APPENDIX G

THIRD QUARTER 2011 ANALYTICAL LABORATORY REPORTS, CHAIN-OF-CUSTODY, AND VALIDATION REPORTS

APPENDIX G

TABLE OF CONTENTS

Section No.

APPENDIX G

Section 1

Outfall 002 – July 20 & 21, 2011

MEC^X Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUG1929

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:	IUG1929
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	2
No. of Reanalyses/Dilutions:	1
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 002 (Grab)	IUG1929-01	N/A	Water	7/20/2011 9:00:00 AM	120.1
Outfall 002 (Comp)	IUG1929-03	N/A	Water	7/21/2011 12:57:00 AM	180.1, 245.1, 245.1 (Diss), 314.0, 1613B, 900.0, 901.1, 903.1, 904, 905, 906, ASTM D5174
Outfall 002 (Comp)	IUG1929-03RE	N/A	Water	7/21/2011 12:57:00 AM	1613B

II. Sample Management

No anomalies were observed regarding sample management. The samples receipt temperature was not noted by Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine and Eberline, no custody seals were required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin
Date Reviewed: August 26, 2011

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

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

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

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

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

- Calibration: Calibration criteria were met.

    - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤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.

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

- Blanks: The method blank had detects between the EDL and the RL for target compounds 1,2,3,4,6,7,8-HpCDD, total HpCDD, OCDD, OCDF, all HxCDF isomers and total HxCDF, and 1,2,3,4,6,7,8-HpCDF and total HpCDF. Most method blank results were reported as EMPCs; however, due to the extent of the contamination, the reviewer considered it appropriate to utilize all method blank results to qualify sample results. All

associated sample totals were comprised of the same peaks as those in the method blank totals; therefore, all sample results for the blank contaminants below the reporting limit were qualified as nondetected, "U," at the level of contamination.

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

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

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

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

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

- Compound Identification: Compound identification was verified. A confirmation analysis was performed for the result for 2,3,7,8-TCDF, an EMPC in the original analysis. The result was not confirmed; therefore, the original analysis was rejected, "R," in favor of the confirmation result, and the result and EDL for total TCDF were adjusted accordingly. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.

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

B. EPA METHODS 245.1—Mercury

Reviewed By: P. Meeks
Date Reviewed: August 25, 2011

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

- Holding Times: The analytical holding time, 28 days for mercury, was met.

- Tuning: Not applicable to this analysis.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no applicable detects.

- Interference Check Samples: Not applicable to this analysis.

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

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

- Internal Standards Performance: Not applicable to these analyses.

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

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

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

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

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: August 25, 2011

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. The remaining aliquots were prepared beyond the five-day analytical holding time for unpreserved samples; however, as the sample aliquots were preserved upon receipt at the laboratory, no qualifications were required.

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

  The gross alpha detector efficiency was less than 20%; therefore, nondetected gross alpha in the sample was qualified as estimated, "UJ." The remaining detector efficiencies were ≥20%. The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- Blanks: There were no analytes detected in the method blanks.

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

- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG for all analytes. The RPDs were within the laboratory-established control limits.

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

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

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

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

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: August 25, 2011

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

- Holding Times: Analytical holding times were met.

- Calibration: Calibration criteria were met. Initial calibration r^2 values were $\geq$0.995. All initial and continuing calibration recoveries were within 90-110%. Perchlorate IPC and IPC-MA recoveries were within the method-established control limits.

- Blanks: Method blanks and CCBs had no detects.

- Blank Spikes and Laboratory Control Samples: The recoveries were within method or laboratory-established QC limits.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG for turbidity. The RPD was within the laboratory-established control limit.

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

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

  Due to initial calibration weighting, the reviewer was not able to exactly calculate the 4 ppb perchlorate standard.

- 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 IUG1929

Analysis Method 900

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	0.285	3	1.2	pCi/L	U	UJ	C
Gross Beta	12587472	4.29	4	1.47	pCi/L			

Analysis Method 901.1

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	2.25	pCi/L	U	U	
Potassium-40	13966002	ND	25	72.1	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	-0.06	1	0.48	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	-0.072	1	0.476	pCi/L	U	U	

Analysis Method 905

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.296	2	0.844	pCi/L	U	U	

Analysis Method 906

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	61.8	500	159	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	0.356	1	0.023	pCi/L	Jb	J	DNQ

Analysis Method EPA 120.1

Sample Name Outfall 002 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1929-01 **Sample Date:** 7/20/2011 9:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	630	1.0	1.0	umhos/c			

Analysis Method EPA 180.1

Sample Name Outfall 002 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	0.84	1.0	0.040	NTU	Ja	J	DNQ

Analysis Method EPA 245.1

Sample Name Outfall 002 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

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

Analysis Method EPA 245.1-Diss

Sample Name Outfall 002 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

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

Analysis Method EPA 314.0

Sample Name Outfall 002 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	ND	4.0	0.95	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name Outfall 002 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1929-03 **Sample Date:** 7/21/2011 12:57:00 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	5e-005	6.5e-007	ug/L	J, Q, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	5e-005	4.5e-007	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	1.2e-006	5e-005	5.5e-007	ug/L	J	J	DNQ
1,2,3,4,7,8-HxCDD	39227-28-6	ND	5e-005	3.9e-007	ug/L	J, Q	UJ	*III
1,2,3,4,7,8-HxCDF	70648-26-9	ND	5e-005	3.3e-007	ug/L	J, Q, Ba	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	5e-005	3.4e-007	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDF	57117-44-9	ND	5e-005	3.2e-007	ug/L	J, Q, Ba	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	5e-005	3.3e-007	ug/L	J, Q	UJ	*III
1,2,3,7,8,9-HxCDF	72918-21-9	1.1e-006	5e-005	3.6e-007	ug/L	J	J	DNQ
1,2,3,7,8-PeCDD	40321-76-4	ND	5e-005	9.5e-007	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	2e-006	5e-005	5.9e-007	ug/L	J	J	DNQ
2,3,4,6,7,8-HxCDF	60851-34-5	ND	5e-005	3.1e-007	ug/L	J, Ba	U	B
2,3,4,7,8-PeCDF	57117-31-4	ND	5e-005	7.9e-007	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	1e-005	5.2e-007	ug/L		U	
2,3,7,8-TCDF	51207-31-9	2.4e-006	1e-005	8.3e-007	ug/L	J, Q	R	D
2,3,7,8-TCDF	51207-31-9	ND	1e-005	1.6e-006	ug/L		U	
OCDD	3268-87-9	ND	0.0001	5e-007	ug/L	J, Ba	U	B
OCDF	39001-02-0	ND	0.0001	9.2e-007	ug/L	J, Q, Ba	U	B
Total HpCDD	37871-00-4	ND	5e-005	6.5e-007	ug/L	J, Q, Ba	U	B
Total HpCDF	38998-75-3	ND	5e-005	5e-007	ug/L	J, Q, Ba	U	B
Total HxCDD	34465-46-8	6.8e-006	5e-005	3.5e-007	ug/L	J, Q	J	DNQ, *III
Total HxCDF	55684-94-1	ND	5e-005	3.3e-007	ug/L	J, Q, Ba	U	B
Total PeCDD	36088-22-9	ND	5e-005	9.5e-007	ug/L		U	
Total PeCDF	30402-15-4	2e-006	5e-005	6e-007	ug/L	J	J	DNQ
Total TCDD	41903-57-5	2.8e-006	1e-005	5.2e-007	ug/L	J	J	DNQ
Total TCDF	55722-27-5	ND	1e-005	0.0000016	ug/L	J, Q	U	$

APPENDIX G

Section 2

Outfall 002 – July 20 & 22, 2011

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Quarterly Outfall 002-
Quarterly Outfall 002

Sampled: 07/20/11-07/22/11
Received: 07/20/11
Issued: 08/18/11 17:00

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

SAMPLE CROSS REFERENCE

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals
Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

The recovery for the internal standard 13C-1,2,3,4,7,8-HxCDD in the associated method blank is below the method recommended goal. Data quality is not considered affected if the internal standard signal to noise ratio is greater than 10:1 which is achieved for this internal standard in the MB. The detection limits are below the lower calibration limit and there is no adverse impact on data quality.

LABORATORY ID	CLIENT ID	MATRIX
IUG1929-01	Outfall 002 (Grab)	Water
IUG1929-02	Trip Blanks	Water
IUG1929-03	Outfall 002 (Comp)	Water
IUG1929-04	Trip Blank	Water

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

Reviewed By:

Debby Wilson

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-01 (Outfall 002 (Grab) - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/l									
Benzene	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Carbon tetrachloride	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Chloroform	EPA 624	11G2803	0.33	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethane	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
1,2-Dichloroethane	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethene	EPA 624	11G2803	0.42	0.50	ND	1	NA	07/24/11	
Ethylbenzene	EPA 624	11G2803	0.25	0.50	ND	1	NA	07/24/11	
Tetrachloroethene	EPA 624	11G2803	0.32	0.50	ND	1	NA	07/24/11	
Toluene	EPA 624	11G2803	0.36	0.50	ND	1	NA	07/24/11	
1,1,1-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
1,1,2-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
Trichloroethene	EPA 624	11G2803	0.26	0.50	ND	1	NA	07/24/11	
Trichlorofluoromethane	EPA 624	11G2803	0.34	0.50	ND	1	NA	07/24/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11G2803	0.50	5.0	ND	1	NA	07/24/11	
Vinyl chloride	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
Xylenes, Total	EPA 624	11G2803	0.90	1.5	ND	1	NA	07/24/11	
Surrogate: 4-Bromofluorobenzene (80-120%)					*92 %*				
Surrogate: Dibromofluoromethane (80-120%)					*100 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				
Sample ID: IUG1929-02 (Trip Blanks - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/l									
Benzene	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Carbon tetrachloride	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Chloroform	EPA 624	11G2803	0.33	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethane	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
1,2-Dichloroethane	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethene	EPA 624	11G2803	0.42	0.50	ND	1	NA	07/24/11	
Ethylbenzene	EPA 624	11G2803	0.25	0.50	ND	1	NA	07/24/11	
Tetrachloroethene	EPA 624	11G2803	0.32	0.50	ND	1	NA	07/24/11	
Toluene	EPA 624	11G2803	0.36	0.50	ND	1	NA	07/24/11	
1,1,1-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
1,1,2-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
Trichloroethene	EPA 624	11G2803	0.26	0.50	ND	1	NA	07/24/11	
Trichlorofluoromethane	EPA 624	11G2803	0.34	0.50	ND	1	NA	07/24/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11G2803	0.50	5.0	ND	1	NA	07/24/11	
Vinyl chloride	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
Xylenes, Total	EPA 624	11G2803	0.90	1.5	ND	1	NA	07/24/11	
Surrogate: 4-Bromofluorobenzene (80-120%)					*93 %*				
Surrogate: Dibromofluoromethane (80-120%)					*109 %*				
Surrogate: Toluene-d8 (80-120%)					*108 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	11G3466	1.62	4.76	ND	0.952	UP\	07/29/11	
2,4-Dinitrotoluene	EPA 625	11G3466	0.190	4.76	ND	0.952	UP\	07/29/11	
N-Nitrosodimethylamine	EPA 625	11G3466	0.0952	4.76	ND	0.952	UP\	07/29/11	
Pentachlorophenol	EPA 625	11G3466	0.0952	4.76	ND	0.952	UP\	07/29/11	
2,4,6-Trichlorophenol	EPA 625	11G3466	0.0952	5.71	ND	0.952	UP\	07/29/11	
Surrogate: 2,4,6-Tribromophenol (40-120%)					*100 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*87 %*				
Surrogate: 2-Fluorophenol (30-120%)					*69 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*87 %*				
Surrogate: Phenol-d6 (35-120%)					*73 %*				
Surrogate: Terphenyl-d14 (50-125%)					*96 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water) - cont.					**Sampled: 07/21/11**				
Reporting Units: ug/l									
alpha-BHC	EPA 608	11G3054	0.0024	0.0094	ND	0.943	DXD	07/27/11	
Surrogate: Decachlorobiphenyl (45-120%)					*75 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*69 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-01 (Outfall 002 (Grab) - Water)					**Sampled: 07/20/11**				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11H0192	1.4	5.0	ND	1	DA	08/02/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: mg/l									
Iron	EPA 200.7	11G3542	0.015	0.040	**0.041**	1	DP	07/29/11	B
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: ug/l									
Mercury	EPA 245.1	11G3104	0.10	0.20	ND	1	DB	07/28/11	
Cadmium	EPA 200.8	11G3599	0.10	1.0	ND	1	kb1	07/29/11	
Zinc	EPA 200.7	11G3542	6.00	20.0	ND	1	DP	07/29/11	
Copper	EPA 200.8	11G3599	0.500	2.00	**0.968**	1	kb1	07/29/11	Ja
Lead	EPA 200.8	11G3599	0.20	1.0	ND	1	kb1	07/29/11	
Selenium	EPA 200.8	11G3599	0.50	2.0	ND	1	kb1	07/29/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water) - cont.					**Sampled: 07/21/11**				
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	11G3598	0.015	0.040	ND	1	DP	07/29/11	
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11G2902	0.10	0.20	ND	1	DB	07/25/11	
Cadmium	EPA 200.8-Diss	11G3545	0.10	1.0	ND	1	kb1	07/29/11	
Zinc	EPA 200.7-Diss	11G3598	6.00	20.0	ND	1	DP	07/29/11	
Copper	EPA 200.8-Diss	11G3545	0.500	2.00	**0.824**	1	kb1	07/29/11	Ja
Lead	EPA 200.8-Diss	11G3545	0.20	1.0	ND	1	kb1	07/29/11	
Selenium	EPA 200.8-Diss	11G3545	0.50	2.0	ND	1	kb1	07/29/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water) - cont.					**Sampled: 07/21/11**				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11G2677	0.500	0.500	ND	1	NCP	07/22/11	
Biochemical Oxygen Demand	SM5210B	11G2698	0.50	2.0	**1.7**	1	XL	07/27/11	Ja
Chloride	EPA 300.0	11G2464	3.0	5.0	**42**	10	NN	07/21/11	
Nitrate-N	EPA 300.0	11G2464	0.060	0.11	**0.088**	1	NN	07/21/11	Ja
Nitrite-N	EPA 300.0	11G2464	0.090	0.15	ND	1	NN	07/21/11	
Nitrate/Nitrite-N	EPA 300.0	11G2464	0.15	0.26	ND	1	NN	07/21/11	
Sulfate	EPA 300.0	11G2464	3.0	5.0	**140**	10	NN	07/21/11	
Surfactants (MBAS)	SM5540-C	11G2552	0.050	0.10	**0.093**	1	SLA	07/21/11	Ja
Total Dissolved Solids	SM2540C	11G2837	1.0	10	**440**	1	MC	07/25/11	
Total Suspended Solids	SM 2540D	11G2960	1.0	10	ND	1	MC	07/25/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-01 (Outfall 002 (Grab) - Water)					**Sampled: 07/20/11**				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	11G2460	0.10	0.10	ND	1	RRZ	07/21/11	
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: NTU									
Turbidity	EPA 180.1	11G2737	0.040	1.0	**0.84**	1	RRZ	07/22/11	Ja
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11G3150	0.95	4.0	ND	1	mn	07/27/11	
Total Cyanide	SM4500CN-E	11H0106	2.2	5.0	ND	1	SLA	08/01/11	
Sample ID: IUG1929-01 (Outfall 002 (Grab) - Water)					**Sampled: 07/20/11**				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	EPA 120.1	11G2389	1.0	1.0	**630**	1	MC	07/21/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Gross Alpha	900	8687	1.2	3	**0.285**	1	DVP	08/08/11	U
Gross Beta	900	8687	1.47	4	**4.29**	1	DVP	08/08/11	
Sample ID: IUG1929-04 (Trip Blank - Water)					**Sampled: 07/22/11**				
Reporting Units: pCi/L									
Gross Alpha	900	8687	0.297	3	**0.091**	1	DVP	08/08/11	U
Gross Beta	900	8687	0.784	4	-0.194	1	DVP	08/08/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Cesium-137	901.1	8687	2.25	20	ND	1	CSS	08/04/11	U
Potassium-40	901.1	8687	72.1	25	ND	1	CSS	08/04/11	U
Sample ID: IUG1929-04 (Trip Blank - Water)					**Sampled: 07/22/11**				
Reporting Units: pCi/L									
Cesium-137	901.1	8687	0.979	20	ND	1	CSS	08/05/11	U
Potassium-40	901.1	8687	21.9	25	ND	1	CSS	08/05/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Radium-226	903.1	8687	0.48	1	-0.06	1	TM	08/09/11	U
Sample ID: IUG1929-04 (Trip Blank - Water)					**Sampled: 07/22/11**				
Reporting Units: pCi/L									
Radium-226	903.1	8687	0.509	1	**0.19**	1	TM	08/09/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Radium-228	904	8687	0.476	1	-0.072	1	LS	08/08/11	U
Sample ID: IUG1929-04 (Trip Blank - Water)					**Sampled: 07/22/11**				
Reporting Units: pCi/L									
Radium-228	904	8687	0.452	1	-0.099	1	LS	08/08/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Strontium-90	905	8687	0.844	2	**0.296**	1	LS	08/03/11	U
Sample ID: IUG1929-04 (Trip Blank - Water)					**Sampled: 07/22/11**				
Reporting Units: pCi/L									
Strontium-90	905	8687	0.794	2	**0.184**	1	LS	08/03/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)						**Sampled: 07/21/11**			
Reporting Units: pCi/L									
Tritium	906	8687	159	500	**61.8**	1	WL	08/11/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

ASTM-D5174

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water) - cont.					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Uranium, Total	D5174	8687	0.023	1	**0.356**	1	NS	08/03/11	Jb
Sample ID: IUG1929-04 (Trip Blank - Water)					**Sampled: 07/22/11**				
Reporting Units: pCi/L									
Uranium, Total	D5174	8687	0.023	1	ND	1	NS	08/03/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)					**Sampled: 07/21/11**				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1213131	6.5e-007	5e-005	**4.5e-006**	0.96	SY	08/02/11	J, Q, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1213131	4.5e-007	5e-005	**2.4e-006**	0.96	SY	08/02/11	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1213131	5.5e-007	5e-005	**1.2e-006**	0.96	SY	08/02/11	J
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1213131	3.9e-007	5e-005	**9.2e-007**	0.96	SY	08/02/11	J, Q
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1213131	3.3e-007	5e-005	**1.6e-006**	0.96	SY	08/02/11	J, Q, Ba
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1213131	3.4e-007	5e-005	**1.2e-006**	0.96	SY	08/02/11	J, Q
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1213131	3.2e-007	5e-005	**1.6e-006**	0.96	SY	08/02/11	J, Q, Ba
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1213131	3.3e-007	5e-005	**1.4e-006**	0.96	SY	08/02/11	J, Q
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1213131	3.6e-007	5e-005	**1.1e-006**	0.96	SY	08/02/11	J
1,2,3,7,8-PeCDD	EPA-5 1613B	1213131	9.5e-007	5e-005	ND	0.96	SY	08/02/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1213131	5.9e-007	5e-005	**2e-006**	0.96	SY	08/02/11	J
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1213131	3.1e-007	5e-005	**1.2e-006**	0.96	SY	08/02/11	J, Ba
2,3,4,7,8-PeCDF	EPA-5 1613B	1213131	7.9e-007	5e-005	ND	0.96	SY	08/02/11	
2,3,7,8-TCDD	EPA-5 1613B	1213131	5.2e-007	1e-005	ND	0.96	SY	08/02/11	
2,3,7,8-TCDF	EPA-5 1613B	1213131	8.3e-007	1e-005	**2.4**	0.96	SY	08/02/11	J, Q
OCDD	EPA-5 1613B	1213131	5e-007	0.0001	**2e-005**	0.96	SY	08/02/11	J, Ba
OCDF	EPA-5 1613B	1213131	9.2e-007	0.0001	**4.6e-006**	0.96	SY	08/02/11	J, Q, Ba
Total HpCDD	EPA-5 1613B	1213131	6.5e-007	5e-005	**1.3e-005**	0.96	SY	08/02/11	J, Q, Ba
Total HpCDF	EPA-5 1613B	1213131	5e-007	5e-005	**4.4e-006**	0.96	SY	08/02/11	J, Q, Ba
Total HxCDD	EPA-5 1613B	1213131	3.5e-007	5e-005	**6.8e-006**	0.96	SY	08/02/11	J, Q
Total HxCDF	EPA-5 1613B	1213131	3.3e-007	5e-005	**5.6e-006**	0.96	SY	08/02/11	J, Q, Ba
Total PeCDD	EPA-5 1613B	1213131	9.5e-007	5e-005	ND	0.96	SY	08/02/11	
Total PeCDF	EPA-5 1613B	1213131	6e-007	5e-005	**2e-006**	0.96	SY	08/02/11	J
Total TCDD	EPA-5 1613B	1213131	5.2e-007	1e-005	**2.8e-006**	0.96	SY	08/02/11	J
Total TCDF	EPA-5 1613B	1213131	8.3e-007	1e-005	**2.4e-006**	0.96	SY	08/02/11	J, Q
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*32 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*36 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*36 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*36 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*39 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*40 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*40 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*41 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*34 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*35 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*40 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*38 %*				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*36 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*39 %*				
Surrogate: 13C-OCDD (17-157%)					*33 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*96 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1929-03RE1 (Outfall 002 (Comp) - Water) - cont.					**Sampled: 07/21/11**				
Reporting Units: ug/L									
2,3,7,8-TCDF	EPA-5 1613B	1213131	1.6e-006	1e-005	ND	0.96	SY	08/03/11	
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*34 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*86 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 002 (Grab) (IUG1929-01) - Water					
SM2540F	2	07/20/2011 09:00	07/20/2011 19:30	07/21/2011 08:35	07/21/2011 08:35
Sample ID: Outfall 002 (Comp) (IUG1929-03) - Water					
EPA 180.1	2	07/21/2011 00:57	07/20/2011 19:30	07/22/2011 19:00	07/22/2011 19:00
EPA 300.0	2	07/21/2011 00:57	07/20/2011 19:30	07/21/2011 19:45	07/21/2011 19:50
Filtration	1	07/21/2011 00:57	07/20/2011 19:30	07/22/2011 20:24	07/22/2011 20:26
SM5210B	2	07/21/2011 00:57	07/20/2011 19:30	07/22/2011 14:30	07/27/2011 09:50
SM5540-C	2	07/21/2011 00:57	07/20/2011 19:30	07/21/2011 19:06	07/21/2011 21:38

