hours, no qualifications were required.

- Calibration: The control results were acceptable.

- Blanks: Not applicable to this method.

- Blank Spikes and Laboratory Control Samples: Not applicable to this method.

- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.

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

- 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:

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

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

Validated Sample Result Forms 440-7197-1

Analysis Method   SM 9221E

Sample Name	Arroyo Simi-FP		**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-7197-1		**Sample Date:**	4/2/2012 12:40:00 PM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Coliform, Fecal	STL00002	500			MPN/10			

Analysis Method   SM 9221F

Sample Name	Arroyo Simi-FP		**Matrix Type:**	Water			**Validation Level:**	IV
Lab Sample Name:	440-7197-1		**Sample Date:**	4/2/2012 12:40:00 PM				

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Escherichia coli	68586-22	500	2.0	2.0	MPN/10			

APPENDIX G

Section 22

Arroyo Simi-Frontier Park – April 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: 440-7197-1
Client Project/Site: Boeing SSFL outfalls

For:

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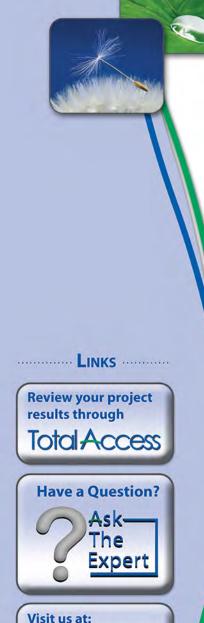Arcadia, California 91007

Attn: Bronwyn Kelly

Debby Wilson

_____

Authorized for release by:
4/16/2012 3:08:12 PM

Debby Wilson
Project Manager I
debby.wilson@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.

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.

Debby Wilson

Project Manager I

4/16/2012 3:08:12 PM

Table of Contents

TestAmerica Irvine
4/16/2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-7197-1	Arroyo Simi-FP	Water	04/02/12 12:40	04/02/12 16:10

Client Sample Results

Client Sample ID: Arroyo Simi-FP

Lab Sample ID: 440-7197-1

Date Collected: 04/02/12 12:40

Date Received: 04/02/12 16:10

Matrix: Water

Method: SM 9221E - Coliforms, Fecal (Multiple-Tube Fermentation)

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Fecal	**500**				MPN/100mL			04/02/12 17:17	1

Method: SM 9221F - E.Coli (Multiple-Tube Fermentation; EC-MUG)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Escherichia coli	**500**		2.0	2.0	MPN/100mL			04/02/12 17:17	1

TestAmerica Irvine
4/16/2012

Client Sample ID: Arroyo Simi-FP

Lab Sample ID: 440-7197-1

Date Collected: 04/02/12 12:40

Matrix: Water

Date Received: 04/02/12 16:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount		Final Amount		Batch Number		Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 9221E		1	100	mL	100	mL	17475			AK	TAL IRV
										(Start)	04/02/12 17:17		
										(End)	04/05/12 15:15		
Total/NA	Analysis	SM 9221F		1	100	mL	100	mL	17476			AK	TAL IRV
										(Start)	04/02/12 17:17		
										(End)	04/05/12 15:15		

Laboratory References:

EMSL = EMSL Analytical, Inc., 200 Rt 130 North, Cinnaminson, NJ 08077

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

Client: MWH Americas Inc
Project/Site: Boeing SSFL outfalls

TestAmerica Job ID: 440-7197-1

Biology

Analysis Batch: 17475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-7197-1	Arroyo Simi-FP	Total/NA	Water	SM 9221E	

Analysis Batch: 17476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-7197-1	Arroyo Simi-FP	Total/NA	Water	SM 9221F	

Definitions/Glossary

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

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's
current list of certified methods and analytes.

