

## **APPENDIX G**

### **Section 65**

Outfall 018 - BMP Effectiveness February 7 - 11, 2010

Test America Analytical Laboratory Report

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## LABORATORY REPORT

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

Project: BMP Effectiveness  
Monitoring Program

Sampled: 02/07/10-02/11/10  
Received: 02/11/10  
Issued: 02/22/10 21:49

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

### CASE NARRATIVE

**SAMPLE RECEIPT:** Samples were received intact, at 2°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:** No analyses were subcontracted to an outside laboratory.

#### LABORATORY ID

ITB1559-01  
ITB1559-02  
ITB1559-03  
ITB1559-04  
ITB1559-05

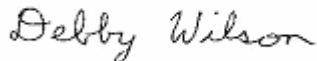
#### CLIENT ID

018 EFF-1  
018 EFF-2  
018 EFF-3  
018 EFF-4  
018 EFF-5

#### MATRIX

Water  
Water  
Water  
Water  
Water

Reviewed By:



**TestAmerica Irvine**

Debby Wilson For Joseph Doak  
Project Manager

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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: ITB1559

Sampled: 02/07/10-02/11/10  
Received: 02/11/10

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1559-01 (018 EFF-1 - Water)</b>					<b>Sampled: 02/07/10</b>				
Reporting Units: g/cc									
Density	Displacement	10B2266	N/A	NA	1.0	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-02 (018 EFF-2 - Water)</b>					<b>Sampled: 02/08/10</b>				
Reporting Units: g/cc									
Density	Displacement	10B2266	N/A	NA	0.99	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-03 (018 EFF-3 - Water)</b>					<b>Sampled: 02/09/10</b>				
Reporting Units: g/cc									
Density	Displacement	10B2266	N/A	NA	1.0	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-04 (018 EFF-4 - Water)</b>					<b>Sampled: 02/10/10</b>				
Reporting Units: g/cc									
Density	Displacement	10B2266	N/A	NA	1.0	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-05 (018 EFF-5 - Water)</b>					<b>Sampled: 02/11/10</b>				
Reporting Units: g/cc									
Density	Displacement	10B2266	N/A	NA	1.0	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-01 (018 EFF-1 - Water)</b>					<b>Sampled: 02/07/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10B2268	10	10	ND	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-02 (018 EFF-2 - Water)</b>					<b>Sampled: 02/08/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10B2268	10	10	ND	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-03 (018 EFF-3 - Water)</b>					<b>Sampled: 02/09/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10B2268	10	10	ND	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-04 (018 EFF-4 - Water)</b>					<b>Sampled: 02/10/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10B2268	10	10	ND	1	02/18/10	02/18/10	
<b>Sample ID: ITB1559-05 (018 EFF-5 - Water)</b>					<b>Sampled: 02/11/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10B2268	10	10	ND	1	02/18/10	02/18/10	

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager



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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: ITB1559

Sampled: 02/07/10-02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2266 Extracted: 02/18/10</b>										
<b>Duplicate Analyzed: 02/18/2010 (10B2266-DUP1)</b>										
Density	1.00	NA	N/A	g/cc		Source: ITB1559-01 1.00		0.06	20	

TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

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MWH-Pasadena/Boeing  
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## DATA QUALIFIERS AND DEFINITIONS

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.  
**RPD** Relative Percent Difference

**TestAmerica Irvine**

Debby Wilson For Joseph Doak  
Project Manager

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**ITB1559 <Page 4 of 5>**

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Monitoring Program  
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Sampled: 02/07/10-02/11/10  
Received: 02/11/10

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at [www.testamericainc.com](http://www.testamericainc.com)*

