APPENDIX G

Section 13

Outfall 002 - March 6 & 7, 2010

MEC^{X} Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITC0790

Prepared by

MEC^{X}, LP
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I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ITC0790
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 002 (COMPOSITE)	ITC0790-03	G0C090503-001, F0C090509-001	WATER	3/7/2010 9:05:00 AM	ASTM 5174-91, 1201, 180.1, 200.7, EPA 200.7 (Diss), 200.8, 200.8 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-St. Louis above the control limit at ambient temperature; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at TestAmercia-West Sacramento and TestAmerica-St. Louis. As the samples were couriered to TestAmerica-Irvine, 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: April 9, 2010

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had detects between the EDL and the RL for all target compounds except 2,3,7,8-TCDD and total TCDD, and 1,2,3,7,8-PeCDD and total PeCDD. Most method blank results were reported as EMPCs; however, due to the extent of the method blank contamination, it was the reviewer's professional opinion that the

EMPC results also be utilized to qualify sample results. All sample detects were qualified as estimated nondetects, "U," at the levels of contamination.

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

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

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

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

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

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

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

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

Reviewed By: P. Meeks
Date Reviewed: April 8 & 28, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 200.7, 200.8, 245.1*, and the *National Functional Guidelines for Inorganic Data Review* (7/02).

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

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

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995. The CCV recoveries for dissolved beryllium bracketing the sample were above the control limit; however, dissolved beryllium was not detected in the site sample. All initial and all remaining continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. The total chromium 1ppb CRDL and the mercury CRI recoveries were above the control limit; however, total chromium and mercury were not detected in the site samples. The remaining CRDL/CRI recoveries were within the control limits of 70-130%.

- Blanks: Total arsenic was reported in the method blank at -1.00 µg/L; therefore, nondetected total arsenic was qualified as estimated, "UJ." Dissolved copper was detected in the method blank at 0.692 µg/L; therefore dissolved copper detected in the sample was qualified as nondetected, "U," at the reporting limit. Dissolved chromium was detected in a bracketing CCB at 1.16 µg/L; therefore, dissolved chromium detected in the sample was qualified as nondetected, "U," at the level of contamination. Method blanks and CCBs had no other detects.

- Interference Check Samples: Recoveries were within 80-120%. Cadmium, chromium, and copper were detected in the ICSAs but the reviewer was unable to determine if the detects were due to low-level contamination in the ICSA solution. There were no other 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 sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for all of the 200.7 analytes (except dissolved zinc) and the 200.8 total analytes. Recoveries and RPDs were within laboratory-established QC limits.

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

- Internal Standards Performance: All sample internal standard intensities were within 60-120% of the internal standard intensities measured in the initial calibration. Beryllium, chromium, manganese nickel, and copper were not bracketed by an internal standard of a lower mass; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method

detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: April 13, 2010

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. All remaining aliquots were 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 and radium-226 detector efficiencies were less than 20%; therefore, the results for these analytes were qualified as estimated, "UJ," for nondetects and, "J," for detects. 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: Total Uranium was detected in the method blank at 0.315 pCi/L; therefore, total uranium detected in the sample was qualified as nondetected ,"U," at the reporting limit. There were no other analytes detected in the method blanks or the KPA CCBs.

- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs (radium-226, radium-228, strontium-90) were within laboratory-established control limits.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG for cesium-137, potassium-40, tritium, and gross alpha and gross beta. Except for gross beta, all results and duplicate results were nondetects. The RPD for gross beta exceeded the control limit of 20%, at 22%; however, as the duplicate results were within the error margins, no qualification was applied.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for the sample in this SDG. Matrix spike analyses were performed on the sample in this SDG for gross alpha and gross beta. The recoveries were within the laboratory-established control limits. Method accuracy for he remaining analytes was evaluated based on the LCS results.

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

  The reviewer noted that the total uranium preparation log was not signed as having been reviewed.

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

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

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

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: April 8, 2010

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

- Holding Times: Analytical holding times were met.

- Calibration: Calibration criteria were met. The specific conductivity initial calibration r^2 value was ≥0.995 and all specific conductivity and turbidity continuing calibration recoveries were within 90-110%.

- Blanks: Method blanks and CCBs had no detects.

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

- Laboratory Duplicates: A laboratory duplicate analysis was performed for turbidity. The RPD was within the laboratory-established control limits.

- Matrix Spike/Matrix Spike Duplicate: 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.

Validated Sample Result Forms ITC0790

Analysis Method ASTM 5174-91

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	ND	0.693	0.21	pCi/L	Jb	U	B

Analysis Method EPA 120.1

Sample Name OUTFALL 002 (GRAB) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITC0790-01 **Sample Date:** 3/6/2010 3:05:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	490	1.0	1.0	umhos/c			result, RL and DL changed to match Form I

Analysis Method EPA 180.1

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	4.1	1.0	0.040	NTU			

Analysis Method EPA 200.7

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Barium	7440-39-3	0.035	0.010	0.0060	mg/l			
Iron	7439-89-6	0.17	0.040	0.015	mg/l			
Zinc	7440-66-6	ND	20	6.0	ug/l		U	

Analysis Method EPA 200.7-Diss

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Barium	7440-39-3	0.036	0.010	0.0060	mg/l			
Iron	7439-89-6	0.016	0.040	0.015	mg/l	Ja	J	DNQ
Zinc	7440-66-6	ND	20	6.0	ug/l		U	

Analysis Method EPA 200.8

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440-38-2	ND	1.0	0.90	ug/l		UJ	B
Beryllium	7440-41-7	ND	0.50	0.10	ug/l		UJ	*III
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		U	
Chromium	7440-47-3	ND	2.0	0.90	ug/l		UJ	*III
Copper	7440-50-8	1.8	2.0	0.50	ug/l	Ja	J	*III, DNQ
Lead	7439-92-1	0.32	1.0	0.20	ug/l	Ja	J	DNQ
Manganese	7439-96-5	9.7	1.0	0.70	ug/l		J	*III
Nickel	7440-02-0	1.2	2.0	0.50	ug/l	Ja	J	*III, DNQ
Selenium	7782-49-2	ND	2.0	0.50	ug/l		U	

Analysis Method EPA 200.8-Diss

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440-38-2	ND	1.0	0.90	ug/l		U	
Beryllium	7440-41-7	ND	0.50	0.10	ug/l	C	UJ	*III
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		U	
Chromium	7440-47-3	nd	2.4	0.90	ug/l		UJ	B, *III
Copper	7440-50-8	ND	2.0	0.50	ug/l	Ja	UJ	B, *III
Lead	7439-92-1	ND	1.0	0.20	ug/l		U	
Manganese	7439-96-5	6.9	1.0	0.70	ug/l		J	*III
Nickel	7440-02-0	1.2	2.0	0.50	ug/l	Ja	J	*III, DNQ
Selenium	7782-49-2	0.60	2.0	0.50	ug/l	Ja	J	DNQ

Analysis Method EPA 245.1

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 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 (COMPOSITE **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 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 900.0 MOD

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	0.3	3	2.1	pCi/L	U	UJ	C
Gross Beta	12587-47-2	3.9	4	2	pCi/L	Jb	J	DNQ

Analysis Method EPA 901.1 MOD

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	4.5	20	16	pCi/L	U	U	
Potassium 40	13966-00-2	-50	0	250	pCi/L	U	U	

Analysis Method EPA 903.0 MOD

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.123	1	0.063	pCi/L	Jb	J	C, DNQ

Analysis Method EPA 904 MOD

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.51	1	0.6	pCi/L	U	U	

Analysis Method EPA 905 MOD

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.25	3	0.53	pCi/L	U	U	

Analysis Method EPA 906.0 MOD

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	34	500	160	pCi/L	U	U	

Analysis Method EPA-5 1613B

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

Lab Sample Name: ITC0790-03 **Sample Date:** 3/7/2010 9:05:00 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	0.0000019	ug/L	J, B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	1e-006	0.0000005	ug/L	J, Q, B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000009	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000008	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000003	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000007	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000003	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000006	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000004	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000005	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000005	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000003	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000005	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000004	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000005	ug/L		U	
OCDD	3268-87-9	ND	0.00009	0.0000038	ug/L	J, B	U	B
OCDF	39001-02-0	ND	3.6e-006	0.0000007	ug/L	J, Q, B	U	B
Total HpCDD	37871-00-4	ND	6.6e-006	0.0000019	ug/L	B, J, Q	U	B
Total HpCDF	38998-75-3	ND	2.5e-006	0.0000005	ug/L	J, Q, B	U	B
Total HxCDD	34465-46-8	ND	0.00005	0.0000006	ug/L		U	
Total HxCDF	55684-94-1	ND	0.00005	0.0000003	ug/L		U	
Total PeCDD	36088-22-9	ND	0.00005	0.0000005	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000003	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000004	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000005	ug/L		U	

APPENDIX G

Section 14

Outfall 002 - March 6 & 7, 2010

Test America Analytical Laboratory Report

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Routine Outfall 002

Sampled: 03/06/10-03/07/10
Received: 03/08/10
Revised: 04/27/10 17:27

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

SAMPLE CROSS REFERENCE

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

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

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

Revised report to provide corrected units for Conductivity in hard copy report. Form 1 was reported correctly.

Original issue provided Diss, Zn results @ 140 ug/L. This was found to be carryover from another sample. Sample was re-run and is ND. Revised report to provide re-run data for the Diss Zn.

LABORATORY ID	CLIENT ID	MATRIX
ITC0790-01	OUTFALL 002 (GRAB)	Water
ITC0790-02	Trip Blanks	Water
ITC0790-03	Outfall 002 (COMPOSITE)	Water

Reviewed By:

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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

Project ID: Routine Outfall 002
Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-01 (OUTFALL 002 (GRAB) - Water)					**Sampled: 03/06/10**				
Reporting Units: ug/l									
Benzene	EPA 624	10C1689	0.28	0.50	ND	1	03/14/10	03/14/10	
Carbon tetrachloride	EPA 624	10C1689	0.28	0.50	ND	1	03/14/10	03/14/10	
Chloroform	EPA 624	10C1689	0.33	0.50	ND	1	03/14/10	03/14/10	
1,1-Dichloroethane	EPA 624	10C1689	0.40	0.50	ND	1	03/14/10	03/14/10	
1,2-Dichloroethane	EPA 624	10C1689	0.28	0.50	ND	1	03/14/10	03/14/10	
1,1-Dichloroethene	EPA 624	10C1689	0.42	0.50	ND	1	03/14/10	03/14/10	
Ethylbenzene	EPA 624	10C1689	0.25	0.50	ND	1	03/14/10	03/14/10	
Tetrachloroethene	EPA 624	10C1689	0.32	0.50	ND	1	03/14/10	03/14/10	
Toluene	EPA 624	10C1689	0.36	0.50	ND	1	03/14/10	03/14/10	
1,1,1-Trichloroethane	EPA 624	10C1689	0.30	0.50	ND	1	03/14/10	03/14/10	
1,1,2-Trichloroethane	EPA 624	10C1689	0.30	0.50	ND	1	03/14/10	03/14/10	
Trichloroethene	EPA 624	10C1689	0.26	0.50	**0.97**	1	03/14/10	03/14/10	
Trichlorofluoromethane	EPA 624	10C1689	0.34	0.50	ND	1	03/14/10	03/14/10	
Vinyl chloride	EPA 624	10C1689	0.40	0.50	ND	1	03/14/10	03/14/10	
Xylenes, Total	EPA 624	10C1689	0.90	1.5	ND	1	03/14/10	03/14/10	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				
Sample ID: ITC0790-02 (Trip Blanks - Water)					**Sampled: 03/06/10**				
Reporting Units: ug/l									
Benzene	EPA 624	10C1689	0.28	0.50	ND	1	03/14/10	03/14/10	
Carbon tetrachloride	EPA 624	10C1689	0.28	0.50	ND	1	03/14/10	03/14/10	
Chloroform	EPA 624	10C1689	0.33	0.50	ND	1	03/14/10	03/14/10	
1,1-Dichloroethane	EPA 624	10C1689	0.40	0.50	ND	1	03/14/10	03/14/10	
1,2-Dichloroethane	EPA 624	10C1689	0.28	0.50	ND	1	03/14/10	03/14/10	
1,1-Dichloroethene	EPA 624	10C1689	0.42	0.50	ND	1	03/14/10	03/14/10	
Ethylbenzene	EPA 624	10C1689	0.25	0.50	ND	1	03/14/10	03/14/10	
Tetrachloroethene	EPA 624	10C1689	0.32	0.50	ND	1	03/14/10	03/14/10	
Toluene	EPA 624	10C1689	0.36	0.50	ND	1	03/14/10	03/14/10	
1,1,1-Trichloroethane	EPA 624	10C1689	0.30	0.50	ND	1	03/14/10	03/14/10	
1,1,2-Trichloroethane	EPA 624	10C1689	0.30	0.50	ND	1	03/14/10	03/14/10	
Trichloroethene	EPA 624	10C1689	0.26	0.50	ND	1	03/14/10	03/14/10	
Trichlorofluoromethane	EPA 624	10C1689	0.34	0.50	ND	1	03/14/10	03/14/10	
Vinyl chloride	EPA 624	10C1689	0.40	0.50	ND	1	03/14/10	03/14/10	
Xylenes, Total	EPA 624	10C1689	0.90	1.5	ND	1	03/14/10	03/14/10	
Surrogate: 4-Bromofluorobenzene (80-120%)					*95 %*				
Surrogate: Dibromofluoromethane (80-120%)					*108 %*				
Surrogate: Toluene-d8 (80-120%)					*108 %*				

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 002
Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	10C1114	1.6	4.8	ND	0.952	03/09/10	03/11/10	
2,4-Dinitrotoluene	EPA 625	10C1114	0.19	8.6	ND	0.952	03/09/10	03/11/10	
N-Nitrosodimethylamine	EPA 625	10C1114	0.095	7.6	ND	0.952	03/09/10	03/11/10	
Pentachlorophenol	EPA 625	10C1114	0.095	7.6	ND	0.952	03/09/10	03/11/10	
2,4,6-Trichlorophenol	EPA 625	10C1114	0.095	5.7	ND	0.952	03/09/10	03/11/10	
Surrogate: 2,4,6-Tribromophenol (40-120%)					*91 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*81 %*				
Surrogate: 2-Fluorophenol (30-120%)					*69 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*74 %*				
Surrogate: Phenol-d6 (35-120%)					*72 %*				
Surrogate: Terphenyl-d14 (50-125%)					*85 %*				

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Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: ug/l									
alpha-BHC	EPA 608	10C1222	0.0024	0.0094	ND	0.943	03/10/10	03/12/10	
Surrogate: Decachlorobiphenyl (45-120%)					*91 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*63 %*				

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Project ID: Routine Outfall 002
Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-01 (OUTFALL 002 (GRAB) - Water)					**Sampled: 03/06/10**				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10C1956	1.3	4.7	ND	1	03/16/10	03/16/10	

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Sampled: 03/06/10-03/07/10
Received: 03/08/10

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: mg/l									
Barium	EPA 200.7	10C1395	0.0060	0.010	**0.035**	1	03/11/10	03/17/10	
Iron	EPA 200.7	10C1395	0.015	0.040	**0.17**	1	03/11/10	03/17/10	
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: ug/l									
Mercury	EPA 245.1	10C2010	0.10	0.20	ND	1	03/16/10	03/16/10	
Arsenic	EPA 200.8	10C1320	0.90	1.0	ND	1	03/10/10	03/12/10	
Beryllium	EPA 200.8	10C1320	0.10	0.50	ND	1	03/10/10	03/12/10	
Cadmium	EPA 200.8	10C1320	0.10	1.0	ND	1	03/10/10	03/12/10	
Zinc	EPA 200.7	10C1395	6.0	20	ND	1	03/11/10	03/17/10	
Chromium	EPA 200.8	10C1320	0.90	2.0	ND	1	03/10/10	03/12/10	
Copper	EPA 200.8	10C1320	0.50	2.0	**1.8**	1	03/10/10	03/11/10	Ja
Lead	EPA 200.8	10C1320	0.20	1.0	**0.32**	1	03/10/10	03/11/10	Ja
Manganese	EPA 200.8	10C1320	0.70	1.0	**9.7**	1	03/10/10	03/11/10	
Nickel	EPA 200.8	10C1320	0.50	2.0	**1.2**	1	03/10/10	03/11/10	Ja
Selenium	EPA 200.8	10C1320	0.50	2.0	ND	1	03/10/10	03/11/10	

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Project ID: Routine Outfall 002
Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: mg/l									
Barium	EPA 200.7-Diss	10C1739	0.0060	0.010	**0.036**	1	03/14/10	03/17/10	
Iron	EPA 200.7-Diss	10C1739	0.015	0.040	**0.016**	1	03/14/10	03/17/10	Ja
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10C2011	0.10	0.20	ND	1	03/16/10	03/16/10	
Arsenic	EPA 200.8-Diss	10C1740	0.90	1.0	ND	1	03/14/10	03/17/10	
Beryllium	EPA 200.8-Diss	10C1740	0.10	0.50	ND	1	03/14/10	03/16/10	C
Cadmium	EPA 200.8-Diss	10C1740	0.10	1.0	ND	1	03/14/10	03/16/10	
Zinc	EPA 200.7-Diss	10C1739	6.0	20	ND	1	03/14/10	04/27/10	
Chromium	EPA 200.8-Diss	10C1740	0.90	2.0	**2.4**	1	03/14/10	03/16/10	
Copper	EPA 200.8-Diss	10C1740	0.50	2.0	**1.5**	1	03/14/10	03/16/10	Ja
Lead	EPA 200.8-Diss	10C1740	0.20	1.0	ND	1	03/14/10	03/16/10	
Manganese	EPA 200.8-Diss	10C1740	0.70	1.0	**6.9**	1	03/14/10	03/16/10	
Nickel	EPA 200.8-Diss	10C1740	0.50	2.0	**1.2**	1	03/14/10	03/16/10	Ja
Selenium	EPA 200.8-Diss	10C1740	0.50	2.0	**0.60**	1	03/14/10	03/16/10	Ja

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Project ID: Routine Outfall 002
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Sampled: 03/06/10-03/07/10
Received: 03/08/10

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	10C1299	0.50	0.50	ND	1	03/10/10	03/10/10	
Biochemical Oxygen Demand	SM5210B	10C0996	0.50	2.0	**0.80**	1	03/08/10	03/13/10	Ja
Chloride	EPA 300.0	10C0921	0.25	0.50	**16**	1	03/08/10	03/08/10	
Nitrate-N	EPA 300.0	10C0921	0.060	0.11	ND	1	03/08/10	03/08/10	
Nitrite-N	EPA 300.0	10C0921	0.090	0.15	ND	1	03/08/10	03/08/10	
Nitrate/Nitrite-N	EPA 300.0	10C0921	0.15	0.26	ND	1	03/08/10	03/08/10	
Sulfate	EPA 300.0	10C0921	4.0	10	**150**	20	03/08/10	03/08/10	
Surfactants (MBAS)	SM5540-C	10C0982	0.050	0.10	**0.057**	1	03/08/10	03/08/10	Ja
Total Dissolved Solids	SM2540C	10C1348	1.0	10	**370**	1	03/11/10	03/11/10	
Total Suspended Solids	SM 2540D	10C1462	1.0	10	**3.0**	1	03/11/10	03/11/10	Ja