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2803 Extracted: 07/24/11												
Blank Analyzed: 07/24/2011 (11G2803-BLK1)												
Benzene	ND	0.50	0.28	ug/l	NA							
Carbon tetrachloride	ND	0.50	0.28	ug/l	NA							
Chloroform	ND	0.50	0.33	ug/l	NA							
1,1-Dichloroethane	ND	0.50	0.40	ug/l	NA							
1,2-Dichloroethane	ND	0.50	0.28	ug/l	NA							
1,1-Dichloroethene	ND	0.50	0.42	ug/l	NA							
Ethylbenzene	ND	0.50	0.25	ug/l	NA							
Tetrachloroethene	ND	0.50	0.32	ug/l	NA							
Toluene	ND	0.50	0.36	ug/l	NA							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l	NA							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l	NA							
Trichloroethene	ND	0.50	0.26	ug/l	NA							
Trichlorofluoromethane	ND	0.50	0.34	ug/l	NA							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l	NA							
Vinyl chloride	ND	0.50	0.40	ug/l	NA							
Xylenes, Total	ND	1.5	0.90	ug/l	NA							
Surrogate: 4-Bromofluorobenzene	*24.4*			*ug/l*	NA	*25.0*		*98*	*80-120*			
Surrogate: Dibromofluoromethane	*24.6*			*ug/l*	NA	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*26.3*			*ug/l*	NA	*25.0*		*105*	*80-120*			
LCS Analyzed: 07/24/2011 (11G2803-BS1)												
Benzene	22.8	0.50	0.28	ug/l	NA	25.0		91	70-120			
Carbon tetrachloride	25.3	0.50	0.28	ug/l	NA	25.0		101	65-140			
Chloroform	23.6	0.50	0.33	ug/l	NA	25.0		94	70-130			
1,1-Dichloroethane	23.5	0.50	0.40	ug/l	NA	25.0		94	70-125			
1,2-Dichloroethane	24.5	0.50	0.28	ug/l	NA	25.0		98	60-140			
1,1-Dichloroethene	21.6	0.50	0.42	ug/l	NA	25.0		86	70-125			
Ethylbenzene	26.0	0.50	0.25	ug/l	NA	25.0		104	75-125			
Tetrachloroethene	25.4	0.50	0.32	ug/l	NA	25.0		102	70-125			
Toluene	24.2	0.50	0.36	ug/l	NA	25.0		97	70-120			
1,1,1-Trichloroethane	24.0	0.50	0.30	ug/l	NA	25.0		96	65-135			
1,1,2-Trichloroethane	25.1	0.50	0.30	ug/l	NA	25.0		100	70-125			
Trichloroethene	25.1	0.50	0.26	ug/l	NA	25.0		100	70-125			
Trichlorofluoromethane	23.8	0.50	0.34	ug/l	NA	25.0		95	65-145			
Vinyl chloride	17.5	0.50	0.40	ug/l	NA	25.0		70	55-135			
Xylenes, Total	80.8	1.5	0.90	ug/l	NA	75.0		108	70-125			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2803 Extracted: 07/24/11												
LCS Analyzed: 07/24/2011 (11G2803-BS1)												
Surrogate: 4-Bromofluorobenzene	*25.3*			*ug/l*	NA	*25.0*		*101*	*80-120*			
Surrogate: Dibromofluoromethane	*25.8*			*ug/l*	NA	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.6*			*ug/l*	NA	*25.0*		*106*	*80-120*			
Matrix Spike Analyzed: 07/24/2011 (11G2803-MS1)						**Source: IUG1804-01**						
Benzene	23.3	0.50	0.28	ug/l	NA	25.0	ND	93	65-125			
Carbon tetrachloride	26.5	0.50	0.28	ug/l	NA	25.0	ND	106	65-140			
Chloroform	23.3	0.50	0.33	ug/l	NA	25.0	ND	93	65-135			
1,1-Dichloroethane	23.7	0.50	0.40	ug/l	NA	25.0	ND	95	65-130			
1,2-Dichloroethane	23.4	0.50	0.28	ug/l	NA	25.0	ND	94	60-140			
1,1-Dichloroethene	22.5	0.50	0.42	ug/l	NA	25.0	ND	90	60-130			
Ethylbenzene	27.0	0.50	0.25	ug/l	NA	25.0	ND	108	65-130			
Tetrachloroethene	26.5	0.50	0.32	ug/l	NA	25.0	ND	106	65-130			
Toluene	24.5	0.50	0.36	ug/l	NA	25.0	ND	98	70-125			
1,1,1-Trichloroethane	25.0	0.50	0.30	ug/l	NA	25.0	ND	100	65-140			
1,1,2-Trichloroethane	23.7	0.50	0.30	ug/l	NA	25.0	ND	95	65-130			
Trichloroethene	25.9	0.50	0.26	ug/l	NA	25.0	ND	103	65-125			
Trichlorofluoromethane	24.6	0.50	0.34	ug/l	NA	25.0	ND	98	60-145			
Vinyl chloride	19.0	0.50	0.40	ug/l	NA	25.0	ND	76	45-140			
Xylenes, Total	82.5	1.5	0.90	ug/l	NA	75.0	ND	110	60-130			
Surrogate: 4-Bromofluorobenzene	*25.4*			*ug/l*	NA	*25.0*		*102*	*80-120*			
Surrogate: Dibromofluoromethane	*25.4*			*ug/l*	NA	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*26.4*			*ug/l*	NA	*25.0*		*105*	*80-120*			
Matrix Spike Dup Analyzed: 07/24/2011 (11G2803-MSD1)						**Source: IUG1804-01**						
Benzene	22.8	0.50	0.28	ug/l	NA	25.0	ND	91	65-125	2	20	
Carbon tetrachloride	25.0	0.50	0.28	ug/l	NA	25.0	ND	100	65-140	6	25	
Chloroform	23.5	0.50	0.33	ug/l	NA	25.0	ND	94	65-135	0.8	20	
1,1-Dichloroethane	23.3	0.50	0.40	ug/l	NA	25.0	ND	93	65-130	1	20	
1,2-Dichloroethane	23.8	0.50	0.28	ug/l	NA	25.0	ND	95	60-140	2	20	
1,1-Dichloroethene	21.2	0.50	0.42	ug/l	NA	25.0	ND	85	60-130	6	20	
Ethylbenzene	25.5	0.50	0.25	ug/l	NA	25.0	ND	102	65-130	6	20	
Tetrachloroethene	25.2	0.50	0.32	ug/l	NA	25.0	ND	101	65-130	5	20	
Toluene	24.0	0.50	0.36	ug/l	NA	25.0	ND	96	70-125	2	20	
1,1,1-Trichloroethane	24.1	0.50	0.30	ug/l	NA	25.0	ND	97	65-140	4	20	
1,1,2-Trichloroethane	24.6	0.50	0.30	ug/l	NA	25.0	ND	98	65-130	4	25	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2803 Extracted: 07/24/11												
Matrix Spike Dup Analyzed: 07/24/2011 (11G2803-MSD1)							**Source: IUG1804-01**					
Trichloroethene	25.2	0.50	0.26	ug/l	NA	25.0	ND	101	65-125	3	20	
Trichlorofluoromethane	23.3	0.50	0.34	ug/l	NA	25.0	ND	93	60-145	5	25	
Vinyl chloride	18.2	0.50	0.40	ug/l	NA	25.0	ND	73	45-140	4	30	
Xylenes, Total	78.4	1.5	0.90	ug/l	NA	75.0	ND	104	60-130	5	20	
Surrogate: 4-Bromofluorobenzene	*25.5*			*ug/l*	NA	*25.0*		*102*	*80-120*			
Surrogate: Dibromofluoromethane	*26.1*			*ug/l*	NA	*25.0*		*104*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	NA	*25.0*		*106*	*80-120*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3466 Extracted: 07/26/11												
Blank Analyzed: 07/28/2011 (11G3466-BLK1)												
Bis(2-ethylhexyl)phthalate	ND	5.00	1.70	ug/l	UP\							
2,4-Dinitrotoluene	ND	5.00	0.200	ug/l	UP\							
N-Nitrosodimethylamine	ND	5.00	0.100	ug/l	UP\							
Pentachlorophenol	ND	5.00	0.100	ug/l	UP\							
2,4,6-Trichlorophenol	ND	6.00	0.100	ug/l	UP\							
Surrogate: 2,4,6-Tribromophenol	*19.6*			*ug/l*	UP\	*20.0*		*98*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.28*			*ug/l*	UP\	*10.0*		*83*	*50-120*			
Surrogate: 2-Fluorophenol	*13.9*			*ug/l*	UP\	*20.0*		*70*	*30-120*			
Surrogate: Nitrobenzene-d5	*7.90*			*ug/l*	UP\	*10.0*		*79*	*45-120*			
Surrogate: Phenol-d6	*15.1*			*ug/l*	UP\	*20.0*		*76*	*35-120*			
Surrogate: Terphenyl-d14	*9.34*			*ug/l*	UP\	*10.0*		*93*	*50-125*			
LCS Analyzed: 07/28/2011 (11G3466-BS1)												**MNR1**
Bis(2-ethylhexyl)phthalate	11.2	5.00	1.70	ug/l	UP\	10.0		112	65-130			
2,4-Dinitrotoluene	9.04	5.00	0.200	ug/l	UP\	10.0		90	65-120			
N-Nitrosodimethylamine	8.44	5.00	0.100	ug/l	UP\	10.0		84	45-120			
Pentachlorophenol	10.8	5.00	0.100	ug/l	UP\	10.0		108	24-121			
2,4,6-Trichlorophenol	10.0	6.00	0.100	ug/l	UP\	10.0		100	55-120			
Surrogate: 2,4,6-Tribromophenol	*19.9*			*ug/l*	UP\	*20.0*		*99*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.48*			*ug/l*	UP\	*10.0*		*85*	*50-120*			
Surrogate: 2-Fluorophenol	*12.3*			*ug/l*	UP\	*20.0*		*62*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.14*			*ug/l*	UP\	*10.0*		*81*	*45-120*			
Surrogate: Phenol-d6	*13.9*			*ug/l*	UP\	*20.0*		*69*	*35-120*			
Surrogate: Terphenyl-d14	*9.66*			*ug/l*	UP\	*10.0*		*97*	*50-125*			
LCS Dup Analyzed: 07/28/2011 (11G3466-BSD1)												
Bis(2-ethylhexyl)phthalate	11.2	5.00	1.70	ug/l	UP\	10.0		112	65-130	0.5	20	
2,4-Dinitrotoluene	9.24	5.00	0.200	ug/l	UP\	10.0		92	65-120	2	20	
N-Nitrosodimethylamine	7.74	5.00	0.100	ug/l	UP\	10.0		77	45-120	9	20	
Pentachlorophenol	10.5	5.00	0.100	ug/l	UP\	10.0		105	24-121	3	25	
2,4,6-Trichlorophenol	10.2	6.00	0.100	ug/l	UP\	10.0		102	55-120	2	30	
Surrogate: 2,4,6-Tribromophenol	*19.2*			*ug/l*	UP\	*20.0*		*96*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.60*			*ug/l*	UP\	*10.0*		*86*	*50-120*			
Surrogate: 2-Fluorophenol	*13.6*			*ug/l*	UP\	*20.0*		*68*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.04*			*ug/l*	UP\	*10.0*		*80*	*45-120*			
Surrogate: Phenol-d6	*15.2*			*ug/l*	UP\	*20.0*		*76*	*35-120*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3466 Extracted: 07/26/11												
LCS Dup Analyzed: 07/28/2011 (11G3466-BSD1)												
Surrogate: Terphenyl-d14	*9.26*			*ug/l*	UP\	*10.0*		*93*	*50-125*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3054 Extracted: 07/26/11												
Blank Analyzed: 07/27/2011 (11G3054-BLK1)												
alpha-BHC	ND	0.010	0.0025	ug/l	DXD							
Surrogate: Decachlorobiphenyl	*0.408*			*ug/l*	DXD	*0.500*		*82*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.399*			*ug/l*	DXD	*0.500*		*80*	*35-115*			
LCS Analyzed: 07/27/2011 (11G3054-BS1)												**MNR1**
alpha-BHC	0.432	0.010	0.0025	ug/l	DXD	0.500		86	45-115			
Surrogate: Decachlorobiphenyl	*0.412*			*ug/l*	DXD	*0.500*		*82*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.405*			*ug/l*	DXD	*0.500*		*81*	*35-115*			
LCS Dup Analyzed: 07/27/2011 (11G3054-BSD1)												
alpha-BHC	0.434	0.010	0.0025	ug/l	DXD	0.500		87	45-115	0.3	30	
Surrogate: Decachlorobiphenyl	*0.412*			*ug/l*	DXD	*0.500*		*82*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.408*			*ug/l*	DXD	*0.500*		*82*	*35-115*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11H0192 Extracted: 08/02/11												
Blank Analyzed: 08/02/2011 (11H0192-BLK1)												
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l	DA							
LCS Analyzed: 08/02/2011 (11H0192-BS1)												**MNR1**
Hexane Extractable Material (Oil & Grease)	19.1	5.0	1.4	mg/l	DA	20.0		96	78-114			
LCS Dup Analyzed: 08/02/2011 (11H0192-BSD1)												
Hexane Extractable Material (Oil & Grease)	18.9	5.0	1.4	mg/l	DA	20.0		94	78-114	1	11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3104 Extracted: 07/28/11												
Blank Analyzed: 07/28/2011 (11G3104-BLK1)												
Mercury	ND	0.20	0.10	ug/l	DB							
LCS Analyzed: 07/28/2011 (11G3104-BS1)												
Mercury	7.97	0.20	0.10	ug/l	DB	8.00		100	85-115			
Matrix Spike Analyzed: 07/28/2011 (11G3104-MS1)						**Source: IUG2391-01**						
Mercury	7.70	0.20	0.10	ug/l	DB	8.00	ND	96	70-130			
Matrix Spike Dup Analyzed: 07/28/2011 (11G3104-MSD1)						**Source: IUG2391-01**						
Mercury	7.66	0.20	0.10	ug/l	DB	8.00	ND	96	70-130	0.5	20	
Batch: 11G3542 Extracted: 07/29/11												
Blank Analyzed: 07/29/2011 (11G3542-BLK1)												
Iron	0.0185	0.040	0.015	mg/l	DP							*Ja*
Zinc	ND	20.0	6.00	ug/l	DP							
LCS Analyzed: 07/29/2011 (11G3542-BS1)												
Iron	0.517	0.040	0.015	mg/l	DP	0.500		103	85-115			
Zinc	468	20.0	6.00	ug/l	DP	500		94	85-115			
Matrix Spike Analyzed: 07/29/2011 (11G3542-MS1)						**Source: IUG2072-01**						
Iron	0.516	0.040	0.015	mg/l	DP	0.500	ND	103	70-130			
Zinc	472	20.0	6.00	ug/l	DP	500	ND	94	70-130			
Matrix Spike Analyzed: 07/29/2011 (11G3542-MS2)						**Source: IUG2012-01**						
Iron	0.705	0.040	0.015	mg/l	DP	0.500	0.159	109	70-130			
Zinc	491	20.0	6.00	ug/l	DP	500	ND	98	70-130			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3542 Extracted: 07/29/11												
Matrix Spike Dup Analyzed: 07/29/2011 (11G3542-MSD1)							**Source: IUG2072-01**					
Iron	0.510	0.040	0.015	mg/l	DP	0.500	ND	102	70-130	1	20	
Zinc	451	20.0	6.00	ug/l	DP	500	ND	90	70-130	4	20	
Batch: 11G3599 Extracted: 07/29/11												
Blank Analyzed: 07/29/2011 (11G3599-BLK1)												
Cadmium	ND	1.0	0.10	ug/l	kb1							
Copper	ND	2.00	0.500	ug/l	kb1							
Lead	ND	1.0	0.20	ug/l	kb1							
Selenium	ND	2.0	0.50	ug/l	kb1							
LCS Analyzed: 07/29/2011 (11G3599-BS1)												
Cadmium	76.8	1.0	0.10	ug/l	kb1	80.0		96	85-115			
Copper	80.2	2.00	0.500	ug/l	kb1	80.0		100	85-115			
Lead	76.9	1.0	0.20	ug/l	kb1	80.0		96	85-115			
Selenium	78.0	2.0	0.50	ug/l	kb1	80.0		98	85-115			
Matrix Spike Analyzed: 07/29/2011 (11G3599-MS1)							**Source: IUG2712-01**					
Cadmium	77.3	1.0	0.10	ug/l	kb1	80.0	ND	97	70-130			
Copper	76.4	2.00	0.500	ug/l	kb1	80.0	1.97	93	70-130			
Lead	72.5	1.0	0.20	ug/l	kb1	80.0	ND	91	70-130			
Selenium	77.6	2.0	0.50	ug/l	kb1	80.0	0.883	96	70-130			
Matrix Spike Analyzed: 07/29/2011 (11G3599-MS2)							**Source: IUG1929-03**					
Cadmium	77.7	1.0	0.10	ug/l	kb1	80.0	ND	97	70-130			
Copper	78.9	2.00	0.500	ug/l	kb1	80.0	0.968	97	70-130			
Lead	74.4	1.0	0.20	ug/l	kb1	80.0	ND	93	70-130			
Selenium	76.4	2.0	0.50	ug/l	kb1	80.0	ND	96	70-130			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3599 Extracted: 07/29/11												
Matrix Spike Dup Analyzed: 07/29/2011 (11G3599-MSD1)							**Source: IUG2712-01**					
Cadmium	77.3	1.0	0.10	ug/l	kb1	80.0	ND	97	70-130	0.02	20	
Copper	76.5	2.00	0.500	ug/l	kb1	80.0	1.97	93	70-130	0.1	20	
Lead	71.8	1.0	0.20	ug/l	kb1	80.0	ND	90	70-130	0.9	20	
Selenium	79.2	2.0	0.50	ug/l	kb1	80.0	0.883	98	70-130	2	20	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2902 Extracted: 07/25/11												
Blank Analyzed: 07/25/2011 (11G2902-BLK1)												
Mercury	ND	0.20	0.10	ug/l	DB							
LCS Analyzed: 07/25/2011 (11G2902-BS1)												
Mercury	8.20	0.20	0.10	ug/l	DB	8.00		102	85-115			
Matrix Spike Analyzed: 07/25/2011 (11G2902-MS1)						**Source: IUG1441-01**						
Mercury	7.80	0.20	0.10	ug/l	DB	8.00	ND	98	70-130			
Matrix Spike Dup Analyzed: 07/25/2011 (11G2902-MSD1)						**Source: IUG1441-01**						
Mercury	7.89	0.20	0.10	ug/l	DB	8.00	ND	99	70-130	1	20	
Batch: 11G3545 Extracted: 07/29/11												
Blank Analyzed: 07/29/2011 (11G3545-BLK1)												
Cadmium	ND	1.0	0.10	ug/l	kb1							
Copper	ND	2.00	0.500	ug/l	kb1							
Lead	ND	1.0	0.20	ug/l	kb1							
Selenium	ND	2.0	0.50	ug/l	kb1							
LCS Analyzed: 07/29/2011 (11G3545-BS1)												
Cadmium	80.7	1.0	0.10	ug/l	kb1	80.0		101	85-115			
Copper	83.1	2.00	0.500	ug/l	kb1	80.0		104	85-115			
Lead	79.0	1.0	0.20	ug/l	kb1	80.0		99	85-115			
Selenium	83.3	2.0	0.50	ug/l	kb1	80.0		104	85-115			
Matrix Spike Analyzed: 07/29/2011 (11G3545-MS1)						**Source: IUG2240-01**						
Cadmium	79.7	1.0	0.10	ug/l	kb1	80.0	ND	100	70-130			
Copper	79.4	2.00	0.500	ug/l	kb1	80.0	4.05	94	70-130			
Lead	76.4	1.0	0.20	ug/l	kb1	80.0	0.315	95	70-130			
Selenium	90.0	2.0	0.50	ug/l	kb1	80.0	7.72	103	70-130			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3545 Extracted: 07/29/11												
Matrix Spike Analyzed: 07/29/2011 (11G3545-MS2)						**Source: IUG2240-02**						
Cadmium	79.4	1.0	0.10	ug/l	kb1	80.0	ND	99	70-130			
Copper	80.9	2.00	0.500	ug/l	kb1	80.0	5.15	95	70-130			
Lead	77.0	1.0	0.20	ug/l	kb1	80.0	0.353	96	70-130			
Selenium	89.3	2.0	0.50	ug/l	kb1	80.0	7.88	102	70-130			
Matrix Spike Dup Analyzed: 07/29/2011 (11G3545-MSD1)						**Source: IUG2240-01**						
Cadmium	78.9	1.0	0.10	ug/l	kb1	80.0	ND	99	70-130	0.9	20	
Copper	80.8	2.00	0.500	ug/l	kb1	80.0	4.05	96	70-130	2	20	
Lead	77.4	1.0	0.20	ug/l	kb1	80.0	0.315	96	70-130	1	20	
Selenium	89.6	2.0	0.50	ug/l	kb1	80.0	7.72	102	70-130	0.4	20	
Batch: 11G3598 Extracted: 07/29/11												
Blank Analyzed: 07/29/2011 (11G3598-BLK1)												
Iron	ND	0.040	0.015	mg/l	DP							
Zinc	ND	20.0	6.00	ug/l	DP							
LCS Analyzed: 07/29/2011 (11G3598-BS1)												
Iron	0.512	0.040	0.015	mg/l	DP	0.500		102	85-115			
Zinc	456	20.0	6.00	ug/l	DP	500		91	85-115			
Matrix Spike Analyzed: 07/29/2011 (11G3598-MS1)						**Source: IUG2045-01**						
Iron	0.527	0.040	0.015	mg/l	DP	0.500	ND	105	70-130			
Zinc	474	20.0	6.00	ug/l	DP	500	ND	95	70-130			
Matrix Spike Analyzed: 07/29/2011 (11G3598-MS2)						**Source: IUG2240-02**						
Iron	0.519	0.040	0.015	mg/l	DP	0.500	0.0193	100	70-130			
Zinc	467	20.0	6.00	ug/l	DP	500	7.70	92	70-130			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3598 Extracted: 07/29/11												
Matrix Spike Dup Analyzed: 07/29/2011 (11G3598-MSD1)							**Source: IUG2045-01**					
Iron	0.555	0.040	0.015	mg/l	DP	0.500	ND	111	70-130	5	20	
Zinc	503	20.0	6.00	ug/l	DP	500	ND	101	70-130	6	20	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2389 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2389-BLK1)												
Specific Conductance	ND	1.0	1.0	µs/cm @	MC							
LCS Analyzed: 07/21/2011 (11G2389-BS1)												
Specific Conductance	1360	1.0	1.0	µs/cm @	MC	1410		97	90-110			
Duplicate Analyzed: 07/21/2011 (11G2389-DUP1)						**Source: IUG1890-01**						
Specific Conductance	861	1.0	1.0	µs/cm @	MC		833			3	5	
Batch: 11G2464 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2464-BLK1)												
Chloride	ND	0.50	0.30	mg/l	NN							
Nitrate-N	ND	0.11	0.060	mg/l	NN							
Nitrite-N	ND	0.15	0.090	mg/l	NN							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l	NN							
Sulfate	ND	0.50	0.30	mg/l	NN							
LCS Analyzed: 07/21/2011 (11G2464-BS1)												
Chloride	5.05	0.50	0.30	mg/l	NN	5.00		101	90-110			*M-3*
Nitrate-N	1.15	0.11	0.060	mg/l	NN	1.13		101	90-110			
Nitrite-N	1.56	0.15	0.090	mg/l	NN	1.52		103	90-110			
Sulfate	10.0	0.50	0.30	mg/l	NN	10.0		100	90-110			
Matrix Spike Analyzed: 07/21/2011 (11G2464-MS1)						**Source: IUG1984-02**						
Nitrate-N	13.5	2.2	1.2	mg/l	NN	11.3	ND	119	80-120			
Nitrite-N	24.1	3.0	1.8	mg/l	NN	15.2	ND	159	80-120			*M1*
Sulfate	388	10	6.0	mg/l	NN	100	283	106	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2464 Extracted: 07/21/11												
Matrix Spike Analyzed: 07/22/2011 (11G2464-MS2)						**Source: IUG2101-02**						
Chloride	150	10	6.0	mg/l	NN	50.0	106	89	80-120			
Nitrate-N	15.7	2.2	1.2	mg/l	NN	11.3	2.95	113	80-120			
Nitrite-N	18.3	3.0	1.8	mg/l	NN	15.2	ND	120	80-120			
Sulfate	289	10	6.0	mg/l	NN	100	190	99	80-120			
Matrix Spike Dup Analyzed: 07/21/2011 (11G2464-MSD1)						**Source: IUG1984-02**						
Nitrate-N	11.2	2.2	1.2	mg/l	NN	11.3	ND	99	80-120	18	20	
Nitrite-N	23.7	3.0	1.8	mg/l	NN	15.2	ND	156	80-120	2	20	*M1*
Sulfate	382	10	6.0	mg/l	NN	100	283	99	80-120	2	20	
Batch: 11G2552 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2552-BLK1)												
Surfactants (MBAS)	ND	0.10	0.050	mg/l	SLA							
LCS Analyzed: 07/21/2011 (11G2552-BS1)												
Surfactants (MBAS)	0.250	0.10	0.050	mg/l	SLA	0.250		100	90-110			
Matrix Spike Analyzed: 07/21/2011 (11G2552-MS1)						**Source: IUG1765-03**						
Surfactants (MBAS)	0.293	0.10	0.050	mg/l	SLA	0.250	0.0569	94	50-125			
Matrix Spike Dup Analyzed: 07/21/2011 (11G2552-MSD1)						**Source: IUG1765-03**						
Surfactants (MBAS)	0.265	0.10	0.050	mg/l	SLA	0.250	0.0569	83	50-125	10	20	
Batch: 11G2677 Extracted: 07/22/11												
Blank Analyzed: 07/22/2011 (11G2677-BLK1)												
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l	NCP							