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

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27B/559

<p>Client Name/Address:                  MWH-Pasadena                  618 Michilinda Ave, Suite 200                  Pasadena, CA 91007</p>		<p>Project: Boeing BMP                  Effectiveness Monitoring                  Program</p>		<p>ANALYSIS REQUIRED</p>		<p>Comments</p>	
<p>Test America Contact: Joe Doak</p>		<p>Phone Number:                  (626) 568-6691                  Fax Number:                  (626) 568-6515</p>		<p>Suspended Sediment                  Concentration (SSC, ASTM-                  D3977-1997)</p>			
<p>Project Manager: Bronwyn Kelly</p>		<p>Sampler: EW/SD</p>					
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative		Bottle #
018 EFF-1	W	1 L Poly	2	27/10-1046	None		1
018 EFF-2	W	1 L Poly	2	28/10 1230	None		2
018 EFF-3	W	1 L Poly	2	29/10 1320	None	3	
018 EFF-4	W	1 L Poly	2	29/10 1415	None	4	
018 EFF-5	W	1 L Poly	2	29/10 1345	None	5	
<p>Relinquished By: <i>[Signature]</i> Date/Time: 2-11-10 14:30 Received By: <i>[Signature]</i> Date/Time: 2-11-10 14:30</p> <p>Relinquished By: <i>[Signature]</i> Date/Time: 2-11-10 19:45 Received By: <i>[Signature]</i> Date/Time: 2-11-10 19:45</p> <p>Relinquished By: <i>[Signature]</i> Date/Time: 2-11-10 19:45 Received By: <i>[Signature]</i> Date/Time: 2-11-10 19:45</p>							
<p>Turn around Time: (check)                  24 Hours _____ 5 Days _____                  48 Hours _____ 10 Days _____                  72 Hours _____ Normal <input checked="" type="checkbox"/>                  Perchlorate Only 72 Hours _____                  Metals Only 72 Hours _____                  Sample Integrity: (Check) On Ice: <input checked="" type="checkbox"/></p>							

16:45  
 2/12/10  
 2.1 M211/

# **APPENDIX G**

## **Section 66**

Outfall 018 – March 2 & 3, 2010

MEC<sup>X</sup> Data Validation Report

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# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITC0215 and ITC0421

Prepared by

MEC<sup>x</sup>, 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: ITC0215 and ITC0421  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 2  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 018	ITC0421-01	G0C020512-001, FOC050563-001	Water	3/2/2010 14:50	ASTM 5174-91, 180.1, 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, EA 906.0 MOD
Outfall 018	ITC0215-01		Water	3/2/2010 14:50	120.1

**II. Sample Management**

No anomalies were observed regarding sample management. The sample was received at ambient temperature at TestAmerica-St. Louis; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at TA-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.



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**Data Qualifier Reference Table**


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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.

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### 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.**

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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.

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: April 8, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> 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  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  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 most target compounds, and detects above the RL for a few target compounds. A few 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. The sample result for total PeCDD did not contain the

same peak as the method blank and was therefore not qualified. Total HpCDF was qualified as estimated, "J," as only a portion of the total was considered method blank contamination. Remaining sample results were qualified as nondetected, "U," at the level of contamination.

- Blank Spikes and Laboratory Control Samples: The LCS/LCSD recoveries were within the acceptance criteria listed in Table 6 of Method 1613. All RPDs were within the laboratory-established control limits.
- 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. Any EMPC qualified as nondetected for method blank contamination was not further qualified as an EMPC. The result for 1,2,3,4,6,7,8-HpCDF was reported as an EMPC and was therefore qualified as an estimated nondetect, "UJ," at the level of the EMPC. The result for total PeCDD was comprised of a single peak not meeting ratio criteria and was qualified as an estimated nondetect, "UJ." 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 METHOD 245.1—Mercury**

Reviewed By: P. Meeks  
Date Reviewed: April 6, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC<sup>x</sup> 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  $\geq 0.995$  and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were within the control limits of 70-130%.
- Blanks: Method blanks and CCBs had no 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 on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- 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: April 14, 2010

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

- Holding Times: Aliquots for gross alpha and gross beta and total uranium were prepared beyond the five-day holding time for unpreserved aqueous samples; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. The tritium sample was analyzed within 180 days of collection. Aliquots for the remaining analytes 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: A laboratory duplicate analysis was performed on the sample in this SDG for cesium-137 and potassium-40. The analytes were not detected in either sample.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD or matrix spike analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA.

The reviewer noted that the 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 9, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC<sup>x</sup> 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  $\geq 0.995$  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: No laboratory duplicate analyses were performed on the sample in this SDG.
- 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.

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# Validated Sample Result Forms ITC0215/ITC0421

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## *Analysis Method*    *ASTM 5174-91*

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<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Total Uranium	7440-61-1	ND	0.693	0.21	pCi/L	Jb	UJ	H, B

## *Analysis Method*    *EPA 120.1*

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<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	Water		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0215-01	<b>Sample Date:</b>	3/2/2010 2:50:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Specific Conductance	NA	490	1.0	1.0	uS/cm			

## *Analysis Method*    *EPA 180.1*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	Water		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Turbidity	Turb	0.29	1.0	0.040	NTU	J	J	DNQ

## *Analysis Method*    *EPA 245.1*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	Water		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Mercury	7439-97-6	ND	0.20	0.10	ug/l	C	U	

## *Analysis Method*    *EPA 245.1-Diss*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	Water		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

*Analysis Method*    *EPA 900.0 MOD*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Gross Alpha	12587-46-1	2.6	3	2.7	pCi/L	U	UJ	H, C
Gross Beta	12587-47-2	3.6	4	1.2	pCi/L	Jb	J	H, DNQ