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Sampled: 03/06/10-03/07/10
Received: 03/08/10

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-01 (OUTFALL 002 (GRAB) - Water)					**Sampled: 03/06/10**				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	10C0938	0.10	0.10	ND	1	03/08/10	03/08/10	
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: NTU									
Turbidity	EPA 180.1	10C0939	0.040	1.0	**4.1**	1	03/08/10	03/08/10	
Sample ID: ITC0790-01 (OUTFALL 002 (GRAB) - Water)					**Sampled: 03/06/10**				
Reporting Units: ug/l									
Total Cyanide	SM4500CN-E	10C1460	2.2	5.0	ND	1	03/11/10	03/11/10	
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10C1047	0.90	4.0	ND	1	03/09/10	03/09/10	
Sample ID: ITC0790-01 (OUTFALL 002 (GRAB) - Water)					**Sampled: 03/06/10**				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	EPA 120.1	10C1346	1.0	1.0	**490**	1	03/11/10	03/11/10	

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Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	70198	0.0000019	0.00005	**3.7e-006**	0.94	03/11/10	03/16/10	J, B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	70198	0.00000059	0.00005	**1e-006**	0.94	03/11/10	03/16/10	J, Q, B
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	70198	0.00000095	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	70198	0.00000084	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	70198	0.00000033	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	70198	0.00000078	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	70198	0.00000032	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	70198	0.00000067	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	70198	0.00000043	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	70198	0.00000058	0.00005	ND	0.94	03/11/10	03/16/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	70198	0.0000005	0.00005	ND	0.94	03/11/10	03/16/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	70198	0.0000003	0.00005	ND	0.94	03/11/10	03/16/10	
2,3,4,7,8-PeCDF	EPA-5 1613B	70198	0.00000055	0.00005	ND	0.94	03/11/10	03/16/10	
2,3,7,8-TCDD	EPA-5 1613B	70198	0.00000044	0.00001	ND	0.94	03/11/10	03/16/10	
2,3,7,8-TCDF	EPA-5 1613B	70198	0.0000005	0.00001	ND	0.94	03/11/10	03/16/10	
OCDD	EPA-5 1613B	70198	0.0000038	0.00009	**3.3e-005**	0.94	03/11/10	03/16/10	J, B
OCDF	EPA-5 1613B	70198	0.00000074	0.00009	**3.6e-006**	0.94	03/11/10	03/16/10	J, Q, B
Total HpCDD	EPA-5 1613B	70198	0.0000019	0.00005	**6.6e-006**	0.94	03/11/10	03/16/10	B, J, Q
Total HpCDF	EPA-5 1613B	70198	0.00000059	0.00005	**2.5e-006**	0.94	03/11/10	03/16/10	J, Q, B
Total HxCDD	EPA-5 1613B	70198	0.00000067	0.00005	ND	0.94	03/11/10	03/16/10	
Total HxCDF	EPA-5 1613B	70198	0.0000003	0.00005	ND	0.94	03/11/10	03/16/10	
Total PeCDD	EPA-5 1613B	70198	0.00000058	0.00005	ND	0.94	03/11/10	03/16/10	
Total PeCDF	EPA-5 1613B	70198	0.0000003	0.00005	ND	0.94	03/11/10	03/16/10	
Total TCDD	EPA-5 1613B	70198	0.00000044	0.00001	ND	0.94	03/11/10	03/16/10	
Total TCDF	EPA-5 1613B	70198	0.0000005	0.00001	ND	0.94	03/11/10	03/16/10	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*102 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*96 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*92 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*86 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*88 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*90 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*87 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*81 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*81 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*82 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*89 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*82 %*				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*78 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*82 %*				
Surrogate: 13C-OCDD (17-157%)					*95 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*102 %*				

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 002
Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	67296	0.21	0.693	**0.584**	1	03/10/10	03/12/10	Jb

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Sampled: 03/06/10-03/07/10
Received: 03/08/10

EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	70220	2.1	3	**0.3**	1	03/11/10	03/14/10	U
Gross Beta	EPA 900.0 MOD	70220	2	4	**3.9**	1	03/11/10	03/14/10	Jb

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EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	69127	16	20	**4.5**	1	03/10/10	03/20/10	U
Potassium 40	EPA 901.1 MOD	69127	250	NA	-50	1	03/10/10	03/20/10	U

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Received: 03/08/10

EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	69101	0.063	1	**0.123**	1	03/10/10	04/02/10	Jb

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Received: 03/08/10

EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)						**Sampled: 03/07/10**			
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	69102	0.6	1	**0.51**	1	03/10/10	03/19/10	U

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Received: 03/08/10

EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)					**Sampled: 03/07/10**				
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	69104	0.53	3	**0.25**	1	03/10/10	03/20/10	U

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EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water)						**Sampled: 03/07/10**			
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	77060	160	500	**34**	1	03/18/10	03/23/10	U

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Received: 03/08/10

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: OUTFALL 002 (GRAB) (ITC0790-01) - Water					
SM2540F	2	03/06/2010 15:05	03/08/2010 03:45	03/08/2010 09:40	03/08/2010 09:40
Sample ID: Outfall 002 (COMPOSITE) (ITC0790-03) - Water					
EPA 180.1	2	03/07/2010 09:05	03/08/2010 03:45	03/08/2010 12:30	03/08/2010 12:30
EPA 300.0	2	03/07/2010 09:05	03/08/2010 03:45	03/08/2010 13:00	03/08/2010 13:59
Filtration	1	03/07/2010 09:05	03/08/2010 03:45	03/08/2010 16:42	03/08/2010 16:43
SM5210B	2	03/07/2010 09:05	03/08/2010 03:45	03/08/2010 19:35	03/13/2010 06:00
SM5540-C	2	03/07/2010 09:05	03/08/2010 03:45	03/08/2010 19:29	03/08/2010 20:20

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Received: 03/08/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1689 Extracted: 03/14/10											
Blank Analyzed: 03/14/2010 (10C1689-BLK1)											
Benzene	ND	0.50	0.28	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
1,1-Dichloroethane	ND	0.50	0.40	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	ug/l							
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.0	1.1	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Cyclohexane	ND	1.0	0.40	ug/l							
Surrogate: 4-Bromofluorobenzene	*24.5*			*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Dibromofluoromethane	*26.0*			*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: Toluene-d8	*26.9*			*ug/l*	*25.0*		*108*	*80-120*			
LCS Analyzed: 03/14/2010 (10C1689-BS1)											
Benzene	24.8	0.50	0.28	ug/l	25.0		99	70-120			
Carbon tetrachloride	25.7	0.50	0.28	ug/l	25.0		103	65-140			
Chloroform	26.6	0.50	0.33	ug/l	25.0		106	70-130			
1,1-Dichloroethane	27.0	0.50	0.40	ug/l	25.0		108	70-125			
1,2-Dichloroethane	27.3	0.50	0.28	ug/l	25.0		109	60-140			
1,1-Dichloroethene	25.6	0.50	0.42	ug/l	25.0		102	70-125			
Ethylbenzene	26.1	0.50	0.25	ug/l	25.0		104	75-125			
Tetrachloroethene	24.3	0.50	0.32	ug/l	25.0		97	70-125			
Toluene	26.9	0.50	0.36	ug/l	25.0		108	70-120			
1,1,1-Trichloroethane	26.3	0.50	0.30	ug/l	25.0		105	65-135			
1,1,2-Trichloroethane	27.1	0.50	0.30	ug/l	25.0		108	70-125			
Trichloroethene	25.9	0.50	0.26	ug/l	25.0		104	70-125			
Trichlorofluoromethane	26.9	0.50	0.34	ug/l	25.0		108	65-145			

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Project ID: Routine Outfall 002
Report Number: ITC0790

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Received: 03/08/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1689 Extracted: 03/14/10											
LCS Analyzed: 03/14/2010 (10C1689-BS1)											
Vinyl chloride	25.6	0.50	0.40	ug/l	25.0		102	55-135			
Xylenes, Total	81.3	1.5	0.90	ug/l	75.0		108	70-125			
Surrogate: 4-Bromofluorobenzene	*27.9*			*ug/l*	*25.0*		*111*	*80-120*			
Surrogate: Dibromofluoromethane	*27.7*			*ug/l*	*25.0*		*111*	*80-120*			
Surrogate: Toluene-d8	*27.1*			*ug/l*	*25.0*		*108*	*80-120*			
Matrix Spike Analyzed: 03/14/2010 (10C1689-MS1)						**Source: ITC0791-01**					
Benzene	25.0	0.50	0.28	ug/l	25.0	ND	100	65-125			
Carbon tetrachloride	25.6	0.50	0.28	ug/l	25.0	ND	102	65-140			
Chloroform	26.6	0.50	0.33	ug/l	25.0	ND	106	65-135			
1,1-Dichloroethane	27.0	0.50	0.40	ug/l	25.0	ND	108	65-130			
1,2-Dichloroethane	26.2	0.50	0.28	ug/l	25.0	ND	105	60-140			
1,1-Dichloroethene	25.1	0.50	0.42	ug/l	25.0	ND	100	60-130			
Ethylbenzene	25.9	0.50	0.25	ug/l	25.0	ND	104	65-130			
Tetrachloroethene	23.8	0.50	0.32	ug/l	25.0	ND	95	65-130			
Toluene	26.6	0.50	0.36	ug/l	25.0	ND	106	70-125			
1,1,1-Trichloroethane	26.3	0.50	0.30	ug/l	25.0	ND	105	65-140			
1,1,2-Trichloroethane	25.0	0.50	0.30	ug/l	25.0	ND	100	65-130			
Trichloroethene	25.5	0.50	0.26	ug/l	25.0	ND	102	65-125			
Trichlorofluoromethane	26.6	0.50	0.34	ug/l	25.0	ND	106	60-145			
Vinyl chloride	25.7	0.50	0.40	ug/l	25.0	ND	103	45-140			
Xylenes, Total	79.3	1.5	0.90	ug/l	75.0	ND	106	60-130			
Surrogate: 4-Bromofluorobenzene	*27.4*			*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: Dibromofluoromethane	*27.8*			*ug/l*	*25.0*		*111*	*80-120*			
Surrogate: Toluene-d8	*26.8*			*ug/l*	*25.0*		*107*	*80-120*			
Matrix Spike Dup Analyzed: 03/14/2010 (10C1689-MSD1)						**Source: ITC0791-01**					
Benzene	25.4	0.50	0.28	ug/l	25.0	ND	102	65-125	1	20	
Carbon tetrachloride	26.0	0.50	0.28	ug/l	25.0	ND	104	65-140	2	25	
Chloroform	26.6	0.50	0.33	ug/l	25.0	ND	106	65-135	0.2	20	
1,1-Dichloroethane	27.7	0.50	0.40	ug/l	25.0	ND	111	65-130	3	20	
1,2-Dichloroethane	27.2	0.50	0.28	ug/l	25.0	ND	109	60-140	4	20	
1,1-Dichloroethene	25.3	0.50	0.42	ug/l	25.0	ND	101	60-130	1	20	
Ethylbenzene	26.0	0.50	0.25	ug/l	25.0	ND	104	65-130	0.5	20	
Tetrachloroethene	24.2	0.50	0.32	ug/l	25.0	ND	97	65-130	1	20	
Toluene	27.3	0.50	0.36	ug/l	25.0	ND	109	70-125	3	20	

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1689 Extracted: 03/14/10											
Matrix Spike Dup Analyzed: 03/14/2010 (10C1689-MSD1)						**Source: ITC0791-01**					
1,1,1-Trichloroethane	26.4	0.50	0.30	ug/l	25.0	ND	106	65-140	0.6	20	
1,1,2-Trichloroethane	26.3	0.50	0.30	ug/l	25.0	ND	105	65-130	5	25	
Trichloroethene	26.2	0.50	0.26	ug/l	25.0	ND	105	65-125	2	20	
Trichlorofluoromethane	26.6	0.50	0.34	ug/l	25.0	ND	106	60-145	0.2	25	
Vinyl chloride	24.3	0.50	0.40	ug/l	25.0	ND	97	45-140	5	30	
Xylenes, Total	79.5	1.5	0.90	ug/l	75.0	ND	106	60-130	0.2	20	
Surrogate: 4-Bromofluorobenzene	*26.4*			*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: Dibromofluoromethane	*27.5*			*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: Toluene-d8	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1114 Extracted: 03/09/10											
Blank Analyzed: 03/11/2010 (10C1114-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/l							
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l							
Pentachlorophenol	ND	8.0	0.10	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2,4,6-Tribromophenol	*17.0*			*ug/l*	*20.0*		*85*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.96*			*ug/l*	*10.0*		*90*	*50-120*			
Surrogate: 2-Fluorophenol	*14.8*			*ug/l*	*20.0*		*74*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.08*			*ug/l*	*10.0*		*81*	*45-120*			
Surrogate: Phenol-d6	*15.6*			*ug/l*	*20.0*		*78*	*35-120*			
Surrogate: Terphenyl-d14	*9.80*			*ug/l*	*10.0*		*98*	*50-125*			
LCS Analyzed: 03/11/2010 (10C1114-BS1)											**MNR1**
Bis(2-ethylhexyl)phthalate	9.28	5.0	1.7	ug/l	10.0		93	65-130			
2,4-Dinitrotoluene	8.70	9.0	0.20	ug/l	10.0		87	65-120			*Ja*
N-Nitrosodimethylamine	7.36	8.0	0.10	ug/l	10.0		74	45-120			*Ja*
Pentachlorophenol	7.28	8.0	0.10	ug/l	10.0		73	50-120			*Ja*
2,4,6-Trichlorophenol	8.50	6.0	0.10	ug/l	10.0		85	55-120			
Surrogate: 2,4,6-Tribromophenol	*17.5*			*ug/l*	*20.0*		*87*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.52*			*ug/l*	*10.0*		*85*	*50-120*			
Surrogate: 2-Fluorophenol	*13.3*			*ug/l*	*20.0*		*66*	*30-120*			
Surrogate: Nitrobenzene-d5	*7.58*			*ug/l*	*10.0*		*76*	*45-120*			
Surrogate: Phenol-d6	*14.5*			*ug/l*	*20.0*		*73*	*35-120*			
Surrogate: Terphenyl-d14	*8.72*			*ug/l*	*10.0*		*87*	*50-125*			
LCS Dup Analyzed: 03/11/2010 (10C1114-BSD1)											
Bis(2-ethylhexyl)phthalate	10.2	5.0	1.7	ug/l	10.0		102	65-130	10	20	
2,4-Dinitrotoluene	9.40	9.0	0.20	ug/l	10.0		94	65-120	8	20	
N-Nitrosodimethylamine	7.80	8.0	0.10	ug/l	10.0		78	45-120	6	20	*Ja*
Pentachlorophenol	7.82	8.0	0.10	ug/l	10.0		78	50-120	7	25	*Ja*
2,4,6-Trichlorophenol	8.92	6.0	0.10	ug/l	10.0		89	55-120	5	30	
Surrogate: 2,4,6-Tribromophenol	*19.5*			*ug/l*	*20.0*		*97*	*40-120*			
Surrogate: 2-Fluorobiphenyl	*8.84*			*ug/l*	*10.0*		*88*	*50-120*			
Surrogate: 2-Fluorophenol	*14.6*			*ug/l*	*20.0*		*73*	*30-120*			
Surrogate: Nitrobenzene-d5	*8.20*			*ug/l*	*10.0*		*82*	*45-120*			
Surrogate: Phenol-d6	*15.4*			*ug/l*	*20.0*		*77*	*35-120*			

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Received: 03/08/10

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1114 Extracted: 03/09/10											
LCS Dup Analyzed: 03/11/2010 (10C1114-BSD1)											
Surrogate: Terphenyl-d14	*9.40*			*ug/l*	*10.0*		*94*	*50-125*			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1222 Extracted: 03/10/10											
Blank Analyzed: 03/11/2010 (10C1222-BLK1)											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	*0.447*			*ug/l*	*0.500*		*89*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.277*			*ug/l*	*0.500*		*55*	*35-115*			
LCS Analyzed: 03/11/2010 (10C1222-BS1)											**MNR1**
alpha-BHC	0.342	0.010	0.0025	ug/l	0.500		68	45-115			
Surrogate: Decachlorobiphenyl	*0.473*			*ug/l*	*0.500*		*95*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.331*			*ug/l*	*0.500*		*66*	*35-115*			
LCS Dup Analyzed: 03/11/2010 (10C1222-BSD1)											
alpha-BHC	0.300	0.010	0.0025	ug/l	0.500		60	45-115	13	30	
Surrogate: Decachlorobiphenyl	*0.456*			*ug/l*	*0.500*		*91*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.286*			*ug/l*	*0.500*		*57*	*35-115*			