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2677 Extracted: 07/22/11												
LCS Analyzed: 07/22/2011 (11G2677-BS1)												
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	NCP	10.0		98	80-115			
Matrix Spike Analyzed: 07/22/2011 (11G2677-MS1)						**Source: IUG1251-01**						
Ammonia-N (Distilled)	11.8	0.500	0.500	mg/l	NCP	10.0	2.80	90	70-120			
Matrix Spike Dup Analyzed: 07/22/2011 (11G2677-MSD1)						**Source: IUG1251-01**						
Ammonia-N (Distilled)	12.0	0.500	0.500	mg/l	NCP	10.0	2.80	92	70-120	2	15	
Batch: 11G2698 Extracted: 07/22/11												
Blank Analyzed: 07/27/2011 (11G2698-BLK1)												
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l	XL							
LCS Analyzed: 07/27/2011 (11G2698-BS1)												
Biochemical Oxygen Demand	201	100	25	mg/l	XL	198		102	85-115			
LCS Dup Analyzed: 07/27/2011 (11G2698-BSD1)												
Biochemical Oxygen Demand	209	100	25	mg/l	XL	198		106	85-115	4	20	
Batch: 11G2737 Extracted: 07/22/11												
Blank Analyzed: 07/22/2011 (11G2737-BLK1)												
Turbidity	ND	1.0	0.040	NTU	RRZ							
Duplicate Analyzed: 07/22/2011 (11G2737-DUP1)						**Source: IUG1929-03**						
Turbidity	0.850	1.0	0.040	NTU	RRZ		0.840			1	20	*Ja*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2837 Extracted: 07/25/11												
Blank Analyzed: 07/25/2011 (11G2837-BLK1)												
Total Dissolved Solids	ND	10	1.0	mg/l	MC							
LCS Analyzed: 07/25/2011 (11G2837-BS1)												
Total Dissolved Solids	1000	10	1.0	mg/l	MC	1000		100	90-110			
Duplicate Analyzed: 07/25/2011 (11G2837-DUP1)						**Source: IUG2225-01**						
Total Dissolved Solids	382	10	1.0	mg/l	MC		372			3	10	
Batch: 11G2960 Extracted: 07/25/11												
Blank Analyzed: 07/25/2011 (11G2960-BLK1)												
Total Suspended Solids	ND	10	1.0	mg/l	MC							
LCS Analyzed: 07/25/2011 (11G2960-BS1)												
Total Suspended Solids	989	10	1.0	mg/l	MC	1000		99	85-115			
Duplicate Analyzed: 07/25/2011 (11G2960-DUP1)						**Source: IUG2302-01**						
Total Suspended Solids	14.0	10	1.0	mg/l	MC		14.0			0	10	
Batch: 11G3150 Extracted: 07/27/11												
Blank Analyzed: 07/27/2011 (11G3150-BLK1)												
Perchlorate	ND	4.0	0.95	ug/l	mn							
LCS Analyzed: 07/27/2011 (11G3150-BS1)												
Perchlorate	27.6	4.0	0.95	ug/l	mn	25.0		111	85-115			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3150 Extracted: 07/27/11												
Matrix Spike Analyzed: 07/27/2011 (11G3150-MS1)							**Source: IUG2204-06**					
Perchlorate	25.8	4.0	0.95	ug/l	mn	25.0	ND	103	80-120			
Matrix Spike Dup Analyzed: 07/27/2011 (11G3150-MSD1)							**Source: IUG2204-06**					
Perchlorate	26.3	4.0	0.95	ug/l	mn	25.0	ND	105	80-120	2	20	
Batch: 11H0106 Extracted: 08/01/11												
Blank Analyzed: 08/01/2011 (11H0106-BLK1)												
Total Cyanide	ND	5.0	2.2	ug/l	SLA							
LCS Analyzed: 08/01/2011 (11H0106-BS1)												
Total Cyanide	198	5.0	2.2	ug/l	SLA	200		99	90-110			
Matrix Spike Analyzed: 08/01/2011 (11H0106-MS1)							**Source: IUG2169-01**					
Total Cyanide	196	5.0	2.2	ug/l	SLA	200	ND	98	70-115			
Matrix Spike Dup Analyzed: 08/01/2011 (11H0106-MSD1)							**Source: IUG2169-01**					
Total Cyanide	199	5.0	2.2	ug/l	SLA	200	ND	99	70-115	1	15	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/04/11												
LCS Analyzed: 08/08/2011 (S107136-03)						**Source:**						
Gross Alpha	50.3	3	0.622	pCi/L	DVP	40.4		124	70-130			
Gross Beta	32.9	4	1.01	pCi/L	DVP	34.6		95	70-130			
Blank Analyzed: 08/10/2011 (S107136-04)						**Source:**						
Gross Alpha	-0.057	3	0.629	pCi/L	DVP				-			*U*
Gross Beta	-0.32	4	1.01	pCi/L	DVP				-			*U*
Duplicate Analyzed: 08/09/2011 (S107136-05)						**Source: IUG1929-03**						
Gross Alpha	0.392	3	1.43	pCi/L	DVP		0.285		-	0		*U*
Gross Beta	4.38	4	1.32	pCi/L	DVP		4.29		-	2		

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/04/11												
LCS Analyzed: 08/05/2011 (S107136-03)						**Source:**						
Cobalt-60	112	10	1.96	pCi/L	CSS	118		95	80-120			
Cesium-137	123	20	2.04	pCi/L	CSS	124		99	80-120			
Blank Analyzed: 08/05/2011 (S107136-04)						**Source:**						
Cesium-137	ND	20	1.13	pCi/L	CSS				-			*U*
Potassium-40	ND	25	14.6	pCi/L	CSS				-			*U*
Duplicate Analyzed: 08/05/2011 (S107136-05)						**Source: IUG1929-03**						
Cesium-137	ND	20	1.91	pCi/L	CSS		0		-	0		*U*
Potassium-40	ND	25	36.9	pCi/L	CSS		0		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/09/11												
LCS Analyzed: 08/09/2011 (S107136-03)						**Source:**						
Radium-226	48	1	0.689	pCi/L	TM	55.7		86	80-120			
Blank Analyzed: 08/09/2011 (S107136-04)						**Source:**						
Radium-226	-0.107	1	0.6	pCi/L	TM				-			*U*
Duplicate Analyzed: 08/09/2011 (S107136-05)						**Source: IUG1929-03**						
Radium-226	0.021	1	0.515	pCi/L	TM		-0.06		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/08/11												
LCS Analyzed: 08/08/2011 (S107136-03)						**Source:**						
Radium-228	4.86	1	0.414	pCi/L	LS	4.81		101	60-140			
Blank Analyzed: 08/08/2011 (S107136-04)						**Source:**						
Radium-228	0.197	1	0.641	pCi/L	LS				-			*U*
Duplicate Analyzed: 08/08/2011 (S107136-05)						**Source: IUG1929-03**						
Radium-228	0.106	1	0.465	pCi/L	LS		-0.072		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/03/11												
LCS Analyzed: 08/03/2011 (S107136-03)						**Source:**						
Strontium-90	15.9	2	0.62	pCi/L	LS	17.3		92	80-120			
Blank Analyzed: 08/03/2011 (S107136-04)						**Source:**						
Strontium-90	0.118	2	0.718	pCi/L	LS				-			*U*
Duplicate Analyzed: 08/03/2011 (S107136-05)						**Source: IUG1929-03**						
Strontium-90	-0.018	2	0.54	pCi/L	LS		0.296		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

906

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/10/11												
LCS Analyzed: 08/11/2011 (S107136-03)						**Source:**						
Tritium	2640	500	158	pCi/L	WL	2530		104	80-120			
Blank Analyzed: 08/11/2011 (S107136-04)						**Source:**						
Tritium	91.6	500	157	pCi/L	WL				-			*U*
Duplicate Analyzed: 08/11/2011 (S107136-05)						**Source: IUG1929-03**						
Tritium	48.8	500	159	pCi/L	WL		61.8		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

ASTM-D5174

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8687 Extracted: 08/03/11												
LCS Analyzed: 08/03/2011 (S107136-03)						**Source:**						
Uranium, Total	50.5	1	0.233	pCi/L	NS	56.5		89	80-120			
Blank Analyzed: 08/03/2011 (S107136-04)						**Source:**						
Uranium, Total	-0.005	1	0.023	pCi/L	NS				-			*U*
Duplicate Analyzed: 08/03/2011 (S107136-05)						**Source: IUG1929-03**						
Uranium, Total	0.362	1	0.023	pCi/L	NS		0.356		-	2		*Jb*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1213131 Extracted: 08/01/11												
Blank Analyzed: 08/02/2011 (G1H010000131B)						**Source:**						
1,2,3,4,6,7,8-HpCDD	1.7e-006	0.00005	0000009	ug/L	SY				-			*J, Q*
1,2,3,4,6,7,8-HpCDF	2.7e-006	0.00005	0000006	ug/L	SY				-			*J, Q*
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0000008	ug/L	SY				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	.000001	ug/L	SY				-			
1,2,3,4,7,8-HxCDF	1.1e-006	0.00005	0000002	ug/L	SY				-			*J, Q*
1,2,3,6,7,8-HxCDD	ND	0.00005	0000005	ug/L	SY				-			
1,2,3,6,7,8-HxCDF	8.2e-007	0.00005	0000002	ug/L	SY				-			*J, Q*
1,2,3,7,8,9-HxCDD	ND	0.00005	0000005	ug/L	SY				-			
1,2,3,7,8,9-HxCDF	4e-007	0.00005	0000002	ug/L	SY				-			*J, Q*
1,2,3,7,8-PeCDD	ND	0.00005	0000008	ug/L	SY				-			
1,2,3,7,8-PeCDF	ND	0.00005	0000007	ug/L	SY				-			
2,3,4,6,7,8-HxCDF	9.3e-007	0.00005	0000002	ug/L	SY				-			*J, Q*
2,3,4,7,8-PeCDF	ND	0.00005	.000000	ug/L	SY				-			
2,3,7,8-TCDD	ND	0.00001	0000007	ug/L	SY				-			
2,3,7,8-TCDF	ND	0.00001	0000009	ug/L	SY				-			
OCDD	8.9e-006	0.0001	0000005	ug/L	SY				-			*J*
OCDF	2.8e-006	0.0001	.000001	ug/L	SY				-			*J, Q*
Total HpCDD	3.7e-006	0.00005	0000009	ug/L	SY				-			*J, Q*
Total HpCDF	2.7e-006	0.00005	0000007	ug/L	SY				-			*J, Q*
Total HxCDD	ND	0.00005	0000005	ug/L	SY				-			
Total HxCDF	2.9e-006	0.00005	0000002	ug/L	SY				-			*J, Q*
Total PeCDD	ND	0.00005	0000008	ug/L	SY				-			
Total PeCDF	ND	0.00005	0000007	ug/L	SY				-			
Total TCDD	2.8e-006	0.00001	0000007	ug/L	SY				-			*J, Q*
Total TCDF	ND	0.00001	0000009	ug/L	SY				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00056*			*ug/L*	SY	*0.002*		*28*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00063*			*ug/L*	SY	*0.002*		*31*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00063*			*ug/L*	SY	*0.002*		*32*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00062*			*ug/L*	SY	*0.002*		*31*	*32-141*			*
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00066*			*ug/L*	SY	*0.002*		*33*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00073*			*ug/L*	SY	*0.002*		*36*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00068*			*ug/L*	SY	*0.002*		*34*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00074*			*ug/L*	SY	*0.002*		*37*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.0006*			*ug/L*	SY	*0.002*		*30*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00063*			*ug/L*	SY	*0.002*		*32*	*24-185*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1213131 Extracted: 08/01/11												
Blank Analyzed: 08/02/2011 (G1H010000131B)						**Source:**						
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00071*			*ug/L*	SY	*0.002*		*35*	*28-136*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.0007*			*ug/L*	SY	*0.002*		*35*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.00067*			*ug/L*	SY	*0.002*		*33*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.00075*			*ug/L*	SY	*0.002*		*38*	*24-169*			
Surrogate: 13C-OCDD	*0.0011*			*ug/L*	SY	*0.004*		*28*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.00077*			*ug/L*	SY	*0.0008*		*96*	*35-197*			
LCS Analyzed: 08/02/2011 (G1H010000131C)						**Source:**						
1,2,3,4,6,7,8-HpCDD	0.00112	0.00005	.000001	ug/L	SY	0.001		112	70-140			*Ba*
1,2,3,4,6,7,8-HpCDF	0.00118	0.00005	.000003	ug/L	SY	0.001		118	82-122			*Ba*
1,2,3,4,7,8,9-HpCDF	0.00114	0.00005	.000004	ug/L	SY	0.001		114	78-138			
1,2,3,4,7,8-HxCDD	0.00113	0.00005	0000003	ug/L	SY	0.001		113	70-164			
1,2,3,4,7,8-HxCDF	0.00113	0.00005	0000004	ug/L	SY	0.001		113	72-134			*Ba*
1,2,3,6,7,8-HxCDD	0.00101	0.00005	0000002	ug/L	SY	0.001		101	76-134			
1,2,3,6,7,8-HxCDF	0.00115	0.00005	0000003	ug/L	SY	0.001		115	84-130			*Ba*
1,2,3,7,8,9-HxCDD	0.00112	0.00005	0000002	ug/L	SY	0.001		112	64-162			
1,2,3,7,8,9-HxCDF	0.00113	0.00005	0000004	ug/L	SY	0.001		113	78-130			*Ba*
1,2,3,7,8-PeCDD	0.00109	0.00005	0.000002	ug/L	SY	0.001		109	70-142			
1,2,3,7,8-PeCDF	0.00113	0.00005	.000001	ug/L	SY	0.001		113	80-134			
2,3,4,6,7,8-HxCDF	0.00111	0.00005	0000003	ug/L	SY	0.001		111	70-156			*Ba*
2,3,4,7,8-PeCDF	0.00112	0.00005	.000001	ug/L	SY	0.001		112	68-160			
2,3,7,8-TCDD	0.000214	0.00001	0000004	ug/L	SY	0.0002		107	67-158			
2,3,7,8-TCDF	0.000231	0.00001	0000004	ug/L	SY	0.0002		115	75-158			
OCDD	0.00224	0.0001	.000000	ug/L	SY	0.002		112	78-144			*Ba*
OCDF	0.00255	0.0001	0.000003	ug/L	SY	0.002		127	63-170			*Ba*
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.000801*			*ug/L*	SY	*0.002*		*40*	*26-166*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.000887*			*ug/L*	SY	*0.002*		*44*	*21-158*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.000928*			*ug/L*	SY	*0.002*		*46*	*20-186*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.000853*			*ug/L*	SY	*0.002*		*43*	*21-193*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.000909*			*ug/L*	SY	*0.002*		*45*	*19-202*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00102*			*ug/L*	SY	*0.002*		*51*	*25-163*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.000952*			*ug/L*	SY	*0.002*		*48*	*21-159*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00103*			*ug/L*	SY	*0.002*		*52*	*17-205*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.000869*			*ug/L*	SY	*0.002*		*43*	*21-227*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.000849*			*ug/L*	SY	*0.002*		*42*	*21-192*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1213131 Extracted: 08/01/11												
LCS Analyzed: 08/02/2011 (G1H010000131C)						**Source:**						
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00102*			*ug/L*	SY	*0.002*		*51*	*22-176*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.000971*			*ug/L*	SY	*0.002*		*49*	*13-328*			
Surrogate: 13C-2,3,7,8-TCDD	*0.000899*			*ug/L*	SY	*0.002*		*45*	*20-175*			
Surrogate: 13C-2,3,7,8-TCDF	*0.000996*			*ug/L*	SY	*0.002*		*50*	*22-152*			
Surrogate: 13C-OCDD	*0.00167*			*ug/L*	SY	*0.004*		*42*	*13-199*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.000755*			*ug/L*	SY	*0.0008*		*94*	*31-191*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUG1929-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.38	5.0	15
IUG1929-01	624-Boeing 001/002Q (Fr113+X+Fr	1,1-Dichloroethene	ug/l	0	0.50	6
IUG1929-01	624-Boeing 001/002Q (Fr113+X+Fr	Trichloroethene	ug/l	0.25	0.50	5
IUG1929-01	Settleable Solids - SM2540F	Total Settleable Solids	ml/l	0	0.10	0.3

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUG1929-02	624-Boeing 001/002Q (Fr113+X+Fr	1,1-Dichloroethene	ug/l	0	0.50	6
IUG1929-02	624-Boeing 001/002Q (Fr113+X+Fr	Trichloroethene	ug/l	0	0.50	5

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUG1929-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.0018	0.0094	0.03
IUG1929-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.71	13
IUG1929-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	4.76	18
IUG1929-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.51	4.76	4
IUG1929-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	4.76	16
IUG1929-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	4.76	16.5
IUG1929-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.500	10.1
IUG1929-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	1.69	2.0	30
IUG1929-03	Cadmium-200.8	Cadmium	ug/l	0	1.0	3.1
IUG1929-03	Chloride - 300.0	Chloride	mg/l	42	5.0	150
IUG1929-03	Copper-200.8	Copper	ug/l	0.97	2.00	14
IUG1929-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	0.57	5.0	8.5
IUG1929-03	Iron-200.7	Iron	mg/l	0.041	0.040	0.3
IUG1929-03	Lead-200.8	Lead	ug/l	0.018	1.0	5.2
IUG1929-03	MBAS - SM5540C	Surfactants (MBAS)	mg/l	0.093	0.10	0.5
IUG1929-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.088	0.11	8
IUG1929-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUG1929-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.088	0.26	8
IUG1929-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6

TestAmerica Irvine

Debby Wilson
Project Manager

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

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

Project ID: Quarterly Outfall 002-Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

IUG1929-03	Selenium-200.8	Selenium	ug/l	0	2.0	5
IUG1929-03	Sulfate-300.0	Sulfate	mg/l	144	5.0	300
IUG1929-03	TDS - SM2540C	Total Dissolved Solids	mg/l	438	10	950
IUG1929-03	TSS - SM2540D	Total Suspended Solids	mg/l	0	10	45
IUG1929-03	Zinc-200.7	Zinc	ug/l	4.51	20.0	119

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

DATA QUALIFIERS AND DEFINITIONS

*****	Surrogate recovery is outside stated control limits.
B	Analyte was detected in the associated Method Blank.
Ba	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J	Estimated result. Result is less than the reporting limit.
Ja	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
Jb	The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M-3	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
Q	Estimated maximum possible concentration (EMPC).
U	The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 120.1	Water	X	X
EPA 1664A	Water	X	X
EPA 180.1	Water	X	N/A
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2540C	Water	X	N/A
SM2540F	Water	X	X
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5540-C	Water	X	N/A

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUG1929-03, IUG1929-04

Analysis Performed: Gross Alpha
Samples: IUG1929-03, IUG1929-04

Analysis Performed: Gross Beta
Samples: IUG1929-03, IUG1929-04

Analysis Performed: Radium, Combined
Samples: IUG1929-03, IUG1929-04

Analysis Performed: Strontium 90
Samples: IUG1929-03, IUG1929-04

Analysis Performed: Tritium
Samples: IUG1929-03

Analysis Performed: Uranium, Combined
Samples: IUG1929-03, IUG1929-04

Method Performed: 900
Samples: IUG1929-03, IUG1929-04

Method Performed: 901.1
Samples: IUG1929-03, IUG1929-04

Method Performed: 903.1
Samples: IUG1929-03, IUG1929-04

Method Performed: 904
Samples: IUG1929-03, IUG1929-04

Method Performed: 905
Samples: IUG1929-03, IUG1929-04

Method Performed: 906
Samples: IUG1929-03

Method Performed: D5174
Samples: IUG1929-03, IUG1929-04

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 002-
Quarterly Outfall 002
Report Number: IUG1929

Sampled: 07/20/11-07/22/11
Received: 07/20/11

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

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B

Samples: IUG1929-03, IUG1929-03RE1

TestAmerica Irvine

Debby Wilson
Project Manager

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson	Boeing-SSFL NPDES **Quarterly Outfall 002** **COMPOSITE** LOW
Project Manager: Bronwyn Kelly Sampler: Rick Banaga	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, **Fe, Mn**	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
							ANALYSIS REQUIRED														
Outfall 002	W	1L Poly	1	7-21-2011 00:57	HNO_3	6A	X														
Outfall 002 Dup	W	1L Poly	1		HNO_3	6B	X														
Outfall 002	W	1L Amber	2		None	7A, 7B		X													
Outfall 002	W	1L Poly	1		None	8			X												
Outfall 002	W	500 mL Poly	2		None	9A, 9B				X											
Outfall 002	W	500 mL Poly	2		None	10A, 10B					X										
Outfall 002	W	500 mL Poly	1		None	11						X									
Outfall 002	W	500 mL Poly	2		None	12A, 12B							X								
Outfall 002	W	500 mL Poly	1		H_2SO_4	13			X					X							
Outfall 002	W	1L Amber	2		None	14A, 14B									X						
Outfall 002	W	1L Amber	2	7-31-2011 00:57	None	15A, 15B										X					

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 002 for this storm event.

These must be added to the same work order for COC Page 1 of 3 for Outfall 002 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
Rick Banaga	7-21-2011 13:45		7-21-11 13:45
Relinquished By	Date/Time:	Received By	Date/Time:
	7-21-11 18:20		1820 7-21-11
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)

Intact: ✓ On Ice: X

Data Requirements: (Check)

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

21103

CHAIN OF CUSTODY FORM

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

Test America Contact: Debby Wilson

Project:
Boeing-SSFL NPDES
Quarterly Outfall 002
COMPOSITE
Low

Project Manager: Bronwyn Kelly

Sampler: Rick BANAGAN

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, Fe, Mn	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)	Cyanide	Chronic Toxicity	Comments
Outfall 002	W	1L Poly	1	7-21-2011 00:57	None	16	X				Filter w/in 24hrs of receipt at lab
Outfall 002	W	2.5 Gal Cube	1		None	17A		X			Unfiltered and unpreserved analysis
		500 mL Amber	1		None	17B					
Outfall 002	W	500 mL Poly	1	7-21-2011 00:57	NaOH	18			X		
~~Outfall 002~~	~~W~~	~~1 Gal Poly~~	~~1~~		~~None~~	~~19~~				X	Only test if first or second rain events of the year

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 002 for this storm event.

These must be added to the same work order for COC Page 1 of 3 for Outfall 002 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
Rick Banagan	7-21-2011 13:45	Matt Campbell	7-21-11 13:45
Matt Campbell	7-21-11 18:00		1800 7-21-11

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

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

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

21103

CHAIN OF CUSTODY FORM

IU61929

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson	Boeing-SSFL NPDES **Quarterly Outfall 002** **GRAB**
Project Manager: Bronwyn Kelly Sampler: Rick Bunch	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs (624) + Freon 113	Oil & Grease (1664-HEM)	Settleable Solids	Conductivity										Comments
Outfall 002	W	VOAs	5	7-20-2011 09:00	HCl	1A, 1B, 1C, 1D, 1E	X													
Outfall 002	W	1L Amber	2		HCl	2A, 2B		X												
Outfall 002	W	1L Poly	1		None	3			X											
Outfall 002	W	500 mL Poly	2		None	4A, 4B				X										
Trip Blanks	W	VOAs	3	7-20-2011 09:00	HCl	5A, 5B, 5C	X													

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

Temp °F = 76
pH = 7.2
DO = 3.81

Time of readings = 09:00

These Samples are the Grab Portion of Outfall 002 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:
	7-20-2011 14:00		7-21-11 14:10
Relinquished By	Date/Time:	Received By	Date/Time:
	7-20-11 19:30		
Relinquished By	Date/Time:	Received By	Date/Time:
			7/20/11 1930

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

Sample Integrity: (Check)
Intact: ✓ On Ice: ✓ 5.3°C

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

20M03

EBERLINE SERVICES

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

August 17, 2011

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

Reference: **Test America-Irvine IUG1929**
Eberline Analytical Report S107136-8687
Sample Delivery Group 8687

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUG1929. The samples were received at Eberline Analytical on July 25, 2011.

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

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/kwp

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8687 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.

All analyses were performed on the samples as received i.e. the samples were not filtered.

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%

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. The gamma spectroscopy planchets were counted for sufficient time to meet the required Cs-137 detection limit of 20 pCi/L. As a consequence of keying to the Cs-137 RDL, the detection limit for K-40 was not achieved for all the samples.

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."