---

*Analysis Method*    *EPA 901.1 MOD*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Cesium 137	10045-97-3	0	20	22	pCi/L	U	U	
Potassium 40	13966-00-2	-80	0	200	pCi/L	U	U	

---

*Analysis Method*    *EPA 903.0 MOD*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Radium (226)	13982-63-3	0.075	1	0.051	pCi/L	Jb	J	C, DNQ

---

*Analysis Method*    *EPA 904 MOD*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Radium 228	15262-20-1	0.05	1	0.65	pCi/L	U	U	

---

*Analysis Method*    *EPA 905 MOD*

---

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Strontium 90	10098-97-2	-0.06	3	0.38	pCi/L	U	U	

---

*Analysis Method EPA 906.0 MOD*

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
Tritium	10028-17-8	85	500	130	pCi/L	U	U	

*Analysis Method EPA-5 1613B*

<b>Sample Name</b>	Outfall 018	<b>Matrix Type:</b>	WATER		<b>Validation Level:</b>	IV		
<b>Lab Sample Name:</b>	ITC0421-01	<b>Sample Date:</b>	3/3/2010 2:19:00 PM					
<b>Analyte</b>	<b>CAS No</b>	<b>Result Value</b>	<b>RL</b>	<b>MDL</b>	<b>Result Units</b>	<b>Lab Qualifier</b>	<b>Validation Qualifier</b>	<b>Validation Notes</b>
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.0000003	ug/L	J, B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000006	ug/L	J, Q	UJ	*III
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000008	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000000	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000001	ug/L	J, B	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000000	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	1.8e-007	0.0000001	ug/L	J, Q, B	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000000	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000001	ug/L	J, B	U	B
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000002	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000000	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	2e-007	0.0000001	ug/L	J, Q, B	U	B
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000000	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000000	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000000	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000001	ug/L	J, B	U	B
OCDF	39001-02-0	ND	0.0001	0.0000002	ug/L	J, B	U	B
Total HpCDD	37871-00-4	ND	0.00005	0.0000003	ug/L	J, B	U	B
Total HpCDF	38998-75-3	2.4e-006	2.4e-006	0.0000006	ug/L	J, Q, B	J	B, DNQ, *III
Total HxCDD	34465-46-8	ND	0.00005	0.0000000	ug/L		U	
Total HxCDF	55684-94-1	ND	0.00005	0.0000001	ug/L	J, B	U	B
Total PeCDD	36088-22-9	ND	1.5e-006	0.0000002	ug/L	J, Q, B	UJ	*III
Total PeCDF	30402-15-4	ND	0.00005	0.0000000	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000000	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000000	ug/L		U	

# **APPENDIX G**

## **Section 67**

Outfall 018 – March 2 & 3, 2010

Test America Analytical Laboratory Report

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## LABORATORY REPORT

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

Project: Routine Outfall 018

Sampled: 03/02/10-03/03/10  
Received: 03/02/10  
Revised: 04/19/10 11:20

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

### CASE NARRATIVE

**SAMPLE RECEIPT:** Samples were received intact, at 2°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:** WATER, 1613B, Dioxins/Furans with Totals

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

The method blank associated with this extraction batch has detected concentrations of several analytes above the lower calibration limit (LCL). These concentration of these analytes are below the LCL in the sample with the exception of OCDD. There is no negative impact on the data as a result of this anomaly.

Revised report to provide corrected units for Conductivity. Form 1 results have correct data.

### TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

**LABORATORY ID**

ITC0215-01  
ITC0215-02  
ITC0421-01

**CLIENT ID**

Outfall 018  
Trip Blanks  
Outfall 018

**MATRIX**

Water  
Water  
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 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0215-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/02/10</b>				
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	10C1198	0.28	0.50	ND	1	03/10/10	03/10/10	
Carbon tetrachloride	EPA 624	10C1198	0.28	0.50	ND	1	03/10/10	03/10/10	
Chloroform	EPA 624	10C1198	0.33	0.50	ND	1	03/10/10	03/10/10	
1,1-Dichloroethane	EPA 624	10C1198	0.40	0.50	ND	1	03/10/10	03/10/10	
1,2-Dichloroethane	EPA 624	10C1198	0.28	0.50	ND	1	03/10/10	03/10/10	
1,1-Dichloroethene	EPA 624	10C1198	0.42	0.50	ND	1	03/10/10	03/10/10	
Ethylbenzene	EPA 624	10C1198	0.25	0.50	ND	1	03/10/10	03/10/10	
Tetrachloroethene	EPA 624	10C1198	0.32	0.50	ND	1	03/10/10	03/10/10	
Toluene	EPA 624	10C1198	0.36	0.50	ND	1	03/10/10	03/10/10	
1,1,1-Trichloroethane	EPA 624	10C1198	0.30	0.50	ND	1	03/10/10	03/10/10	
1,1,2-Trichloroethane	EPA 624	10C1198	0.30	0.50	ND	1	03/10/10	03/10/10	
Trichloroethene	EPA 624	10C1198	0.26	0.50	ND	1	03/10/10	03/10/10	
Trichlorofluoromethane	EPA 624	10C1198	0.34	0.50	ND	1	03/10/10	03/10/10	
Vinyl chloride	EPA 624	10C1198	0.40	0.50	ND	1	03/10/10	03/10/10	
Xylenes, Total	EPA 624	10C1198	0.90	1.5	ND	1	03/10/10	03/10/10	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					105 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					119 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					114 %				
<b>Sample ID: ITC0215-02 (Trip Blanks - Water)</b>					<b>Sampled: 03/02/10</b>				
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	10C1026	0.28	0.50	ND	1	03/09/10	03/09/10	
Carbon tetrachloride	EPA 624	10C1026	0.28	0.50	ND	1	03/09/10	03/09/10	
Chloroform	EPA 624	10C1026	0.33	0.50	ND	1	03/09/10	03/09/10	
1,1-Dichloroethane	EPA 624	10C1026	0.40	0.50	ND	1	03/09/10	03/09/10	
1,2-Dichloroethane	EPA 624	10C1026	0.28	0.50	ND	1	03/09/10	03/09/10	
1,1-Dichloroethene	EPA 624	10C1026	0.42	0.50	ND	1	03/09/10	03/09/10	
Ethylbenzene	EPA 624	10C1026	0.25	0.50	ND	1	03/09/10	03/09/10	
Tetrachloroethene	EPA 624	10C1026	0.32	0.50	ND	1	03/09/10	03/09/10	
Toluene	EPA 624	10C1026	0.36	0.50	ND	1	03/09/10	03/09/10	
1,1,1-Trichloroethane	EPA 624	10C1026	0.30	0.50	ND	1	03/09/10	03/09/10	
1,1,2-Trichloroethane	EPA 624	10C1026	0.30	0.50	ND	1	03/09/10	03/09/10	
Trichloroethene	EPA 624	10C1026	0.26	0.50	ND	1	03/09/10	03/09/10	
Trichlorofluoromethane	EPA 624	10C1026	0.34	0.50	ND	1	03/09/10	03/09/10	
Vinyl chloride	EPA 624	10C1026	0.40	0.50	ND	1	03/09/10	03/09/10	
Xylenes, Total	EPA 624	10C1026	0.90	1.5	ND	1	03/09/10	03/09/10	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					106 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					118 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					110 %				

### 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 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## 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
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: ug/l</b>									
Bis(2-ethylhexyl)phthalate	EPA 625	10C0555	1.6	4.8	ND	0.966	03/04/10	03/08/10	
2,4-Dinitrotoluene	EPA 625	10C0555	0.19	8.7	ND	0.966	03/04/10	03/08/10	
N-Nitrosodimethylamine	EPA 625	10C0555	0.097	7.7	ND	0.966	03/04/10	03/08/10	
Pentachlorophenol	EPA 625	10C0555	0.097	7.7	ND	0.966	03/04/10	03/08/10	
2,4,6-Trichlorophenol	EPA 625	10C0555	0.097	5.8	ND	0.966	03/04/10	03/08/10	
<i>Surrogate: 2,4,6-Tribromophenol (40-120%)</i>					89 %				
<i>Surrogate: 2-Fluorobiphenyl (50-120%)</i>					83 %				
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					71 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					76 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					76 %				
<i>Surrogate: Terphenyl-d14 (50-125%)</i>					88 %				

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 Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: ug/l</b>									
alpha-BHC	EPA 608	10C0551	0.0024	0.0096	ND	0.962	03/04/10	03/05/10	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					80 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					51 %				

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Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0215-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/02/10</b>				
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10C1221	1.3	4.7	ND	1	03/10/10	03/10/10	