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1956 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C1956-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/16/2010 (10C1956-BS1)											**MNR1**
Hexane Extractable Material (Oil & Grease)	19.7	5.0	1.4	mg/l	20.0		98	78-114			
LCS Dup Analyzed: 03/16/2010 (10C1956-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.4	5.0	1.4	mg/l	20.0		97	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1320 Extracted: 03/10/10											
Blank Analyzed: 03/11/2010-03/16/2010 (10C1320-BLK1)											
Arsenic	ND	1.0	0.90	ug/l							
Beryllium	ND	0.50	0.10	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Chromium	ND	2.0	0.90	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Manganese	ND	1.0	0.70	ug/l							
Nickel	ND	2.0	0.50	ug/l							
Selenium	ND	2.0	0.50	ug/l							
LCS Analyzed: 03/11/2010-03/12/2010 (10C1320-BS1)											
Arsenic	80.1	1.0	0.90	ug/l	80.0		100	85-115			
Beryllium	82.4	0.50	0.10	ug/l	80.0		103	85-115			
Cadmium	79.4	1.0	0.10	ug/l	80.0		99	85-115			
Chromium	82.0	2.0	0.90	ug/l	80.0		102	85-115			
Copper	78.4	2.0	0.50	ug/l	80.0		98	85-115			
Lead	80.3	1.0	0.20	ug/l	80.0		100	85-115			
Manganese	80.9	1.0	0.70	ug/l	80.0		101	85-115			
Nickel	78.1	2.0	0.50	ug/l	80.0		98	85-115			
Selenium	79.9	2.0	0.50	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 03/11/2010-03/12/2010 (10C1320-MS1)						**Source: ITC0790-03**					
Arsenic	82.5	1.0	0.90	ug/l	80.0	ND	103	70-130			
Beryllium	89.8	0.50	0.10	ug/l	80.0	ND	112	70-130			
Cadmium	81.1	1.0	0.10	ug/l	80.0	ND	101	70-130			
Chromium	81.0	2.0	0.90	ug/l	80.0	ND	101	70-130			
Copper	79.6	2.0	0.50	ug/l	80.0	1.76	97	70-130			
Lead	75.7	1.0	0.20	ug/l	80.0	0.316	94	70-130			
Manganese	92.3	1.0	0.70	ug/l	80.0	9.73	103	70-130			
Nickel	79.0	2.0	0.50	ug/l	80.0	1.23	97	70-130			
Selenium	80.3	2.0	0.50	ug/l	80.0	ND	100	70-130			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1320 Extracted: 03/10/10											
Matrix Spike Analyzed: 03/11/2010-03/12/2010 (10C1320-MS2)						**Source: ITC0791-03**					
Arsenic	83.9	1.0	0.90	ug/l	80.0	ND	105	70-130			
Beryllium	90.5	0.50	0.10	ug/l	80.0	ND	113	70-130			
Cadmium	81.3	1.0	0.10	ug/l	80.0	ND	102	70-130			
Chromium	83.1	2.0	0.90	ug/l	80.0	1.11	103	70-130			
Copper	79.8	2.0	0.50	ug/l	80.0	1.36	98	70-130			
Lead	75.1	1.0	0.20	ug/l	80.0	0.231	94	70-130			
Manganese	109	1.0	0.70	ug/l	80.0	27.8	102	70-130			
Nickel	78.8	2.0	0.50	ug/l	80.0	1.55	97	70-130			
Selenium	82.0	2.0	0.50	ug/l	80.0	0.542	102	70-130			
Matrix Spike Dup Analyzed: 03/11/2010-03/12/2010 (10C1320-MSD1)						**Source: ITC0790-03**					
Arsenic	81.8	1.0	0.90	ug/l	80.0	ND	102	70-130	0.8	20	
Beryllium	87.9	0.50	0.10	ug/l	80.0	ND	110	70-130	2	20	
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	4	20	
Chromium	78.5	2.0	0.90	ug/l	80.0	ND	98	70-130	3	20	
Copper	79.1	2.0	0.50	ug/l	80.0	1.76	97	70-130	0.6	20	
Lead	73.6	1.0	0.20	ug/l	80.0	0.316	92	70-130	3	20	
Manganese	91.4	1.0	0.70	ug/l	80.0	9.73	102	70-130	1	20	
Nickel	77.5	2.0	0.50	ug/l	80.0	1.23	95	70-130	2	20	
Selenium	82.2	2.0	0.50	ug/l	80.0	ND	103	70-130	2	20	
Batch: 10C1395 Extracted: 03/11/10											
Blank Analyzed: 03/17/2010 (10C1395-BLK1)											
Barium	ND	0.010	0.0060	mg/l							
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20	6.0	ug/l							

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1395 Extracted: 03/11/10											
LCS Analyzed: 03/17/2010 (10C1395-BS1)											
Barium	0.515	0.010	0.0060	mg/l	0.500		103	85-115			
Iron	0.518	0.040	0.015	mg/l	0.500		104	85-115			
Zinc	501	20	6.0	ug/l	500		100	85-115			
Matrix Spike Analyzed: 03/17/2010 (10C1395-MS1)						**Source: ITC0790-03**					
Barium	0.559	0.010	0.0060	mg/l	0.500	0.0353	105	70-130			
Iron	0.698	0.040	0.015	mg/l	0.500	0.165	106	70-130			
Zinc	515	20	6.0	ug/l	500	ND	103	70-130			
Matrix Spike Dup Analyzed: 03/17/2010 (10C1395-MSD1)						**Source: ITC0790-03**					
Barium	0.569	0.010	0.0060	mg/l	0.500	0.0353	107	70-130	2	20	
Iron	0.725	0.040	0.015	mg/l	0.500	0.165	112	70-130	4	20	
Zinc	524	20	6.0	ug/l	500	ND	105	70-130	2	20	
Batch: 10C2010 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C2010-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/16/2010 (10C2010-BS1)											
Mercury	8.36	0.20	0.10	ug/l	8.00		105	85-115			
Matrix Spike Analyzed: 03/16/2010 (10C2010-MS1)						**Source: ITC1476-01**					
Mercury	8.41	0.20	0.10	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/16/2010 (10C2010-MSD1)						**Source: ITC1476-01**					
Mercury	8.38	0.20	0.10	ug/l	8.00	ND	105	70-130	0.5	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1739 Extracted: 03/14/10											
Blank Analyzed: 03/17/2010 (10C1739-BLK1)											
Barium	ND	0.010	0.0060	mg/l							
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 03/17/2010 (10C1739-BS1)											
Barium	0.534	0.010	0.0060	mg/l	0.500		107	85-115			
Iron	0.547	0.040	0.015	mg/l	0.500		109	85-115			
Zinc	520	20	6.0	ug/l	500		104	85-115			
Matrix Spike Analyzed: 03/17/2010 (10C1739-MS1)						**Source: ITC0790-03**					
Barium	0.575	0.010	0.0060	mg/l	0.500	0.0359	108	70-130			
Iron	0.558	0.040	0.015	mg/l	0.500	0.0164	108	70-130			
Zinc	526	20	6.0	ug/l	500	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/17/2010 (10C1739-MSD1)						**Source: ITC0790-03**					
Barium	0.563	0.010	0.0060	mg/l	0.500	0.0359	105	70-130	2	20	
Iron	0.540	0.040	0.015	mg/l	0.500	0.0164	105	70-130	3	20	
Zinc	514	20	6.0	ug/l	500	ND	103	70-130	2	20	
Batch: 10C1740 Extracted: 03/14/10											
Blank Analyzed: 03/16/2010 (10C1740-BLK1)											
Arsenic	ND	1.0	0.90	ug/l							
Beryllium	ND	0.50	0.10	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Chromium	ND	2.0	0.90	ug/l							
Copper	0.692	2.0	0.50	ug/l							*Ja*
Lead	ND	1.0	0.20	ug/l							
Manganese	ND	1.0	0.70	ug/l							
Nickel	ND	2.0	0.50	ug/l							
Selenium	ND	2.0	0.50	ug/l							

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1740 Extracted: 03/14/10											
LCS Analyzed: 03/16/2010 (10C1740-BS1)											
Arsenic	81.3	1.0	0.90	ug/l	80.0		102	85-115			
Beryllium	92.2	0.50	0.10	ug/l	80.0		115	85-115			
Cadmium	81.0	1.0	0.10	ug/l	80.0		101	85-115			
Chromium	87.9	2.0	0.90	ug/l	80.0		110	85-115			
Copper	82.0	2.0	0.50	ug/l	80.0		103	85-115			
Lead	83.1	1.0	0.20	ug/l	80.0		104	85-115			
Manganese	88.3	1.0	0.70	ug/l	80.0		110	85-115			
Nickel	84.7	2.0	0.50	ug/l	80.0		106	85-115			
Selenium	82.0	2.0	0.50	ug/l	80.0		103	85-115			
Matrix Spike Analyzed: 03/16/2010 (10C1740-MS1)						**Source: ITC1128-01**					
Arsenic	80.8	1.0	0.90	ug/l	80.0	ND	101	70-130			
Beryllium	98.3	0.50	0.10	ug/l	80.0	ND	123	70-130			
Cadmium	77.6	1.0	0.10	ug/l	80.0	ND	97	70-130			
Chromium	117	2.0	0.90	ug/l	80.0	10.8	132	70-130			*M1*
Copper	76.4	2.0	0.50	ug/l	80.0	1.11	94	70-130			
Lead	78.0	1.0	0.20	ug/l	80.0	ND	97	70-130			
Manganese	94.1	1.0	0.70	ug/l	80.0	3.86	113	70-130			
Nickel	101	2.0	0.50	ug/l	80.0	7.54	117	70-130			
Selenium	95.3	2.0	0.50	ug/l	80.0	13.5	102	70-130			
Matrix Spike Analyzed: 03/16/2010-03/17/2010 (10C1740-MS2)						**Source: ITC1128-02**					
Arsenic	82.1	1.0	0.90	ug/l	80.0	ND	103	70-130			
Beryllium	102	0.50	0.10	ug/l	80.0	ND	128	70-130			
Cadmium	77.7	1.0	0.10	ug/l	80.0	ND	97	70-130			
Chromium	89.3	2.0	0.90	ug/l	80.0	7.60	102	70-130			
Copper	77.2	2.0	0.50	ug/l	80.0	2.21	94	70-130			
Lead	76.7	1.0	0.20	ug/l	80.0	ND	96	70-130			
Manganese	91.1	1.0	0.70	ug/l	80.0	5.77	107	70-130			
Nickel	133	2.0	0.50	ug/l	80.0	56.6	95	70-130			
Selenium	102	2.0	0.50	ug/l	80.0	20.5	102	70-130			

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1740 Extracted: 03/14/10											
Matrix Spike Dup Analyzed: 03/16/2010 (10C1740-MSD1)						**Source: ITC1128-01**					
Arsenic	81.8	1.0	0.90	ug/l	80.0	ND	102	70-130	1	20	
Beryllium	101	0.50	0.10	ug/l	80.0	ND	126	70-130	2	20	
Cadmium	79.0	1.0	0.10	ug/l	80.0	ND	99	70-130	2	20	
Chromium	137	2.0	0.90	ug/l	80.0	10.8	157	70-130	16	20	*M1*
Copper	77.6	2.0	0.50	ug/l	80.0	1.11	96	70-130	2	20	
Lead	78.3	1.0	0.20	ug/l	80.0	ND	98	70-130	0.4	20	
Manganese	97.6	1.0	0.70	ug/l	80.0	3.86	117	70-130	4	20	
Nickel	112	2.0	0.50	ug/l	80.0	7.54	130	70-130	10	20	
Selenium	97.0	2.0	0.50	ug/l	80.0	13.5	104	70-130	2	20	
Batch: 10C2011 Extracted: 03/16/10											
Blank Analyzed: 03/16/2010 (10C2011-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/16/2010 (10C2011-BS1)											
Mercury	8.65	0.20	0.10	ug/l	8.00		108	85-115			
Matrix Spike Analyzed: 03/16/2010 (10C2011-MS1)						**Source: ITC1128-01**					
Mercury	8.49	0.20	0.10	ug/l	8.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 03/16/2010 (10C2011-MSD1)						**Source: ITC1128-01**					
Mercury	8.36	0.20	0.10	ug/l	8.00	ND	104	70-130	2	20	

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Project ID: Routine Outfall 002
Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0921 Extracted: 03/08/10											
Blank Analyzed: 03/08/2010 (10C0921-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 03/08/2010 (10C0921-BS1)											
Chloride	4.95	0.50	0.25	mg/l	5.00		99	90-110			
Nitrate-N	1.11	0.11	0.060	mg/l	1.13		98	90-110			
Nitrite-N	1.51	0.15	0.090	mg/l	1.52		100	90-110			
Sulfate	10.3	0.50	0.20	mg/l	10.0		103	90-110			
Matrix Spike Analyzed: 03/08/2010 (10C0921-MS1)						**Source: ITC0793-02**					
Chloride	12.9	0.50	0.25	mg/l	5.00	7.84	102	80-120			
Nitrate-N	1.40	0.11	0.060	mg/l	1.13	0.258	101	80-120			
Nitrite-N	1.58	0.15	0.090	mg/l	1.52	ND	104	80-120			
Sulfate	22.1	0.50	0.20	mg/l	10.0	11.7	103	80-120			
Matrix Spike Analyzed: 03/08/2010 (10C0921-MS2)						**Source: ITC0878-02**					
Chloride	11.8	0.50	0.25	mg/l	5.00	6.58	104	80-120			
Nitrate-N	4.50	0.11	0.060	mg/l	1.13	3.38	99	80-120			
Nitrite-N	1.59	0.15	0.090	mg/l	1.52	ND	105	80-120			
Sulfate	31.2	0.50	0.20	mg/l	10.0	20.3	109	80-120			
Matrix Spike Dup Analyzed: 03/08/2010 (10C0921-MSD1)						**Source: ITC0793-02**					
Chloride	12.9	0.50	0.25	mg/l	5.00	7.84	101	80-120	0.07	20	
Nitrate-N	1.37	0.11	0.060	mg/l	1.13	0.258	98	80-120	3	20	
Nitrite-N	1.58	0.15	0.090	mg/l	1.52	ND	104	80-120	0.1	20	
Sulfate	22.0	0.50	0.20	mg/l	10.0	11.7	103	80-120	0.1	20	

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0939 Extracted: 03/08/10											
Blank Analyzed: 03/08/2010 (10C0939-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 03/08/2010 (10C0939-DUP1)						**Source: ITC0790-03**					
Turbidity	4.17	1.0	0.040	NTU		4.12			1	20	
Batch: 10C0982 Extracted: 03/08/10											
Blank Analyzed: 03/08/2010 (10C0982-BLK1)											
Surfactants (MBAS)	ND	0.10	0.050	mg/l							
LCS Analyzed: 03/08/2010 (10C0982-BS1)											
Surfactants (MBAS)	0.235	0.10	0.050	mg/l	0.250		94	90-110			
Matrix Spike Analyzed: 03/08/2010 (10C0982-MS1)						**Source: ITC0790-03**					
Surfactants (MBAS)	0.329	0.10	0.050	mg/l	0.250	0.0567	109	50-125			
Matrix Spike Dup Analyzed: 03/08/2010 (10C0982-MSD1)						**Source: ITC0790-03**					
Surfactants (MBAS)	0.339	0.10	0.050	mg/l	0.250	0.0567	113	50-125	3	20	
Batch: 10C0996 Extracted: 03/08/10											
Blank Analyzed: 03/13/2010 (10C0996-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l							
LCS Analyzed: 03/13/2010 (10C0996-BS1)											
Biochemical Oxygen Demand	200	100	25	mg/l	198		101	85-115			

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C0996 Extracted: 03/08/10											
LCS Dup Analyzed: 03/13/2010 (10C0996-BSD1)											
Biochemical Oxygen Demand	196	100	25	mg/l	198		99	85-115	2	20	
Batch: 10C1047 Extracted: 03/09/10											
Blank Analyzed: 03/09/2010 (10C1047-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/09/2010 (10C1047-BS1)											
Perchlorate	24.0	4.0	0.90	ug/l	25.0		96	85-115			
Matrix Spike Analyzed: 03/09/2010 (10C1047-MS1)						**Source: ITC0877-01**					
Perchlorate	30.3	4.0	0.90	ug/l	25.0	6.15	97	80-120			
Matrix Spike Dup Analyzed: 03/09/2010 (10C1047-MSD1)						**Source: ITC0877-01**					
Perchlorate	30.6	4.0	0.90	ug/l	25.0	6.15	98	80-120	0.7	20	
Batch: 10C1299 Extracted: 03/10/10											
Blank Analyzed: 03/10/2010 (10C1299-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
LCS Analyzed: 03/10/2010 (10C1299-BS1)											
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/10/2010 (10C1299-MS1)						**Source: ITC0421-01**					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120			

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1299 Extracted: 03/10/10											
Matrix Spike Dup Analyzed: 03/10/2010 (10C1299-MSD1)						**Source: ITC0421-01**					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120	0	15	
Batch: 10C1346 Extracted: 03/11/10											
Blank Analyzed: 03/11/2010 (10C1346-BLK1)											
Specific Conductance	ND	1.0	1.0	umhos/cm @ 25C							
LCS Analyzed: 03/11/2010 (10C1346-BS1)											
Specific Conductance	1410	1.0	1.0	umhos/cm @ 25C	1410		100	90-110			
Batch: 10C1348 Extracted: 03/11/10											
Blank Analyzed: 03/11/2010 (10C1348-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/11/2010 (10C1348-BS1)											
Total Dissolved Solids	998	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/11/2010 (10C1348-DUP1)						**Source: ITC0719-01**					
Total Dissolved Solids	293	10	1.0	mg/l		290			1	10	
Batch: 10C1460 Extracted: 03/11/10											
Blank Analyzed: 03/11/2010 (10C1460-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10C1460 Extracted: 03/11/10											
LCS Analyzed: 03/11/2010 (10C1460-BS1)											
Total Cyanide	191	5.0	2.2	ug/l	200		95	90-110			
Matrix Spike Analyzed: 03/11/2010 (10C1460-MS1)						**Source: ITC0989-03**					
Total Cyanide	186	5.0	2.2	ug/l	200	ND	93	70-115			
Matrix Spike Dup Analyzed: 03/11/2010 (10C1460-MSD1)						**Source: ITC0989-03**					
Total Cyanide	185	5.0	2.2	ug/l	200	ND	93	70-115	0.6	15	
Batch: 10C1462 Extracted: 03/11/10											
Blank Analyzed: 03/11/2010 (10C1462-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/11/2010 (10C1462-BS1)											
Total Suspended Solids	996	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/11/2010 (10C1462-DUP1)						**Source: ITC0803-01**					
Total Suspended Solids	223	10	1.0	mg/l		223			0	10	

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EPA-5 1613B

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

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EPA-5 1613B

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

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 002

Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

METHOD BLANK/QC DATA

EPA-5 1613B

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

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Received: 03/08/10

METHOD BLANK/QC DATA

ASTM 5174-91

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 67296 Extracted: 03/10/10											
Matrix Spike Dup Analyzed: 03/12/2010 (F0B230452001D)						**Source: F0B230452001**					
Total Uranium	26.9	0.7	0.2	pCi/L	27.7	0.677	95	62-150	4	20	
Matrix Spike Analyzed: 03/12/2010 (F0B230452001S)						**Source: F0B230452001**					
Total Uranium	28.1	0.7	0.2	pCi/L	27.7	0.677	99	62-150			
Blank Analyzed: 03/12/2010 (F0C080000296B)						**Source:**					
Total Uranium	0.315	0.693	0.21	pCi/L				-			*Jb*
LCS Analyzed: 03/12/2010 (F0C080000296C)						**Source:**					
Total Uranium	5.62	0.69	0.21	pCi/L	5.54		101	90-120			

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Received: 03/08/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 70220 Extracted: 03/11/10											
Matrix Spike Analyzed: 03/14/2010 (F0C090509001S)						**Source: ITC0790-03**					
Gross Alpha	47.4	3	2.6	pCi/L	59.9	0.3	79	35-150			
Gross Beta	87	4	2.2	pCi/L	82.4	3.9	101	54-150			
Duplicate Analyzed: 03/14/2010 (F0C090509001X)						**Source: ITC0790-03**					
Gross Alpha	1.9	3	2.1	pCi/L		0.3		-			*U*
Gross Beta	4.8	4	2.1	pCi/L		3.9		-			
Blank Analyzed: 03/14/2010 (F0C110000220B)						**Source:**					
Gross Alpha	-0.16	3	0.79	pCi/L				-			*U*
Gross Beta	0.37	4	1.5	pCi/L				-			*U*
LCS Analyzed: 03/14/2010 (F0C110000220C)						**Source:**					
Gross Alpha	31.9	3	0.8	pCi/L	49.4		64	62-134			
Gross Beta	53	4	1.5	pCi/L	67.9		78	58-133			