8/17/11

N. Joseph Verville
Client Services Manager

Date

EBERLINE ANALYTICAL
SDG 8687

SDG 8687	Client Test America, Inc.
Contact N. Joseph Verville	Contract IUG1929

SUMMARY DATA SECTION

TABLE OF CONTENTS

Prepared by

Reviewed by

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

ABOUT THE DATA SUMMARY SECTION

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

MATRIX SPIKES

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

DATA SHEETS

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

METHOD SUMMARIES

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

REPORT GUIDES

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

LAB SAMPLE SUMMARY

SDG 8687
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1929

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S107136-01	IUG1929-03	Boeing - SSFL	WATER			IUG1929	07/21/11 00:57
S107136-02	IUG1929-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUG1929	07/21/11 12:20
S107136-03	Lab Control Sample		WATER				
S107136-04	Method Blank		WATER				
S107136-05	Duplicate (S107136-01)	Boeing - SSFL	WATER				07/21/11 00:57

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

QC SUMMARY

Client Test America, Inc.
Contract IUG1929

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8687	IUG1929	IUG1929-03	WATER		10.0 L				S107136-01	8687-001
		IUG1929-04 (TRIP-BLANK)	WATER		10.0 L				S107136-02	8687-002
		Method Blank	WATER						S107136-04	8687-004
		Lab Control Sample	WATER						S107136-03	8687-003
		Duplicate (S107136-01)	WATER		10.0 L				S107136-05	8687-005

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

SDG 8687
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
Contract IUG1929

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Beta Counting												
AC	WATER	Radium-228 in Water	7281-132	10.4	2			1	1	1/1		
SR	WATER	Strontium-90 in Water	7281-132	10.4	2			1	1	1/1		
Gas Proportional Counting												
80A	WATER	Gross Alpha in Water	7281-132	20.6	2			1	1	1/1		
80B	WATER	Gross Beta in Water	7281-132	11.0	2			1	1	1/1		
Gamma Spectroscopy												
GAM	WATER	Gamma Emitters in Water	7281-132	7.0	2			1	1	1/1		
Kinetic Phosphorimetry, ug												
U_T	WATER	Uranium, Total	7281-132		2			1	1	1/1		
Liquid Scintillation Counting												
H	WATER	Tritium in Water	7281-132	10.0	1			1	1	1/1		
Radon Counting												
RA	WATER	Radium-226 in Water	7281-132	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 08/17/11

EBERLINE ANALYTICAL

SDG 8687

SDG 8687
Contact N. Joseph Verville

LAB WORK SUMMARY

Client Test America, Inc.
Contract IUG1929

LAB SAMPLE / COLLECTED / RECEIVED	CLIENT SAMPLE ID / LOCATION / CUSTODY / SAS no	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S107136-01	IUG1929-03		8687-001	80A/80		08/08/11	08/10/11	BW	Gross Alpha in Water
07/21/11	Boeing - SSFL	WATER	8687-001	80B/80		08/08/11	08/11/11	BW	Gross Beta in Water
	IUG1929		8687-001	AC		08/08/11	08/12/11	BW	Radium-228 in Water
			8687-001	GAM		08/04/11	08/08/11	CSS	Gamma Emitters in Water
			8687-001	H		08/11/11	08/15/11	BW	Tritium in Water
			8687-001	RA		08/09/11	08/10/11	BW	Radium-226 in Water
			8687-001	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8687-001	U_T		08/03/11	08/03/11	BW	Uranium, Total
S107136-02	IUG1929-04 (TRIP-BLANK)		8687-002	80A/80		08/08/11	08/10/11	BW	Gross Alpha in Water
07/21/11	Boeing - SSFL	WATER	8687-002	80B/80		08/08/11	08/11/11	BW	Gross Beta in Water
	IUG1929		8687-002	AC		08/08/11	08/12/11	BW	Radium-228 in Water
			8687-002	GAM		08/05/11	08/08/11	CSS	Gamma Emitters in Water
			8687-002	RA		08/09/11	08/10/11	BW	Radium-226 in Water
			8687-002	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8687-002	U_T		08/03/11	08/03/11	BW	Uranium, Total
S107136-03	Lab Control Sample		8687-003	80A/80		08/08/11	08/10/11	BW	Gross Alpha in Water
		WATER	8687-003	80B/80		08/08/11	08/11/11	BW	Gross Beta in Water
			8687-003	AC		08/08/11	08/12/11	BW	Radium-228 in Water
			8687-003	GAM		08/05/11	08/08/11	CSS	Gamma Emitters in Water
			8687-003	H		08/11/11	08/15/11	BW	Tritium in Water
			8687-003	RA		08/09/11	08/10/11	BW	Radium-226 in Water
			8687-003	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8687-003	U_T		08/03/11	08/03/11	BW	Uranium, Total
S107136-04	Method Blank		8687-004	80A/80		08/10/11	08/10/11	BW	Gross Alpha in Water
		WATER	8687-004	80B/80		08/10/11	08/11/11	BW	Gross Beta in Water
			8687-004	AC		08/08/11	08/12/11	BW	Radium-228 in Water
			8687-004	GAM		08/05/11	08/08/11	CSS	Gamma Emitters in Water
			8687-004	H		08/11/11	08/15/11	BW	Tritium in Water
			8687-004	RA		08/09/11	08/10/11	BW	Radium-226 in Water
			8687-004	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8687-004	U_T		08/03/11	08/03/11	BW	Uranium, Total

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Test America, Inc.
Contract IUG1929

LAB SAMPLE / COLLECTED / RECEIVED	CLIENT SAMPLE ID / LOCATION / CUSTODY	SAS no	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S107136-05	Duplicate (S107136-01)			8687-005	80A/80		08/09/11	08/10/11	BW	Gross Alpha in Water
07/21/11	Boeing - SSFL		WATER	8687-005	80B/80		08/09/11	08/11/11	BW	Gross Beta in Water
				8687-005	AC		08/08/11	08/12/11	BW	Radium-228 in Water
				8687-005	GAM		08/05/11	08/08/11	CSS	Gamma Emitters in Water
				8687-005	H		08/11/11	08/15/11	BW	Tritium in Water
				8687-005	RA		08/09/11	08/10/11	BW	Radium-226 in Water
				8687-005	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
				8687-005	U_T		08/03/11	08/03/11	BW	Uranium, Total

COUNTS OF TESTS BY SAMPLE TYPE

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

8687-004 Method Blank

METHOD BLANK

SDG 8687 Client Test America, Inc.
Contact N. Joseph Verville Contract IUG1929

Lab sample id S107136-04 Client sample id Method Blank
Dept sample id 8687-004 Material/Matrix WATER

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	-0.057	0.31	0.629	3.00	U	80A
Gross Beta	12587472	-0.320	0.59	1.01	4.00	U	80B
Tritium	10028178	91.6	96	157	500	U	H
Radium-226	13982633	-0.107	0.32	0.600	1.00	U	RA
Radium-228	15262201	0.197	0.25	0.641	1.00	U	AC
Strontium-90	10098972	0.118	0.33	0.718	2.00	U	SR
Uranium, Total		-0.005	0.010	0.023	1.00	U	U_T
Potassium-40	13966002	U		14.6	25.0	U	GAM
Cesium-137	10045973	U		1.13	20.0	U	GAM

QC-BLANK #79244

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-DS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

8687-003

Lab Control Sample

LAB CONTROL SAMPLE

SDG 8687 | Client Test America, Inc.

Contact N. Joseph Verville | Contract IUG1929

Lab sample id S107136-03 | Client sample id Lab Control Sample

Dept sample id 8687-003 | 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	50.3	2.8	0.622	3.00		80A	40.4	1.6	124	73-127	70-130
Gross Beta	32.9	1.4	1.01	4.00		80B	34.6	1.4	95	88-112	70-130
Tritium	2640	160	158	500		H	2530	100	104	87-113	80-120
Radium-226	48.0	2.0	0.689	1.00		RA	55.7	2.2	86	85-115	80-120
Radium-228	4.86	0.30	0.414	1.00		AC	4.81	0.19	101	87-113	60-140
Strontium-90	15.9	1.3	0.620	2.00		SR	17.3	0.69	92	87-113	80-120
Uranium, Total	50.5	6.2	0.233	1.00		U_T	56.5	2.3	89	88-112	80-120
Cobalt-60	112	3.5	1.96	10.0		GAM	118	4.7	95	92-108	80-120
Cesium-137	123	3.1	2.04	20.0		GAM	124	5.0	99	92-108	80-120

QC-LCS #79243

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

8687-005 IUG1929-03

DUPLICATE

SDG 8687 Client Test America, Inc.
Contact N. Joseph Verville Contract IUG1929

DUPLICATE		ORIGINAL			
Lab sample id	S107136-05	Lab sample id	S107136-01	Client sample id	IUG1929-03
Dept sample id	8687-005	Dept sample id	8687-001	Location/Matrix	Boeing - SSFL WATER
		Received		Collected/Volume	07/21/11 00:57 10.0 L
				Chain of custody id	IUG1929

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	0.392	0.77	1.43	3.00	U	80A	0.285	0.73	1.20	U	-		0.2
Gross Beta	4.38	0.88	1.32	4.00		80B	4.29	1.0	1.47		2	52	0.1
Tritium	48.8	95	159	500	U	H	61.8	96	159	U	-		0.2
Radium-226	0.021	0.28	0.515	1.00	U	RA	-0.060	0.25	0.480	U	-		0.4
Radium-228	0.106	0.18	0.465	1.00	U	AC	-0.072	0.22	0.476	U	-		1.3
Strontium-90	-0.018	0.22	0.540	2.00	U	SR	0.296	0.42	0.844	U	-		1.3
Uranium, Total	0.362	0.043	0.023	1.00	J	U_T	0.356	0.043	0.023	J	2	25	0.2
Potassium-40	U		36.9	25.0	U	GAM	U		72.1	U	-		0.9
Cesium-137	U		1.91	20.0	U	GAM	U		2.25	U	-		0.2

QC-DUP#1 79245

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-DUP
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

8687-001 IUG1929-03

DATA SHEET

SDG	8687	Client	Test America, Inc.
Contact	N. Joseph Verville	Contract	IUG1929
Lab sample id	S107136-01	Client sample id	IUG1929-03
Dept sample id	8687-001	Location/Matrix	Boeing - SSFL WATER
Received		Collected/Volume	07/21/11 00:57 10.0 L
		Chain of custody id	IUG1929

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	0.285	0.73	1.20	3.00	U	80A
Gross Beta	12587472	4.29	1.0	1.47	4.00		80B
Tritium	10028178	61.8	96	159	500	U	H
Radium-226	13982633	-0.060	0.25	0.480	1.00	U	RA
Radium-228	15262201	-0.072	0.22	0.476	1.00	U	AC
Strontium-90	10098972	0.296	0.42	0.844	2.00	U	SR
Uranium, Total		0.356	0.043	0.023	1.00	J	U_T
Potassium-40	13966002	U		72.1	25.0	U	GAM
Cesium-137	10045973	U		2.25	20.0	U	GAM

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	08/17/11

EBERLINE ANALYTICAL

SDG 8687

8687-002 IUG1929-04 (TRIP-BLANK)

DATA SHEET

SDG	8687	Client	Test America, Inc.
Contact	N. Joseph Verville	Contract	IUG1929
Lab sample id	S107136-02	Client sample id	IUG1929-04 (TRIP-BLANK)
Dept sample id	8687-002	Location/Matrix	Boeing - SSFL WATER
Received		Collected/Volume	07/21/11 12:20 10.0 L
		Chain of custody id	IUG1929

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	0.091	0.18	0.297	3.00	U	80A
Gross Beta	12587472	-0.194	0.46	0.784	4.00	U	80B
Radium-226	13982633	0.190	0.30	0.509	1.00	U	RA
Radium-228	15262201	-0.099	0.22	0.452	1.00	U	AC
Strontium-90	10098972	0.184	0.37	0.794	2.00	U	SR
Uranium, Total		0	0.010	0.023	1.00	U	U_T
Potassium-40	13966002	U		21.9	25.0	U	GAM
Cesium-137	10045973	U		0.979	20.0	U	GAM

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	08/17/11

EBERLINE ANALYTICAL

SDG 8687

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

Test AC Matrix WATER
SDG 8687
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-228
Preparation batch 7281-132					
S107136-01			8687-001	IUG1929-03	U
S107136-02			8687-002	IUG1929-04 (TRIP-BLANK)	U
S107136-03			8687-003	Lab Control Sample	ok
S107136-04			8687-004	Method Blank	U
S107136-05			8687-005	Duplicate (S107136-01)	- 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 7281-132			2σ prep error 10.4 %	Reference Lab Notebook No. 7281 pg.132												
S107136-01			IUG1929-03	0.476	1.80			68		150			18	08/08/11	08/08	GRB-225
S107136-02			IUG1929-04 (TRIP-BLANK)	0.452	1.80			70		150			18	08/08/11	08/08	GRB-227
S107136-03			Lab Control Sample	0.414	1.80			72		150				08/08/11	08/08	GRB-228
S107136-04			Method Blank	0.641	1.80			68		150				08/08/11	08/08	GRB-229
S107136-05			Duplicate (S107136-01)	0.465	1.80			68		150			18	08/08/11	08/08	GRB-230
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 FOR 5 SAMPLES
MDA 0.490 ± 0.176
YIELD 69 ± 4

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER

BETA COUNTING

Test SR Matrix WATER
SDG 8687
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90	
Preparation batch 7281-132						
S107136-01			8687-001	IUG1929-03	U	
S107136-02			8687-002	IUG1929-04 (TRIP-BLANK)	U	
S107136-03			8687-003	Lab Control Sample	ok	
S107136-04			8687-004	Method Blank	U	
S107136-05			8687-005	Duplicate (S107136-01)	-	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 7281-132			2σ prep error 10.4 %	Reference Lab Notebook No. 7281 pg.132												
S107136-01			IUG1929-03	0.844	0.500			94		50			13	08/03/11	08/03	GRB-231
S107136-02			IUG1929-04 (TRIP-BLANK)	0.794	0.500			93		50			13	08/03/11	08/03	GRB-232
S107136-03			Lab Control Sample	0.620	0.500			88		50				08/03/11	08/03	GRB-227
S107136-04			Method Blank	0.718	0.500			94		54				08/03/11	08/03	GRB-202
S107136-05			Duplicate (S107136-01)	0.540	0.500			95		50			13	08/03/11	08/03	GRB-228
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 FOR 5 SAMPLES
MDA 0.703 ± 0.249
YIELD 93 ± 6

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

Test 80A Matrix WATER
SDG 8687
Contact N. Joseph Verville

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha	
Preparation batch 7281-132						
S107136-01	80		8687-001	IUG1929-03	U	
S107136-02	80		8687-002	IUG1929-04 (TRIP-BLANK)	U	
S107136-03	80		8687-003	Lab Control Sample	ok	
S107136-04	80		8687-004	Method Blank	U	
S107136-05	80		8687-005	Duplicate (S107136-01)	-	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 7281-132			2σ prep error 20.6 %	Reference Lab Notebook No. 7281 pg.132												
S107136-01	80		IUG1929-03	1.20	0.250			121		400			18	08/04/11	08/08	GRB-107
S107136-02	80		IUG1929-04 (TRIP-BLANK)	0.297	0.300			0		400			18	08/04/11	08/08	GRB-109
S107136-03	80		Lab Control Sample	0.622	0.250			63		400				08/04/11	08/08	GRB-111
S107136-04	80		Method Blank	0.629	0.250			65		400				08/04/11	08/10	GRB-111
S107136-05	80		Duplicate (S107136-01)	1.43	0.250			118		400			19	08/04/11	08/09	GRB-214
Nominal values and limits from method				3.00	0.250			0-200		100			180			

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

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 0.836 ± 0.930
RESIDUE 73 ± 99

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

Test 80B Matrix WATER
SDG 8687
Contact N. Joseph Verville

LAB METHOD SUMMARY

GROSS BETA IN WATER
GAS PROPORTIONAL COUNTING

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7281-132					
S107136-01	80		8687-001	IUG1929-03	4.29
S107136-02	80		8687-002	IUG1929-04 (TRIP-BLANK)	U
S107136-03	80		8687-003	Lab Control Sample	ok
S107136-04	80		8687-004	Method Blank	U
S107136-05	80		8687-005	Duplicate (S107136-01)	ok
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 7281-132			2σ prep error 11.0 %	Reference Lab Notebook No. 7281 pg.132												
S107136-01	80		IUG1929-03	1.47	0.250			121		400			18	08/04/11	08/08	GRB-107
S107136-02	80		IUG1929-04 (TRIP-BLANK)	0.784	0.300			0		400			18	08/04/11	08/08	GRB-109
S107136-03	80		Lab Control Sample	1.01	0.250			63		400				08/04/11	08/08	GRB-111
S107136-04	80		Method Blank	1.01	0.250			65		400				08/04/11	08/10	GRB-111
S107136-05	80		Duplicate (S107136-01)	1.32	0.250			118		400			19	08/04/11	08/09	GRB-214
Nominal values and limits from method				4.00	0.250			0-200		100			180			

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

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 1.12 ± 0.547
RESIDUE 73 ± 99

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

Test GAM Matrix WATER
SDG 8687
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER

GAMMA SPECTROSCOPY

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137	
Preparation batch 7281-132							
S107136-01			8687-001	IUG1929-03		U	
S107136-02			8687-002	IUG1929-04 (TRIP-BLANK)		U	
S107136-03			8687-003	Lab Control Sample	ok	ok	
S107136-04			8687-004	Method Blank		U	
S107136-05			8687-005	Duplicate (S107136-01)		-	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 7281-132			2σ prep error 7.0 %		Reference Lab Notebook No. 7281 pg.132											
S107136-01			IUG1929-03		2.00					896			14	08/04/11	08/04	MB,06,00
S107136-02			IUG1929-04 (TRIP-BLANK)		2.00					1031			15	08/04/11	08/05	01,02,00
S107136-03			Lab Control Sample		2.00					1032				08/04/11	08/05	01,03,00
S107136-04			Method Blank		2.00					1032				08/04/11	08/05	01,04,00
S107136-05			Duplicate (S107136-01)		2.00					1021			15	08/04/11	08/05	MB,05,00
Nominal values and limits from method				6.00	2.00					400			180			

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

Test U T Matrix WATER
SDG 8687
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Uranium, Total
Preparation batch 7281-132					
S107136-01			8687-001	IUG1929-03	0.356 J
S107136-02			8687-002	IUG1929-04 (TRIP-BLANK)	U
S107136-03			8687-003	Lab Control Sample	ok
S107136-04			8687-004	Method Blank	U
S107136-05			8687-005	Duplicate (S107136-01)	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 7281-132			2σ prep error		Reference Lab Notebook No. 7281 pg.132											
S107136-01			IUG1929-03	0.023	0.0200								13	08/03/11	08/03	KPA-001
S107136-02			IUG1929-04 (TRIP-BLANK)	0.023	0.0200								13	08/03/11	08/03	KPA-001
S107136-03			Lab Control Sample	0.233	0.0200									08/03/11	08/03	KPA-001
S107136-04			Method Blank	0.023	0.0200									08/03/11	08/03	KPA-001
S107136-05			Duplicate (S107136-01)	0.023	0.0200								13	08/03/11	08/03	KPA-001
Nominal values and limits from method				1.00	0.0200								180			

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 0.065 ± 0.188
YIELD _____ ± _____

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

Test H Matrix WATER
SDG 8687
Contact N. Joseph Verville

LAB METHOD SUMMARY

TRITIUM IN WATER
LIQUID SCINTILLATION COUNTING

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium
Preparation batch 7281-132					
S107136-01			8687-001	IUG1929-03	U
S107136-03			8687-003	Lab Control Sample	ok
S107136-04			8687-004	Method Blank	U
S107136-05			8687-005	Duplicate (S107136-01)	- 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 7281-132			2σ prep error 10.0 %	Reference Lab Notebook No. 7281 pg.132												
S107136-01			IUG1929-03	159	0.0100			100		150			21	08/10/11	08/11	LSC-005
S107136-03			Lab Control Sample	158	0.100			10		150				08/10/11	08/11	LSC-005
S107136-04			Method Blank	157	0.100			10		150				08/10/11	08/11	LSC-005
S107136-05			Duplicate (S107136-01)	159	0.0100			100		150			21	08/10/11	08/11	LSC-005
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 FOR 4 SAMPLES
MDA 158 ± 1.91
YIELD 55 ± 104

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

EBERLINE ANALYTICAL

SDG 8687

LAB METHOD SUMMARY

RADIUM-226 IN WATER

RADON COUNTING

Test RA Matrix WATER
SDG 8687
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1929

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226	
Preparation batch 7281-132						
S107136-01			8687-001	IUG1929-03	U	
S107136-02			8687-002	IUG1929-04 (TRIP-BLANK)	U	
S107136-03			8687-003	Lab Control Sample	ok	
S107136-04			8687-004	Method Blank	U	
S107136-05			8687-005	Duplicate (S107136-01)	-	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 7281-132			2σ prep error 16.4 %	Reference Lab Notebook No. 7281 pg.132												
S107136-01			IUG1929-03	0.480	0.100			100		116			19	08/09/11	08/09	RN-012
S107136-02			IUG1929-04 (TRIP-BLANK)	0.509	0.100			100		116			19	08/09/11	08/09	RN-013
S107136-03			Lab Control Sample	0.689	0.100			100		116				08/09/11	08/09	RN-009
S107136-04			Method Blank	0.600	0.100			100		116				08/09/11	08/09	RN-016
S107136-05			Duplicate (S107136-01)	0.515	0.100			100		116			19	08/09/11	08/09	RN-014
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 FOR 5 SAMPLES
MDA 0.559 ± 0.171
YIELD 100 ± 0

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

SAMPLE SUMMARY

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

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

The following notes apply to these reports:

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

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

PREPARATION BATCH SUMMARY

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

The following notes apply to this report:

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

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

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

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

  These qualifiers should be reviewed as follows:

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687 Contact N. Joseph Verville	REPORT GUIDE	Client Test America, Inc. Contract IUG1929

WORK SUMMARY

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

The following notes apply to this report:

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

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

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

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

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

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

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-RG
Version	3.06
Report date	08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

DATA SHEET

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

The following notes apply to this report:

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

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

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

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

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

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

The following qualifiers are defined by the DVD system:

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

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 08/17/11

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

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 08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

LAB CONTROL SAMPLE

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

The following notes apply to this report:

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

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 EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

DUPLICATE

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

MATRIX SPIKE

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

The following notes apply to this report:

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

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

MATRIX SPIKE

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1929

METHOD SUMMARY

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

The following notes apply to this report:

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

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

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

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

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 08/17/11

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.

SDG 8687
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1929

METHOD SUMMARY

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/17/11

Subcontract Order - TestAmerica Irvine (IUG1929)

8687

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

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

Analysis	Units	Expires	Comments
Sample ID: IUG1929-03 (Outfall 002 (Comp) - Water)		Sampled: 07/21/11 00:57	
Gamma Spec-O	mg/kg	07/20/12 00:57	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/17/12 00:57	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/17/12 00:57	Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	07/20/12 00:57	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	07/20/12 00:57	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	07/20/12 00:57	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	07/20/12 00:57	Out St Louis, Boeing permit, DO NOT FILTER!
Containers Supplied:			
2.5 gal Poly (T)	500 mL Amber (U)		
Sample ID: IUG1929-04 (Trip Blank - Water)		Sampled: 07/22/11 12:20	
Gamma Spec-O	mg/kg	07/21/12 12:20	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/18/12 12:20	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/18/12 12:20	Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	07/21/12 12:20	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	07/21/12 12:20	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	07/21/12 12:20	Out St Louis, Boeing permit, DO NOT FILTER!
Containers Supplied:			
2.5 gal Poly (A)			

Released By	Date/Time	Received By	Date/Time
	7/22/11	Fed-EX	7/22/11
Released By	Date/Time	Received By	Date/Time
			07/23/11 1000

SUBCONTRACT ORDER

TestAmerica Irvine

IUG1929

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services
2030 Wright Avenue
Richmond, CA 94804
Phone :(510) 235-2633
Fax: (510) 235-0438

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: IUG1929-03	**Water**	**Sampled: 07/21/11 00:57**		
Uranium, Combined-O	08/03/11 12:00	07/20/12 00:57		Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	08/03/11 12:00	07/20/12 00:57		Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	08/03/11 12:00	07/20/12 00:57		Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	08/03/11 12:00	07/20/12 00:57		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	08/03/11 12:00	01/17/12 00:57		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Alpha-O	08/03/11 12:00	01/17/12 00:57		Out St Louis, Boeing permit, DO NOT FILTER!
Gamma Spec-O	08/03/11 12:00	07/20/12 00:57		Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Containers Supplied:				
2.5 gal Poly (T)	500 mL Amber (U)			
Sample ID: IUG1929-04	**Water**	**Sampled: 07/22/11 12:20**		
Uranium, Combined-O	08/03/11 12:00	07/21/12 12:20		Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	08/03/11 12:00	07/21/12 12:20		Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	08/03/11 12:00	07/21/12 12:20		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	08/03/11 12:00	01/18/12 12:20		Out St Louis, Boeing permit, DO NOT FILTER!
Gross Alpha-O	08/03/11 12:00	01/18/12 12:20		Out St Louis, Boeing permit, DO NOT FILTER!
Gamma Spec-O	08/03/11 12:00	07/21/12 12:20		Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Containers Supplied:				
2.5 gal Poly (A)				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 07/25/11 1000 CoC No. 1061929

Container I.D. No. GE CHEST Requested TAT (Days) STD P.O. Received Yes [ ] No [ ]

INSPECTION

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

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by _____ Date: 07/25/11 Time: 0815

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
All samples	160						

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. 100487 Calibration date 24 SEP 10

APPENDIX G

Section 3

Outfall 018 – July 19 & 20, 2011

MEC^X Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUG1765

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:	IUG1765
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	2
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 018 (Grab)	IUG1765-01	N/A	Water	7/19/2011 10:00:00 AM	120.1
Outfall 018	IUG1765-03	N/A	Water	7/20/2011 9:42:00 AM	180.1, 245.1, 245.1 (Diss), 314.0, 1613B, 900.0, 901.1, 903.1, 904, 905, 906, ASTM D5174

II. Sample Management

No anomalies were observed regarding sample management. The receipt temperature was not noted by Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The remaining samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine and Eberline, no custody seals were required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin
Date Reviewed: August 26, 2011

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

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

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

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

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

- Calibration: Calibration criteria were met.

    - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤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.

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

- Blanks: The method blank had detects between the EDL and the RL for 1,2,3,4,6,7,8-HpCDD, total HpCDD, OCDD and OCDF. Although OCDF was reported as an EMPC, the reviewer considered it appropriate to use the method blank result to qualify the sample result. The sample result for total HpCDD was qualified as estimated, "J," as only a portion of the total was considered method blank contamination. Sample results for the

remaining blank contaminants below the reporting limit were qualified as nondetected, "U," at the level of contamination.

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

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

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

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

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

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

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

B. EPA METHODS 245.1—Mercury

Reviewed By: P. Meeks
Date Reviewed: August 25, 2011

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

- Holding Times: The analytical holding time, 28 days for mercury, was met.

- Tuning: Not applicable to this analysis.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no applicable detects.

- Interference Check Samples: Not applicable to this analysis.

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

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

- Internal Standards Performance: Not applicable to these analyses.

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

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

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

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

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: August 30, 2011

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. The remaining aliquots were prepared within the five-day analytical holding time for unpreserved samples.

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

  The gross alpha detector efficiency was less than 20%; therefore, nondetected gross alpha in the sample was qualified as estimated, "UJ." The remaining detector efficiencies were ≥20%. The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- Blanks: There were no analytes detected in the method blanks.

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

- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG for all analytes. The RPDs were within the laboratory-established control limits.

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

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

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

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

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

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: August 25, 2011

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

- Holding Times: Analytical holding times were met.

- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥0.995. All initial and continuing calibration recoveries were within 90-110%. Perchlorate IPC and IPC-MA recoveries were within the method-established control limits.

- Blanks: Method blanks and CCBs had no detects.

- Blank Spikes and Laboratory Control Samples: The recoveries were within method or laboratory-established QC limits.

- Laboratory Duplicates: A laboratory duplicate analyses were performed on the sample in this SDG for turbidity. The RPD was within the laboratory-established control limit.

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

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

  Due to initial calibration weighting, the reviewer was not able to exactly calculate the 4 ppb perchlorate standard.

- 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 IUG1765

Analysis Method 900

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	0.276	3	1.18	pCi/L	U	UJ	C
Gross Beta	12587472	5.2	4	1.06	pCi/L			

Analysis Method 901.1

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	2.06	pCi/L	U	U	
Potassium-40	13966002	ND	25	66.2	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.058	1	0.564	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0	1	0.457	pCi/L	U	U	

Analysis Method 905

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.316	2	0.873	pCi/L	U	U	

Analysis Method 906

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	12.1	500	141	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	0.025	1	0.023	pCi/L	Jb	J	DNQ

Analysis Method EPA 120.1

Sample Name Outfall 018 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1765-01 **Sample Date:** 7/19/2011 10:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	570	1.0	1.0	umhos/c			

Analysis Method EPA 180.1

Sample Name Outfall 018 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	0.090	1.0	0.040	NTU	Ja	J	DNQ

Analysis Method EPA 245.1

Sample Name Outfall 018 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

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

Analysis Method EPA 245.1-Diss

Sample Name Outfall 018 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

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

Analysis Method EPA 314.0

Sample Name Outfall 018 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

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

Analysis Method EPA-5 1613B

Sample Name Outfall 018 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUG1765-03 **Sample Date:** 7/20/2011 9:42:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.0000007	ug/L	J, B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000006	ug/L	J, Q	UJ	*III
1,2,3,4,7,8,9-HpCDF	55673-89-7	0.000001	0.00005	0.0000008	ug/L	J	J	DNQ
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000009	ug/L	J, Q	UJ	*III
1,2,3,4,7,8-HxCDF	70648-26-9	0.000001	0.00005	0.0000005	ug/L	J	J	DNQ
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000008	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDF	57117-44-9	0.000002	0.00005	0.0000005	ug/L	J	J	DNQ
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000008	ug/L	J, Q	UJ	*III
1,2,3,7,8,9-HxCDF	72918-21-9	0.000001	0.00005	0.0000005	ug/L	J	J	DNQ
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000015	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000006	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000004	ug/L	J, Q	UJ	*III
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000007	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000008	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000006	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000007	ug/L	J, B	U	B
OCDF	39001-02-0	ND	0.0001	0.0000008	ug/L	J, B	U	B
Total HpCDD	37871-00-4	0.000007	0.00005	0.0000007	ug/L	B	J	B
Total HpCDF	38998-75-3	0.000004	0.00005	0.0000007	ug/L			
Total HxCDD	34465-46-8	0.000004	0.00005	0.0000008	ug/L			
Total HxCDF	55684-94-1	0.000007	0.00005	0.0000004	ug/L			
Total PeCDD	36088-22-9	ND	0.00005	0.0000015	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000006	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000008	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000006	ug/L		U	

APPENDIX G

Section 4

Outfall 018 – July 19, 20, & 21, 2011

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Quarterly Outfall 018

Sampled: 07/19/11-07/21/11
Received: 07/19/11
Issued: 08/12/11 15:42

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

SAMPLE CROSS REFERENCE

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals
Sample: 1
Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

LABORATORY ID	CLIENT ID	MATRIX
IUG1765-01	Outfall 018 (Grab)	Water
IUG1765-02	Trip blanks	Water
IUG1765-03	Outfall 018 (Composite)	Water
IUG1765-04	TRIP BLANK	Water

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

Reviewed By:

Debby Wilson

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-01 (Outfall 018 (Grab) - Water)					**Sampled: 07/19/11**				
Reporting Units: ug/l									
Benzene	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Carbon tetrachloride	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Chloroform	EPA 624	11G2803	0.33	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethane	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
1,2-Dichloroethane	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethene	EPA 624	11G2803	0.42	0.50	ND	1	NA	07/24/11	
Ethylbenzene	EPA 624	11G2803	0.25	0.50	ND	1	NA	07/24/11	
Tetrachloroethene	EPA 624	11G2803	0.32	0.50	ND	1	NA	07/24/11	
Toluene	EPA 624	11G2803	0.36	0.50	ND	1	NA	07/24/11	
1,1,1-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
1,1,2-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
Trichloroethene	EPA 624	11G2803	0.26	0.50	ND	1	NA	07/24/11	
Trichlorofluoromethane	EPA 624	11G2803	0.34	0.50	ND	1	NA	07/24/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11G2803	0.50	5.0	ND	1	NA	07/24/11	
Vinyl chloride	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
Xylenes, Total	EPA 624	11G2803	0.90	1.5	ND	1	NA	07/24/11	
Surrogate: 4-Bromofluorobenzene (80-120%)					*92 %*				
Surrogate: Dibromofluoromethane (80-120%)					*106 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				
Sample ID: IUG1765-02 (Trip blanks - Water)					**Sampled: 07/19/11**				
Reporting Units: ug/l									
Benzene	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Carbon tetrachloride	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
Chloroform	EPA 624	11G2803	0.33	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethane	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
1,2-Dichloroethane	EPA 624	11G2803	0.28	0.50	ND	1	NA	07/24/11	
1,1-Dichloroethene	EPA 624	11G2803	0.42	0.50	ND	1	NA	07/24/11	
Ethylbenzene	EPA 624	11G2803	0.25	0.50	ND	1	NA	07/24/11	
Tetrachloroethene	EPA 624	11G2803	0.32	0.50	ND	1	NA	07/24/11	
Toluene	EPA 624	11G2803	0.36	0.50	ND	1	NA	07/24/11	
1,1,1-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
1,1,2-Trichloroethane	EPA 624	11G2803	0.30	0.50	ND	1	NA	07/24/11	
Trichloroethene	EPA 624	11G2803	0.26	0.50	ND	1	NA	07/24/11	
Trichlorofluoromethane	EPA 624	11G2803	0.34	0.50	ND	1	NA	07/24/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11G2803	0.50	5.0	ND	1	NA	07/24/11	
Vinyl chloride	EPA 624	11G2803	0.40	0.50	ND	1	NA	07/24/11	
Xylenes, Total	EPA 624	11G2803	0.90	1.5	ND	1	NA	07/24/11	
Surrogate: 4-Bromofluorobenzene (80-120%)					*89 %*				
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	11G2798	1.60	4.72	ND	0.943	JV	07/24/11	
2,4-Dinitrotoluene	EPA 625	11G2798	0.189	4.72	ND	0.943	JV	07/24/11	
N-Nitrosodimethylamine	EPA 625	11G2798	0.0943	4.72	ND	0.943	JV	07/24/11	
Pentachlorophenol	EPA 625	11G2798	0.0943	4.72	ND	0.943	JV	07/24/11	
2,4,6-Trichlorophenol	EPA 625	11G2798	0.0943	5.66	ND	0.943	JV	07/24/11	
Surrogate: 2,4,6-Tribromophenol (40-120%)					*108 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*95 %*				
Surrogate: 2-Fluorophenol (30-120%)					*80 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*85 %*				
Surrogate: Phenol-d6 (35-120%)					*85 %*				
Surrogate: Terphenyl-d14 (50-125%)					*100 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water) - cont.					**Sampled: 07/20/11**				
Reporting Units: ug/l									
alpha-BHC	EPA 608	11G3054	0.0024	0.0094	ND	0.943	DXD	07/27/11	
Surrogate: Decachlorobiphenyl (45-120%)					*74 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*76 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-01 (Outfall 018 (Grab) - Water)					**Sampled: 07/19/11**				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11H0047	1.3	4.7	ND	1	DA	08/01/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: mg/l									
Iron	EPA 200.7	11G3286	0.015	0.040	ND	1	DP	07/27/11	
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/l									
Mercury	EPA 245.1	11G3104	0.10	0.20	ND	1	DB	07/28/11	
Cadmium	EPA 200.8	11G3300	0.10	1.0	ND	1	RDC	07/28/11	
Zinc	EPA 200.7	11G3286	6.00	20.0	ND	1	DP	07/27/11	
Copper	EPA 200.8	11G3300	0.500	2.00	**0.665**	1	RDC	07/28/11	Ja
Lead	EPA 200.8	11G3300	0.20	1.0	ND	1	RDC	07/28/11	
Selenium	EPA 200.8	11G3300	0.50	2.0	ND	1	RDC	07/28/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water) - cont.					**Sampled: 07/20/11**				
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	11G3301	0.015	0.040	**0.038**	1	DP	07/27/11	Ja
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11G2548	0.10	0.20	ND	1	DB	07/22/11	
Cadmium	EPA 200.8-Diss	11G3302	0.10	1.0	ND	1	RDC	07/28/11	
Zinc	EPA 200.7-Diss	11G3301	6.00	20.0	ND	1	DP	07/27/11	
Copper	EPA 200.8-Diss	11G3302	0.500	2.00	**1.08**	1	RDC	07/28/11	Ja
Lead	EPA 200.8-Diss	11G3302	0.20	1.0	ND	1	RDC	07/28/11	
Selenium	EPA 200.8-Diss	11G3302	0.50	2.0	ND	1	RDC	07/28/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water) - cont.					**Sampled: 07/20/11**				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11G2677	0.500	0.500	ND	1	NCP	07/22/11	
Biochemical Oxygen Demand	SM5210B	11G2555	0.50	2.0	ND	1	XL	07/26/11	
Chloride	EPA 300.0	11G2288	6.0	10	**42**	20	NN	07/21/11	
Nitrate-N	EPA 300.0	11G2288	0.060	0.11	**0.089**	1	NN	07/21/11	Ja
Nitrite-N	EPA 300.0	11G2288	0.090	0.15	ND	1	NN	07/21/11	
Nitrate/Nitrite-N	EPA 300.0	11G2288	0.15	0.26	ND	1	NN	07/21/11	
Sulfate	EPA 300.0	11G2288	6.0	10	**140**	20	NN	07/21/11	
Surfactants (MBAS)	SM5540-C	11G2552	0.050	0.10	**0.057**	1	SLA	07/21/11	Ja
Total Dissolved Solids	SM2540C	11G2388	1.0	10	**400**	1	MC	07/21/11	
Total Suspended Solids	SM 2540D	11G2941	1.0	10	ND	1	MC	07/25/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-01 (Outfall 018 (Grab) - Water)					**Sampled: 07/19/11**				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	11G2262	0.10	0.10	ND	1	RRZ	07/20/11	
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: NTU									
Turbidity	EPA 180.1	11G2462	0.040	1.0	**0.090**	1	RRZ	07/21/11	Ja
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11G2433	0.90	4.0	ND	1	mn	07/21/11	
Total Cyanide	SM4500CN-E	11H0106	2.2	5.0	ND	1	SLA	08/01/11	
Sample ID: IUG1765-01 (Outfall 018 (Grab) - Water)					**Sampled: 07/19/11**				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	EPA 120.1	11G2214	1.0	1.0	**570**	1	MC	07/20/11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Gross Alpha	900	8686	1.18	3	**0.276**	1	DVP	08/06/11	U
Gross Beta	900	8686	1.06	4	**5.2**	1	DVP	08/06/11	
Sample ID: IUG1765-04 (TRIP BLANK - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Gross Alpha	900	8686	0.323	3	**0.015**	1	DVP	08/08/11	U
Gross Beta	900	8686	0.82	4	-0.404	1	DVP	08/08/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Cesium-137	901.1	8686	2.06	20	ND	1	LS	08/03/11	U
Potassium-40	901.1	8686	66.2	25	ND	1	LS	08/03/11	U
Sample ID: IUG1765-04 (TRIP BLANK - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Cesium-137	901.1	8686	0.929	20	ND	1	LS	08/04/11	U
Potassium-40	901.1	8686	15.5	25	ND	1	LS	08/04/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Radium-226	903.1	8686	0.564	1	**0.058**	1	TM	08/08/11	U
Sample ID: IUG1765-04 (TRIP BLANK - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Radium-226	903.1	8686	0.59	1	**0.098**	1	TM	08/08/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Radium-228	904	8686	0.457	1	ND	1	TSC	08/08/11	U
Sample ID: IUG1765-04 (TRIP BLANK - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Radium-228	904	8686	0.443	1	-0.124	1	TSC	08/08/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Strontium-90	905	8686	0.873	2	**0.316**	1	TSC	08/03/11	U
Sample ID: IUG1765-04 (TRIP BLANK - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Strontium-90	905	8686	0.842	2	**0.218**	1	TSC	08/03/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Tritium	906	8686	141	500	**12.1**	1	WL	08/06/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

ASTM-D5174

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water) - cont.					**Sampled: 07/20/11**				
Reporting Units: pCi/L									
Uranium, Total	D5174	8686	0.023	1	**0.025**	1	CSS	08/03/11	Jb
Sample ID: IUG1765-04 (TRIP BLANK - Water)					**Sampled: 07/21/11**				
Reporting Units: pCi/L									
Uranium, Total	D5174	8686	0.023	1	ND	1	CSS	08/03/11	U

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)					**Sampled: 07/20/11**				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1206087	0.00000078	0.00005	**0.0000044**	0.95	SK	07/29/11	J, B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1206087	0.00000062	0.00005	**0.0000026**	0.95	SK	07/29/11	J, Q
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1206087	0.00000082	0.00005	**0.0000019**	0.95	SK	07/29/11	J
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1206087	0.00000097	0.00005	**0.0000016**	0.95	SK	07/29/11	J, Q
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1206087	0.0000005	0.00005	**0.0000017**	0.95	SK	07/29/11	J
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1206087	0.00000085	0.00005	**0.0000015**	0.95	SK	07/29/11	J, Q
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1206087	0.00000052	0.00005	**0.000002**	0.95	SK	07/29/11	J
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1206087	0.00000087	0.00005	**0.0000017**	0.95	SK	07/29/11	J, Q
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1206087	0.00000052	0.00005	**0.0000016**	0.95	SK	07/29/11	J
1,2,3,7,8-PeCDD	EPA-5 1613B	1206087	0.0000015	0.00005	ND	0.95	SK	07/29/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1206087	0.00000064	0.00005	ND	0.95	SK	07/29/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1206087	0.00000044	0.00005	**0.0000013**	0.95	SK	07/29/11	J, Q
2,3,4,7,8-PeCDF	EPA-5 1613B	1206087	0.0000007	0.00005	ND	0.95	SK	07/29/11	
2,3,7,8-TCDD	EPA-5 1613B	1206087	0.00000084	0.00001	ND	0.95	SK	07/29/11	
2,3,7,8-TCDF	EPA-5 1613B	1206087	0.00000069	0.00001	ND	0.95	SK	07/29/11	
OCDD	EPA-5 1613B	1206087	0.00000071	0.0001	**0.000027**	0.95	SK	07/29/11	J, B
OCDF	EPA-5 1613B	1206087	0.00000082	0.0001	**0.0000044**	0.95	SK	07/29/11	J, B
Total HpCDD	EPA-5 1613B	1206087	0.00000078	0.00005	**0.0000074**	0.95	SK	07/29/11	B
Total HpCDF	EPA-5 1613B	1206087	0.00000071	0.00005	**0.0000045**	0.95	SK	07/29/11	
Total HxCDD	EPA-5 1613B	1206087	0.00000089	0.00005	**0.0000048**	0.95	SK	07/29/11	
Total HxCDF	EPA-5 1613B	1206087	0.00000049	0.00005	**0.0000072**	0.95	SK	07/29/11	
Total PeCDD	EPA-5 1613B	1206087	0.0000015	0.00005	ND	0.95	SK	07/29/11	
Total PeCDF	EPA-5 1613B	1206087	0.00000064	0.00005	ND	0.95	SK	07/29/11	
Total TCDD	EPA-5 1613B	1206087	0.00000084	0.00001	ND	0.95	SK	07/29/11	
Total TCDF	EPA-5 1613B	1206087	0.00000069	0.00001	ND	0.95	SK	07/29/11	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*48 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*51 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*51 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*45 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*52 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*55 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*48 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*51 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*53 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*50 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*51 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*51 %*				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*47 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*46 %*				
Surrogate: 13C-OCDD (17-157%)					*53 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*94 %*				

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 018 (Grab) (IUG1765-01) - Water					
SM2540F	2	07/19/2011 10:00	07/19/2011 17:55	07/20/2011 08:35	07/20/2011 08:35
Sample ID: Outfall 018 (Composite) (IUG1765-03) - Water					
EPA 180.1	2	07/20/2011 09:42	07/19/2011 17:55	07/21/2011 10:10	07/21/2011 10:10
EPA 300.0	2	07/20/2011 09:42	07/19/2011 17:55	07/20/2011 21:00	07/21/2011 01:13
Filtration	1	07/20/2011 09:42	07/19/2011 17:55	07/21/2011 15:06	07/21/2011 15:08
SM5210B	2	07/20/2011 09:42	07/19/2011 17:55	07/21/2011 19:40	07/26/2011 09:15
SM5540-C	2	07/20/2011 09:42	07/19/2011 17:55	07/21/2011 19:06	07/21/2011 21:38