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Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: mg/l</b>									
Iron	EPA 200.7	10C0824	0.015	0.040	ND	1	03/06/10	03/06/10	
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: ug/l</b>									
Mercury	EPA 245.1	10C1290	0.10	0.20	ND	1	03/10/10	03/10/10	C
<b>Manganese</b>	EPA 200.7	10C0824	7.0	20	<b>8.8</b>	1	03/06/10	03/06/10	J
Cadmium	EPA 200.8	10C0660	0.10	1.0	ND	1	03/05/10	03/10/10	
<b>Copper</b>	EPA 200.8	10C0660	0.50	2.0	<b>1.7</b>	1	03/05/10	03/10/10	J
Lead	EPA 200.8	10C0660	0.20	1.0	ND	1	03/05/10	03/10/10	
Selenium	EPA 200.8	10C0660	0.50	2.0	ND	1	03/05/10	03/10/10	
Zinc	EPA 200.8	10C0660	5.0	20	ND	1	03/05/10	03/10/10	

### 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 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: mg/l</b>									
Iron	EPA 200.7-Diss	10C1105	0.015	0.040	ND	1	03/09/10	03/14/10	
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: ug/l</b>									
Mercury	EPA 245.1-Diss	10C1471	0.10	0.20	ND	1	03/11/10	03/11/10	
Manganese	EPA 200.7-Diss	10C1105	7.0	20	ND	1	03/09/10	03/14/10	
Cadmium	EPA 200.8-Diss	10C0936	0.10	1.0	ND	1	03/08/10	03/09/10	
<b>Copper</b>	EPA 200.8-Diss	10C0936	0.50	2.0	<b>1.4</b>	1	03/08/10	03/09/10	J
Lead	EPA 200.8-Diss	10C0936	0.20	1.0	ND	1	03/08/10	03/09/10	
Selenium	EPA 200.8-Diss	10C0936	0.50	2.0	ND	1	03/08/10	03/09/10	
Zinc	EPA 200.8-Diss	10C0936	5.0	20	ND	1	03/08/10	03/09/10	

**TestAmerica Irvine**

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: mg/l</b>									
Ammonia-N (Distilled)	SM4500NH3-C	10C1299	0.50	0.50	ND	1	03/10/10	03/10/10	
<b>Biochemical Oxygen Demand</b>	SM5210B	10C0531	0.50	2.0	<b>1.0</b>	1	03/04/10	03/09/10	J
<b>Chloride</b>	EPA 300.0	10C0489	0.25	0.50	<b>20</b>	1	03/04/10	03/04/10	
Nitrate-N	EPA 300.0	10C0489	0.060	0.11	ND	1	03/04/10	03/04/10	
Nitrite-N	EPA 300.0	10C0489	0.090	0.15	ND	1	03/04/10	03/04/10	
Nitrate/Nitrite-N	EPA 300.0	10C0489	0.15	0.26	ND	1	03/04/10	03/04/10	
<b>Sulfate</b>	EPA 300.0	10C0489	2.0	5.0	<b>150</b>	10	03/04/10	03/04/10	B-1
Surfactants (MBAS)	SM5540-C	10C0559	0.050	0.10	ND	1	03/04/10	03/04/10	
<b>Total Dissolved Solids</b>	SM2540C	10C1017	1.0	10	<b>360</b>	1	03/09/10	03/09/10	
<b>Total Suspended Solids</b>	SM 2540D	10C0998	1.0	10	<b>8.0</b>	1	03/08/10	03/08/10	J

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Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0215-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/02/10</b>				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	10C0320	0.10	0.10	ND	1	03/03/10	03/03/10	
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: NTU									
Turbidity	EPA 180.1	10C0518	0.040	1.0	<b>0.29</b>	1	03/04/10	03/04/10	J
<b>Sample ID: ITC0215-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/02/10</b>				
Reporting Units: ug/l									
Total Cyanide	SM4500CN-E	10C0428	2.2	5.0	ND	1	03/03/10	03/03/10	
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10C0480	0.90	4.0	ND	1	03/04/10	03/04/10	
<b>Sample ID: ITC0215-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/02/10</b>				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	EPA 120.1	10C0448	1.0	1.0	<b>490</b>	1	03/04/10	03/04/10	