1
2
3
4
5
6
7
8
9
10
11

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675/ 786-0262

http://www.emsl.com   E-mail: MicrobiologyLab@emsl.com

Client: TestAmerica Irvine	**EMSL Order ID:** 371205181
17461 Derian Avenue Suite 100	**Date Received:** 4/4/2012
Irvine , CA 92614	**Date Analyzed:** 4/6/2012
Attn.	**Date Reported:** 4/6/2012
Project: Boeing SSFL Outfalls-44002624	**Date Amended:**

Real-Time PCR Analysis for Human *Bacteroides*

(Based on a published method SAM: 348 - 357, 2010), EMSL Test Code: M199, Revision No. 3, 04/18/2011)

Lab Sample Number	Client Sample ID	Location	Amount Received	Amount Sampled	CEs /100 mL
5181-1	440-7197-1	Arroyo Simi-FP	Water 250 ml	Water 250 ml	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation of the data contained in this report is the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. The above test report relates only to the items tested. EMSL bears no responsibility for sample collection activities or analytical method limitations.

Note: The PCR primer is HF183 and the qPCR probe and primer was evaluated in 2010 by EPA scientists. The real-time PCR based on HF183 detects human specific total bacteroides predominantly with minor cross-detections on chicken and dog fecal materials. CEs: Cell Equivalents, measured by PCR using genomic DNA standards.

USEPA License No: 0240-02

Quanyi "Charlie" Li, Ph.D.

Director, PCR and DNA Analysis Lab

Page 1 of 1

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007	Project: Boeing-SSFL NPDES Arroyo Simi - Frontier Park

Test America Contact: Debby Wilson

Project Manager: Bronwyn Kelly

Sampler: Rick BANNIA

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

ANALYSIS REQUIRED

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

Temp °F =

pH =

Time of readings =

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Fecal coliform (SM9221)	E. coli (SM9221)	MST-Bateroidales, Human	Comments
Arroyo Simi-FP	W	125 mL Poly	1	4-2-2012 12:40	Na2S2O3	1	X			
Arroyo Simi-FP	W	125 mL Poly	1		Na2S2O3	2		X		
Arroyo Simi-FP	W	125 mL Poly	1	4-2-2012 12:40	None	3			X	Deliver to lab ASAP

Relinquished By	Date/Time: 4-2-2012 13:30	Received By	Date/Time: 4-2-12 13:30
Relinquished By	Date/Time: 4-2-12 16:10	Received By	Date/Time: 4/2/12 16:10
Relinquished By	Date/Time:	Received By	Date/Time:

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

Sample Integrity: (Check)
Intact ✓   On Ice: ✓   5.0°

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

Client: MWH Americas Inc

Job Number: 440-7197-1

Login Number: 7197
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	True	
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	
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	

TestAmerica Irvine

4/16/2012

APPENDIX G

Section 23

Arroyo Simi-Frontier Park – April 6, 2012

MECX Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-7737-1

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:	440-7737-1
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	440-7737-1	N/A	Water	4/6/2012 11:40:00 AM	SM 9221F, SM 9221E

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. As the samples were couriered to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A.   VARIOUS EPA METHODS— e. Coli and Fecal Coliform

Reviewed By: P. Meeks
Date Reviewed: May 14, 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 General Minerals (DVP-6, Rev. 0), Standard Method SM 9221E* and *SM 9221F,* and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The analytical holding time is listed as immediate. As the sample was prepared within six hours, no qualifications were required.

- Calibration: The control results were acceptable.

- Blanks: Not applicable to this method.

- Blank Spikes and Laboratory Control Samples: Not applicable to this method.

- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.

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

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

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

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

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

Validated Sample Result Forms 440-7737-1

Analysis Method   SM 9221E

| **Sample Name** | Arroyo Simi-FP | | **Matrix Type:** | Water | | **Validation Level:** | IV |

Lab Sample Name: 440-7737-1   **Sample Date:** 4/6/2012 11:40:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Coliform, Fecal	STL00002	250			MPN/10			

Analysis Method   SM 9221F

| **Sample Name** | Arroyo Simi-FP | | **Matrix Type:** | Water | | **Validation Level:** | IV |

Lab Sample Name: 440-7737-1   **Sample Date:** 4/6/2012 11:40:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Escherichia coli	68586-22	250	2.0	2.0	MPN/10			

APPENDIX G

Section 24

Arroyo Simi-Frontier Park – April 6, 2012

Test America Analytical Laboratory Report

ANALYTICAL REPORT

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

TestAmerica Job ID: 440-7737-1
Client Project/Site: Boeing SSFL outfalls

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

Attn: Bronwyn Kelly

Debby Wilson

_____

Authorized for release by:
4/13/2012 5:02:20 PM

Debby Wilson
Project Manager I
debby.wilson@testamericainc.com

LINKS

Review your project results through
Total Access

Have a Question?
Ask The Expert

Visit us at:
www.testamericainc.com

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.