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METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69127 Extracted: 03/10/10											
Duplicate Analyzed: 03/20/2010 (F0C090509001X)						**Source: ITC0790-03**					
Cesium 137	-0.3	20	13	pCi/L		4.5		-			*U*
Potassium 40	-50	NA	220	pCi/L		-50		-			*U*
Blank Analyzed: 03/21/2010 (F0C100000127B)						**Source:**					
Cesium 137	1.9	20	14	pCi/L				-			*U*
Potassium 40	12	NA	210	pCi/L				-			*U*
LCS Analyzed: 03/21/2010 (F0C100000127C)						**Source:**					
Americium 241	131000	NA	500	pCi/L	141000		93	87-110			
Cobalt 60	79200	NA	200	pCi/L	87800		90	89-110			
Cesium 137	48400	20	200	pCi/L	53100		91	90-110			

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METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69101 Extracted: 03/10/10											
Blank Analyzed: 04/02/2010 (F0C100000101B)						**Source:**					
Radium (226)	0.025	1	0.051	pCi/L				-			*U*
LCS Analyzed: 04/02/2010 (F0C100000101C)						**Source:**					
Radium (226)	10.6	1	0.05	pCi/L	11.3		94	68-136			
LCS Dup Analyzed: 04/02/2010 (F0C100000101L)						**Source:**					
Radium (226)	10.1	1	0.05	pCi/L	11.3		89	68-136	6	40	

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Sampled: 03/06/10-03/07/10
Received: 03/08/10

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69102 Extracted: 03/10/10											
Blank Analyzed: 03/19/2010 (F0C100000102B)						**Source:**					
Radium 228	0.19	1	0.39	pCi/L				-			*U*
LCS Analyzed: 03/19/2010 (F0C100000102C)						**Source:**					
Radium 228	7.41	1	0.36	pCi/L	6.37		116	60-142			
LCS Dup Analyzed: 03/19/2010 (F0C100000102L)						**Source:**					
Radium 228	7.87	1	0.42	pCi/L	6.37		124	60-142	6	40	

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METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 69104 Extracted: 03/10/10											
Blank Analyzed: 03/20/2010 (F0C100000104B)						**Source:**					
Strontium 90	0.01	3	0.43	pCi/L				-			*U*
LCS Analyzed: 03/20/2010 (F0C100000104C)						**Source:**					
Strontium 90	6.64	3	0.4	pCi/L	6.79		98	80-130			
LCS Dup Analyzed: 03/20/2010 (F0C100000104L)						**Source:**					
Strontium 90	6.75	3	0.39	pCi/L	6.79		99	80-130	2	40	

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Received: 03/08/10

METHOD BLANK/QC DATA

EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 77060 Extracted: 03/18/10											
Duplicate Analyzed: 03/23/2010 (F0C090509001X)						**Source: ITC0790-03**					
Tritium	-26	500	150	pCi/L		34		-			*U*
Matrix Spike Analyzed: 03/24/2010 (F0C090512001S)						**Source: F0C090512001**					
Tritium	4170	500	150	pCi/L	4510	-17	93	62-147			
Blank Analyzed: 03/23/2010 (F0C180000060B)						**Source:**					
Tritium	83	500	150	pCi/L				-			*U*
LCS Analyzed: 03/23/2010 (F0C180000060C)						**Source:**					
Tritium	4450	500	150	pCi/L	4510		99	85-112			

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Report Number: ITC0790

Sampled: 03/06/10-03/07/10
Received: 03/08/10

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITC0790-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.7	15
ITC0790-01	624-Boeing 001/002Q (Fr113+X+Fr	1,1-Dichloroethene	ug/l	0	0.50	6
ITC0790-01	624-Boeing 001/002Q (Fr113+X+Fr	Trichloroethene	ug/l	0.97	0.50	5
ITC0790-01	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	-1	5.0	8.5
ITC0790-01	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
ITC0790-02	624-Boeing 001/002Q (Fr113+X+Fr	1,1-Dichloroethene	ug/l	0	0.50	6
ITC0790-02	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
ITC0790-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0094	0.03
ITC0790-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	13
ITC0790-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.6	18
ITC0790-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.32	4.8	4
ITC0790-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.6	16
ITC0790-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.6	16
ITC0790-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.50	10
ITC0790-03	Arsenic-200.8	Arsenic	ug/l	0.13	1.0	10
ITC0790-03	Barium-200.7	Barium	mg/l	0.035	0.010	1
ITC0790-03	Beryllium-200.8	Beryllium	ug/l	0.025	0.50	4
ITC0790-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	0.80	2.0	30
ITC0790-03	Cadmium-200.8	Cadmium	ug/l	0.033	1.0	3.1
ITC0790-03	Chloride - 300.0	Chloride	mg/l	16	0.50	150
ITC0790-03	Chromium-200.8	Chromium	ug/l	0.60	2.0	16
ITC0790-03	Copper-200.8	Copper	ug/l	1.76	2.0	14

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ITC0790-03	Iron-200.7	Iron	mg/l	0.17	0.040	0.3
ITC0790-03	Lead-200.8	Lead	ug/l	0.32	1.0	5.2
ITC0790-03	Manganese-200.8	Manganese	ug/l	9.73	1.0	50
ITC0790-03	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.057	0.10	0.5
ITC0790-03	Nickel-200.8	Nickel	ug/l	1.23	2.0	96
ITC0790-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.029	0.11	8
ITC0790-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITC0790-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.029	0.26	8
ITC0790-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
ITC0790-03	Selenium-200.8	Selenium	ug/l	0.37	2.0	5
ITC0790-03	Sulfate-300.0	Sulfate	mg/l	154	10	300
ITC0790-03	TDS - SM2540C	Total Dissolved Solids	mg/l	371	10	950
ITC0790-03	TSS - SM2540D	Total Suspended Solids	mg/l	3.00	10	45
ITC0790-03	Zinc-200.7	Zinc	ug/l	4.14	20	120

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DATA QUALIFIERS AND DEFINITIONS

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
J	Estimated result. Result is less than the reporting limit.
Ja	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
Jb	Result is greater than sample detection limit but less than stated reporting limit.
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
Q	Estimated maximum possible concentration (EMPC).
U	Result is less than the sample detection limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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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	X
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
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	
SM2540F	Water	X	X
SM4500CN-E	Water	X	X
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5540-C	Water	X	X

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

Subcontracted Laboratories

TestAmerica Irvine

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TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITC0790-03

Method Performed: EPA 900.0 MOD
Samples: ITC0790-03

Method Performed: EPA 901.1 MOD
Samples: ITC0790-03

Method Performed: EPA 903.0 MOD
Samples: ITC0790-03

Method Performed: EPA 904 MOD
Samples: ITC0790-03

Method Performed: EPA 905 MOD
Samples: ITC0790-03

Method Performed: EPA 906.0 MOD
Samples: ITC0790-03

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ITC0790-03

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

ITC0790

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs 624 + xylenes	Settleable Solids	Oil & Grease (1664-HEM)	Cyanide (total recoverable)	Conductivity	~~Total Residual Chlorine~~ 1/4 3/6/10
Outfall 002	W	VOAs	5	3/6/10 1505	HCl	1A, 1B, 1C, 1D, 1E	X					
Outfall 002	W	1L Poly	1		None	2		X				
Outfall 002	W	1L Amber	2	SD	HCl	3A, 3B			X			
Outfall 002	W	500 mL Poly	1		NaOH	4				X		
Outfall 002	W	500 mL Poly	2	3/6/10 1505	None	5A, 5B					X	
Trip Blanks	W	VOAs	3	3/6/10 0700	HCl	6A, 6B, 6C	X					
~~Outfall 002~~	~~W~~	~~150 mL Poly~~	~~1~~		~~None~~	~~7~~						

ANALYSIS REQUIRED

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

Temp °F = 56.8

pH = 8.0

Time of readings = 3/6/10 1505

Comments

MS 3/8/10 6.0

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:
	3/7/10 1415		3/7/10 1415
Relinquished By	Date/Time:	Received By	Date/Time:
	3/7/10 1645	SC Rec Fridge	3/7/10
Relinquished By	Date/Time:	Received By	Date/Time:
SC Rec Fridge	3/8/10 0345		3/8/10 0345

Turn-around time: (Check)

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

48 Hour: _____ 5 Day: _____ Normal: _____

Sample Integrity: (Check)

Intact: ✓ On Ice: X 4°C

Data Requirements: (Check)

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

CHAIN OF CUSTODY FORM

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

Test America Contact: Joseph Doak

Project:
Boeing-SSFL NPDES
Routine Outfall 002
COMPOSITE

Project Manager: Bronwyn Kelly

Sampler: S Dawson

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, **As, Ba, Be, Cr, Fe, Mn, Ni**	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) + Pesticides + PP	2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, PCP (SVOCs 625)	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	~~Chronic Toxicity~~ 1/1. 3/7/2010	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, **As, Ba, Be, Fe, Mn, Ni**		Comments
Outfall 002	W	1L Poly	1	3/7/10 0905	HNO_3	8A	X														high flow
Outfall 002 Dup	W	1L Poly	1		HNO_3	8B	X														
Outfall 002	W	1L Amber	2		None	9A, 9B		X													
Outfall 002	W	1L Poly	1		None	10			X												
Outfall 002	W	500 mL Poly	2		None	11A, 11B				X											
Outfall 002	W	500 mL Poly	2		None	12A, 12B					X										
Outfall 002	W	500 mL Poly	1		None	13						X									
Outfall 002	W	500 mL Poly	2		None	14A, 14B							X								
Outfall 002	W	500 mL Poly	1	SD	H_2SO_4	15								X							
Outfall 002	W	1L Amber	2		None	16A, 16B									X						
Outfall 002	W	1L Amber	2		None	17A, 17B										X					
Outfall 002	W	2.5 Gal Cube	1	3/7/10 0905	None	18A											X				Unfiltered and unpreserved analysis
		500 mL Amber	1		None	18B															
~~Outfall 002~~	W	~~1 Gal Cube~~	1		None	19															
Outfall 002	W	1L Poly	1	3/7/10 0905	None	20													X		Filter w/in 24hrs of receipt at lab

COC Page 2 of 2 lists the composite samples for Outfall 002 for this storm event.
These must be added to the same work order for COC Page 1 of 2 for Outfall 002 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	3/7/10 1415	[signature]	3/7/10 1415
[signature]	3/7/10 1645	SC rec fridge	3/7/10
SC Rec Fridge 3/8/10	0345	[signature]	3/8/10 0345

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

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

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITC0790

MWH-Pasadena Boeing

Lot #: F0C090509

Kathleen Robb

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

TESTAMERICA LABORATORIES, INC.

Lynn Fussner
Project Manager

April 5, 2010

Case Narrative
LOT NUMBER: F0C090509

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 9, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

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

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

Affected Samples:
F0C090509 (1): ITC0790-03

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

Affected Samples:
F0C090509 (1): ITC0790-03

METHODS SUMMARY

F0C090509

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

References:

ASTM Annual Book Of ASTM Standards.

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

SAMPLE SUMMARY

F0C090509

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LWFWT	001	ITC0790-03	03/07/10	09:05

NOTE(S):

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

TestAmerica Irvine

Client Sample ID: ITC0790-03

Radiochemistry

Lab Sample ID: F0C090509-001
Work Order: LWFWT
Matrix: WATER

Date Collected: 03/07/10 0905
Date Received: 03/09/10 0915

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**		**Batch # 0069127**	**Yld %**
Cesium 137	4.5	U	9.4	20.0	16	03/10/10	03/20/10
Potassium 40	-50	U	360		250	03/10/10	03/20/10
Gross Alpha/Beta EPA 900				**pCi/L**		**Batch # 0070220**	**Yld %**
Gross Alpha	0.3	U	1.1	3.0	2.1	03/11/10	03/14/10
Gross Beta	3.9	**J**	**1.4**	4.0	**2.0**	**03/11/10**	**03/14/10**
SR-90 BY GFPC EPA-905 MOD				**pCi/L**		**Batch # 0069104**	**Yld % 80**
Strontium 90	0.25	U	0.32	3.00	0.53	03/10/10	03/20/10
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**		**Batch # 0077060**	**Yld %**
Tritium	34	U	87	500	160	03/18/10	03/23/10
Total Uranium by KPA ASTM 5174-91				**pCi/L**		**Batch # 0067296**	**Yld %**
Total Uranium	0.584	J	0.072	0.693	0.21	03/10/10	03/12/10
Radium 226 by EPA 903.0 MOD				**pCi/L**		**Batch # 0069101**	**Yld % 76**
Radium (226)	0.123	J	0.058	1.00	0.063	03/10/10	04/02/10
Radium 228 by GFPC EPA 904 MOD				**pCi/L**		**Batch # 0069102**	**Yld % 72**
Radium 228	0.51	U	0.38	1.00	0.60	03/10/10	03/19/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0C090509
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC		Prep Date	Lab Sample ID Analysis Date
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch # 0067296		Yld %		F0C080000-296B
Total Uranium	0.315	J	0.039	0.693	0.21		03/10/10	03/12/10
Radium 226 by EPA 903.0 MOD			pCi/L	Batch # 0069101		Yld % 105		F0C100000-101B
Radium (226)	0.025	U	0.031	1.00	0.051		03/10/10	04/02/10
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch # 0069102		Yld % 91		F0C100000-102B
Radium 228	0.19	U	0.24	1.00	0.39		03/10/10	03/19/10
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch # 0069104		Yld % 83		F0C100000-104B
Strontium 90	0.01	U	0.24	3.00	0.43		03/10/10	03/20/10
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch # 0069127		Yld %		F0C100000-127B
Cesium 137	1.9	U	7.6	20.0	14		03/10/10	03/21/10
Potassium 40	12	U	93		210		03/10/10	03/21/10
Gross Alpha/Beta EPA 900			pCi/L	Batch # 0070220		Yld %		F0C110000-220B
Gross Alpha	-0.16	U	0.35	3.00	0.79		03/11/10	03/14/10
Gross Beta	0.37	U	0.91	4.00	1.5		03/11/10	03/14/10
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch # 0077060		Yld %		F0C180000-060B
Tritium	83	U	94	500	150		03/18/10	03/23/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0C090509
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ+/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Total Uranium by KPA ASTM 5174-91			**pCi/L**	**5174-91**			**F0C080000-296C**
Total Uranium	27.7	28.6	3.5	0.2		103	(90 - 120)
	Batch #:	0067296		**Analysis Date:**	03/12/10		
Total Uranium by KPA ASTM 5174-91			**pCi/L**	**5174-91**			**F0C080000-296C**
Total Uranium	5.54	5.62	0.58	0.21		101	(90 - 120)
	Batch #:	0067296		**Analysis Date:**	03/12/10		
Gamma Cs-137 & Hits by EPA 901.1 MOD			**pCi/L**	**901.1 MOD**			**F0C100000-127C**
Americium 241	141000	131000	10000	500		93	(87 - 110)
Cesium 137	53100	48400	2800	200		91	(90 - 110)
Cobalt 60	87800	79200	4400	200		90	(89 - 110)
	Batch #:	0069127		**Analysis Date:**	03/21/10		
Gross Alpha/Beta EPA 900			**pCi/L**	**900.0 MOD**			**F0C110000-220C**
Gross Alpha	49.4	31.9	3.8	0.8		64	(62 - 134)
	Batch #:	0070220		**Analysis Date:**	03/14/10		
Gross Alpha/Beta EPA 900			**pCi/L**	**900.0 MOD**			**F0C110000-220C**
Gross Beta	67.9	53.0	4.7	1.5		78	(58 - 133)
	Batch #:	0070220		**Analysis Date:**	03/14/10		
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**	**906.0 MOD**			**F0C180000-060C**
Tritium	4510	4450	470	150		99	(85 - 112)
	Batch #:	0077060		**Analysis Date:**	03/23/10		

NOTE(S)

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

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0C090509
Matrix: WATER

Parameter		Spike Amount	Result		Total Uncert. (2 σ +/-)	% Yld	% Rec	QC Control Limits	Precision	
Radium 226 by EPA 903.0 MOD				**pCi/L**	**903.0 MOD**				**F0C100000-101C**	
Radium (226)		11.3	10.6		0.92	106	94	(68 - 136)		
	Spk 2	11.3	10.1		0.87	101	89	(68 - 136)	6	%RPD
		Batch #:	0069101			**Analysis Date:**		04/02/10		
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**904 MOD**				**F0C100000-102C**	
Radium 228		6.37	7.41		0.83	99	116	(60 - 142)		
	Spk 2	6.37	7.87		0.90	85	124	(60 - 142)	6	%RPD
		Batch #:	0069102			**Analysis Date:**		03/19/10		
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**				**F0C100000-104C**	
Strontium 90		6.79	6.64		0.80	87	98	(80 - 130)		
	Spk 2	6.79	6.75		0.80	90	99	(80 - 130)	2	%RPD
		Batch #:	0069104			**Analysis Date:**		03/20/10		

NOTE(S)

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F0C090512
Matrix: WATER
Date Sampled: 03/07/10
Date Received: 03/09/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	QC Sample ID %REC	QC Control Limits
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F0C090512-001**	
Tritium	4510	4170	440		-17	74		93	(62 - 147)
	Batch #:	0077060			Analysis Date:	03/24/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0C090509-001**	
Gross Alpha	59.9	47.4	6.6		0.3	1.1		79	(35 - 150)
	Batch #:	0070220			Analysis Date:	03/14/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0C090509-001**	
Gross Beta	82.4	87.0	7.4		3.9	1.4		101	(54 - 150)
	Batch #:	0070220			Analysis Date:	03/14/10			

NOTE(S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F0B230452 Date Sampled: 02/20/10 1349
Matrix: WATER Date Received: 02/23/10 0910

Parameter		Spike Amount	SPIKE Result	Total Uncert. (2 σ+/-)	Spike Yld	SAMPLE Result		Total Uncert. (2σ +/-)	QC Sample ID % Yld	%Rec	QC Control Limits
Total Uranium by KPA ASTM 5				pCi/L		5174-91				F0B230452-001	
Total Uranium		27.7	28.1	3.4		0.677	J	0.074		99	(62 - 150)
	Spk2	27.7	26.9	3.3		0.677	J	0.074		95	(62 - 150)
									Precision:	4	%RPD

Batch #: 0067296 Analysis date: 03/12/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F0C090509
Matrix: WATER

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

Parameter	SAMPLE Result		Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ+/-)	% Yld	QC Sample ID Precision	
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**				**F0C090509-001**	
Cesium 137	4.5	U	9.4		-0.3	U	7.3		232	%RPD
Potassium 40	-50	U	360		-50	U	200		8	%RPD
	Batch #:		0069127	(Sample)	0069127		(Duplicate)			
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F0C090509-001**	
Gross Alpha	0.3	U	1.1		1.9	U	1.5		143	%RPD
Gross Beta	3.9	J	1.4		4.8		1.5		22	%RPD
	Batch #:		0070220	(Sample)	0070220		(Duplicate)			
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**				**F0C090509-001**	
Tritium	34	U	87		-26	U	72		1480	%RPD
	Batch #:		0077060	(Sample)	0077060		(Duplicate)			