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2803 Extracted: 07/24/11												
Blank Analyzed: 07/24/2011 (11G2803-BLK1)												
Benzene	ND	0.50	0.28	ug/l	NA							
Carbon tetrachloride	ND	0.50	0.28	ug/l	NA							
Chloroform	ND	0.50	0.33	ug/l	NA							
1,1-Dichloroethane	ND	0.50	0.40	ug/l	NA							
1,2-Dichloroethane	ND	0.50	0.28	ug/l	NA							
1,1-Dichloroethene	ND	0.50	0.42	ug/l	NA							
Ethylbenzene	ND	0.50	0.25	ug/l	NA							
Tetrachloroethene	ND	0.50	0.32	ug/l	NA							
Toluene	ND	0.50	0.36	ug/l	NA							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l	NA							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l	NA							
Trichloroethene	ND	0.50	0.26	ug/l	NA							
Trichlorofluoromethane	ND	0.50	0.34	ug/l	NA							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l	NA							
Vinyl chloride	ND	0.50	0.40	ug/l	NA							
Xylenes, Total	ND	1.5	0.90	ug/l	NA							
Surrogate: 4-Bromofluorobenzene	*24.4*			*ug/l*	NA	*25.0*		*98*	*80-120*			
Surrogate: Dibromofluoromethane	*24.6*			*ug/l*	NA	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*26.3*			*ug/l*	NA	*25.0*		*105*	*80-120*			
LCS Analyzed: 07/24/2011 (11G2803-BS1)												
Benzene	22.8	0.50	0.28	ug/l	NA	25.0		91	70-120			
Carbon tetrachloride	25.3	0.50	0.28	ug/l	NA	25.0		101	65-140			
Chloroform	23.6	0.50	0.33	ug/l	NA	25.0		94	70-130			
1,1-Dichloroethane	23.5	0.50	0.40	ug/l	NA	25.0		94	70-125			
1,2-Dichloroethane	24.5	0.50	0.28	ug/l	NA	25.0		98	60-140			
1,1-Dichloroethene	21.6	0.50	0.42	ug/l	NA	25.0		86	70-125			
Ethylbenzene	26.0	0.50	0.25	ug/l	NA	25.0		104	75-125			
Tetrachloroethene	25.4	0.50	0.32	ug/l	NA	25.0		102	70-125			
Toluene	24.2	0.50	0.36	ug/l	NA	25.0		97	70-120			
1,1,1-Trichloroethane	24.0	0.50	0.30	ug/l	NA	25.0		96	65-135			
1,1,2-Trichloroethane	25.1	0.50	0.30	ug/l	NA	25.0		100	70-125			
Trichloroethene	25.1	0.50	0.26	ug/l	NA	25.0		100	70-125			
Trichlorofluoromethane	23.8	0.50	0.34	ug/l	NA	25.0		95	65-145			
Vinyl chloride	17.5	0.50	0.40	ug/l	NA	25.0		70	55-135			
Xylenes, Total	80.8	1.5	0.90	ug/l	NA	75.0		108	70-125			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2803 Extracted: 07/24/11												
LCS Analyzed: 07/24/2011 (11G2803-BS1)												
Surrogate: 4-Bromofluorobenzene	*25.3*			*ug/l*	NA	*25.0*		*101*	*80-120*			
Surrogate: Dibromofluoromethane	*25.8*			*ug/l*	NA	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.6*			*ug/l*	NA	*25.0*		*106*	*80-120*			
Matrix Spike Analyzed: 07/24/2011 (11G2803-MS1)						**Source: IUG1804-01**						
Benzene	23.3	0.50	0.28	ug/l	NA	25.0	ND	93	65-125			
Carbon tetrachloride	26.5	0.50	0.28	ug/l	NA	25.0	ND	106	65-140			
Chloroform	23.3	0.50	0.33	ug/l	NA	25.0	ND	93	65-135			
1,1-Dichloroethane	23.7	0.50	0.40	ug/l	NA	25.0	ND	95	65-130			
1,2-Dichloroethane	23.4	0.50	0.28	ug/l	NA	25.0	ND	94	60-140			
1,1-Dichloroethene	22.5	0.50	0.42	ug/l	NA	25.0	ND	90	60-130			
Ethylbenzene	27.0	0.50	0.25	ug/l	NA	25.0	ND	108	65-130			
Tetrachloroethene	26.5	0.50	0.32	ug/l	NA	25.0	ND	106	65-130			
Toluene	24.5	0.50	0.36	ug/l	NA	25.0	ND	98	70-125			
1,1,1-Trichloroethane	25.0	0.50	0.30	ug/l	NA	25.0	ND	100	65-140			
1,1,2-Trichloroethane	23.7	0.50	0.30	ug/l	NA	25.0	ND	95	65-130			
Trichloroethene	25.9	0.50	0.26	ug/l	NA	25.0	ND	103	65-125			
Trichlorofluoromethane	24.6	0.50	0.34	ug/l	NA	25.0	ND	98	60-145			
Vinyl chloride	19.0	0.50	0.40	ug/l	NA	25.0	ND	76	45-140			
Xylenes, Total	82.5	1.5	0.90	ug/l	NA	75.0	ND	110	60-130			
Surrogate: 4-Bromofluorobenzene	*25.4*			*ug/l*	NA	*25.0*		*102*	*80-120*			
Surrogate: Dibromofluoromethane	*25.4*			*ug/l*	NA	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*26.4*			*ug/l*	NA	*25.0*		*105*	*80-120*			
Matrix Spike Dup Analyzed: 07/24/2011 (11G2803-MSD1)						**Source: IUG1804-01**						
Benzene	22.8	0.50	0.28	ug/l	NA	25.0	ND	91	65-125	2	20	
Carbon tetrachloride	25.0	0.50	0.28	ug/l	NA	25.0	ND	100	65-140	6	25	
Chloroform	23.5	0.50	0.33	ug/l	NA	25.0	ND	94	65-135	0.8	20	
1,1-Dichloroethane	23.3	0.50	0.40	ug/l	NA	25.0	ND	93	65-130	1	20	
1,2-Dichloroethane	23.8	0.50	0.28	ug/l	NA	25.0	ND	95	60-140	2	20	
1,1-Dichloroethene	21.2	0.50	0.42	ug/l	NA	25.0	ND	85	60-130	6	20	
Ethylbenzene	25.5	0.50	0.25	ug/l	NA	25.0	ND	102	65-130	6	20	
Tetrachloroethene	25.2	0.50	0.32	ug/l	NA	25.0	ND	101	65-130	5	20	
Toluene	24.0	0.50	0.36	ug/l	NA	25.0	ND	96	70-125	2	20	
1,1,1-Trichloroethane	24.1	0.50	0.30	ug/l	NA	25.0	ND	97	65-140	4	20	
1,1,2-Trichloroethane	24.6	0.50	0.30	ug/l	NA	25.0	ND	98	65-130	4	25	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2803 Extracted: 07/24/11												
Matrix Spike Dup Analyzed: 07/24/2011 (11G2803-MSD1)							**Source: IUG1804-01**					
Trichloroethene	25.2	0.50	0.26	ug/l	NA	25.0	ND	101	65-125	3	20	
Trichlorofluoromethane	23.3	0.50	0.34	ug/l	NA	25.0	ND	93	60-145	5	25	
Vinyl chloride	18.2	0.50	0.40	ug/l	NA	25.0	ND	73	45-140	4	30	
Xylenes, Total	78.4	1.5	0.90	ug/l	NA	75.0	ND	104	60-130	5	20	
Surrogate: 4-Bromofluorobenzene	*25.5*			*ug/l*	NA	*25.0*		*102*	*80-120*			
Surrogate: Dibromofluoromethane	*26.1*			*ug/l*	NA	*25.0*		*104*	*80-120*			
Surrogate: Toluene-d8	*26.5*			*ug/l*	NA	*25.0*		*106*	*80-120*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2798 Extracted: 07/24/11												
Blank Analyzed: 07/24/2011 (11G2798-BLK1)												
Bis(2-ethylhexyl)phthalate	ND	5.00	1.70	ug/l	JV							
2,4-Dinitrotoluene	ND	5.00	0.200	ug/l	JV							
N-Nitrosodimethylamine	ND	5.00	0.100	ug/l	JV							
Pentachlorophenol	ND	5.00	0.100	ug/l	JV							
2,4,6-Trichlorophenol	ND	6.00	0.100	ug/l	JV							
Surrogate: 2,4,6-Tribromophenol	*19.9*			*ug/l*	JV	*20.0*		*100*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*9.86*			*ug/l*	JV	*10.0*		*99*	*50-120*			
Surrogate: 2-Fluorophenol	*16.0*			*ug/l*	JV	*20.0*		*80*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.50*			*ug/l*	JV	*10.0*		*85*	*45-120*			
Surrogate: Phenol-d6	*17.2*			*ug/l*	JV	*20.0*		*86*	*35-120*			
Surrogate: Terphenyl-d14	*10.3*			*ug/l*	JV	*10.0*		*103*	*50-125*			
LCS Analyzed: 07/24/2011 (11G2798-BS1)												**MNR1**
Bis(2-ethylhexyl)phthalate	11.1	5.00	1.70	ug/l	JV	10.0		111	65-130			
2,4-Dinitrotoluene	11.2	5.00	0.200	ug/l	JV	10.0		112	65-120			
N-Nitrosodimethylamine	8.62	5.00	0.100	ug/l	JV	10.0		86	45-120			
Pentachlorophenol	10.6	5.00	0.100	ug/l	JV	10.0		106	24-121			
2,4,6-Trichlorophenol	9.60	6.00	0.100	ug/l	JV	10.0		96	55-120			
Surrogate: 2,4,6-Tribromophenol	*20.8*			*ug/l*	JV	*20.0*		*104*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.34*			*ug/l*	JV	*10.0*		*83*	*50-120*			
Surrogate: 2-Fluorophenol	*15.5*			*ug/l*	JV	*20.0*		*77*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.90*			*ug/l*	JV	*10.0*		*89*	*45-120*			
Surrogate: Phenol-d6	*16.7*			*ug/l*	JV	*20.0*		*83*	*35-120*			
Surrogate: Terphenyl-d14	*10.1*			*ug/l*	JV	*10.0*		*101*	*50-125*			
LCS Dup Analyzed: 07/24/2011 (11G2798-BSD1)												
Bis(2-ethylhexyl)phthalate	11.1	5.00	1.70	ug/l	JV	10.0		111	65-130	0.4	20	
2,4-Dinitrotoluene	11.9	5.00	0.200	ug/l	JV	10.0		119	65-120	6	20	
N-Nitrosodimethylamine	8.86	5.00	0.100	ug/l	JV	10.0		89	45-120	3	20	
Pentachlorophenol	10.7	5.00	0.100	ug/l	JV	10.0		107	24-121	0.9	25	
2,4,6-Trichlorophenol	9.78	6.00	0.100	ug/l	JV	10.0		98	55-120	2	30	
Surrogate: 2,4,6-Tribromophenol	*21.0*			*ug/l*	JV	*20.0*		*105*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*7.90*			*ug/l*	JV	*10.0*		*79*	*50-120*			
Surrogate: 2-Fluorophenol	*16.3*			*ug/l*	JV	*20.0*		*81*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.98*			*ug/l*	JV	*10.0*		*90*	*45-120*			
Surrogate: Phenol-d6	*17.8*			*ug/l*	JV	*20.0*		*89*	*35-120*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2798 Extracted: 07/24/11												
LCS Dup Analyzed: 07/24/2011 (11G2798-BSD1)												
Surrogate: Terphenyl-d14	*10.2*			*ug/l*	JV	*10.0*		*102*	*50-125*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3054 Extracted: 07/26/11												
Blank Analyzed: 07/27/2011 (11G3054-BLK1)												
alpha-BHC	ND	0.010	0.0025	ug/l	DXD							
Surrogate: Decachlorobiphenyl	*0.408*			*ug/l*	DXD	*0.500*		*82*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.399*			*ug/l*	DXD	*0.500*		*80*	*35-115*			
LCS Analyzed: 07/27/2011 (11G3054-BS1)												**MNR1**
alpha-BHC	0.432	0.010	0.0025	ug/l	DXD	0.500		86	45-115			
Surrogate: Decachlorobiphenyl	*0.412*			*ug/l*	DXD	*0.500*		*82*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.405*			*ug/l*	DXD	*0.500*		*81*	*35-115*			
LCS Dup Analyzed: 07/27/2011 (11G3054-BSD1)												
alpha-BHC	0.434	0.010	0.0025	ug/l	DXD	0.500		87	45-115	0.3	30	
Surrogate: Decachlorobiphenyl	*0.412*			*ug/l*	DXD	*0.500*		*82*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.408*			*ug/l*	DXD	*0.500*		*82*	*35-115*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11H0047 Extracted: 08/01/11												
Blank Analyzed: 08/01/2011 (11H0047-BLK1)												
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l	DA							
LCS Analyzed: 08/01/2011 (11H0047-BS1)												**MNR1**
Hexane Extractable Material (Oil & Grease)	18.9	5.0	1.4	mg/l	DA	20.0		94	78-114			
LCS Dup Analyzed: 08/01/2011 (11H0047-BSD1)												
Hexane Extractable Material (Oil & Grease)	19.3	5.0	1.4	mg/l	DA	20.0		96	78-114	2	11	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3104 Extracted: 07/28/11												
Blank Analyzed: 07/28/2011 (11G3104-BLK1)												
Mercury	ND	0.20	0.10	ug/l	DB							
LCS Analyzed: 07/28/2011 (11G3104-BS1)												
Mercury	7.97	0.20	0.10	ug/l	DB	8.00		100	85-115			
Matrix Spike Analyzed: 07/28/2011 (11G3104-MS1)						**Source: IUG2391-01**						
Mercury	7.70	0.20	0.10	ug/l	DB	8.00	ND	96	70-130			
Matrix Spike Dup Analyzed: 07/28/2011 (11G3104-MSD1)						**Source: IUG2391-01**						
Mercury	7.66	0.20	0.10	ug/l	DB	8.00	ND	96	70-130	0.5	20	
Batch: 11G3286 Extracted: 07/27/11												
Blank Analyzed: 07/27/2011 (11G3286-BLK1)												
Iron	ND	0.040	0.015	mg/l	DP							
Zinc	ND	20.0	6.00	ug/l	DP							
LCS Analyzed: 07/27/2011 (11G3286-BS1)												
Iron	0.508	0.040	0.015	mg/l	DP	0.500		102	85-115			
Zinc	525	20.0	6.00	ug/l	DP	500		105	85-115			
Matrix Spike Analyzed: 07/27/2011 (11G3286-MS1)						**Source: IUG2558-01**						
Iron	0.890	0.040	0.015	mg/l	DP	0.500	0.317	115	70-130			
Zinc	578	20.0	6.00	ug/l	DP	500	16.3	112	70-130			
Matrix Spike Dup Analyzed: 07/27/2011 (11G3286-MSD1)						**Source: IUG2558-01**						
Iron	0.846	0.040	0.015	mg/l	DP	0.500	0.317	106	70-130	5	20	
Zinc	576	20.0	6.00	ug/l	DP	500	16.3	112	70-130	0.4	20	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3300 Extracted: 07/27/11												
Blank Analyzed: 07/28/2011 (11G3300-BLK1)												
Cadmium	ND	1.0	0.10	ug/l	RDC							
Copper	ND	2.00	0.500	ug/l	RDC							
Lead	ND	1.0	0.20	ug/l	RDC							
Selenium	0.608	2.0	0.50	ug/l	RDC							*Ja*
LCS Analyzed: 07/28/2011 (11G3300-BS1)												
Cadmium	83.0	1.0	0.10	ug/l	RDC	80.0		104	85-115			
Copper	80.6	2.00	0.500	ug/l	RDC	80.0		101	85-115			
Lead	81.9	1.0	0.20	ug/l	RDC	80.0		102	85-115			
Selenium	84.5	2.0	0.50	ug/l	RDC	80.0		106	85-115			
Matrix Spike Analyzed: 07/28/2011 (11G3300-MS1)						**Source: IUG2555-01**						
Cadmium	81.7	5.0	0.50	ug/l	RDC	80.0	ND	102	70-130			
Copper	83.5	10.0	2.50	ug/l	RDC	80.0	10.2	92	70-130			
Lead	80.2	5.0	1.0	ug/l	RDC	80.0	ND	100	70-130			
Selenium	376	10	2.5	ug/l	RDC	80.0	292	105	70-130			
Matrix Spike Dup Analyzed: 07/28/2011 (11G3300-MSD1)						**Source: IUG2555-01**						
Cadmium	80.8	5.0	0.50	ug/l	RDC	80.0	ND	101	70-130	1	20	
Copper	83.1	10.0	2.50	ug/l	RDC	80.0	10.2	91	70-130	0.5	20	
Lead	78.9	5.0	1.0	ug/l	RDC	80.0	ND	99	70-130	2	20	
Selenium	373	10	2.5	ug/l	RDC	80.0	292	101	70-130	0.9	20	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2548 Extracted: 07/22/11												
Blank Analyzed: 07/22/2011 (11G2548-BLK1)												
Mercury	ND	0.20	0.10	ug/l	DB							
LCS Analyzed: 07/22/2011 (11G2548-BS1)												
Mercury	8.10	0.20	0.10	ug/l	DB	8.00		101	85-115			
Matrix Spike Analyzed: 07/22/2011 (11G2548-MS1)						**Source: IUG1278-01**						
Mercury	8.02	0.20	0.10	ug/l	DB	8.00	ND	100	70-130			
Matrix Spike Dup Analyzed: 07/22/2011 (11G2548-MSD1)						**Source: IUG1278-01**						
Mercury	8.22	0.20	0.10	ug/l	DB	8.00	ND	103	70-130	3	20	
Batch: 11G3301 Extracted: 07/27/11												
Blank Analyzed: 07/27/2011 (11G3301-BLK1)												
Iron	ND	0.040	0.015	mg/l	DP							
Zinc	ND	20.0	6.00	ug/l	DP							
LCS Analyzed: 07/27/2011 (11G3301-BS1)												**MNR1**
Iron	0.502	0.040	0.015	mg/l	DP	0.500		100	85-115			
Zinc	523	20.0	6.00	ug/l	DP	500		105	85-115			
LCS Dup Analyzed: 07/27/2011 (11G3301-BSD1)												
Iron	0.508	0.040	0.015	mg/l	DP	0.500		102	85-115	1	20	
Zinc	522	20.0	6.00	ug/l	DP	500		104	85-115	0.2	20	
Batch: 11G3302 Extracted: 07/27/11												
Blank Analyzed: 07/28/2011 (11G3302-BLK1)												
Cadmium	ND	1.0	0.10	ug/l	RDC							
Copper	ND	2.00	0.500	ug/l	RDC							
Lead	ND	1.0	0.20	ug/l	RDC							
Selenium	0.741	2.0	0.50	ug/l	RDC							*Ja*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G3302 Extracted: 07/27/11												
LCS Analyzed: 07/28/2011 (11G3302-BS1)												**MNR1**
Cadmium	81.2	1.0	0.10	ug/l	RDC	80.0		102	85-115			
Copper	76.1	2.00	0.500	ug/l	RDC	80.0		95	85-115			
Lead	79.6	1.0	0.20	ug/l	RDC	80.0		100	85-115			
Selenium	83.6	2.0	0.50	ug/l	RDC	80.0		105	85-115			
LCS Dup Analyzed: 07/28/2011 (11G3302-BSD1)												
Cadmium	80.0	1.0	0.10	ug/l	RDC	80.0		100	85-115	2	20	
Copper	76.4	2.00	0.500	ug/l	RDC	80.0		95	85-115	0.4	20	
Lead	78.8	1.0	0.20	ug/l	RDC	80.0		98	85-115	1	20	
Selenium	80.0	2.0	0.50	ug/l	RDC	80.0		100	85-115	4	20	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2214 Extracted: 07/20/11												
Blank Analyzed: 07/20/2011 (11G2214-BLK1)												
Specific Conductance	ND	1.0	1.0	µs/cm @	MC							
LCS Analyzed: 07/20/2011 (11G2214-BS1)												
Specific Conductance	1360	1.0	1.0	µs/cm @	MC	1410		97	90-110			
Duplicate Analyzed: 07/20/2011 (11G2214-DUP1)							**Source: IUG1762-05**					
Specific Conductance	553	1.0	1.0	µs/cm @	MC		535			3	5	
Batch: 11G2288 Extracted: 07/20/11												
Blank Analyzed: 07/20/2011 (11G2288-BLK1)												
Chloride	ND	0.50	0.30	mg/l	NN							
Nitrate-N	ND	0.11	0.060	mg/l	NN							
Nitrite-N	ND	0.15	0.090	mg/l	NN							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l	NN							
Sulfate	ND	0.50	0.30	mg/l	NN							
LCS Analyzed: 07/20/2011 (11G2288-BS1)												
Chloride	4.74	0.50	0.30	mg/l	NN	5.00		95	90-110			
Nitrate-N	1.03	0.11	0.060	mg/l	NN	1.13		91	90-110			
Nitrite-N	1.46	0.15	0.090	mg/l	NN	1.52		96	90-110			
Sulfate	9.78	0.50	0.30	mg/l	NN	10.0		98	90-110			
Matrix Spike Analyzed: 07/20/2011 (11G2288-MS1)							**Source: IUG1769-01**					
Chloride	115	5.0	3.0	mg/l	NN	50.0	66.4	97	80-120			
Nitrate-N	14.2	1.1	0.60	mg/l	NN	11.3	3.49	95	80-120			
Nitrite-N	15.2	1.5	0.90	mg/l	NN	15.2	ND	100	80-120			
Sulfate	239	5.0	3.0	mg/l	NN	100	134	105	80-120			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2288 Extracted: 07/20/11												
Matrix Spike Analyzed: 07/20/2011 (11G2288-MS2)							**Source: IUG1881-01**					
Chloride	8.73	0.50	0.30	mg/l	NN	5.00	3.75	100	80-120			
Nitrate-N	3.10	0.11	0.060	mg/l	NN	1.13	1.93	104	80-120			
Nitrite-N	1.53	0.15	0.090	mg/l	NN	1.52	ND	101	80-120			
Sulfate	12.0	0.50	0.30	mg/l	NN	10.0	2.25	98	80-120			
Matrix Spike Dup Analyzed: 07/20/2011 (11G2288-MSD1)							**Source: IUG1769-01**					
Chloride	114	5.0	3.0	mg/l	NN	50.0	66.4	96	80-120	0.3	20	
Nitrate-N	14.3	1.1	0.60	mg/l	NN	11.3	3.49	96	80-120	0.8	20	
Nitrite-N	15.5	1.5	0.90	mg/l	NN	15.2	ND	102	80-120	2	20	
Sulfate	236	5.0	3.0	mg/l	NN	100	134	102	80-120	1	20	
Batch: 11G2388 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2388-BLK1)												
Total Dissolved Solids	ND	10	1.0	mg/l	MC							
LCS Analyzed: 07/21/2011 (11G2388-BS1)												
Total Dissolved Solids	996	10	1.0	mg/l	MC	1000		100	90-110			
Duplicate Analyzed: 07/21/2011 (11G2388-DUP1)							**Source: IUG1806-06**					
Total Dissolved Solids	135	10	1.0	mg/l	MC		136			0.7	10	
Batch: 11G2433 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2433-BLK1)												
Perchlorate	ND	4.0	0.90	ug/l	mn							

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2433 Extracted: 07/21/11												
LCS Analyzed: 07/21/2011 (11G2433-BS1)												
Perchlorate	23.4	4.0	0.90	ug/l	mn	25.0		94	85-115			
Matrix Spike Analyzed: 07/21/2011 (11G2433-MS1)						**Source: IUG1814-04**						
Perchlorate	24.1	4.0	0.90	ug/l	mn	25.0	ND	96	80-120			
Matrix Spike Dup Analyzed: 07/21/2011 (11G2433-MSD1)						**Source: IUG1814-04**						
Perchlorate	24.9	4.0	0.90	ug/l	mn	25.0	ND	100	80-120	3	20	
Batch: 11G2462 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2462-BLK1)												
Turbidity	ND	1.0	0.040	NTU	RRZ							
Duplicate Analyzed: 07/21/2011 (11G2462-DUP1)						**Source: IUG1765-03**						
Turbidity	0.0900	1.0	0.040	NTU	RRZ		0.0900			0	20	*Ja*
Duplicate Analyzed: 07/21/2011 (11G2462-DUP2)						**Source: IUG1892-02**						
Turbidity	ND	1.0	0.040	NTU	RRZ		ND				20	
Batch: 11G2552 Extracted: 07/21/11												
Blank Analyzed: 07/21/2011 (11G2552-BLK1)												
Surfactants (MBAS)	ND	0.10	0.050	mg/l	SLA							
LCS Analyzed: 07/21/2011 (11G2552-BS1)												
Surfactants (MBAS)	0.250	0.10	0.050	mg/l	SLA	0.250		100	90-110			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2552 Extracted: 07/21/11												
Matrix Spike Analyzed: 07/21/2011 (11G2552-MS1)							**Source: IUG1765-03**					
Surfactants (MBAS)	0.293	0.10	0.050	mg/l	SLA	0.250	0.0569	94	50-125			
Matrix Spike Dup Analyzed: 07/21/2011 (11G2552-MSD1)							**Source: IUG1765-03**					
Surfactants (MBAS)	0.265	0.10	0.050	mg/l	SLA	0.250	0.0569	83	50-125	10	20	
Batch: 11G2555 Extracted: 07/21/11												
Blank Analyzed: 07/26/2011 (11G2555-BLK1)												
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l	XL							
LCS Analyzed: 07/26/2011 (11G2555-BS1)												
Biochemical Oxygen Demand	173	100	25	mg/l	XL	198		87	85-115			
LCS Dup Analyzed: 07/26/2011 (11G2555-BSD1)												
Biochemical Oxygen Demand	209	100	25	mg/l	XL	198		106	85-115	19	20	
Batch: 11G2677 Extracted: 07/22/11												
Blank Analyzed: 07/22/2011 (11G2677-BLK1)												
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l	NCP							
LCS Analyzed: 07/22/2011 (11G2677-BS1)												
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	NCP	10.0		98	80-115			
Matrix Spike Analyzed: 07/22/2011 (11G2677-MS1)							**Source: IUG1251-01**					
Ammonia-N (Distilled)	11.8	0.500	0.500	mg/l	NCP	10.0	2.80	90	70-120			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11G2677 Extracted: 07/22/11												
Matrix Spike Dup Analyzed: 07/22/2011 (11G2677-MSD1)							**Source: IUG1251-01**					
Ammonia-N (Distilled)	12.0	0.500	0.500	mg/l	NCP	10.0	2.80	92	70-120	2	15	
Batch: 11G2941 Extracted: 07/25/11												
Blank Analyzed: 07/25/2011 (11G2941-BLK1)												
Total Suspended Solids	ND	10	1.0	mg/l	MC							
LCS Analyzed: 07/25/2011 (11G2941-BS1)												
Total Suspended Solids	1010	10	1.0	mg/l	MC	1000		101	85-115			
Duplicate Analyzed: 07/25/2011 (11G2941-DUP1)							**Source: IUG2029-01**					
Total Suspended Solids	18.0	10	1.0	mg/l	MC		18.0			0	10	
Batch: 11H0106 Extracted: 08/01/11												
Blank Analyzed: 08/01/2011 (11H0106-BLK1)												
Total Cyanide	ND	5.0	2.2	ug/l	SLA							
LCS Analyzed: 08/01/2011 (11H0106-BS1)												
Total Cyanide	198	5.0	2.2	ug/l	SLA	200		99	90-110			
Matrix Spike Analyzed: 08/01/2011 (11H0106-MS1)							**Source: IUG2169-01**					
Total Cyanide	196	5.0	2.2	ug/l	SLA	200	ND	98	70-115			
Matrix Spike Dup Analyzed: 08/01/2011 (11H0106-MSD1)							**Source: IUG2169-01**					
Total Cyanide	199	5.0	2.2	ug/l	SLA	200	ND	99	70-115	1	15	