Debby Wilson

Debby Wilson
Project Manager I
4/13/2012 5:02:20 PM

Table of Contents

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-7737-1	Arroyo Simi-FP	Water	04/06/12 11:40	04/06/12 14:50

Client Sample Results

Client: MWH Americas Inc

Project/Site: Boeing SSFL outfalls

TestAmerica Job ID: 440-7737-1

Client Sample ID: Arroyo Simi-FP

Date Collected: 04/06/12 11:40

Date Received: 04/06/12 14:50

Lab Sample ID: 440-7737-1

Matrix: Water

Method: SM 9221E - Coliforms, Fecal (Multiple-Tube Fermentation)

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Coliform, Fecal	**250**				MPN/100mL			04/06/12 15:54	1

Method: SM 9221F - E.Coli (Multiple-Tube Fermentation; EC-MUG)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Escherichia coli	**250**		2.0	2.0	MPN/100mL			04/06/12 15:54	1

TestAmerica Irvine

4/13/2012

Client: MWH Americas Inc

Project/Site: Boeing SSFL outfalls

TestAmerica Job ID: 440-7737-1

Client Sample ID: Arroyo Simi-FP

Lab Sample ID: 440-7737-1

Date Collected: 04/06/12 11:40

Matrix: Water

Date Received: 04/06/12 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount		Final Amount		Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 9221E		1	100	mL	100	mL	18297		AK	TAL IRV
									(Start)	04/06/12 15:54		
									(End)	04/09/12 12:35		
Total/NA	Analysis	SM 9221F		1	100	mL	100	mL	18298		AK	TAL IRV
									(Start)	04/06/12 15:54		
									(End)	04/09/12 12:35		

Laboratory References:

EMSL = EMSL Analytical, Inc., 200 Rt 130 North, Cinnaminson, NJ 08077

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

Biology

Analysis Batch: 18297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-7737-1	Arroyo Simi-FP	Total/NA	Water	SM 9221E	

Analysis Batch: 18298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-7737-1	Arroyo Simi-FP	Total/NA	Water	SM 9221F	

1
2
3
4
5
6
7
8
9
10
11

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)

1 2 3 4 5 6 7 8 9 10 11

Certification Summary

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675/ 786-0262

http://www.emsl.com   E-mail: MicrobiologyLab@emsl.com

Client: TestAmerica Irvine	**EMSL Order ID:** 371205533
17461 Derian Avenue Suite 100	**Date Received:** 4/10/2012
Irvine , CA 92614	**Date Analyzed:** 4/11/2012
Attn.	**Date Reported:** 4/13/2012
Project: 44002624/Boeing SSFL Outfalls	**Date Amended:**

Real-Time PCR Analysis for Human *Bacteroides*

(Based on a published method SAM: 348 - 357, 2010), EMSL Test Code: M199, Revision No. 3, 04/18/2011)

Lab Sample Number	Client Sample ID	Location	Amount Received	Amount Sampled	CEs /100 mL
5533-1	Arroyo Simi-FP (440-7737-1)		Water 250 ml	Water 250 ml	None Detected

EMSL maintains liability limited to cost of analysis. Interpretation of the data contained in this report is the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. The above test report relates only to the items tested. EMSL bears no responsibility for sample collection activities or analytical method limitations.

Note: The PCR primer is HF183 and the qPCR probe and primer was evaluated in 2010 by EPA scientists. The real-time PCR based on HF183 detects human specific total bacteroides predominantly with minor cross-detections on chicken and dog fecal materials. CEs: Cell Equivalents, measured by PCR using genomic DNA standards.

USEPA License No: 0240-02

Quanyi "Charlie" Li, Ph.D.