NOTE(S)

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

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

SUBCONTRACT ORDER
TestAmerica Irvine
ITC0790

wf 3/9

SENDING LABORATORY:	RECEIVING LABORATORY:
TestAmerica Irvine	TestAmerica St. Louis
17461 Derian Avenue. Suite 100	13715 Rider Trail North
Irvine, CA 92614	Earth City, MO 63045
Phone: (949) 261-1022	Phone :(314) 298-8566
Fax: (949) 260-3297	Fax: (314) 298-8757
Project Manager: Joseph Doak	Project Location: CA - CALIFORNIA
Client: MWH-Pasadena/Boeing	Receipt Temperature:_______°C Ice: Y / N

Sample ID: ITC0790-03 (Outfall 002 (COMPOSITE) - Water) Sampled: **03/07/10 09:05**

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
EDD + Level 4	N/A	03/17/10	04/04/10 09:05	$0.00	0%	Excel EDD email to pm,Include Std logs for Lvl IV
Gamma Spec-O	mg/kg	03/17/10	03/07/11 09:05	$200.00	50%	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/17/10	09/03/10 09:05	$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/17/10	09/03/10 09:05	$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 226-O	pCi/L	03/17/10	03/07/11 09:05	$88.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 228-O	pCi/L	03/17/10	03/07/11 09:05	$84.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/17/10	03/07/11 09:05	$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/17/10	03/07/11 09:05	$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/17/10	03/07/11 09:05	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (S) 500 mL Amber (T)

Released By	Date/Time	Received By	Date/Time
[signature]	3/8/10 17:00	FedEx	3/8/10 17:00
		[signature]	3.9.10 0915

Released By / Date/Time / Received By / Date/Time

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

ITC0790

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs 624 + xylenes	Settleable Solids	Oil & Grease (1664-HEM)	Cyanide (total recoverable)	Conductivity	~~Total Residual Chlorine~~								Comments
							ANALYSIS REQUIRED													
Outfall 002	W	VOAs	5	3/6/10 1505	HCl	1A, 1B, 1C, 1D, 1E	X													
Outfall 002	W	1L Poly	1		None	2		X												
Outfall 002	W	1L Amber	2	SD	HCl	3A, 3B			X											
Outfall 002	W	500 mL Poly	1		NaOH	4				X										
Outfall 002	W	500 mL Poly	2	3/6/10 1505	None	5A, 5B					X									
Trip Blanks	W	VOAs	3	3/6/10 0700	HCl	6A, 6B, 6C	X													
~~Outfall 002~~	~~W~~	~~450 mL Poly~~	~~1~~		~~None~~	~~7~~														

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

Temp °F = 56.8

pH = 8.10

Time of readings = 3/6/10 1505

MS 3/8/10 6.0

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:
	3/7/10 1415		3/7/10 1415
Relinquished By	Date/Time:	Received By	Date/Time:
	3/7/10 1645		
Relinquished By	Date/Time:	Received By	Date/Time:

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

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

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

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 002** **COMPOSITE**
Project Manager: Bronwyn Kelly Sampler: S Dawson	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, As, Ba, Be, Cr, Fe, Mn, Ni	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) + Pesticides + PP	2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, PCP (SVOCs 625)	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	~~Chronic Toxicity~~ 3/7/2010	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, As, Ba, Be, Fe, Mn, Ni		Comments
Outfall 002	W	1L Poly	1	3/7/10 0905	HNO_3	8A	X														
Outfall 002 Dup	W	1L Poly	1		HNO_3	8B	X														
Outfall 002	W	1L Amber	2		None	9A, 9B		X													
Outfall 002	W	1L Poly	1		None	10			X												
Outfall 002	W	500 mL Poly	2		None	11A, 11B				X											
Outfall 002	W	500 mL Poly	2		None	12A, 12B					X										
Outfall 002	W	500 mL Poly	1		None	13						X									
Outfall 002	W	500 mL Poly	2		None	14A, 14B							X								
Outfall 002	W	500 mL Poly	1	SD	H_2SO_4	15								X							
Outfall 002	W	1L Amber	2		None	16A, 16B									X						
Outfall 002	W	1L Amber	2		None	17A, 17B										X					
Outfall 002	W	2.5 Gal Cube	1	3/7/10	None	18A											X				Unfiltered and unpreserved analysis
		500 mL Amber	1	0905	None	18B															
~~Outfall 002~~	W	~~1 Gal Cube~~	~~1~~		None	19															
Outfall 002	W	1L Poly	1	3/7/10 0905	None	20													X		Filter w/in 24hrs of receipt at lab

ANALYSIS REQUIRED

COC Page 2 of 2 lists the composite samples for Outfall 002 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 002 for the same event.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	3/7/10 1415	[signature]	3/7/10 1415
[signature]	3/7/10 1645		

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

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

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

high flow

TestAmerica
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Lot #(s): F0C090509, 523, 519, 524, 516, 518, 526

CONDITION UPON RECEIPT FORM

Client: TA Irvine
Quote No: 85044, 77635
COC/RFA No: Liebow 342
Initiated By: SN Date: 3.9.10 Time: 0915

Shipping Information

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

Shipping # (s):*				Sample Temperature (s):**			
1.	4287 2133 6598	6.		1.	ambient	6.	
2.	6576	7.		2.		7.	
3.	6587	8.		3.		8.	
4.		9.		4.		9.	
5.		10.		5.		10.	

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes: ITC 0630
755
754
464
792
793
(790)
791

Corrective Action:
☐ Client Contact Name: _____ Informed by: _____
☐ Sample(s) processed "as is"
☐ Sample(s) on hold until: _____ If released, notify: _____
Project Management Review: K. DJ Date: 03-11-10

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

APPENDIX G

Section 15

Outfall 003 - January 21 & 22, 2010

MEC^X Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITA1955

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:	ITA1955
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 003 (Comp)	ITA1955-02	G0A260513-001, F0A260523-001	Water	1/22/2010 3:08:00 PM	ASTM 5174-91, 245.1, 245.1-Diss, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the 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. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. Custody seals were intact upon receipt at the remaining laboratories. 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: March 10, 2010

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had detects between the EDL and the RL for total PeCDF, and for 1,2,3,6,7,8-HxCDF and total HxCDF, both reported as EMPCs. There were no sample detects for the method blank contaminants.

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

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

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

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

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

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

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. The result for total OCDF was reported below the EDL by the laboratory based on retention time and signal to noise ratio. The results for 1,2,3,4,6,7,8-HpCDF and total HpCDF at the same concentration were reported as EMPCs. As ratio criteria were not met, both results were qualified as estimated nondetects, "UJ," at the reported concentration level. Any total results reported as EMPCs or including EMPCs were qualified as estimated, "J." Any detects reported below the EDL, or between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

B. EPA METHODS 245.1—Mercury

Reviewed By: P. Meeks
Date Reviewed: March 5, 2010

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

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

- Tuning: Not applicable to this analysis.

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

- Blanks: Method blanks and CCBs had no detects.

- Interference Check Samples: Not applicable to this analysis.

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

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the dissolved sample fraction. Recoveries and the RPD were within laboratory-established QC limits.

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

- Internal Standards Performance: Not applicable to this analysis.

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

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

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

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

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: March 5, 2010

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquot for total uranium was prepared beyond the five day holding time for unpreserved samples; therefore, total uranium detected in the sample was qualified as estimated "J." All remaining aliquots were prepared within the five-day analytical holding time for unpreserved samples.

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

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

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

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

- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs (radium-226, radium-228, and strontium-90) were within laboratory-established control limits.

- Laboratory Duplicates: Duplicate analyses were performed on the sample in this SDG for gamma spectroscopy. There were no detects in either sample.

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

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

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

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

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

Validated Sample Result Forms: ITA1955

Analysis Method ASTM 5174-91

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	0.339	0.693	0.21	pCi/L	Jb	J	H, DNQ

Analysis Method EPA 245.1

Sample Name Outfall 003 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	0.00013	0.00020	0.00010	mg/l	Ja	J	DNQ

Analysis Method EPA 245.1-Diss

Sample Name Outfall 003 (Comp) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

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

Analysis Method EPA 900.0 MOD

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	3.3	3	1.1	pCi/L		J	C
Gross Beta	12587-47-2	4	4	1.6	pCi/L	Jb	J	DNQ

Analysis Method EPA 901.1 MOD

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-0.1	20	13	pCi/L	U	U	
Potassium 40	13966-00-2	-20	0	190	pCi/L	U	U	

Analysis Method EPA 903.0 MOD

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.27	1	0.18	pCi/L	Jb	J	DNQ

Analysis Method EPA 904 MOD

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.43	1	0.79	pCi/L	U	U	

Analysis Method EPA 905 MOD

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.29	3	0.67	pCi/L	U	U	

Analysis Method EPA 906.0 MOD

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	123	500	140	pCi/L	U	U	

Analysis Method EPA-5 1613B

Sample Name Outfall 003 (Comp) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1955-02 **Sample Date:** 1/22/2010 3:08:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	4e-005	0.000049	0.000012	ug/L	J	J	DNQ
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	7.3e-006	0.000007	ug/L	J, Q	UJ	*III
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000049	0.000013	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000049	0.000009	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.000049	0.000006	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.000049	0.000008	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000049	0.000005	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000049	0.000007	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000049	0.000006	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000049	0.000013	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000049	0.000009	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000049	0.000005	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000049	0.000012	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.0000098	0.000005	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.0000098	0.000003	ug/L		U	
OCDD	3268-87-9	0.00028	0.000098	0.000035	ug/L			
OCDF	39001-02-0	1.6e-005	0.000098	0.000021	ug/L	J	J	DNQ
Total HpCDD	37871-00-4	8e-005	0.000049	0.000012	ug/L			
Total HpCDF	38998-75-3	ND	7.3e-006	0.000007	ug/L	J, Q	UJ	*III
Total HxCDD	34465-46-8	ND	0.000049	0.000007	ug/L		U	
Total HxCDF	55684-94-1	ND	0.000049	0.000005	ug/L		U	
Total PeCDD	36088-22-9	ND	0.000049	0.000013	ug/L		U	
Total PeCDF	30402-15-4	ND	0.000049	0.000005	ug/L		U	
Total TCDD	41903-57-5	ND	0.0000098	0.000005	ug/L		U	
Total TCDF	55722-27-5	ND	0.0000098	0.000003	ug/L		U	

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APPENDIX G

Section 16

Outfall 003 - January 21& 22, 2010

Test America Analytical Laboratory Report

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Routine Outfall 003

Sampled: 01/21/10-01/22/10
Received: 01/21/10
Revised: 04/02/10 11:04

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

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

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

ADDITIONAL INFORMATION: Some analytes in these samples 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.

Some analytes have been reported at concentrations below the corresponding estimated detection limit (EDL) because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.

The continuing calibration standard analyzed February 4, 2010 at 00:29 has a percent difference value for the internal standard 13C-1,2,3,6,7,8-HxCDD that is above the method recommended criteria from the initial calibration curve. Because this sample has a recovery within acceptance limits for this IS there is no adverse impact on the data.

Final revised report to provide corrected units and .pdf for Radchem.

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 003

Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

LABORATORY ID	CLIENT ID	MATRIX
ITA1816-01	Outfall 003 (Grab)	Water
ITA1955-02	Outfall 003 (Comp)	Water

Reviewed By:

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1816-01 (Outfall 003 (Grab) - Water)					**Sampled: 01/21/10**				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10B0032	1.3	4.8	ND	1	02/01/10	02/01/10	

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: ug/l									
Mercury	EPA 245.1	10A2307	0.10	0.20	**0.13**	1	01/25/10	01/25/10	Ja
Antimony	EPA 200.8	10A2318	0.30	2.0	ND	1	01/25/10	01/28/10	
Cadmium	EPA 200.8	10A2318	0.10	1.0	**0.12**	1	01/25/10	01/28/10	Ja
Copper	EPA 200.8	10A2318	0.50	2.0	**3.8**	1	01/25/10	01/28/10	B
Lead	EPA 200.8	10A2318	0.20	1.0	**2.2**	1	01/25/10	01/28/10	B
Thallium	EPA 200.8	10A2318	0.20	1.0	ND	1	01/25/10	01/28/10	

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Received: 01/21/10

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10B0102	0.10	0.20	ND	1	02/01/10	02/01/10	
Antimony	EPA 200.8-Diss	10A2590	0.30	2.0	**0.36**	1	01/27/10	01/28/10	Ja
Cadmium	EPA 200.8-Diss	10A2590	0.10	1.0	**0.21**	1	01/27/10	01/28/10	Ja
Copper	EPA 200.8-Diss	10A2590	0.50	2.0	**2.7**	1	01/27/10	01/28/10	
Lead	EPA 200.8-Diss	10A2590	0.20	1.0	**0.68**	1	01/27/10	01/28/10	Ja
Thallium	EPA 200.8-Diss	10A2590	0.20	1.0	ND	1	01/27/10	01/28/10	

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Received: 01/21/10

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: mg/l									
Chloride	EPA 300.0	10A2122	0.25	0.50	**6.5**	1	01/22/10	01/22/10	
Nitrate/Nitrite-N	EPA 300.0	10A2122	0.15	0.26	**1.5**	1	01/22/10	01/22/10	
Sulfate	EPA 300.0	10A2122	0.20	0.50	**9.0**	1	01/22/10	01/22/10	
Total Dissolved Solids	SM2540C	10A2248	1.0	10	**140**	1	01/25/10	01/25/10	

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Received: 01/21/10

EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	33251	0.000012	0.000049	**4e-005**	0.98	02/02/10	02/04/10	J
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	33251	0.0000073	0.000049	**7.3e-006**	0.98	02/02/10	02/04/10	J, Q
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	33251	0.000013	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	33251	0.0000096	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	33251	0.0000061	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	33251	0.0000081	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	33251	0.0000054	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	33251	0.000007	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	33251	0.0000067	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	33251	0.000013	0.000049	ND	0.98	02/02/10	02/04/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	33251	0.000009	0.000049	ND	0.98	02/02/10	02/04/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	33251	0.0000056	0.000049	ND	0.98	02/02/10	02/04/10	
2,3,4,7,8-PeCDF	EPA-5 1613B	33251	0.000012	0.000049	ND	0.98	02/02/10	02/04/10	
2,3,7,8-TCDD	EPA-5 1613B	33251	0.0000055	0.0000098	ND	0.98	02/02/10	02/04/10	
2,3,7,8-TCDF	EPA-5 1613B	33251	0.0000035	0.0000098	ND	0.98	02/02/10	02/04/10	
OCDD	EPA-5 1613B	33251	0.000035	0.000098	**0.00028**	0.98	02/02/10	02/04/10	
OCDF	EPA-5 1613B	33251	0.000021	0.000098	**1.6e-005**	0.98	02/02/10	02/04/10	J
Total HpCDD	EPA-5 1613B	33251	0.000012	0.000049	**8e-005**	0.98	02/02/10	02/04/10	
Total HpCDF	EPA-5 1613B	33251	0.0000073	0.000049	**7.3e-006**	0.98	02/02/10	02/04/10	J, Q
Total HxCDD	EPA-5 1613B	33251	0.000007	0.000049	ND	0.98	02/02/10	02/04/10	
Total HxCDF	EPA-5 1613B	33251	0.0000054	0.000049	ND	0.98	02/02/10	02/04/10	
Total PeCDD	EPA-5 1613B	33251	0.000013	0.000049	ND	0.98	02/02/10	02/04/10	
Total PeCDF	EPA-5 1613B	33251	0.0000056	0.000049	ND	0.98	02/02/10	02/04/10	
Total TCDD	EPA-5 1613B	33251	0.0000055	0.0000098	ND	0.98	02/02/10	02/04/10	
Total TCDF	EPA-5 1613B	33251	0.0000035	0.0000098	ND	0.98	02/02/10	02/04/10	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)					*42 %*				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)					*46 %*				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)					*42 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)					*32 %*				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)					*39 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)					*50 %*				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)					*44 %*				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)					*41 %*				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)					*36 %*				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)					*36 %*				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)					*45 %*				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)					*35 %*				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					*37 %*				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					*35 %*				
Surrogate: 13C-OCDD (17-157%)					*35 %*				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					*91 %*				

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Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	35029	0.21	0.693	**0.339**	1	02/04/10	02/08/10	Jb

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EPA 900.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	27090	1.1	3	**3.3**	1	01/27/10	01/30/10	
Gross Beta	EPA 900.0 MOD	27090	1.6	4	**4**	1	01/27/10	01/30/10	Jb

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EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	27266	13	20	-0.1	1	01/27/10	02/09/10	U
Potassium 40	EPA 901.1 MOD	27266	190	NA	-20	1	01/27/10	02/09/10	U

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EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	27284	0.18	1	**0.27**	1	01/27/10	02/12/10	Jb

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EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	27285	0.79	1	**0.43**	1	01/27/10	02/12/10	U

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EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Strontium 90	EPA 905 MOD	27286	0.67	3	**0.29**	1	01/27/10	02/05/10	U

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EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)					**Sampled: 01/22/10**				
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	28080	140	500	**123**	1	01/28/10	01/29/10	U

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SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 003 (Comp) (ITA1955-02) - Water					
EPA 300.0	2	01/22/2010 15:08	01/22/2010 18:45	01/22/2010 17:00	01/22/2010 19:24
Filtration	1	01/22/2010 15:08	01/22/2010 18:45	01/23/2010 13:10	01/23/2010 13:10