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 08/04/11												
LCS Analyzed: 08/08/2011 (S107135-03)						**Source:**						
Gross Alpha	124	3	1.43	pCi/L		111		112	70-130			
Gross Beta	101	4	3.03	pCi/L		104		97	70-130			
Blank Analyzed: 08/08/2011 (S107135-04)						**Source:**						
Gross Alpha	-0.45	3	1.98	pCi/L					-			*U*
Gross Beta	-0.608	4	2.39	pCi/L					-			*U*
Duplicate Analyzed: 08/08/2011 (S107135-05)						**Source: IUG1765-03**						
Gross Alpha	0.566	3	1.43	pCi/L			0.276		-	0		*U*
Gross Beta	5.97	4	1.16	pCi/L			5.2		-	14		

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 07/20/11												
LCS Analyzed: 08/03/2011 (S107135-03)						**Source:**						
Cobalt-60	277	10	4.63	pCi/L		285		97	80-120			
Cesium-137	295	20	5.6	pCi/L		299		99	80-120			
Blank Analyzed: 08/04/2011 (S107135-04)						**Source:**						
Cesium-137	ND	20	2.35	pCi/L					-			*U*
Potassium-40	ND	25	30.8	pCi/L					-			*U*
Duplicate Analyzed: 08/04/2011 (S107135-05)						**Source: IUG1765-03**						
Cesium-137	ND	20	1.34	pCi/L			0		-	0		*U*
Potassium-40	ND	25	18.3	pCi/L			0		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 08/08/11												
LCS Analyzed: 08/08/2011 (S107135-03)						**Source:**						
Radium-226	47.5	1	0.745	pCi/L		50.1		95	80-120			
Blank Analyzed: 08/08/2011 (S107135-04)						**Source:**						
Radium-226	0.029	1	0.445	pCi/L					-			*U*
Duplicate Analyzed: 08/08/2011 (S107135-05)						**Source: IUG1765-03**						
Radium-226	-0.121	1	0.62	pCi/L			0.058		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 08/08/11												
LCS Analyzed: 08/08/2011 (S107135-03)						**Source:**						
Radium-228	6.46	1	0.426	pCi/L		5.78		112	60-140			
Blank Analyzed: 08/08/2011 (S107135-04)						**Source:**						
Radium-228	-0.123	1	0.432	pCi/L					-			*U*
Duplicate Analyzed: 08/08/2011 (S107135-05)						**Source: IUG1765-03**						
Radium-228	-0.112	1	0.498	pCi/L			0		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 08/01/11												
LCS Analyzed: 08/03/2011 (S107135-03)						**Source:**						
Strontium-90	17.6	2	0.628	pCi/L		17.3		102	80-120			
Blank Analyzed: 08/03/2011 (S107135-04)						**Source:**						
Strontium-90	0.253	2	0.742	pCi/L					-			*U*
Duplicate Analyzed: 08/03/2011 (S107135-05)						**Source: IUG1765-03**						
Strontium-90	0.069	2	0.84	pCi/L			0.316		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

906

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 08/05/11												
LCS Analyzed: 08/06/2011 (S107135-03)						**Source:**						
Tritium	2380	500	142	pCi/L		2530		94	80-120			
Blank Analyzed: 08/06/2011 (S107135-04)						**Source:**						
Tritium	-5.91	500	138	pCi/L					-			*U*
Duplicate Analyzed: 08/06/2011 (S107135-05)						**Source: IUG1765-03**						
Tritium	41.5	500	143	pCi/L			12.1		-	0		*U*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

ASTM-D5174

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8686 Extracted: 08/03/11												
LCS Analyzed: 08/03/2011 (S107135-03)						**Source:**						
Uranium, Total	55.6	1	0.233	pCi/L		62.5		89	80-120			
Blank Analyzed: 08/03/2011 (S107135-04)						**Source:**						
Uranium, Total	ND	1	0.023	pCi/L					-			*U*
Duplicate Analyzed: 08/03/2011 (S107135-05)						**Source: IUG1765-03**						
Uranium, Total	0.025	1	0.023	pCi/L			0.025		-	0		*Jb*

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1206087 Extracted: 07/25/11												
Blank Analyzed: 07/27/2011 (G1G250000087B)						**Source:**						
1,2,3,4,6,7,8-HpCDD	3.5e-006	0.00005	0000008	ug/L	SK				-			*J*
1,2,3,4,6,7,8-HpCDF	ND	0.00005	.000001	ug/L	SK				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	.000001	ug/L	SK				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.000001	ug/L	SK				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0000004	ug/L	SK				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0000009	ug/L	SK				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0000004	ug/L	SK				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	.000000	ug/L	SK				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0000004	ug/L	SK				-			
1,2,3,7,8-PeCDD	ND	0.00005	.000001	ug/L	SK				-			
1,2,3,7,8-PeCDF	ND	0.00005	.000001	ug/L	SK				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0000004	ug/L	SK				-			
2,3,4,7,8-PeCDF	ND	0.00005	.000001	ug/L	SK				-			
2,3,7,8-TCDD	ND	0.00001	0000009	ug/L	SK				-			
2,3,7,8-TCDF	ND	0.00001	.000001	ug/L	SK				-			
OCDD	2.2e-005	0.0001	.000001	ug/L	SK				-			*J*
OCDF	2.3e-006	0.0001	.000001	ug/L	SK				-			*J, Q*
Total HpCDD	5.8e-006	0.00005	0000008	ug/L	SK				-			
Total HpCDF	ND	0.00005	.000001	ug/L	SK				-			
Total HxCDD	ND	0.00005	.000000	ug/L	SK				-			
Total HxCDF	ND	0.00005	0000004	ug/L	SK				-			
Total PeCDD	ND	0.00005	.000001	ug/L	SK				-			
Total PeCDF	ND	0.00005	.000001	ug/L	SK				-			
Total TCDD	ND	0.00001	0000009	ug/L	SK				-			
Total TCDF	ND	0.00001	.000001	ug/L	SK				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00095*			*ug/L*	SK	*0.002*		*48*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00099*			*ug/L*	SK	*0.002*		*50*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00099*			*ug/L*	SK	*0.002*		*49*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.0011*			*ug/L*	SK	*0.002*		*57*	*32-141*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.0012*			*ug/L*	SK	*0.002*		*58*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.0011*			*ug/L*	SK	*0.002*		*53*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.0012*			*ug/L*	SK	*0.002*		*59*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.0012*			*ug/L*	SK	*0.002*		*60*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.001*			*ug/L*	SK	*0.002*		*52*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.001*			*ug/L*	SK	*0.002*		*51*	*24-185*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1206087 Extracted: 07/25/11												
Blank Analyzed: 07/27/2011 (G1G250000087B)						**Source:**						
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.0012*			*ug/L*	SK	*0.002*		*60*	*28-136*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.0011*			*ug/L*	SK	*0.002*		*55*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.001*			*ug/L*	SK	*0.002*		*52*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.0011*			*ug/L*	SK	*0.002*		*56*	*24-169*			
Surrogate: 13C-OCDD	*0.0019*			*ug/L*	SK	*0.004*		*47*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.00078*			*ug/L*	SK	*0.0008*		*97*	*35-197*			
LCS Analyzed: 07/27/2011 (G1G250000087C)						**Source:**						
1,2,3,4,6,7,8-HpCDD	0.00104	0.00005	.000002	ug/L	SK	0.001		104	70-140			*B*
1,2,3,4,6,7,8-HpCDF	0.00111	0.00005	0.000004	ug/L	SK	0.001		111	82-122			
1,2,3,4,7,8,9-HpCDF	0.00111	0.00005	.000005	ug/L	SK	0.001		111	78-138			
1,2,3,4,7,8-HxCDD	0.00109	0.00005	.000001	ug/L	SK	0.001		109	70-164			
1,2,3,4,7,8-HxCDF	0.00108	0.00005	0000007	ug/L	SK	0.001		108	72-134			
1,2,3,6,7,8-HxCDD	0.000989	0.00005	.000001	ug/L	SK	0.001		99	76-134			
1,2,3,6,7,8-HxCDF	0.00109	0.00005	0000007	ug/L	SK	0.001		109	84-130			
1,2,3,7,8,9-HxCDD	0.00105	0.00005	.000001	ug/L	SK	0.001		105	64-162			
1,2,3,7,8,9-HxCDF	0.00108	0.00005	.000000	ug/L	SK	0.001		108	78-130			
1,2,3,7,8-PeCDD	0.00104	0.00005	.000003	ug/L	SK	0.001		104	70-142			
1,2,3,7,8-PeCDF	0.00109	0.00005	.000002	ug/L	SK	0.001		109	80-134			
2,3,4,6,7,8-HxCDF	0.00109	0.00005	000000(	ug/L	SK	0.001		109	70-156			
2,3,4,7,8-PeCDF	0.00107	0.00005	.000002	ug/L	SK	0.001		107	68-160			
2,3,7,8-TCDD	0.000204	0.00001	.000001	ug/L	SK	0.0002		102	67-158			
2,3,7,8-TCDF	0.000232	0.00001	.000001	ug/L	SK	0.0002		116	75-158			
OCDD	0.00219	0.0001	.000003	ug/L	SK	0.002		109	78-144			*B*
OCDF	0.00239	0.0001	.000005	ug/L	SK	0.002		120	63-170			*B*
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.000778*			*ug/L*	SK	*0.002*		*39*	*26-166*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.000802*			*ug/L*	SK	*0.002*		*40*	*21-158*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.0008*			*ug/L*	SK	*0.002*		*40*	*20-186*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.000906*			*ug/L*	SK	*0.002*		*45*	*21-193*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00093*			*ug/L*	SK	*0.002*		*47*	*19-202*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.000932*			*ug/L*	SK	*0.002*		*47*	*25-163*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00094*			*ug/L*	SK	*0.002*		*47*	*21-159*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.000954*			*ug/L*	SK	*0.002*		*48*	*17-205*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.000793*			*ug/L*	SK	*0.002*		*40*	*21-227*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.000777*			*ug/L*	SK	*0.002*		*39*	*21-192*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Analyst	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1206087 Extracted: 07/25/11												
LCS Analyzed: 07/27/2011 (G1G250000087C)						**Source:**						
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.000976*			*ug/L*	SK	*0.002*		*49*	*22-176*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.000833*			*ug/L*	SK	*0.002*		*42*	*13-328*			
Surrogate: 13C-2,3,7,8-TCDD	*0.000836*			*ug/L*	SK	*0.002*		*42*	*20-175*			
Surrogate: 13C-2,3,7,8-TCDF	*0.000892*			*ug/L*	SK	*0.002*		*45*	*22-152*			
Surrogate: 13C-OCDD	*0.00148*			*ug/L*	SK	*0.004*		*37*	*13-199*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.000792*			*ug/L*	SK	*0.0008*		*99*	*31-191*			

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUG1765-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.095	4.7	15
IUG1765-01	Settleable Solids - SM2540F	Total Settleable Solids	ml/l	0	0.10	0.3

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUG1765-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.00050	0.0094	0.03
IUG1765-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.66	13
IUG1765-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	4.72	18
IUG1765-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.28	4.72	4
IUG1765-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	4.72	16
IUG1765-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	4.72	16.5
IUG1765-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.500	10.1
IUG1765-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	0.47	2.0	30
IUG1765-03	Cadmium-200.8	Cadmium	ug/l	0	1.0	3.1
IUG1765-03	Chloride - 300.0	Chloride	mg/l	42	10	150
IUG1765-03	Copper-200.8	Copper	ug/l	0.67	2.00	14
IUG1765-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	0.65	5.0	8.5
IUG1765-03	Iron-200.7	Iron	mg/l	0.0092	0.040	0.3
IUG1765-03	Lead-200.8	Lead	ug/l	0	1.0	5.2
IUG1765-03	MBAS - SM5540C	Surfactants (MBAS)	mg/l	0.057	0.10	0.5
IUG1765-03	Mercury - 245.1	Mercury	ug/l	0.012	0.20	0.1
IUG1765-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.089	0.11	8
IUG1765-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUG1765-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.089	0.26	8
IUG1765-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
IUG1765-03	Selenium-200.8	Selenium	ug/l	0.40	2.0	5
IUG1765-03	Sulfate-300.0	Sulfate	mg/l	139	10	300
IUG1765-03	TDS - SM2540C	Total Dissolved Solids	mg/l	398	10	950

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

IUG1765-03	TSS - SM2540D	Total Suspended Solids	mg/l	0	10	45
IUG1765-03	Zinc-200.7	Zinc	ug/l	5.63	20.0	119

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

DATA QUALIFIERS AND DEFINITIONS

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J	Estimated result. Result is less than the reporting limit.
Ja	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
Jb	The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
Q	Estimated maximum possible concentration (EMPC).
U	The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018

Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 120.1	Water	X	X
EPA 1664A	Water	X	X
EPA 180.1	Water	X	N/A
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2540C	Water	X	N/A
SM2540F	Water	X	X
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5540-C	Water	X	N/A

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUG1765-03, IUG1765-04

Analysis Performed: Gross Alpha
Samples: IUG1765-03, IUG1765-04

Analysis Performed: Gross Beta
Samples: IUG1765-03, IUG1765-04

Analysis Performed: Radium, Combined
Samples: IUG1765-03, IUG1765-04

Analysis Performed: Strontium 90
Samples: IUG1765-03, IUG1765-04

Analysis Performed: Tritium
Samples: IUG1765-03

Analysis Performed: Uranium, Combined
Samples: IUG1765-03, IUG1765-04

Method Performed: 900
Samples: IUG1765-03, IUG1765-04

Method Performed: 901.1
Samples: IUG1765-03, IUG1765-04

Method Performed: 903.1
Samples: IUG1765-03, IUG1765-04

Method Performed: 904
Samples: IUG1765-03, IUG1765-04

Method Performed: 905
Samples: IUG1765-03, IUG1765-04

Method Performed: 906
Samples: IUG1765-03

Method Performed: D5174
Samples: IUG1765-03, IUG1765-04

TestAmerica Irvine

Debby Wilson
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Quarterly Outfall 018
Report Number: IUG1765

Sampled: 07/19/11-07/21/11
Received: 07/19/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*
880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: IUG1765-03

TestAmerica Irvine

Debby Wilson
Project Manager

CHAIN OF CUSTODY FORM

EUG1765

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson	Boeing-SSFL NPDES **Quarterly Outfall 018** **COMPOSITE** HIGH
Project Manager: Bronwyn Kelly Sampler: Rick BAÑACA	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, **Fe, Mn**	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
							ANALYSIS REQUIRED														
Outfall 018	W	1L Poly	1	7-20-2011 09:42	HNO_3	6A	X														
Outfall 018 Dup	W	1L Poly	1		HNO_3	6B	X														
Outfall 018	W	1L Amber	2		None	7A, 7B		X													
Outfall 018	W	1L Poly	1		None	8			X												
Outfall 018	W	500 mL Poly	2		None	9A, 9B				X											
Outfall 018	W	500 mL Poly	2		None	10A, 10B					X										
Outfall 018	W	500 mL Poly	1		None	11						X									
Outfall 018	W	500 mL Poly	2		None	12A, 12B							X								
Outfall 018	W	500 mL Poly	1		H_2SO_4	13								X							
Outfall 018	W	1L Amber	2		None	14A, 14B									X						
Outfall 018	W	1L Amber	2	7-20-2011 09:42	None	15A, 15B										X					

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 018 for this storm event.

These must be added to the same work order for COC Page 1 of 3 for Outfall 018 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	7-20-2011 14:00	[signature]	7-20-11 14:00
Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	7-20-11 19:30		
Relinquished By	Date/Time:	Received By	Date/Time:
		[signature]	7-20-11 19:30

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

Sample Integrity: (Check) 3.1
Intact: ✓ On Ice: ✓

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

20M04

CHAIN OF CUSTODY FORM

EMG1765

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson	Boeing-SSFL NPDES **Quarterly Outfall 018** **COMPOSITE**
Project Manager: Bronwyn Kelly Sampler: Rick Bannon	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	ANALYSIS REQUIRED: Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn	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)	Cyanide	Chronic Toxicity	Comments
Outfall 018	W	1L Poly	1	7-20-2011 09:42	None	16	X				Filter w/in 24hrs of receipt at lab
Outfall 018	W	2.5 Gal Cube	1		None	17A		X			Unfiltered and unpreserved analysis
		500 mL Amber	1		None	17B					
Outfall 018	W	500 mL Poly	1	7-20-2011 09:42	NaOH	18			X		
~~Outfall 018~~	~~W~~	~~1 Gal Poly~~	~~1~~	7-20-2011 09:42	None	19				X	Only test if first or second rain events of the year

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 018 for this storm event.

These must be added to the same work order for COC Page 1 of 3 for Outfall 018 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
Rick Bannon	7-20-2011 14:00	Matt Connell	7-20-11 14:00
Relinquished By	Date/Time:	Received By	Date/Time:
Matt Connell	7-20-11 19:30		
Relinquished By	Date/Time:	Received By	Date/Time:
		Jaime Figueroa	7-20-11 19:30

Turn-around time: (Check)

24 Hour: ____ 72 Hour: ____ 10 Day: ____

48 Hour: ____ 5 Day: ____ Normal: X

Sample Integrity: (Check) 3.1

Intact: ✓ On Ice: ✓

Data Requirements: (Check)

No Level IV: _ All Level IV: _ NPDES Level IV: X

20M04

CHAIN OF CUSTODY FORM

$0 G1765

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

Test America Contact: Debby Wilson

Project:
Boeing-SSFL NPDES
Quarterly Outfall 018
GRAB

Project Manager: Bronwyn Kelly
Rick Danaen
Sampler: Andrew Layne

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs (624) + Freon 113	Oil & Grease (1664-HEM)	Settleable Solids	Conductivity										Comments
							ANALYSIS REQUIRED													Field readings: (Log in and include in report Temp and pH) Temp °F = 77° pH = 6.77 DO = 4.98 Time of readings = 1000
Outfall 018	W	VOAs	5	7-19-2011 1000	HCl	1A, 1B, 1C, 1D, 1E	X													
Outfall 018	W	1L Amber	2		HCl	2A, 2B		X												
Outfall 018	W	1L Poly	1		None	3			X											
Outfall 018	W	500 mL Poly	2		None	4A, 4B				X										
Trip Blanks	W	VOAs	3	7-19-2011 1000	HCl	5A, 5B, 5C	X													

These Samples are the Grab Portion of Outfall 018 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:
Rick Danaen	7-19-2011 13:50	Matt Guerrero	7-19-11 13:50
Matt Guerrero	7-19-11 17:55		
		Stephanie	7/19 17:55

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

Sample Integrity: (Check)
Intact: ✓ On Ice: ✓ 6.9°C

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

18M02

EBERLINE SERVICES

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

August 11, 2011

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

Reference: **Test America-Irvine IUG1765**
Eberline Analytical Report S107135-8686
Sample Delivery Group 8686

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUG1765. The samples were received on July 22, 2011.

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

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb
Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8686 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 sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

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 2σerror (Total):

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

4.0 Analysis Notes

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

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

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

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

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

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

4.7 Gamma Spectroscopy – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits. The gamma spectroscopy planchets were counted for sufficient time to meet the required Cs-137 detection limit of 20 pCi/L. As a consequence of keying to the Cs-137 RDL, the detection limit for K-40 was not achieved for all the samples.

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."

8/11/11

N. Joseph Verville
Client Services Manager

Date

E B E R L I N E A N A L Y T I C A L
SDG 8686

SDG 8686	Client Test America, Inc.
Contact N. Joseph Verville	Contract IUG1765

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	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-TOC
Version	3.06
Report date	08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

ABOUT THE DATA SUMMARY SECTION

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

MATRIX SPIKES

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

DATA SHEETS

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

METHOD SUMMARIES

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

REPORT GUIDES

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB SAMPLE SUMMARY

SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S107135-01	IUG1765-03	Boeing - SSFL	WATER			IUG1765	07/20/11 09:42
S107135-02	IUG1765-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUG1765	07/20/11 13:22
S107135-03	Lab Control Sample		WATER				
S107135-04	Method Blank		WATER				
S107135-05	Duplicate (S107135-01)	Boeing - SSFL	WATER				07/20/11 09:42

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

SDG 8686
Contact N. Joseph Verville

QC SUMMARY

Client Test America, Inc.
Contract IUG1765

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS RECEIVED	DAYS COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8686	IUG1765	IUG1765-03	WATER		6.0 L		07/22/11	2	S107135-01	8686-001
		IUG1765-04 (TRIP-BLANK)	WATER		6.0 L				S107135-02	8686-002
		Method Blank	WATER						S107135-04	8686-004
		Lab Control Sample	WATER						S107135-03	8686-003
		Duplicate (S107135-01)	WATER		6.0 L		07/22/11	2	S107135-05	8686-005

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

PREP BATCH SUMMARY

SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Beta Counting												
AC	WATER	Radium-228 in Water	7281-128	10.4	2			1	1	1/1		
SR	WATER	Strontium-90 in Water	7281-128	10.4	2			1	1	1/1		
Gas Proportional Counting												
80A	WATER	Gross Alpha in Water	7281-128	20.6	2			1	1	1/1		
80B	WATER	Gross Beta in Water	7281-128	11.0	2			1	1	1/1		
Gamma Spectroscopy												
GAM	WATER	Gamma Emitters in Water	7281-128	7.0	2			1	1	1/1		
Kinetic Phosphorimetry, ug												
U_T	WATER	Uranium, Total	7281-128		2			1	1	1/1		
Liquid Scintillation Counting												
H	WATER	Tritium in Water	7281-128	10.0	1			1	1	1/1		
Radon Counting												
RA	WATER	Radium-226 in Water	7281-128	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 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB WORK SUMMARY

SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

LAB SAMPLE / COLLECTED / RECEIVED	CLIENT SAMPLE ID / LOCATION / CUSTODY / SAS no	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S107135-01	IUG1765-03		8686-001	80A/80		08/06/11	08/09/11	BW	Gross Alpha in Water
07/20/11	Boeing - SSFL	WATER	8686-001	80B/80		08/06/11	08/09/11	BW	Gross Beta in Water
07/22/11	IUG1765		8686-001	AC		08/08/11	08/10/11	BW	Radium-228 in Water
			8686-001	GAM		08/03/11	08/05/11	MWT	Gamma Emitters in Water
			8686-001	H		08/06/11	08/09/11	BW	Tritium in Water
			8686-001	RA		08/08/11	08/08/11	BW	Radium-226 in Water
			8686-001	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8686-001	U_T		08/03/11	08/03/11	BW	Uranium, Total
S107135-02	IUG1765-04 (TRIP-BLANK)		8686-002	80A/80		08/08/11	08/09/11	BW	Gross Alpha in Water
07/20/11	Boeing - SSFL	WATER	8686-002	80B/80		08/08/11	08/09/11	BW	Gross Beta in Water
	IUG1765		8686-002	AC		08/08/11	08/10/11	BW	Radium-228 in Water
			8686-002	GAM		08/04/11	08/05/11	MWT	Gamma Emitters in Water
			8686-002	RA		08/08/11	08/08/11	BW	Radium-226 in Water
			8686-002	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8686-002	U_T		08/03/11	08/03/11	BW	Uranium, Total
S107135-03	Lab Control Sample		8686-003	80A/80		08/08/11	08/09/11	BW	Gross Alpha in Water
		WATER	8686-003	80B/80		08/08/11	08/09/11	BW	Gross Beta in Water
			8686-003	AC		08/08/11	08/10/11	BW	Radium-228 in Water
			8686-003	GAM		08/03/11	08/05/11	MWT	Gamma Emitters in Water
			8686-003	H		08/06/11	08/09/11	BW	Tritium in Water
			8686-003	RA		08/08/11	08/08/11	BW	Radium-226 in Water
			8686-003	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8686-003	U_T		08/03/11	08/03/11	BW	Uranium, Total
S107135-04	Method Blank		8686-004	80A/80		08/08/11	08/09/11	BW	Gross Alpha in Water
		WATER	8686-004	80B/80		08/08/11	08/09/11	BW	Gross Beta in Water
			8686-004	AC		08/08/11	08/10/11	BW	Radium-228 in Water
			8686-004	GAM		08/04/11	08/05/11	MWT	Gamma Emitters in Water
			8686-004	H		08/06/11	08/09/11	BW	Tritium in Water
			8686-004	RA		08/08/11	08/08/11	BW	Radium-226 in Water
			8686-004	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
			8686-004	U_T		08/03/11	08/03/11	BW	Uranium, Total

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

WORK SUMMARY, cont.