Director, PCR and DNA Analysis Lab

Page 1 of 1

Test America version 3/18/2011

CHAIN OF CUSTODY FORM

44U-7737

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

Test America Contact: Debby Wilson | Project:
Boeing-SSFL NPDES
Arroyo Simi - Frontier Park | | | | | | |

| Project Manager: Bronwyn Kelly
Sampler: *Rick Banaga* | Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515 |

ANALYSIS REQUIRED

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

Temp °F =

pH =

Time of readings =

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Fecal coliform (SM9221)	E. coli (SM9221)	MST-Bateriodales, Human	Comments
Arroyo Simi-FP	W	125 mL Poly	1	4-6-2012 11:40	Na2S2O3	1	X			
Arroyo Simi-FP	W	125 mL Poly	1	4-6-2012 11:40	Na2S2O3	2		X		
Arroyo Simi-FP	W	125 mL Poly	1	4-6-2012 11:40	None	3			X	Deliver to lab ASAP

Relinquished By *Rick Banaga*	Date/Time: 4-6-2012 11:38	Received By *Erwin Fajardo*	Date/Time: 4-6-12 12:35
Relinquished By *Erwin Fajardo*	Date/Time: 4/6/12 14:50	Received By *Stephanie*	Date/Time: 4/6/12 1450
Relinquished By	Date/Time:	Received By	Date/Time:

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

Sample Integrity: (Check) 2.3
Intact: ✓   On Ice: ✓

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

4/13/2012

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-7737-1

Login Number: 7737
List Number: 1
Creator: Avila, Stephanie

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
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	
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.	True	
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.	True	

APPENDIX G

Section 25

Arroyo Simi-Frontier Park – April 11, 2012

MECX Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: 440-8284-1

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:	440-8284-1
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	440-8284-1	N/A	Water	4/11/2012 12:15:00 PM	SM 2340B, 200.7

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. As the samples were couriered to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A.   EPA METHOD 200.7—Metals and Hardness

Reviewed By: P. Meeks
Date Reviewed: May 14, 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 and SM2340B*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: The analytical holding times, six months for ICP metals, was met.

- Calibration: Calibration criteria were met. All initial and continuing calibration recoveries were within 90-110%. CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no applicable detects.

- Interference Check Samples: Recoveries were within 80-120%.

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

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

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

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

- Sample Result Verification: The hardness calculation was 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:

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

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

Validated Sample Result Forms 440-8284-1

Analysis Method   200.7 Rev 4.4

Sample Name	Arroyo Simi-FP	**Matrix Type:**	Water			**Validation Level:**	IV	
Lab Sample Name:	440-8284-1	**Sample Date:**	4/11/2012 12:15:00 PM					

Analyte	**CAS No**	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Notes**
Calcium	7440-70-2	55	0.10	0.050	mg/L	MB		
Magnesium	7439-95-4	16	0.020	0.012	mg/L			

Analysis Method   SM 2340B

Sample Name	Arroyo Simi-FP	**Matrix Type:**	Water			**Validation Level:**	IV	
Lab Sample Name:	440-8284-1	**Sample Date:**	4/11/2012 12:15:00 PM					

Analyte	**CAS No**	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Notes**
Hardness, as CaCO3	STL00009	200	0.33	0.17	mg/L			

APPENDIX G

Section 26

Arroyo Simi-Frontier Park – April 11, 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: 440-8284-1
Client Project/Site: Boeing SSFL NPDES
Revision: 1

For:

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

Attn: Bronwyn Kelly

Debby Wilson
_____

Authorized for release by:
5/1/2012 11:00:20 AM

Debby Wilson
Project Manager I
debby.wilson@testamericainc.com

LINKS

Review your project results through
Total Access

Have a Question?
Ask The Expert

Visit us at:
www.testamericainc.com

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.

Debby Wilson

Debby Wilson
Project Manager I
5/1/2012 11:00:20 AM

Table of Contents

1
2
3
4
5
6
7
8
9
10
11
12

TestAmerica Irvine
5/1/2012

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-8284-1	Arroyo Simi-FP	Water	04/11/12 12:15	04/11/12 18:30

1 2 3 4 5 6 7 8 9 10 11 12

Job ID: 440-8284-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-8284-1

Comments
Revised report to remove Calcium and Magnesium results. Results are for hardness calculation only.