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Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	68182	0.00000032	0.00005	2.8e-006	0.95	03/09/10	03/12/10	J, B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	68182	0.00000006	0.00005	9.7e-007	0.95	03/09/10	03/12/10	J, Q
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	68182	0.00000008	0.00005	ND	0.95	03/09/10	03/12/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	68182	0.00000002	0.00005	ND	0.95	03/09/10	03/12/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	68182	0.00000014	0.00005	5.2e-007	0.95	03/09/10	03/12/10	J, B
1,2,3,6,7,8-HxCDD	EPA-5 1613B	68182	0.00000002	0.00005	ND	0.95	03/09/10	03/12/10	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	68182	0.00000013	0.00005	1.8e-007	0.95	03/09/10	03/12/10	J, Q, B
1,2,3,7,8,9-HxCDD	EPA-5 1613B	68182	0.00000002	0.00005	ND	0.95	03/09/10	03/12/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	68182	0.00000016	0.00005	4e-007	0.95	03/09/10	03/12/10	J, B
1,2,3,7,8-PeCDD	EPA-5 1613B	68182	0.00000026	0.00005	ND	0.95	03/09/10	03/12/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	68182	0.00000001	0.00005	ND	0.95	03/09/10	03/12/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	68182	0.00000012	0.00005	2e-007	0.95	03/09/10	03/12/10	J, Q, B
2,3,4,7,8-PeCDF	EPA-5 1613B	68182	0.00000002	0.00005	ND	0.95	03/09/10	03/12/10	
2,3,7,8-TCDD	EPA-5 1613B	68182	0.00000001	0.00001	ND	0.95	03/09/10	03/12/10	
2,3,7,8-TCDF	EPA-5 1613B	68182	0.00000002	0.00001	ND	0.95	03/09/10	03/12/10	
OCDD	EPA-5 1613B	68182	0.00000018	0.0001	2.4e-005	0.95	03/09/10	03/12/10	J, B
OCDF	EPA-5 1613B	68182	0.00000025	0.0001	3.8e-006	0.95	03/09/10	03/12/10	J, B
Total HpCDD	EPA-5 1613B	68182	0.00000032	0.00005	5.2e-006	0.95	03/09/10	03/12/10	J, B
Total HpCDF	EPA-5 1613B	68182	0.00000006	0.00005	2.4e-006	0.95	03/09/10	03/12/10	J, Q, B
Total HxCDD	EPA-5 1613B	68182	0.00000002	0.00005	ND	0.95	03/09/10	03/12/10	
Total HxCDF	EPA-5 1613B	68182	0.00000012	0.00005	1.3e-006	0.95	03/09/10	03/12/10	J, B
Total PeCDD	EPA-5 1613B	68182	0.00000026	0.00005	1.5e-006	0.95	03/09/10	03/12/10	J, Q, B
Total PeCDF	EPA-5 1613B	68182	0.00000001	0.00005	ND	0.95	03/09/10	03/12/10	
Total TCDD	EPA-5 1613B	68182	0.00000001	0.00001	ND	0.95	03/09/10	03/12/10	
Total TCDF	EPA-5 1613B	68182	0.00000002	0.00001	ND	0.95	03/09/10	03/12/10	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	81 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	72 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	72 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	77 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	77 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	82 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	74 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	69 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	69 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	61 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	74 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	61 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	74 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	66 %
Surrogate: 13C-OCDD (17-157%)	77 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	90 %

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Project Manager

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618 Michillinda Avenue, Suite 200  
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## ASTM 5174-91

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: pCi/L									
<b>Total Uranium</b>	ASTM 5174-91	67296	0.21	0.693	<b>0.52</b>	1	03/10/10	03/12/10	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
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	68099	2.7	3	2.6	1	03/09/10	03/15/10	U
Gross Beta	EPA 900.0 MOD	68099	1.2	4	3.6	1	03/09/10	03/15/10	Jb

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Received: 03/02/10

## EPA 901.1 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: pCi/L</b>									
Cesium 137	EPA 901.1 MOD	67102	22	20	ND	1	03/08/10	03/18/10	U
Potassium 40	EPA 901.1 MOD	67102	200	NA	-80	1	03/08/10	03/18/10	U

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Received: 03/02/10

## EPA 903.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: pCi/L									
<b>Radium (226)</b>	EPA 903.0 MOD	67053	0.051	1	<b>0.075</b>	1	03/08/10	03/31/10	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
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: pCi/L</b>									
<b>Radium 228</b>	EPA 904 MOD	67054	0.65	1	<b>0.05</b>	1	03/08/10	03/19/10	U

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Received: 03/02/10

## EPA 905 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: pCi/L</b>									
Strontium 90	EPA 905 MOD	67055	0.38	3	-0.06	1	03/08/10	03/17/10	U

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Received: 03/02/10

## EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0421-01 (Outfall 018 - Water)</b>					<b>Sampled: 03/03/10</b>				
<b>Reporting Units: pCi/L</b>									
<b>Tritium</b>	EPA 906.0 MOD	67136	130	500	<b>85</b>	1	03/08/10	03/09/10	U