Client Test America, Inc.
Contract IUG1765

LAB SAMPLE / COLLECTED / RECEIVED	CLIENT SAMPLE ID / LOCATION / CUSTODY	SAS no	MATRIX	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
S107135-05	Duplicate (S107135-01)			8686-005	80A/80		08/08/11	08/09/11	BW	Gross Alpha in Water
07/20/11	Boeing - SSFL		WATER	8686-005	80B/80		08/08/11	08/09/11	BW	Gross Beta in Water
07/22/11				8686-005	AC		08/08/11	08/10/11	BW	Radium-228 in Water
				8686-005	GAM		08/04/11	08/05/11	MWT	Gamma Emitters in Water
				8686-005	H		08/06/11	08/09/11	BW	Tritium in Water
				8686-005	RA		08/08/11	08/08/11	BW	Radium-226 in Water
				8686-005	SR		08/03/11	08/09/11	BW	Strontium-90 in Water
				8686-005	U_T		08/03/11	08/03/11	BW	Uranium, Total

COUNTS OF TESTS BY SAMPLE TYPE

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 08/11/11

METHOD BLANK

SDG 8686 Client Test America, Inc.
Contact N. Joseph Verville Contract IUG1765

Lab sample id S107135-04 Client sample id Method Blank
Dept sample id 8686-004 Material/Matrix WATER

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	-0.450	0.82	1.98	3.00	U	80A
Gross Beta	12587472	-0.608	1.4	2.39	4.00	U	80B
Tritium	10028178	-5.91	81	138	500	U	H
Radium-226	13982633	0.029	0.24	0.445	1.00	U	RA
Radium-228	15262201	-0.123	0.15	0.432	1.00	U	AC
Strontium-90	10098972	0.253	0.37	0.742	2.00	U	SR
Uranium, Total		0	0.010	0.023	1.00	U	U_T
Potassium-40	13966002	U		30.8	25.0	U	GAM
Cesium-137	10045973	U		2.35	20.0	U	GAM

QC-BLANK #79241

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-DS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

8686-003

Lab Control Sample

LAB CONTROL SAMPLE

SDG 8686 | Client Test America, Inc.

Contact N. Joseph Verville | Contract IUG1765

Lab sample id S107135-03 | Client sample id Lab Control Sample

Dept sample id 8686-003 | 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	124	6.8	1.43	3.00		80A	111	4.4	112	76-124	70-130
Gross Beta	101	3.9	3.03	4.00		80B	104	4.2	97	88-112	70-130
Tritium	2380	150	142	500		H	2530	100	94	88-112	80-120
Radium-226	47.5	2.1	0.745	1.00		RA	50.1	2.0	95	83-117	80-120
Radium-228	6.46	0.34	0.426	1.00		AC	5.78	0.23	112	86-114	60-140
Strontium-90	17.6	1.4	0.628	2.00		SR	17.3	0.69	102	86-114	80-120
Uranium, Total	55.6	6.8	0.233	1.00		U_T	62.5	2.5	89	88-112	80-120
Cobalt-60	277	9.2	4.63	10.0		GAM	285	11	97	92-108	80-120
Cesium-137	295	8.5	5.60	20.0		GAM	299	12	99	92-108	80-120

QC-LCS #79240

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

8686-005 IUG1765-03

DUPLICATE

SDG 8686
Contact N. Joseph Verville
Client Test America, Inc.
Contract IUG1765

DUPLICATE
Lab sample id S107135-05
Dept sample id 8686-005

ORIGINAL
Lab sample id S107135-01
Dept sample id 8686-001
Received 07/22/11

Client sample id IUG1765-03
Location/Matrix Boeing - SSFL WATER
Collected/Volume 07/20/11 09:42 6.0 L
Chain of custody id IUG1765

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	0.566	0.90	1.43	3.00	U	80A	0.276	0.72	1.18	U	-		0.5
Gross Beta	5.97	0.87	1.16	4.00		80B	5.20	0.80	1.06		14	39	1.0
Tritium	41.5	86	143	500	U	H	12.1	83	141	U	-		0.5
Radium-226	-0.121	0.32	0.620	1.00	U	RA	0.058	0.31	0.564	U	-		0.8
Radium-228	-0.112	0.19	0.498	1.00	U	AC	0	0.17	0.457	U	-		0.9
Strontium-90	0.069	0.37	0.840	2.00	U	SR	0.316	0.44	0.873	U	-		0.9
Uranium, Total	0.025	0.011	0.023	1.00	J	U_T	0.025	0.011	0.023	J	0	93	0
Potassium-40	U		18.3	25.0	U	GAM	U		66.2	U	-		1.4
Cesium-137	U		1.34	20.0	U	GAM	U		2.06	U	-		0.6

QC-DUP#1 79242

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-DUP
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

8686-001 IUG1765-03

DATA SHEET

SDG	8686	Client	Test America, Inc.
Contact	N. Joseph Verville	Contract	IUG1765
Lab sample id	S107135-01	Client sample id	IUG1765-03
Dept sample id	8686-001	Location/Matrix	Boeing - SSFL WATER
Received	07/22/11	Collected/Volume	07/20/11 09:42 6.0 L
		Chain of custody id	IUG1765

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	0.276	0.72	1.18	3.00	U	80A
Gross Beta	12587472	5.20	0.80	1.06	4.00		80B
Tritium	10028178	12.1	83	141	500	U	H
Radium-226	13982633	0.058	0.31	0.564	1.00	U	RA
Radium-228	15262201	0	0.17	0.457	1.00	U	AC
Strontium-90	10098972	0.316	0.44	0.873	2.00	U	SR
Uranium, Total		0.025	0.011	0.023	1.00	J	U_T
Potassium-40	13966002	U		66.2	25.0	U	GAM
Cesium-137	10045973	U		2.06	20.0	U	GAM

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	08/11/11

EBERLINE ANALYTICAL

SDG 8686

8686-002 IUG1765-04 (TRIP-BLANK)

DATA SHEET

SDG	8686	Client	Test America, Inc.
Contact	N. Joseph Verville	Contract	IUG1765
Lab sample id	S107135-02	Client sample id	IUG1765-04 (TRIP-BLANK)
Dept sample id	8686-002	Location/Matrix	Boeing - SSFL WATER
Received		Collected/Volume	07/20/11 13:22 6.0 L
		Chain of custody id	IUG1765

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI-FIERS	TEST
Gross Alpha	12587461	0.015	0.17	0.323	3.00	U	80A
Gross Beta	12587472	-0.404	0.48	0.820	4.00	U	80B
Radium-226	13982633	0.098	0.33	0.590	1.00	U	RA
Radium-228	15262201	-0.124	0.16	0.443	1.00	U	AC
Strontium-90	10098972	0.218	0.40	0.842	2.00	U	SR
Uranium, Total		0	0.010	0.023	1.00	U	U_T
Potassium-40	13966002	U		15.5	25.0	U	GAM
Cesium-137	10045973	U		0.929	20.0	U	GAM

Lab id	EAS
Protocol	TA
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

Test AC Matrix WATER
SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Radium-228	
Preparation batch 7281-128						
S107135-01			8686-001	IUG1765-03	U	
S107135-02			8686-002	IUG1765-04 (TRIP-BLANK)	U	
S107135-03			8686-003	Lab Control Sample	ok	
S107135-04			8686-004	Method Blank	U	
S107135-05			8686-005	Duplicate (S107135-01)	-	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 7281-128			2σ prep error 10.4 %	Reference Lab Notebook No. 7281 pg.128												
S107135-01			IUG1765-03	0.457	1.80			67		150			19	08/08/11	08/08	GRB-220
S107135-02			IUG1765-04 (TRIP-BLANK)	0.443	1.80			71		150			19	08/08/11	08/08	GRB-221
S107135-03			Lab Control Sample	0.426	1.80			68		150				08/08/11	08/08	GRB-222
S107135-04			Method Blank	0.432	1.80			71		150				08/08/11	08/08	GRB-223
S107135-05			Duplicate (S107135-01)	0.498	1.80			70		150			19	08/08/11	08/08	GRB-224
Nominal values and limits from method				1.00	1.80			30-105		50			180			

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

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 0.451 ± 0.057
YIELD 69 ± 4

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER

BETA COUNTING

Test SR Matrix WATER
SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90	
Preparation batch 7281-128						
S107135-01			8686-001	IUG1765-03	U	
S107135-02			8686-002	IUG1765-04 (TRIP-BLANK)	U	
S107135-03			8686-003	Lab Control Sample	ok	
S107135-04			8686-004	Method Blank	U	
S107135-05			8686-005	Duplicate (S107135-01)	-	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 7281-128 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg.128																
S107135-01			IUG1765-03	0.873	0.500			90		50			14	08/01/11	08/03	GRB-225
S107135-02			IUG1765-04 (TRIP-BLANK)	0.842	0.500			89		50			14	08/01/11	08/03	GRB-227
S107135-03			Lab Control Sample	0.628	0.500			90		50				08/01/11	08/03	GRB-225
S107135-04			Method Blank	0.742	0.500			85		51				08/01/11	08/03	GRB-221
S107135-05			Duplicate (S107135-01)	0.840	0.500			91		50			14	08/01/11	08/03	GRB-230
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 FOR 5 SAMPLES
MDA 0.785 ± 0.201
YIELD 89 ± 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER
SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha	
Preparation batch 7281-128						
S107135-01	80		8686-001	IUG1765-03	U	
S107135-02	80		8686-002	IUG1765-04 (TRIP-BLANK)	U	
S107135-03	80		8686-003	Lab Control Sample	ok	
S107135-04	80		8686-004	Method Blank	U	
S107135-05	80		8686-005	Duplicate (S107135-01)	-	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 7281-128 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg.128																
S107135-01	80		IUG1765-03	1.18	0.250			114		400			17	08/04/11	08/06	GRB-112
S107135-02	80		IUG1765-04 (TRIP-BLANK)	0.323	0.300			0		400			19	08/04/11	08/08	GRB-101
S107135-03	80		Lab Control Sample	1.43	0.100			64		400				08/04/11	08/08	GRB-103
S107135-04	80		Method Blank	1.98	0.100			67		400				08/04/11	08/08	GRB-104
S107135-05	80		Duplicate (S107135-01)	1.43	0.250			116		400			19	08/04/11	08/08	GRB-105
Nominal values and limits from method				3.00	0.100			0-200		100			180			

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

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 1.27 ± 1.21
RESIDUE 72 ± 95

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7281-128					
S107135-01	80		8686-001	IUG1765-03	5.20
S107135-02	80		8686-002	IUG1765-04 (TRIP-BLANK)	U
S107135-03	80		8686-003	Lab Control Sample	ok
S107135-04	80		8686-004	Method Blank	U
S107135-05	80		8686-005	Duplicate (S107135-01)	ok
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 7281-128 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg.128																
S107135-01	80		IUG1765-03	1.06	0.250			114		400			17	08/04/11	08/06	GRB-112
S107135-02	80		IUG1765-04 (TRIP-BLANK)	0.820	0.300			0		400			19	08/04/11	08/08	GRB-101
S107135-03	80		Lab Control Sample	3.03	0.100			64		400				08/04/11	08/08	GRB-103
S107135-04	80		Method Blank	2.39	0.100			67		400				08/04/11	08/08	GRB-104
S107135-05	80		Duplicate (S107135-01)	1.16	0.250			116		400			19	08/04/11	08/08	GRB-105
Nominal values and limits from method				4.00	0.100			0-200		100			180			

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

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 1.69 ± 1.93
RESIDUE 72 ± 95

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

Test GAM Matrix WATER
SDG 8686
Contact N. Joseph Verville

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER

GAMMA SPECTROSCOPY

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137	
Preparation batch 7281-128							
S107135-01			8686-001	IUG1765-03		U	
S107135-02			8686-002	IUG1765-04 (TRIP-BLANK)		U	
S107135-03			8686-003	Lab Control Sample	ok	ok	
S107135-04			8686-004	Method Blank		U	
S107135-05			8686-005	Duplicate (S107135-01)		-	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 7281-128			2σ prep error 7.0 %	Reference Lab Notebook No. 7281 pg.128												
S107135-01			IUG1765-03		2.00					941			14	07/20/11	08/03	MB,06,00
S107135-02			IUG1765-04 (TRIP-BLANK)		2.00					873			15	07/20/11	08/04	MB,08,00
S107135-03			Lab Control Sample		1.00					913				07/20/11	08/03	01,04,00
S107135-04			Method Blank		1.00					895				07/20/11	08/04	01,03,00
S107135-05			Duplicate (S107135-01)		2.00					896			15	07/20/11	08/04	01,04,00
Nominal values and limits from method				6.00	1.00					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 08/11/11

EBERLINE ANALYTICAL

SDG 8686

Test U T Matrix WATER
SDG 8686
Contact N. Joseph Verville

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Uranium, Total
Preparation batch 7281-128					
S107135-01			8686-001	IUG1765-03	0.025 J
S107135-02			8686-002	IUG1765-04 (TRIP-BLANK)	U
S107135-03			8686-003	Lab Control Sample	ok
S107135-04			8686-004	Method Blank	U
S107135-05			8686-005	Duplicate (S107135-01)	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 7281-128			2σ prep error	Reference Lab Notebook No. 7281 pg.128												
S107135-01			IUG1765-03	0.023	0.0200								14	08/03/11	08/03	KPA-001
S107135-02			IUG1765-04 (TRIP-BLANK)	0.023	0.0200								14	08/03/11	08/03	KPA-001
S107135-03			Lab Control Sample	0.233	0.0200									08/03/11	08/03	KPA-001
S107135-04			Method Blank	0.023	0.0200									08/03/11	08/03	KPA-001
S107135-05			Duplicate (S107135-01)	0.023	0.0200								14	08/03/11	08/03	KPA-001
Nominal values and limits from method				1.00	0.0200								180			

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD FOR 5 SAMPLES
MDA 0.065 ± 0.188
YIELD _____ ± _____

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
Preparation batch 7281-128						
S107135-01			8686-001	IUG1765-03	U	
S107135-03			8686-003	Lab Control Sample	ok	
S107135-04			8686-004	Method Blank	U	
S107135-05			8686-005	Duplicate (S107135-01)	-	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 7281-128 2σ prep error 10.0 % Reference Lab Notebook No. 7281 pg.128																
S107135-01			IUG1765-03	141	0.0100			100		150			17	08/05/11	08/06	LSC-007
S107135-03			Lab Control Sample	142	0.100			10		150				08/05/11	08/06	LSC-007
S107135-04			Method Blank	138	0.100			10		150				08/05/11	08/06	LSC-007
S107135-05			Duplicate (S107135-01)	143	0.0100			100		150			17	08/05/11	08/06	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 FOR 4 SAMPLES
MDA 141 ± 4.32
YIELD 55 ± 104

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

EBERLINE ANALYTICAL

SDG 8686

LAB METHOD SUMMARY

RADIUM-226 IN WATER

RADON COUNTING

Test RA Matrix WATER
SDG 8686
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUG1765

RESULTS

LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226	
Preparation batch 7281-128						
S107135-01			8686-001	IUG1765-03	U	
S107135-02			8686-002	IUG1765-04 (TRIP-BLANK)	U	
S107135-03			8686-003	Lab Control Sample	ok	
S107135-04			8686-004	Method Blank	U	
S107135-05			8686-005	Duplicate (S107135-01)	-	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 7281-128 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg.128																
S107135-01			IUG1765-03	0.564	0.100			100		106			19	08/08/11	08/08	RN-012
S107135-02			IUG1765-04 (TRIP-BLANK)	0.590	0.100			100		106			19	08/08/11	08/08	RN-015
S107135-03			Lab Control Sample	0.745	0.100			100		106				08/08/11	08/08	RN-009
S107135-04			Method Blank	0.445	0.100			100		106				08/08/11	08/08	RN-010
S107135-05			Duplicate (S107135-01)	0.620	0.100			100		106			19	08/08/11	08/08	RN-014
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 FOR 5 SAMPLES
MDA 0.593 ± 0.216
YIELD 100 ± 0

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

SAMPLE SUMMARY

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

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

The following notes apply to these reports:

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

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

PREPARATION BATCH SUMMARY

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

The following notes apply to this report:

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

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

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

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

  These qualifiers should be reviewed as follows:

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

WORK SUMMARY

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

The following notes apply to this report:

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

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

DATA SHEET

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

The following notes apply to this report:

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

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

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

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

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

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

The following qualifiers are defined by the DVD system:

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

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 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

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 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

LAB CONTROL SAMPLE

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

The following notes apply to this report:

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

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 EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

DUPLICATE

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

MATRIX SPIKE

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

The following notes apply to this report:

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

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

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

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

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

* The first, computed limits for the recovery reflect:

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

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

  2. The error of ADDED.

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

MATRIX SPIKE

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUG1765

METHOD SUMMARY

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

The following notes apply to this report:

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

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

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

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

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

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 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

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 08/11/11

SDG 8686
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUG1765

METHOD SUMMARY

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

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

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

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

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 08/11/11

Subcontract Order - TestAmerica Irvine (IUG1765)

8686

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

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

Analysis	Units	Expires	Comments
Sample ID: IUG1765-03 (Outfall 018 (Composite) - Water)		Sampled: 07/20/11 09:42	
Gamma Spec-O	mg/kg	07/19/12 09:42	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/16/12 09:42	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/16/12 09:42	Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	07/19/12 09:42	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	07/19/12 09:42	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	07/19/12 09:42	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	07/19/12 09:42	Out St Louis, Boeing permit, DO NOT FILTER!
Containers Supplied:			
2.5 gal Poly (T) HNO_3	500 mL Amber (U)		
Sample ID: IUG1765-04 (TRIP BLANK - Water)		Sampled: 07/21/11 13:22	
Gamma Spec-O	mg/kg	07/20/12 13:22	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	01/17/12 13:22	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	01/17/12 13:22	Out St Louis, Boeing permit, DO NOT FILTER!
Radium, Combined-O	pCi/L	07/20/12 13:22	Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	07/20/12 13:22	Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	07/20/12 13:22	Boeing permit, DO NOT FILTER!
Containers Supplied:			
2.5 gal Poly (A) HNO_3			

Released By	Date/Time	Received By	Date/Time
Released By	Date/Time	Received By	Date/Time

EBERLINE SERVICES

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 07/22/11 0930 CoC No. IUG1765

Container I.D. No. 1 CE CHEST Requested TAT (Days) STD P.O. Received Yes [ ] No [ ]

INSPECTION

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

14. Was P.M. notified of any anomalies? Yes [/] No [ ] Date ______
15. Inspected by [signature] Date: 07/22/11 Time: 1345

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 24 SEP 10

APPENDIX G

Section 5

Outfall 019 – August 10 & 11, 2011

MEC^X Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUH1217

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:	IUH1217
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	2
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 019 (Grab)	IUH1217-01	N/A	Water	8/10/2011 12:00:00 PM	EPA 120.1
Outfall 019 (Composite)	IUH1217-03	N/A	Water	8/11/2011 12:15:00 PM	200.7, 200.7 (Diss), 245.1, 245.1 (Diss), 314.0, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B (Diss), SM5310B, ASTM D-5174

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 courier to the laboratories, 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 1613—Dioxin/Furans

Reviewed By: L. Calvin
Date Reviewed: September 23, 2011

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

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

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

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

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

- Calibration: Calibration criteria were met.

    - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq$20% for the 15 native compounds (calibration by isotope dilution) and $\leq$35% for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.

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

- Blanks: The method blanks had detects above the EDL for 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8-HxCDF, OCDD, OCDF, and totals for HpCDF and HxCDF. With the exception of total HxCDF, sample results for the method blank contaminants were qualified as nondetected, “U,” at the EDL if reported below the EDL, or at the level of contamination if

detected above the EDL. The result for total HxCDF was qualified as estimated, "J," as only a portion of the total was considered method blank contamination.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613, and RPDs were within the laboratory control limit of ≤50%.

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

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

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

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

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

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J." Total HxCDF contained an EMPC peak, and was therefore qualified as estimated, "J." Any detects between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

B. EPA METHODS 200.7 and 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: September 2011

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 200.7, 245.1*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

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

- Tuning: Not applicable to these analyses.

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

- Blanks: Method blanks and CCBs had no detects.

- Interference Check Samples: Recoveries were within the method-established control limits. There were no target compounds present in the ICSA solution at concentrations indicative of matrix interference.

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

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

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for the 200.7 analytes. Recoveries were not assessed if the native concentration was more than four time the spike amount. Recoveries and RPDs were within laboratory-established QC limits.

- Serial Dilution: No serial dilution analyses were performed.

- Internal Standards Performance: Not applicable to these analyses.

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

  The laboratory reported dissolved concentrations for calcium, magnesium, and zinc that were larger than the total results. The dissolved results were nominally higher and were within the error of the instrumentation.

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

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

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

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: September 22, 2011

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. Aliquots for gross alpha and gross beta were preserved within the five-day analytical holding time.

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

  The gross alpha detector efficiency was less than 20%; therefore, nondetected gross alpha in the sample was qualified as estimated, "UJ." The remaining detector efficiencies were greater than 20%.

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

- Blanks: There were no analytes detected in the method blanks.

- 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. The RPDs were within the laboratory-established control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not 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.

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

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

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

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: September 22, 2011

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 120.1, 314.0, SM2340B, and SM5310B*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: Analytical holding times, 28 days for TOC and conductivity, were met.

- Calibration: Calibration criteria were met. All Initial calibration r^2 values were $\geq$0.995. The TOC initial and continuing calibration recoveries were within 90-110%. The perchlorate IPC-MA recovery was within 80-120%, the ICCS recovery was within 75-125%, and the ICV and CCV recoveries were within 85-115%. The pH buffer check standards results were considered acceptable.

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

- Blank Spikes and Laboratory Control Samples: TOC and pH recoveries were within laboratory-established QC limits. Perchlorate recoveries were within 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. 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 IUH1217

Analysis Method 900

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	0.472	3	1.78	pCi/L	U	UJ	C
Gross Beta	12587472	6.82	4	3.55	pCi/L			

Analysis Method 901.1

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.12	pCi/L	U	U	
Potassium-40	13966002	ND	25	22.4	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.039	1	0.639	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.247	1	0.368	pCi/L	U	U	

Analysis Method 905

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	-0.073	2	0.904	pCi/L	U	U	

Analysis Method 906

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	13.7	500	156	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	0.115	1	0.028	pCi/L	Jb	J	DNQ

Analysis Method EPA 120.1

Sample Name Outfall 019 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-01 **Sample Date:** 8/10/2011 12:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	930	1.0	1.0	umhos/c			

Analysis Method EPA 200.7

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Calcium	7440-70-2	120	0.10	0.050	mg/l	MHA		
Magnesium	7439-95-4	21	0.020	0.012	mg/l	MHA		
Zinc	7440-66-6	ND	20.0	6.00	ug/l		U	

Analysis Method EPA 200.7-Diss

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Calcium	7440-70-2	130	0.10	0.050	mg/l			
Magnesium	7439-95-4	24	0.020	0.012	mg/l			
Zinc	7440-66-6	6.79	20.0	6.00	ug/l	MHA	J	DNQ

Analysis Method EPA 245.1

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

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

Analysis Method EPA 245.1-Diss

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

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

Analysis Method EPA 314.0

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	ND	4.0	0.95	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name Outfall 019 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.0000054	ug/L		U	
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000061	ug/L	J, B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000092	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000072	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000047	ug/L	J, B	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000069	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000045	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000059	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000056	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.000019	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.000024	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000041	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.000023	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.000013	0.000005	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.000029	0.0000032	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.000011	ug/L	J, B	U	B
OCDF	39001-02-0	ND	0.0001	0.000012	ug/L	J, Q, B	U	B
Total HpCDD	37871-00-4	ND	0.00005	0.0000054	ug/L		U	
Total HpCDF	38998-75-3	ND	8e-006	0.0000074	ug/L		U	B
Total HxCDD	34465-46-8	ND	0.00005	0.0000059	ug/L		U	
Total HxCDF	55684-94-1	1.1e-005	0.00005	0.0000047	ug/L	J, Q, B	J	B, DNQ, *III
Total PeCDD	36088-22-9	ND	0.00005	0.000019	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.000023	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.000005	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000032	ug/L		U	

Analysis Method SM2340B

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness (as CaCO3)	NA	390	0.33	0.17	mg/l			

Analysis Method SM2340B-Diss

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3	NA	430	0.33	0.17	mg/l			

Analysis Method SM5310B

Sample Name Outfall 019 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUH1217-03 **Sample Date:** 8/11/2011 12:15:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Organic Carbon	TOC	5.1	1.0	0.50	mg/l			

APPENDIX G

Section 6

Outfall 019 – August 10, 11, & 12, 2011

Test America Analytical Laboratory Report