Receipt
The sample was received on 4/11/2012 6:30 PM; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.50 C.

GC/MS Semi VOA
Method(s) 525.2: Internal standard responses were outside of acceptance limits for the following sample(s): Arroyo Simi-FP (440-8284-1). The sample(s) shows evidence of matrix interference.

Method(s) 525.2: Surrogate recovery for the following sample(s) was outside the upper control limit: Arroyo Simi-FP (440-8284-1). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

GC Semi VOA
Method(s) 608: The continuing calibration verification (CCV) for 1260 associated with batch 20064 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 608: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 19875. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 608: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 19875. 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.

Organic Prep
No analytical or quality issues were noted.

TestAmerica Irvine
5/1/2012

Client Sample ID: Arroyo Simi-FP
Date Collected: 04/11/12 12:15
Date Received: 04/11/12 18:30

Lab Sample ID: 440-8284-1
Matrix: Water

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		04/12/12 14:31	04/19/12 15:54	1
Diazinon	ND		0.25	0.040	ug/L		04/12/12 14:31	04/19/12 15:54	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,3-Dimethyl-2-nitrobenzene	112		70 - 130				04/12/12 14:31	04/19/12 15:54	1
Perylene-d12	79		70 - 130				04/12/12 14:31	04/19/12 15:54	1
Triphenylphosphate	327	AY	70 - 130				04/12/12 14:31	04/19/12 15:54	1

Method: 608 PCB LL - Polychlorinated Biphenyls (PCBs) Low level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1
Aroclor 1221	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1
Aroclor 1232	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1
Aroclor 1242	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1
Aroclor 1248	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1
Aroclor 1254	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1
Aroclor 1260	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 23:10	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	85		45 - 120				04/15/12 14:34	04/16/12 23:10	1

Method: 608 Pesticides - Organochlorine Pesticides Low level

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.095	0.0076	ug/L		04/15/12 14:34	04/16/12 14:26	1
Dieldrin	ND		0.0048	0.0019	ug/L		04/15/12 14:34	04/16/12 14:26	1
Toxaphene	ND		0.48	0.24	ug/L		04/15/12 14:34	04/16/12 14:26	1
4,4'-DDD	ND		0.0048	0.0038	ug/L		04/15/12 14:34	04/16/12 14:26	1
4,4'-DDE	ND		0.0048	0.0029	ug/L		04/15/12 14:34	04/16/12 14:26	1
4,4'-DDT	ND		0.0095	0.0038	ug/L		04/15/12 14:34	04/16/12 14:26	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	54		35 - 115				04/15/12 14:34	04/16/12 14:26	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness, as CaCO3	**200**		0.33	0.17	mg/L			04/18/12 13:18	1

Client: MWH Americas Inc

Project/Site: Boeing SSFL NPDES

TestAmerica Job ID: 440-8284-1

Client Sample ID: Arroyo Simi-FP

Date Collected: 04/11/12 12:15

Date Received: 04/11/12 18:30

Lab Sample ID: 440-8284-1

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	525.2			1000	mL	1	mL	19632	04/12/12 14:31	JM	TAL IRV
Total/NA	Analysis	525.2		1					20682	04/19/12 15:54	JM	TAL IRV
Total/NA	Prep	608			1050	mL	2	mL	19875	04/15/12 14:34	AB	TAL IRV
Total/NA	Analysis	608 Pesticides		1					19946	04/16/12 14:26	DD	TAL IRV
Total/NA	Analysis	608 PCB LL		1					20064	04/16/12 23:10	CN	TAL IRV
Total/NA	Analysis	SM 2340B		1					20492	04/18/12 13:18	FR	TAL IRV

Laboratory References:

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

TestAmerica Irvine
5/1/2012

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-19632/1-A
Matrix: Water
Analysis Batch: 20682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19632