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Received: 03/02/10

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: Outfall 018 (ITC0215-01) - Water</b> SM2540F	2	03/02/2010 14:50	03/02/2010 17:55	03/03/2010 06:41	03/03/2010 09:15
<b>Sample ID: Outfall 018 (ITC0421-01) - Water</b> EPA 180.1	2	03/03/2010 14:19	03/03/2010 17:50	03/04/2010 10:30	03/04/2010 10:30
EPA 300.0	2	03/03/2010 14:19	03/03/2010 17:50	03/04/2010 11:15	03/04/2010 17:01
Filtration	1	03/03/2010 14:19	03/03/2010 17:50	03/03/2010 22:30	03/03/2010 22:30
SM5210B	2	03/03/2010 14:19	03/03/2010 17:50	03/04/2010 10:43	03/09/2010 10:30
SM5540-C	2	03/03/2010 14:19	03/03/2010 17:50	03/04/2010 13:15	03/04/2010 14:43

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Received: 03/02/10

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD RPD	Data Qualifiers
<b>Batch: 10C1026 Extracted: 03/09/10</b>										
<b>Blank Analyzed: 03/09/2010 (10C1026-BLK1)</b>										
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						
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						
Vinyl chloride	ND	0.50	0.40	ug/l						
Xylenes, Total	ND	1.5	0.90	ug/l						
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107		80-120	
Surrogate: Dibromofluoromethane	28.4			ug/l	25.0		114		80-120	
Surrogate: Toluene-d8	26.9			ug/l	25.0		108		80-120	
<b>LCS Analyzed: 03/09/2010 (10C1026-BS1)</b>										
Benzene	21.6	0.50	0.28	ug/l	25.0		86		70-120	
Carbon tetrachloride	31.5	0.50	0.28	ug/l	25.0		126		65-140	
Chloroform	26.6	0.50	0.33	ug/l	25.0		106		70-130	
1,1-Dichloroethane	25.8	0.50	0.40	ug/l	25.0		103		70-125	
1,2-Dichloroethane	26.4	0.50	0.28	ug/l	25.0		106		60-140	
1,1-Dichloroethene	24.6	0.50	0.42	ug/l	25.0		98		70-125	
Ethylbenzene	23.8	0.50	0.25	ug/l	25.0		95		75-125	
Tetrachloroethene	24.8	0.50	0.32	ug/l	25.0		99		70-125	
Toluene	21.8	0.50	0.36	ug/l	25.0		87		70-120	
1,1,1-Trichloroethane	29.1	0.50	0.30	ug/l	25.0		116		65-135	
1,1,2-Trichloroethane	25.6	0.50	0.30	ug/l	25.0		102		70-125	
Trichloroethene	24.8	0.50	0.26	ug/l	25.0		99		70-125	
Trichlorofluoromethane	29.4	0.50	0.34	ug/l	25.0		118		65-145	
Vinyl chloride	26.9	0.50	0.40	ug/l	25.0		108		55-135	
Xylenes, Total	70.9	1.5	0.90	ug/l	75.0		95		70-125	
Surrogate: 4-Bromofluorobenzene	28.0			ug/l	25.0		112		80-120	