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0032 Extracted: 02/01/10											
Blank Analyzed: 02/01/2010 (10B0032-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/01/2010 (10B0032-BS1)											**MNR1**
Hexane Extractable Material (Oil & Grease)	19.6	5.0	1.4	mg/l	20.0		98	78-114			
LCS Dup Analyzed: 02/01/2010 (10B0032-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.4	5.0	1.4	mg/l	20.0		97	78-114	1	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2307 Extracted: 01/25/10											
Blank Analyzed: 01/25/2010 (10A2307-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 01/25/2010 (10A2307-BS1)											
Mercury	8.19	0.20	0.10	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 01/25/2010 (10A2307-MS1)						**Source: ITA2001-01**					
Mercury	8.36	0.20	0.10	ug/l	8.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 01/25/2010 (10A2307-MSD1)						**Source: ITA2001-01**					
Mercury	8.36	0.20	0.10	ug/l	8.00	ND	105	70-130	0.04	20	
Batch: 10A2318 Extracted: 01/25/10											
Blank Analyzed: 01/28/2010 (10A2318-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	0.773	2.0	0.50	ug/l							*Ja*
Lead	0.312	1.0	0.20	ug/l							*Ja*
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 01/28/2010 (10A2318-BS1)											
Antimony	76.7	2.0	0.30	ug/l	80.0		96	85-115			
Cadmium	78.0	1.0	0.10	ug/l	80.0		97	85-115			
Copper	81.5	2.0	0.50	ug/l	80.0		102	85-115			
Lead	79.9	1.0	0.20	ug/l	80.0		100	85-115			
Thallium	77.8	1.0	0.20	ug/l	80.0		97	85-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2318 Extracted: 01/25/10											
Matrix Spike Analyzed: 01/28/2010 (10A2318-MS1)						**Source: ITA1845-06**					
Antimony	82.2	10	1.5	ug/l	80.0	2.19	100	70-130			
Cadmium	79.3	5.0	0.50	ug/l	80.0	1.43	97	70-130			
Copper	87.3	10	2.5	ug/l	80.0	10.1	97	70-130			
Lead	75.7	5.0	1.0	ug/l	80.0	3.23	91	70-130			
Thallium	71.8	5.0	1.0	ug/l	80.0	ND	90	70-130			
Matrix Spike Analyzed: 01/28/2010 (10A2318-MS2)						**Source: ITA1845-07**					
Antimony	83.3	10	1.5	ug/l	80.0	1.86	102	70-130			
Cadmium	79.6	5.0	0.50	ug/l	80.0	ND	100	70-130			
Copper	91.0	10	2.5	ug/l	80.0	5.84	106	70-130			
Lead	73.2	5.0	1.0	ug/l	80.0	1.51	90	70-130			
Thallium	75.6	5.0	1.0	ug/l	80.0	1.53	93	70-130			
Matrix Spike Dup Analyzed: 01/28/2010 (10A2318-MSD1)						**Source: ITA1845-06**					
Antimony	81.6	10	1.5	ug/l	80.0	2.19	99	70-130	0.8	20	
Cadmium	78.5	5.0	0.50	ug/l	80.0	1.43	96	70-130	1	20	
Copper	86.7	10	2.5	ug/l	80.0	10.1	96	70-130	0.7	20	
Lead	73.9	5.0	1.0	ug/l	80.0	3.23	88	70-130	2	20	
Thallium	69.7	5.0	1.0	ug/l	80.0	ND	87	70-130	3	20	

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

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2590 Extracted: 01/27/10											
Blank Analyzed: 01/28/2010 (10A2590-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 01/28/2010 (10A2590-BS1)											
Antimony	78.4	2.0	0.30	ug/l	80.0		98	85-115			
Cadmium	75.9	1.0	0.10	ug/l	80.0		95	85-115			
Copper	72.9	2.0	0.50	ug/l	80.0		91	85-115			
Lead	82.2	1.0	0.20	ug/l	80.0		103	85-115			
Thallium	79.4	1.0	0.20	ug/l	80.0		99	85-115			
Matrix Spike Analyzed: 01/28/2010 (10A2590-MS1)						**Source: ITA2007-01**					
Antimony	80.6	2.0	0.30	ug/l	80.0	0.480	100	70-130			
Cadmium	76.9	1.0	0.10	ug/l	80.0	0.254	96	70-130			
Copper	77.4	2.0	0.50	ug/l	80.0	4.18	92	70-130			
Lead	79.0	1.0	0.20	ug/l	80.0	0.465	98	70-130			
Thallium	78.4	1.0	0.20	ug/l	80.0	ND	98	70-130			
Matrix Spike Dup Analyzed: 01/28/2010 (10A2590-MSD1)						**Source: ITA2007-01**					
Antimony	82.6	2.0	0.30	ug/l	80.0	0.480	103	70-130	2	20	
Cadmium	79.0	1.0	0.10	ug/l	80.0	0.254	98	70-130	3	20	
Copper	79.5	2.0	0.50	ug/l	80.0	4.18	94	70-130	3	20	
Lead	80.7	1.0	0.20	ug/l	80.0	0.465	100	70-130	2	20	
Thallium	79.9	1.0	0.20	ug/l	80.0	ND	100	70-130	2	20	

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Report Number: ITA1816

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Received: 01/21/10

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0102 Extracted: 02/01/10											
Blank Analyzed: 02/01/2010 (10B0102-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/01/2010 (10B0102-BS1)											
Mercury	8.50	0.20	0.10	ug/l	8.00		106	85-115			
Matrix Spike Analyzed: 02/01/2010 (10B0102-MS1)						**Source: ITA1955-02**					
Mercury	8.59	0.20	0.10	ug/l	8.00	ND	107	70-130			
Matrix Spike Dup Analyzed: 02/01/2010 (10B0102-MSD1)						**Source: ITA1955-02**					
Mercury	8.34	0.20	0.10	ug/l	8.00	ND	104	70-130	3	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2122 Extracted: 01/22/10											
Blank Analyzed: 01/22/2010 (10A2122-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 01/22/2010 (10A2122-BS1)											
Chloride	4.94	0.50	0.25	mg/l	5.00		99	90-110			*M-3*
Sulfate	10.1	0.50	0.20	mg/l	10.0		101	90-110			*M-3*
Batch: 10A2248 Extracted: 01/25/10											
Blank Analyzed: 01/25/2010 (10A2248-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 01/25/2010 (10A2248-BS1)											
Total Dissolved Solids	1000	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/25/2010 (10A2248-DUP1)						**Source: ITA1907-01**					
Total Dissolved Solids	263000	10	1.0	mg/l		263000			0.08	10	

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 33251 Extracted: 02/02/10											
Blank Analyzed: 02/04/2010 (G0B020000251B)						**Source:**					
1,2,3,4,6,7,8-HpCDD	ND	0.00005	0.0000092	ug/L				-			
1,2,3,4,6,7,8-HpCDF	ND	0.00005	0.0000072	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.000013	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.0000075	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.0000048	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000056	ug/L				-			
1,2,3,6,7,8-HxCDF	2e-006	0.00005	0.0000043	ug/L				-			*J, Q*
1,2,3,7,8,9-HxCDD	ND	0.00005	0.0000049	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000048	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.000012	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000081	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.0000042	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000094	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000051	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.000004	ug/L				-			
OCDD	ND	0.0001	0.000011	ug/L				-			
OCDF	ND	0.0001	0.000005	ug/L				-			
Total HpCDD	ND	0.00005	0.0000092	ug/L				-			
Total HpCDF	ND	0.00005	0.0000072	ug/L				-			
Total HxCDD	ND	0.00005	0.0000049	ug/L				-			
Total HxCDF	2e-006	0.00005	0.0000042	ug/L				-			*J, Q*
Total PeCDD	ND	0.00005	0.000012	ug/L				-			
Total PeCDF	3.6e-006	0.00005	0.0000061	ug/L				-			*J*
Total TCDD	ND	0.00001	0.0000051	ug/L				-			
Total TCDF	ND	0.00001	0.000004	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.0011*			ug/L	*0.002*		*52*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.0012*			ug/L	*0.002*		*59*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00098*			ug/L	*0.002*		*49*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00086*			ug/L	*0.002*		*43*	*32-141*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00091*			ug/L	*0.002*		*46*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.0012*			ug/L	*0.002*		*58*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.001*			ug/L	*0.002*		*53*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.001*			ug/L	*0.002*		*52*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.00086*			ug/L	*0.002*		*43*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00086*			ug/L	*0.002*		*43*	*24-185*			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 33251 Extracted: 02/02/10											
Blank Analyzed: 02/04/2010 (G0B020000251B)						**Source:**					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.0011*			*ug/L*	*0.002*		*54*	*28-136*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.00086*			*ug/L*	*0.002*		*43*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.00087*			*ug/L*	*0.002*		*44*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.00087*			*ug/L*	*0.002*		*44*	*24-169*			
Surrogate: 13C-OCDD	*0.0019*			*ug/L*	*0.004*		*48*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.00068*			*ug/L*	*0.0008*		*85*	*35-197*			
LCS Analyzed: 02/04/2010 (G0B020000251C)						**Source:**					
1,2,3,4,6,7,8-HpCDD	0.00111	0.00005	0.0000098	ug/L	0.001		111	70-140			
1,2,3,4,6,7,8-HpCDF	0.00115	0.00005	0.0000084	ug/L	0.001		115	82-122			
1,2,3,4,7,8,9-HpCDF	0.00118	0.00005	0.000014	ug/L	0.001		118	78-138			
1,2,3,4,7,8-HxCDD	0.00111	0.00005	0.0000036	ug/L	0.001		111	70-164			
1,2,3,4,7,8-HxCDF	0.00111	0.00005	0.0000065	ug/L	0.001		111	72-134			
1,2,3,6,7,8-HxCDD	0.00109	0.00005	0.0000031	ug/L	0.001		109	76-134			
1,2,3,6,7,8-HxCDF	0.00116	0.00005	0.0000057	ug/L	0.001		116	84-130			*Ba*
1,2,3,7,8,9-HxCDD	0.00101	0.00005	0.0000026	ug/L	0.001		101	64-162			
1,2,3,7,8,9-HxCDF	0.00111	0.00005	0.000006	ug/L	0.001		111	78-130			
1,2,3,7,8-PeCDD	0.0011	0.00005	0.0000084	ug/L	0.001		110	70-142			
1,2,3,7,8-PeCDF	0.00115	0.00005	0.0000065	ug/L	0.001		115	80-134			
2,3,4,6,7,8-HxCDF	0.00112	0.00005	0.0000051	ug/L	0.001		112	70-156			
2,3,4,7,8-PeCDF	0.00115	0.00005	0.0000074	ug/L	0.001		115	68-160			
2,3,7,8-TCDD	0.000187	0.00001	0.000003	ug/L	0.0002		93	67-158			
2,3,7,8-TCDF	0.000215	0.00001	0.0000023	ug/L	0.0002		107	75-158			
OCDD	0.00216	0.0001	0.000025	ug/L	0.002		108	78-144			
OCDF	0.00223	0.0001	0.000015	ug/L	0.002		112	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00161*			*ug/L*	*0.002*		*81*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00188*			*ug/L*	*0.002*		*94*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00162*			*ug/L*	*0.002*		*81*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00145*			*ug/L*	*0.002*		*73*	*32-141*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.00155*			*ug/L*	*0.002*		*78*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00189*			*ug/L*	*0.002*		*94*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00161*			*ug/L*	*0.002*		*81*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00167*			*ug/L*	*0.002*		*84*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.00144*			*ug/L*	*0.002*		*72*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00141*			*ug/L*	*0.002*		*71*	*24-185*			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00176*			*ug/L*	*0.002*		*88*	*28-136*			

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METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 33251 Extracted: 02/02/10											
LCS Analyzed: 02/04/2010 (G0B020000251C)						**Source:**					
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.00145*			*ug/L*	*0.002*		*72*	*21-178*			
Surrogate: 13C-2,3,7,8-TCDD	*0.00138*			*ug/L*	*0.002*		*69*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.0013*			*ug/L*	*0.002*		*65*	*24-169*			
Surrogate: 13C-OCDD	*0.00314*			*ug/L*	*0.004*		*79*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.000739*			*ug/L*	*0.0008*		*92*	*35-197*			
LCS Dup Analyzed: 02/04/2010 (G0B020000251L)						**Source:**					
1,2,3,4,6,7,8-HpCDD	0.00109	0.00005	0.00001	ug/L	0.001		109	70-140	1.6	50	
1,2,3,4,6,7,8-HpCDF	0.00116	0.00005	0.000009	ug/L	0.001		116	82-122	0.1	50	
1,2,3,4,7,8,9-HpCDF	0.00118	0.00005	0.000014	ug/L	0.001		118	78-138	0.4	50	
1,2,3,4,7,8-HxCDD	0.00107	0.00005	0.0000039	ug/L	0.001		107	70-164	4	50	
1,2,3,4,7,8-HxCDF	0.00114	0.00005	0.0000039	ug/L	0.001		114	72-134	2.4	50	
1,2,3,6,7,8-HxCDD	0.00117	0.00005	0.0000034	ug/L	0.001		117	76-134	7.7	50	
1,2,3,6,7,8-HxCDF	0.00118	0.00005	0.0000034	ug/L	0.001		118	84-130	1.2	50	*Ba*
1,2,3,7,8,9-HxCDD	0.00107	0.00005	0.0000029	ug/L	0.001		107	64-162	5.5	50	
1,2,3,7,8,9-HxCDF	0.00112	0.00005	0.0000034	ug/L	0.001		112	78-130	0.84	50	
1,2,3,7,8-PeCDD	0.00111	0.00005	0.0000095	ug/L	0.001		111	70-142	0.78	50	
1,2,3,7,8-PeCDF	0.00114	0.00005	0.0000054	ug/L	0.001		114	80-134	0.59	50	
2,3,4,6,7,8-HxCDF	0.00111	0.00005	0.0000032	ug/L	0.001		111	70-156	0.08	50	
2,3,4,7,8-PeCDF	0.00115	0.00005	0.0000063	ug/L	0.001		115	68-160	0.35	50	
2,3,7,8-TCDD	0.000199	0.00001	0.0000032	ug/L	0.0002		100	67-158	6.4	50	
2,3,7,8-TCDF	0.000211	0.00001	0.0000028	ug/L	0.0002		106	75-158	1.6	50	
OCDD	0.00221	0.0001	0.000015	ug/L	0.002		110	78-144	2.1	50	
OCDF	0.00232	0.0001	0.0000027	ug/L	0.002		116	63-170	4	50	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	*0.00139*			*ug/L*	*0.002*		*69*	*23-140*			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	*0.00151*			*ug/L*	*0.002*		*76*	*28-143*			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	*0.00136*			*ug/L*	*0.002*		*68*	*26-138*			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	*0.00114*			*ug/L*	*0.002*		*57*	*32-141*			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	*0.0012*			*ug/L*	*0.002*		*60*	*26-152*			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	*0.00144*			*ug/L*	*0.002*		*72*	*28-130*			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	*0.00129*			*ug/L*	*0.002*		*64*	*26-123*			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	*0.00138*			*ug/L*	*0.002*		*69*	*29-147*			
Surrogate: 13C-1,2,3,7,8-PeCDD	*0.00116*			*ug/L*	*0.002*		*58*	*25-181*			
Surrogate: 13C-1,2,3,7,8-PeCDF	*0.00117*			*ug/L*	*0.002*		*58*	*24-185*			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	*0.00142*			*ug/L*	*0.002*		*71*	*28-136*			
Surrogate: 13C-2,3,4,7,8-PeCDF	*0.00118*			*ug/L*	*0.002*		*59*	*21-178*			

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Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 33251 Extracted: 02/02/10											
LCS Dup Analyzed: 02/04/2010 (G0B020000251L)						**Source:**					
Surrogate: 13C-2,3,7,8-TCDD	*0.00112*			*ug/L*	*0.002*		*56*	*25-164*			
Surrogate: 13C-2,3,7,8-TCDF	*0.00111*			*ug/L*	*0.002*		*56*	*24-169*			
Surrogate: 13C-OCDD	*0.00265*			*ug/L*	*0.004*		*66*	*17-157*			
Surrogate: 37Cl4-2,3,7,8-TCDD	*0.000705*			*ug/L*	*0.0008*		*88*	*35-197*			

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

ASTM 5174-91

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

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Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 27090 Extracted: 01/27/10											
Matrix Spike Analyzed: 01/30/2010 (F0A210441001S)						**Source: F0A210441001**					
Gross Alpha	41.9	3	1.6	pCi/L	49.4	0.69	83	35-150			
Gross Beta	73.1	4	1.1	pCi/L	68.2	2.49	104	54-150			
Duplicate Analyzed: 01/30/2010 (F0A210441001X)						**Source: F0A210441001**					
Gross Alpha	0.6	2	1.9	pCi/L		0.69		-			*U*
Gross Beta	3.09	4	1.1	pCi/L		2.49		-			*Jb*
Blank Analyzed: 01/30/2010 (F0A270000090B)						**Source:**					
Gross Alpha	-0.15	2	0.7	pCi/L				-			*U*
Gross Beta	-0.66	4	1.5	pCi/L				-			*U*
LCS Analyzed: 01/30/2010 (F0A270000090C)						**Source:**					
Gross Alpha	46.6	3	0.9	pCi/L	49.4		94	62-134			
Gross Beta	64.8	4	1.6	pCi/L	68.2		95	58-133			

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Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA 901.1 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 27266 Extracted: 01/27/10											
Duplicate Analyzed: 02/10/2010 (F0A260523001X)						**Source: ITA1955-02**					
Cesium 137	1.6	20	17	pCi/L		-0.1		-			*U*
Potassium 40	-10	NA	240	pCi/L		-20		-			*U*
Blank Analyzed: 02/09/2010 (F0A270000266B)						**Source:**					
Cesium 137	1.9	20	14	pCi/L				-			*U*
Potassium 40	-50	NA	220	pCi/L				-			*U*
LCS Analyzed: 02/10/2010 (F0A270000266C)						**Source:**					
Americium 241	130000	NA	500	pCi/L	141000		92	87-110			
Cobalt 60	79400	NA	200	pCi/L	87900		90	89-110			
Cesium 137	48300	20	100	pCi/L	53100		91	90-110			

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Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA 903.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 27284 Extracted: 01/27/10											
Blank Analyzed: 02/12/2010 (F0A270000284B)						**Source:**					
Radium (226)	0.092	1	0.14	pCi/L				-			*U*
LCS Analyzed: 02/12/2010 (F0A270000284C)						**Source:**					
Radium (226)	11.8	1	0.1	pCi/L	11.3		104	68-136			
LCS Dup Analyzed: 02/12/2010 (F0A270000284L)						**Source:**					
Radium (226)	11.8	1	0.1	pCi/L	11.3		105	68-136	0.6	40	

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Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 27285 Extracted: 01/27/10											
Blank Analyzed: 02/12/2010 (F0A270000285B)						**Source:**					
Radium 228	-0.02	1	0.53	pCi/L				-			*U*
LCS Analyzed: 02/12/2010 (F0A270000285C)						**Source:**					
Radium 228	6.6	1	0.52	pCi/L	6.44		102	60-142			
LCS Dup Analyzed: 02/12/2010 (F0A270000285L)						**Source:**					
Radium 228	7.12	1	0.53	pCi/L	6.44		110	60-142	8	40	

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Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA 905 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 27286 Extracted: 01/27/10											
Blank Analyzed: 02/05/2010 (F0A270000286B)						**Source:**					
Strontium 90	0.11	3	0.52	pCi/L				-			*U*
LCS Analyzed: 02/05/2010 (F0A270000286C)						**Source:**					
Strontium 90	8.3	3	0.54	pCi/L	6.81		122	80-130			
LCS Dup Analyzed: 02/05/2010 (F0A270000286L)						**Source:**					
Strontium 90	8	3	0.52	pCi/L	6.81		118	80-130	4	40	

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Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

METHOD BLANK/QC DATA

EPA 906.0 MOD

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

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Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITA1816-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.096	4.8	15

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITA1955-02	Antimony-200.8	Antimony	ug/l	0.28	2.0	6
ITA1955-02	Cadmium-200.8	Cadmium	ug/l	0.12	1.0	4
ITA1955-02	Chloride - 300.0	Chloride	mg/l	6.46	0.50	150
ITA1955-02	Copper-200.8	Copper	ug/l	3.83	2.0	14
ITA1955-02	Lead-200.8	Lead	ug/l	2.19	1.0	5.2
ITA1955-02	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	1.52	0.26	10
ITA1955-02	Sulfate-300.0	Sulfate	mg/l	8.98	0.50	250
ITA1955-02	TDS - SM2540C	Total Dissolved Solids	mg/l	143	10	850
ITA1955-02	Thallium-200.8	Thallium	ug/l	0	1.0	2