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorpyrifos	ND		1.0	0.080	ug/L		04/12/12 14:31	04/19/12 14:04	1
Diazinon	ND		0.25	0.040	ug/L		04/12/12 14:31	04/19/12 14:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,3-Dimethyl-2-nitrobenzene	102		70 - 130				04/12/12 14:31	04/19/12 14:04	1
Perylene-d12	96		70 - 130				04/12/12 14:31	04/19/12 14:04	1
Triphenylphosphate	112		70 - 130				04/12/12 14:31	04/19/12 14:04	1

Lab Sample ID: LCS 440-19632/2-A
Matrix: Water
Analysis Batch: 20682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19632

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorpyrifos	5.00	5.62		ug/L		112	70 - 130
Diazinon	5.00	5.01		ug/L		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,3-Dimethyl-2-nitrobenzene	107		70 - 130
Perylene-d12	98		70 - 130
Triphenylphosphate	116		70 - 130

Lab Sample ID: LCSD 440-19632/3-A
Matrix: Water
Analysis Batch: 20682

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19632

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorpyrifos	5.00	5.77		ug/L		115	70 - 130	3	30
Diazinon	5.00	5.07		ug/L		101	70 - 130	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,3-Dimethyl-2-nitrobenzene	108		70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	122		70 - 130

Method: 608 PCB LL - Polychlorinated Biphenyls (PCBs) Low level

Lab Sample ID: MB 440-19875/1-A
Matrix: Water
Analysis Batch: 20064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19875

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1
Aroclor 1221	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1
Aroclor 1232	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1
Aroclor 1242	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1
Aroclor 1248	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1
Aroclor 1254	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1
Aroclor 1260	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 21:52	1

Method: 608 PCB LL - Polychlorinated Biphenyls (PCBs) Low level (Continued)

Lab Sample ID: MB 440-19875/1-A
Matrix: Water
Analysis Batch: 20064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19875

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	48		45 - 120	04/15/12 14:34	04/16/12 21:52	1

Lab Sample ID: LCS 440-19875/4-A
Matrix: Water
Analysis Batch: 20064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19875

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	4.00	3.75		ug/L		94	50 - 115
Aroclor 1260	4.00	3.70		ug/L		93	60 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	94		45 - 120

Lab Sample ID: LCSD 440-19875/5-A
Matrix: Water
Analysis Batch: 20064

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19875

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016	4.00	3.25		ug/L		81	50 - 115	14	30
Aroclor 1260	4.00	3.60		ug/L		90	60 - 120	3	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	94		45 - 120

Method: 608 Pesticides - Organochlorine Pesticides Low level

Lab Sample ID: MB 440-19875/1-A
Matrix: Water
Analysis Batch: 19946

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19875

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.10	0.0080	ug/L		04/15/12 14:34	04/16/12 12:21	1
Dieldrin	ND		0.0050	0.0020	ug/L		04/15/12 14:34	04/16/12 12:21	1
Toxaphene	ND		0.50	0.25	ug/L		04/15/12 14:34	04/16/12 12:21	1
4,4'-DDD	ND		0.0050	0.0040	ug/L		04/15/12 14:34	04/16/12 12:21	1
4,4'-DDE	ND		0.0050	0.0030	ug/L		04/15/12 14:34	04/16/12 12:21	1
4,4'-DDT	ND		0.010	0.0040	ug/L		04/15/12 14:34	04/16/12 12:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		35 - 115	04/15/12 14:34	04/16/12 12:21	1

Lab Sample ID: LCS 440-19875/2-A
Matrix: Water
Analysis Batch: 19946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19875

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dieldrin	0.500	0.497		ug/L		99	55 - 115
4,4'-DDD	0.500	0.538		ug/L		108	55 - 120

Client: MWH Americas Inc
Project/Site: Boeing SSFL NPDES

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

Lab Sample ID: LCS 440-19875/2-A
Matrix: Water
Analysis Batch: 19946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19875

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4,4'-DDE			0.500	0.508		ug/L		102	50 - 120		
4,4'-DDT			0.500	0.549		ug/L		110	55 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	80		35 - 115

Lab Sample ID: LCSD 440-19875/3-A
Matrix: Water
Analysis Batch: 19946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19875