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

DATA QUALIFIERS AND DEFINITIONS

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	Result is greater than sample detection limit but less than stated reporting limit.
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	Result is less than the sample detection limit.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
Filtration	Water	N/A	N/A
SM2540C	Water	X	

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

Subcontracted Laboratories

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

Analysis Performed: Bioassay-7 dy Chrnic
Samples: ITA1955-02

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 003
Report Number: ITA1816

Sampled: 01/21/10-01/22/10
Received: 01/21/10

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91
Samples: ITA1955-02

Method Performed: EPA 900.0 MOD
Samples: ITA1955-02

Method Performed: EPA 901.1 MOD
Samples: ITA1955-02

Method Performed: EPA 903.0 MOD
Samples: ITA1955-02

Method Performed: EPA 904 MOD
Samples: ITA1955-02

Method Performed: EPA 905 MOD
Samples: ITA1955-02

Method Performed: EPA 906.0 MOD
Samples: ITA1955-02

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: ITA1955-02

TestAmerica Irvine

Kathleen A. Robb For Heather Clark
Project Manager

Test America Version 6/29/09

CHAIN OF CUSTODY FORM

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

Test America Contact: Joseph Doak

Project:
Boeing-SSFL NPDES
Routine Outfall 003
GRAB
Stormwater at RMHF

Project Manager: Bronwyn Kelly

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

Sampler: SD / VV

ANALYSIS REQUIRED

Field readings:
Temp °F = 67.1
pH = 6.9
Time of readings = 1045

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)														Comments
Outfall 003	W	1L Amber	2	1/21/10 1045	HCl	1A, 1B	X														
													SD								

These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-21-10 15:45	[signature]	1-21-10 15:45
Relinquished By	Date/Time:	Received By	Date/Time:
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

LABORATORY REPORT

Aquatic Testing Laboratories

"dedicated to providing quality aquatic toxicity testing"

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

Date: January 31, 2010

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

Laboratory No.: A-10012302-001
Sample I.D.: ITA1955-02 (Outfall 003)

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

Date Sampled:	01/22/10
Date Received:	01/23/10
Temp. Received:	0.7°C
Chlorine (TRC):	0.0 mg/l
Date Tested:	01/23/10 to 01/30/10

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

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

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

Result Summary:

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

Quality Control: Reviewed and approved by:

Joseph A. LeMay
Laboratory Director

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0

Aquatic Testing Laboratories

Lab No.: A-10012302-001
Client/ID: Test America – ITA1955-02 (Outfall 003)

Date Tested: 01/23/10 to 01/30/10

TEST SUMMARY

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

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

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	23.1
100% Sample	100%	23.1
* Sample not statistically significantly less than Control.		

CHRONIC TOXICITY

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

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (23.1 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 6.5%)
Statistically significantly different concentrations relative difference >13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	1/23/2010 15:30	Test ID:	10012302c	Sample ID:	Outfall 003
End Date:	1/30/2010 16:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	EFF2-Industrial
Sample Date:	1/22/2010 15:08	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

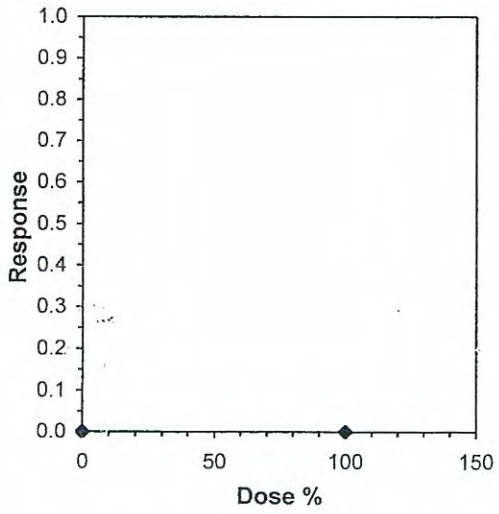
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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

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

Linear Interpolation (200 Resamples)

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



ToxCalc v5.0.23

Reviewed by:

Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	1/23/2010 15:30	Test ID:	10012302c	Sample ID:	Outfall 003
End Date:	1/30/2010 16:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	EFF2-Industrial
Sample Date:	1/22/2010 15:08	Protocol:	FWCH EPA	Test Species:	CD-Ceriodaphnia dubia
Comments:					

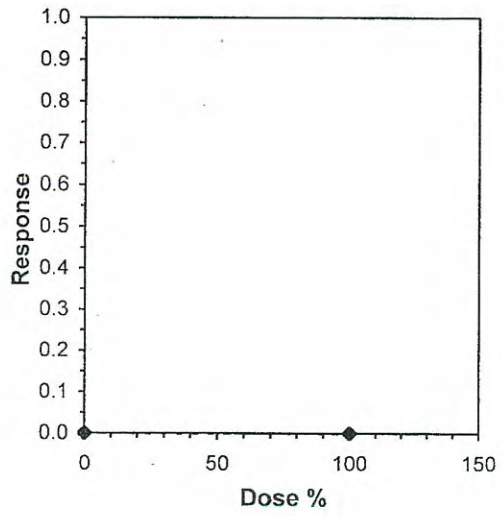
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	20.000	22.000	24.000	25.000	24.000	22.000	21.000	22.000	26.000	25.000
100	23.000	23.000	20.000	24.000	20.000	25.000	25.000	22.000	25.000	24.000

			Transform: Untransformed						1-Tailed		Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	23.100	1.0000	23.100	20.000	26.000	8.525	10				23.100	1.0000
100	23.100	1.0000	23.100	20.000	25.000	8.277	10	0.000	1.734	1.505	23.100	1.0000

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.91338		0.905		-0.3675	-1.0381
F-Test indicates equal variances (p = 0.93)	1.06079		6.54109			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Homoscedastic t Test indicates no significant differences Treatments vs D-Control	1.50508	0.06515	0	3.76667	1	1, 18

Linear Interpolation (200 Resamples)

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



Reviewed by:

CERIODAPHNIA DUBIA CHRONIC BIOASSAY
EPA METHOD 1002.0 Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-10012302-001
Client ID: TestAmerica - ITA1955-02 Outfall 003
Start Date: 01/23/2010

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:															
Time of Readings:		1530	1430	1430	1500	1500	1500	1500	1500	1500	1500	1500	1430	1430	1600
Control	DO	9.0	8.8	8.3	8.2	8.2	8.0	8.6	8.6	8.3	8.2	8.6	8.3	8.8	8.1
	pH	7.7	7.6	7.7	7.7	7.7	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
	Temp	25.7	24.2	24.4	25.4	25.3	25.2	24.8	25.6	25.8	25.6	25.8	24.6	25.2	24.7
100%	DO	9.6	8.6	9.9	7.4	9.4	8.2	9.8	8.3	10.4	8.3	10.2	8.6	11.0	8.8
	pH	7.0	7.5	7.2	7.4	7.4	7.4	7.1	7.5	7.0	7.5	7.2	7.5	7.0	7.5
	Temp	24.3	24.3	24.2	25.4	25.3	25.4	24.9	25.7	24.7	25.6	25.0	24.7	25.5	24.9

Additional Parameters	Control	100% Sample
Conductivity (umohms)	330	162
Alkalinity (mg/l $CaCO_3$)	74	53
Hardness (mg/l $CaCO_3$)	89	82
Ammonia (mg/l NH_3-N)	<0.1	0.4

Source of Neonates

Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	4A	4D	5D	4E	6E	5F	6G	4H	6I	4J

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	3	4	0	0	5	3	0	3	4	0	22	10	
	4	7	6	4	5	7	8	5	7	7	5	61	10	
	5	0	0	8	6	0	0	6	0	0	7	27	10	
	6	10	0	0	0	12	11	0	12	0	0	45	10	
	7	0	12	12	14	0	0	10	0	15	13	76	10	
	Total	20	22	24	25	24	22	21	22	26	25	231	10	
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	3	0	3	0	0	4	0	0	0	0	10	10	
	4	0	3	0	2	3	0	3	2	4	2	19	10	
	5	6	8	7	8	7	7	8	7	6	7	71	10	
	6	14	0	0	0	10	14	14	0	0	0	52	10	
	7	0	12	10	14	0	0	0	13	15	15	879	10	
	Total	23	23	20	24	20	25	25	22	25	24	2331	10	

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

SUBCONTRACT ORDER
TestAmerica Irvine

ITA1955

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB
4350 Transport Street, Unit 107
Ventura, CA 93003
Phone :(805) 650-0546
Fax: (805) 650-0756
Project Location: CA - CALIFORNIA
Receipt Temperature: 0.7 °C Ice: (Y) N

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

Analysis	Units	Expires	Comments
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water)		Sampled: **01/22/10 15:08**	
Bioassay-7 dy Chrnic	N/A	01/24/10 03:08	Cerio, EPA/821-R02-013, Sub to Aquatic testing

Containers Supplied:
1 gal Poly (J)

Released By	1/23/10 7:50 Date/Time	Received By	1-23-10 7:50 Date/Time
Released By	1-23-10 1030 Date/Time	Received By	1-23-10 10:30 Date/Time

Aquatic
Testing
Laboratories

Ceriodaphnia dubia
Chronic Toxicity Test
Reference
Toxicant
Data

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0
REFERENCE TOXICANT - NaCl

Aquatic Testing Laboratories

QA/QC Batch No.: RT-100119

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

TEST SUMMARY

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

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

RESULTS SUMMARY

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

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

CHRONIC TOXICITY

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

QA/QC TEST ACCEPTABILITY

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

Ceriodaphnia Survival and Reproduction Test-7 Day Survival

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

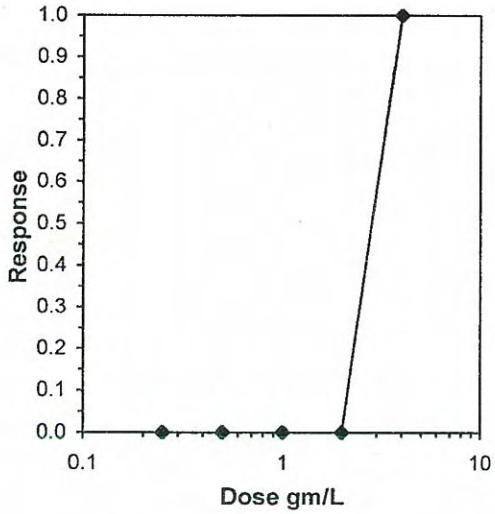
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000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

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

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

Graphical Method

Trim Level	EC50
0.0%	2.8284
	2.8284

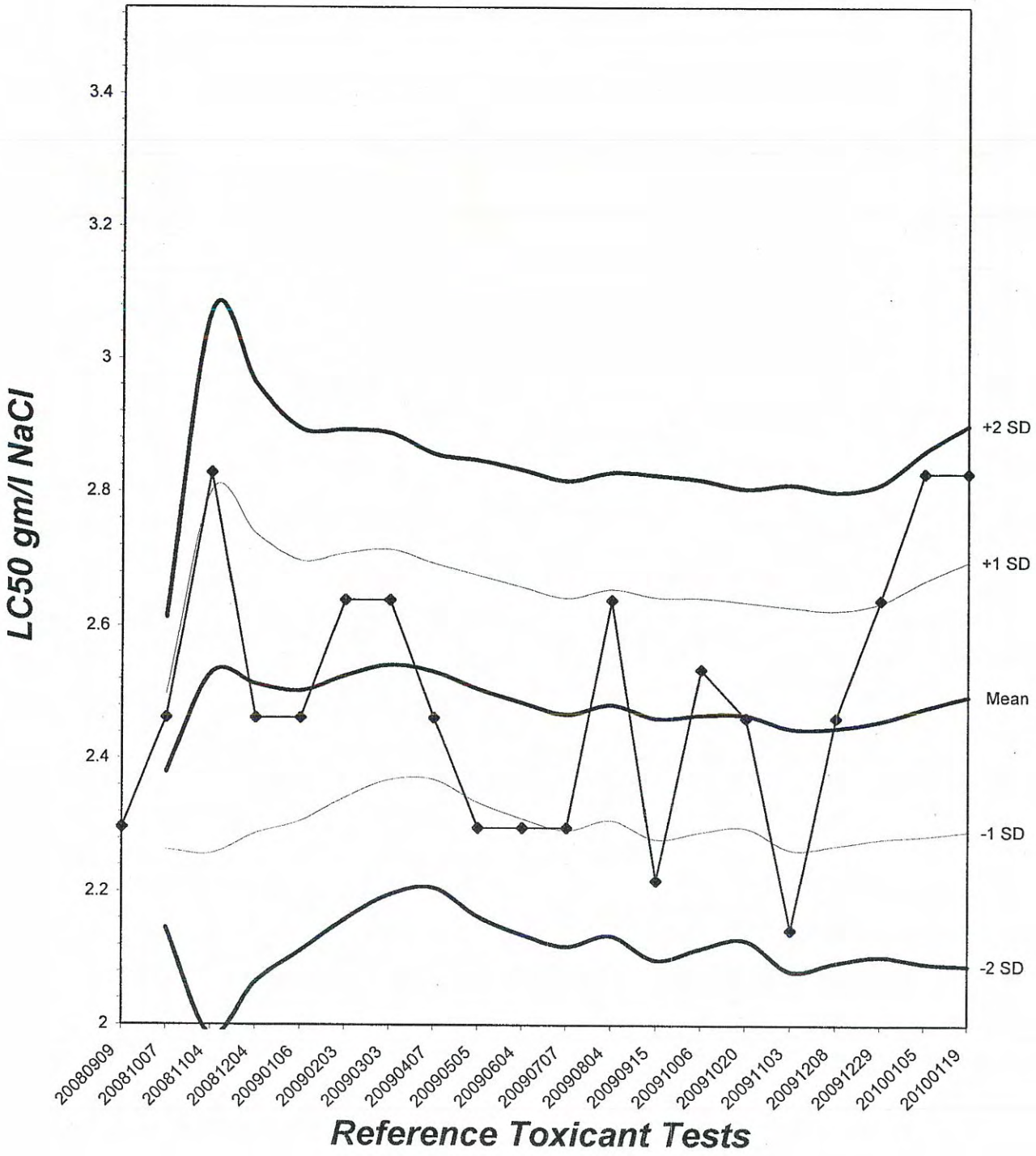


ToxCalc v5.0.23

Reviewed by:

Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 8.13



Ceriodaphnia Survival and Reproduction Test-Reproduction

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

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

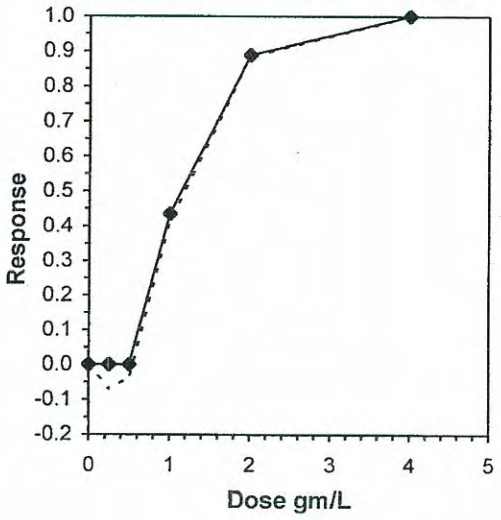
			Transform: Untransformed					1-Tailed			Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	23.400	1.0000	23.400	21.000	25.000	7.037	10				24.233	1.0000
0.25	25.000	1.0684	25.000	22.000	28.000	7.775	10	-1.608	2.223	2.212	24.233	1.0000
0.5	24.300	1.0385	24.300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

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

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

Linear Interpolation (200 Resamples)

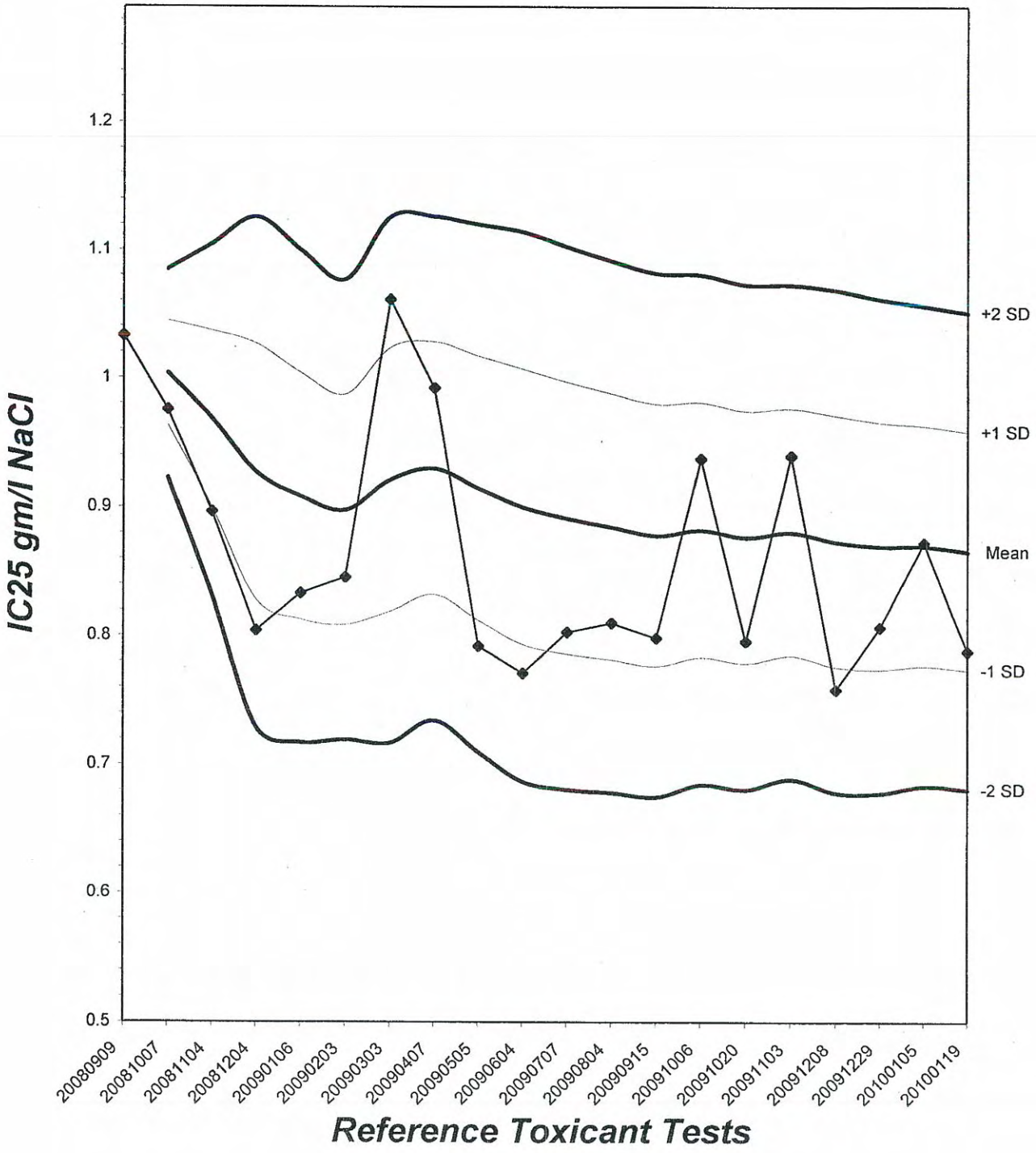
Point	gm/L	SD	95% CL		Skew
IC05	0.5575	0.0143	0.5110	0.5655	-2.0775
IC10	0.6150	0.0146	0.5755	0.6311	-0.4724
IC15	0.6725	0.0178	0.6297	0.6978	0.1744
IC20	0.7301	0.0222	0.6808	0.7720	0.4277
IC25	0.7876	0.0272	0.7293	0.8440	0.5197
IC40	0.9601	0.0466	0.8758	1.0814	0.8653
IC50	1.1439	0.0763	0.9761	1.2715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



Reviewed by: _____

Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 10.7



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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	0	0	0	10	
	4	3	4	3	5	3	4	4	3	3	4	36	10	
	5	6	9	0	0	0	0	8	7	9	8	47	10	
	6	14	0	8	7	8	7	13	0	0	0	57	10	
	7	0	17	10	12	12	14	0	11	10	13	94	10	
	Total	23	25	21	24	23	25	25	21	22	25	234	10	
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	4	0	4	10	
	4	3	4	5	5	3	4	4	3	0	4	35	10	
	5	8	0	0	0	0	7	8	7	9	8	47	10	
	6	0	8	10	7	8	0	0	0	15	0	48	10	
	7	12	14	12	12	13	14	15	12	0	12	116	10	
	Total	23	26	27	24	24	25	27	22	28	24	226	10	
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	0	0	0	0	0	0	10	
	4	3	4	5	4	3	3	4	3	3	4	36	10	
	5	7	8	0	0	0	0	0	8	9	9	41	10	
	6	0	14	7	8	9	9	10	12	0	0	69	10	
	7	12	0	13	14	12	10	12	0	13	11	97	10	
	Total	22	26	25	26	24	22	26	23	25	24	243	10	

Circled fourth brood not used in statistical analysis.

7th day only used if <60% of the surviving control females have produced their third brood.

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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

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

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst Initials:															
Time of Readings:		1400	1400	1400	1430	1430	1330	1330	1500	1500	1330	1340	1400	1400	1400
Control	DO	9.1	8.3	8.0	8.1	9.0	8.0	9.3	8.0	8.3	8.0	8.3	8.2	8.2	8.0
	pH	7.8	8.0	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.0	7.6	8.0	7.7	7.6
	Temp	25.3	25.3	25.4	25.0	25.0	25.0	25.4	24.8	25.7	24.7	25.0	24.4	24.9	24.2
0.25 g/l	DO	9.1	8.3	8.0	8.0	9.0	8.0	9.2	8.0	8.3	8.1	8.5	8.0	8.2	8.2
	pH	7.8	8.0	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.0	7.7	8.0	7.9	7.9
	Temp	25.3	25.4	25.4	25.1	25.0	25.1	25.4	25.1	25.7	24.2	25.2	24.7	25.0	24.3
0.5 g/l	DO	9.0	8.2	8.0	8.0	8.9	8.1	9.1	8.0	8.3	8.2	8.5	8.3	8.3	8.3
	pH	7.7	8.0	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.1	7.8	8.0	7.9	8.0
	Temp	25.3	25.4	25.5	25.2	25.0	25.1	25.4	25.3	25.7	24.3	25.5	24.5	24.9	24.5
1.0 g/l	DO	9.0	8.3	8.0	8.0	8.7	8.1	9.3	8.0	8.3	8.1	8.6	8.1	8.3	8.3
	pH	7.7	8.1	8.0	7.8	7.7	7.9	7.7	7.9	7.7	8.0	7.9	7.9	7.8	7.9
	Temp	25.3	25.5	25.5	25.1	25.1	25.1	25.5	25.3	25.8	24.5	24.8	24.7	25.0	24.3
2.0 g/l	DO	8.9	8.3	7.9	8.1	8.5	8.3	9.3	8.0	8.2	8.1	8.6	8.0	8.2	8.2
	pH	7.7	8.1	8.0	7.8	7.7	7.9	7.7	7.9	7.6	7.9	7.7	7.9	7.8	7.9
	Temp	25.2	25.5	25.6	25.1	25.1	25.2	25.5	25.3	25.9	24.2	24.7	24.2	25.1	24.5
4.0 g/l	DO	8.7	8.4	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.7	8.1	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	25.2	25.5	—	—	—	—	—	—	—	—	—	—	—	—

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

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

Source of Neonates

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

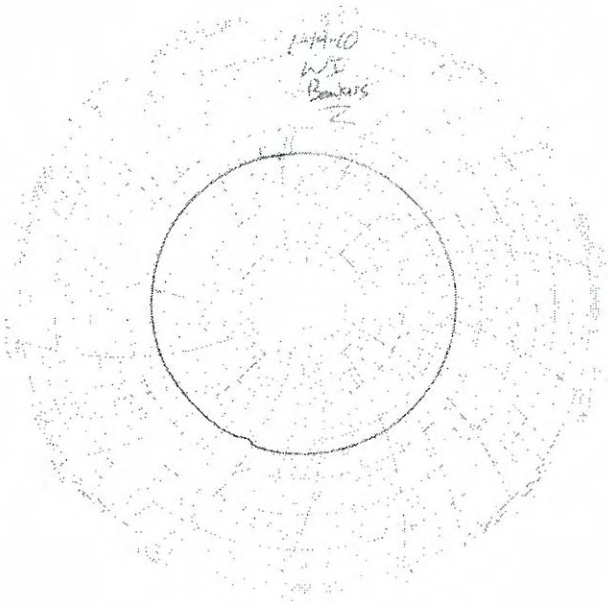
Aquatic Testing Laboratories

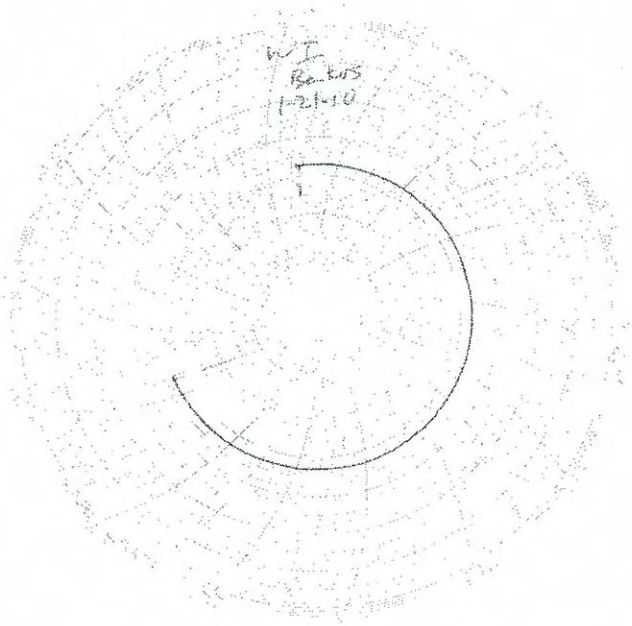
Test Temperature Chart

Test No: RT-100122

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

Acceptable Range: 25+/- 1°C





TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. ITA1955

MWH-Pasadena Boeing

Lot #: F0A260523

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Kay Clay
Project Manager

March 17, 2010

Case Narrative
LOT NUMBER: F0A260523
Revised 03-17-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on January 26, 2010. This sample is associated with your MWH-Pasadena Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements.

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

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

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

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

There were no nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F0A260523

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

References:

ASTM Annual Book Of ASTM Standards.

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

CWL 153

SUBCONTRACT ORDER
TestAmerica Irvine

ITA1955

FOA 260523

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
Sample ID: ITA1955-02 (Outfall 003 (Comp) - Water) Sampled: **01/22/10 15:08**						
Gamma Spec-O ✓	mg/kg	02/02/10	01/22/11 15:08	$250.00	0%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O ✓	pCi/L	02/02/10	07/21/10 15:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O ✓	pCi/L	02/02/10	07/21/10 15:08	$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	02/02/10	02/19/10 15:08	$0.00	0%	
Radium, Combined-O ✓	pCi/L	02/02/10	01/22/11 15:08	$238.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O ✓	pCi/L	02/02/10	01/22/11 15:08	$155.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O ✓	pCi/L	02/02/10	01/22/11 15:08	$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O ✓	pCi/L	02/02/10	01/22/11 15:08	$120.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:
2.5 gal Poly (H) ~~500 mL~~ 1 L Amber (I)

Released By _____ Date/Time _____ Received By Nicholas Queens Date/Time 01/26/10 0820

Released By _____ Date/Time _____ Received By _____ Date/Time _____

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): FOA2600523

CONDITION UPON RECEIPT FORM

Client: TA IRVINE
Quote No: 85044
COC/RFA No: ITA 955
Initiated By: NV
Date: 1/26/10 (153)
Time: 0920

Shipping Information

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

Shipping # (s):*				Sample Temperature (s):**			
1.	428921330019	6.		1.	~~3~~ PVO 3	6.	
2.		7.		2.	1/26/10	7.	
3.		8.		3.		8.	
4.		9.		4.		9.	
5.		10.		5.		10.	

*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes:

Corrective Action:
☐ Client Contact Name: _____ Informed by: _____
☐ Sample(s) processed "as is"
☐ Sample(s) on hold until: _____ If released, notify: _____
Project Management Review: Jaymee Pohl Date: 1-28-10

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

SAMPLE SUMMARY

F0A260523

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LTRPD	001	ITA1955-02	01/22/10	15:08

NOTE(S):

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

TestAmerica Irvine

Client Sample ID: ITA1955-02

Radiochemistry

Lab Sample ID: F0A260523-001
Work Order: LTRPD
Matrix: WATER

Date Collected: 01/22/10 1508
Date Received: 01/26/10 0920

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**		**Batch # 0027266**	**Yld %**
Cesium 137	-0.1	U	7.3	20.0	13	01/27/10	02/09/10
Potassium 40	-20	U	120		190	01/27/10	02/09/10
Gross Alpha/Beta EPA 900				**pCi/L**		**Batch # 0027090**	**Yld %**
Gross Alpha	**3.3**		**1.2**	3.0	**1.1**	**01/27/10**	**01/30/10**
Gross Beta	**4.0**	**J**	**1.2**	4.0	**1.6**	**01/27/10**	**01/30/10**
SR-90 BY GFPC EPA-905 MOD				**pCi/L**		**Batch # 0027286**	**Yld % 64**
Strontium 90	0.29	U	0.40	3.00	0.67	01/27/10	02/05/10
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**		**Batch # 0028080**	**Yld %**
Tritium	123	U	98	500	140	01/28/10	01/29/10
Total Uranium by KPA ASTM 5174-91				**pCi/L**		**Batch # 0035029**	**Yld %**
Total Uranium	**0.339**	**J**	**0.036**	0.693	**0.21**	**02/04/10**	**02/08/10**
Radium 226 by EPA 903.0 MOD				**pCi/L**		**Batch # 0027284**	**Yld % 87**
Radium (226)	**0.27**	**J**	**0.14**	1.00	**0.18**	**01/27/10**	**02/12/10**
Radium 228 by GFPC EPA 904 MOD				**pCi/L**		**Batch # 0027285**	**Yld % 66**
Radium 228	0.43	U	0.48	1.00	0.79	01/27/10	02/12/10

NOTE(S)

Data are incomplete without the case narrative.

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

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

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0A260523
Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC		Prep Date	Analysis Date	Lab Sample ID
Total Uranium by KPA ASTM 5174-91			pCi/L	**Batch #**	**0035029**	**Yld %**			**F0B040000-029B**
Total Uranium	-0.0623	U	0.0075	0.693	0.21		02/04/10	02/08/10	
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	**Batch #**	**0027266**	**Yld %**			**F0A270000-266B**
Cesium 137	1.9	U	7.7	20.0	14		01/27/10	02/09/10	
Potassium 40	-50	U	260		220		01/27/10	02/09/10	
Radium 226 by EPA 903.0 MOD			pCi/L	**Batch #**	**0027284**	**Yld %**	**107**		**F0A270000-284B**
Radium (226)	0.092	U	0.090	1.00	0.14		01/27/10	02/12/10	
Radium 228 by GFPC EPA 904 MOD			pCi/L	**Batch #**	**0027285**	**Yld %**	**97**		**F0A270000-285B**
Radium 228	-0.02	U	0.30	1.00	0.53		01/27/10	02/12/10	
SR-90 BY GFPC EPA-905 MOD			pCi/L	**Batch #**	**0027286**	**Yld %**	**81**		**F0A270000-286B**
Strontium 90	0.11	U	0.31	3.00	0.52		01/27/10	02/05/10	
Gross Alpha/Beta EPA 900			pCi/L	**Batch #**	**0027090**	**Yld %**			**F0A270000-090B**
Gross Alpha	-0.15	U	0.29	2.00	0.70		01/27/10	01/30/10	
Gross Beta	-0.66	U	0.84	4.00	1.5		01/27/10	01/30/10	
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	**Batch #**	**0028080**	**Yld %**			**F0A280000-080B**
Tritium	250	J	120	500	**140**		**01/28/10**	**01/28/10**	

NOTE(S)

Data are incomplete without the case narrative.

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

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

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0A260523
Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 σ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gross Alpha/Beta EPA 900			**pCi/L**	**900.0 MOD**			**F0A270000-090C**
Gross Beta	68.2	64.8	5.6	1.6		95	(58 - 133)
	Batch #:	0027090		**Analysis Date:**	01/30/10		
Gross Alpha/Beta EPA 900			**pCi/L**	**900.0 MOD**			**F0A270000-090C**
Gross Alpha	49.4	46.6	5.2	0.9		94	(62 - 134)
	Batch #:	0027090		**Analysis Date:**	01/30/10		
Gamma Cs-137 & Hits by EPA 901.1 MOD			**pCi/L**	**901.1 MOD**			**F0A270000-266C**
Americium 241	141000	130000	10000	500		92	(87 - 110)
Cesium 137	53100	48300	2800	100		91	(90 - 110)
Cobalt 60	87900	79400	4500	200		90	(89 - 110)
	Batch #:	0027266		**Analysis Date:**	02/10/10		
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**	**906.0 MOD**			**F0A280000-080C**
Tritium	4540	4680	480	140		103	(85 - 112)
	Batch #:	0028080		**Analysis Date:**	01/28/10		
Total Uranium by KPA ASTM 5174-91			**pCi/L**	**5174-91**			**F0B040000-029C**
Total Uranium	27.7	29.2	3.5	0.2		105	(90 - 120)
	Batch #:	0035029		**Analysis Date:**	02/08/10		
Total Uranium by KPA ASTM 5174-91			**pCi/L**	**5174-91**			**F0B040000-029C**
Total Uranium	5.54	5.67	0.59	0.21		102	(90 - 120)
	Batch #:	0035029		**Analysis Date:**	02/08/10		

NOTE(S)

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

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

Client Lot ID: F0A260523
Matrix: WATER

Parameter		Spike Amount	Result		Total Uncert. (2 σ +/-)	% Yld	% Rec	QC Control Limits	Precision	
								Lab Sample ID		
Radium 226 by EPA 903.0 MOD				**pCi/L**	**903.0 MOD**			**F0A270000-284C**		
Radium (226)		11.3	11.8		1.1	109	104	(68 - 136)		
	Spk 2	11.3	11.8		1.1	107	105	(68 - 136)	0.6	%RPD
		Batch #:	0027284			**Analysis Date:**		02/12/10		
Radium 228 by GFPC EPA 904 MOD				**pCi/L**	**904 MOD**			**F0A270000-285C**		
Radium 228		6.44	6.60		0.78	99	102	(60 - 142)		
	Spk 2	6.44	7.12		0.82	98	110	(60 - 142)	8	%RPD
		Batch #:	0027285			**Analysis Date:**		02/12/10		
SR-90 BY GFPC EPA-905 MOD				**pCi/L**	**905 MOD**			**F0A270000-286C**		
Strontium 90		6.81	8.30		0.94	78	122	(80 - 130)		
	Spk 2	6.81	8.00		0.90	81	118	(80 - 130)	4	%RPD
		Batch #:	0027286			**Analysis Date:**		02/05/10		

NOTE(S)

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

MATRIX SPIKE REPORT

Radiochemistry

Client Lot Id: F0A200494
Matrix: WATER

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

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2 σ +/-)	QC Sample ID %YLD	QC Sample ID %REC	QC Control Limits
TRITIUM (Distill) by EPA 906.0 MOD			**pCi/L**		**906.0 MOD**			**F0A200494-001**	
Tritium	4540	4350	460		64	88		94	(62 - 147)
	Batch #:	0028080		Analysis Date:		01/29/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0A210441-001**	
Gross Alpha	49.4	41.9	5.5		0.69	0.85		83	(35 - 150)
	Batch #:	0027090		Analysis Date:		01/30/10			
Gross Alpha/Beta EPA 900			**pCi/L**		**900.0 MOD**			**F0A210441-001**	
Gross Beta	68.2	73.1	6.2		2.49	0.89		104	(54 - 150)
	Batch #:	0027090		Analysis Date:		01/30/10			

NOTE(S)

Data are incomplete without the case narrative.

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

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

Client Lot ID: F0A200486 Date Sampled: 01/18/10 0730
Matrix: WATER Date Received: 01/20/10 0915

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

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

NOTE(S)

Data are incomplete without the case narrative.

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

DUPLICATE EVALUATION REPORT

Radiochemistry

Client Lot ID: F0A260523
Matrix: WATER

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

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2 σ +/-)	% Yld	QC Sample ID Precision	
TRITIUM (Distill) by EPA 906.0 MOD				**pCi/L**	**906.0 MOD**				**F0A200486-001**	
Tritium	99	U	94		-49	U	64		586	%RPD
	Batch #:		0028080	(Sample)	0028080		(Duplicate)			
Gross Alpha/Beta EPA 900				**pCi/L**	**900.0 MOD**				**F0A210441-001**	
Gross Alpha	0.69	U	0.85		0.6	U	1.1		23	%RPD
Gross Beta	2.49	J	0.89		3.09	J	0.91		21	%RPD
	Batch #:		0027090	(Sample)	0027090		(Duplicate)			
Gamma Cs-137 & Hits by EPA 901.1 MOD				**pCi/L**	**901.1 MOD**				**F0A260523-001**	
Cesium 137	-0.1	U	7.3		1.6	U	9.2		240	%RPD
Potassium 40	-20	U	120		-10	U	140		27	%RPD
	Batch #:		0027266	(Sample)	0027266		(Duplicate)			

NOTE (S)

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

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