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dieldrin			0.500	0.470		ug/L		94	55 - 115	5.63	30
4,4'-DDD			0.500	0.508		ug/L		102	55 - 120	5.62	30
4,4'-DDE			0.500	0.481		ug/L		96	50 - 120	5.46	30
4,4'-DDT			0.500	0.520		ug/L		104	55 - 120	5.28	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	76		35 - 115

TestAmerica Irvine
5/1/2012

GC/MS Semi VOA

Prep Batch: 19632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8284-1	Arroyo Simi-FP	Total/NA	Water	525.2	
LCS 440-19632/2-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 440-19632/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MB 440-19632/1-A	Method Blank	Total/NA	Water	525.2	

Analysis Batch: 20682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8284-1	Arroyo Simi-FP	Total/NA	Water	525.2	19632
LCS 440-19632/2-A	Lab Control Sample	Total/NA	Water	525.2	19632
LCSD 440-19632/3-A	Lab Control Sample Dup	Total/NA	Water	525.2	19632
MB 440-19632/1-A	Method Blank	Total/NA	Water	525.2	19632

GC Semi VOA

Prep Batch: 19875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8284-1	Arroyo Simi-FP	Total/NA	Water	608	
LCS 440-19875/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 440-19875/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 440-19875/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 440-19875/5-A	Lab Control Sample Dup	Total/NA	Water	608	
MB 440-19875/1-A	Method Blank	Total/NA	Water	608	

Analysis Batch: 19946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8284-1	Arroyo Simi-FP	Total/NA	Water	608 Pesticides	19875
LCS 440-19875/2-A	Lab Control Sample	Total/NA	Water	608 Pesticides	19875
LCSD 440-19875/3-A	Lab Control Sample Dup	Total/NA	Water	608 Pesticides	19875
MB 440-19875/1-A	Method Blank	Total/NA	Water	608 Pesticides	19875

Analysis Batch: 20064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8284-1	Arroyo Simi-FP	Total/NA	Water	608 PCB LL	19875
LCS 440-19875/4-A	Lab Control Sample	Total/NA	Water	608 PCB LL	19875
LCSD 440-19875/5-A	Lab Control Sample Dup	Total/NA	Water	608 PCB LL	19875
MB 440-19875/1-A	Method Blank	Total/NA	Water	608 PCB LL	19875

Metals

Analysis Batch: 20492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8284-1	Arroyo Simi-FP	Total/NA	Water	SM 2340B	

Definitions/Glossary

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
AY	Matrix Interference suspected

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

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's
current list of certified methods and analytes.

1

2

3

4

5

6

7

8

9

10

11

12

440-8284

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

Test America Contact: Debby Wilson
Project Manager: Bronwyn Kelly
Sampler: Rick Barber

Project:
Boeing-SSFL NPDES
Quarterly Arroyo Simi-Frontier
Park

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

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Hardness as CaCO₃	PCBs (608)	Chlorpyrifos, Diazinon (525.2)	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT	Comments
Arroyo Simi-FP	W	1L Poly	1	4-11-2012 12:15	HNO₃	1	X				
Arroyo Simi-FP	W	1L Amber	2		None	2A, 2B		X			
Arroyo Simi-FP	W	1L Amber	2		HCl	3A, 3B			X		
Arroyo Simi-FP	W	1L Amber	2	4-11-2012 12:15	None	4A, 4B				X	Extract within 36-Hours of sampling

Field readings:
Temp = 50
pH = 7.6
Water Velocity (Ft/second) = 1 ft /60 sec
Time of readings = 12:15

Relinquished By [signature] Date/Time: 4-11-2012
Received By [signature] Date/Time: 4/11/12 15:30

Relinquished By [signature] Date/Time: 4/11/12 18:30
Received By [signature] Date/Time: 4/11/12 18:30

Relinquished By   Date/Time:
Received By   Date/Time:

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

Sample Integrity: (check)
Intact ___ ✓   On Ice: ___ ✓ 2.9

Data Requirements: (check)
No Level IV ___   All Level IV ___ X
NPDES Level IV ___

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 440-8284-1

Login Number: 8284

List Source: TestAmerica Irvine

List Number: 1

Creator: Kim, Will

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.	True	
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	