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Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1026 Extracted: 03/09/10</b>											
<b>LCS Analyzed: 03/09/2010 (10C1026-BS1)</b>											
Surrogate: Dibromofluoromethane	29.7			ug/l	25.0		119	80-120			
Surrogate: Toluene-d8	27.1			ug/l	25.0		108	80-120			
<b>Matrix Spike Analyzed: 03/09/2010 (10C1026-MS1) Source: ITC0249-01</b>											
Benzene	20.9	0.50	0.28	ug/l	25.0	ND	84	65-125			
Carbon tetrachloride	30.6	0.50	0.28	ug/l	25.0	ND	123	65-140			
Chloroform	25.0	0.50	0.33	ug/l	25.0	0.630	97	65-135			
1,1-Dichloroethane	23.7	0.50	0.40	ug/l	25.0	ND	95	65-130			
1,2-Dichloroethane	25.7	0.50	0.28	ug/l	25.0	ND	103	60-140			
1,1-Dichloroethene	22.6	0.50	0.42	ug/l	25.0	ND	90	60-130			
Ethylbenzene	23.0	0.50	0.25	ug/l	25.0	ND	92	65-130			
Tetrachloroethene	26.2	0.50	0.32	ug/l	25.0	3.08	92	65-130			
Toluene	21.3	0.50	0.36	ug/l	25.0	ND	85	70-125			
1,1,1-Trichloroethane	26.8	0.50	0.30	ug/l	25.0	ND	107	65-140			
1,1,2-Trichloroethane	25.1	0.50	0.30	ug/l	25.0	ND	100	65-130			
Trichloroethene	24.6	0.50	0.26	ug/l	25.0	0.340	97	65-125			
Trichlorofluoromethane	27.5	0.50	0.34	ug/l	25.0	0.910	106	60-145			
Vinyl chloride	24.0	0.50	0.40	ug/l	25.0	ND	96	45-140			
Xylenes, Total	68.5	1.5	0.90	ug/l	75.0	ND	91	60-130			
Surrogate: 4-Bromofluorobenzene	28.0			ug/l	25.0		112	80-120			
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120			
<b>Matrix Spike Dup Analyzed: 03/09/2010 (10C1026-MSD1) Source: ITC0249-01</b>											
Benzene	22.1	0.50	0.28	ug/l	25.0	ND	89	65-125	6	20	
Carbon tetrachloride	32.8	0.50	0.28	ug/l	25.0	ND	131	65-140	7	25	
Chloroform	25.9	0.50	0.33	ug/l	25.0	0.630	101	65-135	4	20	
1,1-Dichloroethane	24.8	0.50	0.40	ug/l	25.0	ND	99	65-130	5	20	
1,2-Dichloroethane	26.3	0.50	0.28	ug/l	25.0	ND	105	60-140	2	20	
1,1-Dichloroethene	24.1	0.50	0.42	ug/l	25.0	ND	96	60-130	6	20	
Ethylbenzene	24.0	0.50	0.25	ug/l	25.0	ND	96	65-130	4	20	
Tetrachloroethene	27.5	0.50	0.32	ug/l	25.0	3.08	98	65-130	5	20	
Toluene	22.3	0.50	0.36	ug/l	25.0	ND	89	70-125	5	20	
1,1,1-Trichloroethane	28.0	0.50	0.30	ug/l	25.0	ND	112	65-140	4	20	
1,1,2-Trichloroethane	25.4	0.50	0.30	ug/l	25.0	ND	102	65-130	1	25	
Trichloroethene	25.7	0.50	0.26	ug/l	25.0	0.340	102	65-125	4	20	

#### TestAmerica Irvine

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618 Michillinda Avenue, Suite 200  
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## 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
<b>Batch: 10C1026 Extracted: 03/09/10</b>											
<b>Matrix Spike Dup Analyzed: 03/09/2010 (10C1026-MSD1)</b>						<b>Source: ITC0249-01</b>					
Trichlorofluoromethane	28.8	0.50	0.34	ug/l	25.0	0.910	112	60-145	4	25	
Vinyl chloride	26.5	0.50	0.40	ug/l	25.0	ND	106	45-140	10	30	
Xylenes, Total	71.8	1.5	0.90	ug/l	75.0	ND	96	60-130	5	20	
Surrogate: 4-Bromofluorobenzene	27.4			ug/l	25.0		110	80-120			
Surrogate: Dibromofluoromethane	27.4			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.1			ug/l	25.0		108	80-120			

### **Batch: 10C1198 Extracted: 03/10/10**

#### **Blank Analyzed: 03/10/2010 (10C1198-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							
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							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	28.2			ug/l	25.0		113	80-120			

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Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1198 Extracted: 03/10/10</b>											
<b>LCS Analyzed: 03/10/2010 (10C1198-BS1)</b>											
Benzene	25.0	0.50	0.28	ug/l	25.0		100	70-120			
Carbon tetrachloride	27.7	0.50	0.28	ug/l	25.0		111	65-140			
Chloroform	26.2	0.50	0.33	ug/l	25.0		105	70-130			
1,1-Dichloroethane	26.0	0.50	0.40	ug/l	25.0		104	70-125			
1,2-Dichloroethane	26.2	0.50	0.28	ug/l	25.0		105	60-140			
1,1-Dichloroethene	26.5	0.50	0.42	ug/l	25.0		106	70-125			
Ethylbenzene	27.0	0.50	0.25	ug/l	25.0		108	75-125			
Tetrachloroethene	26.1	0.50	0.32	ug/l	25.0		104	70-125			
Toluene	26.4	0.50	0.36	ug/l	25.0		106	70-120			
1,1,1-Trichloroethane	26.4	0.50	0.30	ug/l	25.0		106	65-135			
1,1,2-Trichloroethane	28.1	0.50	0.30	ug/l	25.0		112	70-125			
Trichloroethene	27.0	0.50	0.26	ug/l	25.0		108	70-125			
Trichlorofluoromethane	27.2	0.50	0.34	ug/l	25.0		109	65-145			
Vinyl chloride	22.8	0.50	0.40	ug/l	25.0		91	55-135			
Xylenes, Total	80.4	1.5	0.90	ug/l	75.0		107	70-125			
Surrogate: 4-Bromofluorobenzene	28.5			ug/l	25.0		114	80-120			
Surrogate: Dibromofluoromethane	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	28.5			ug/l	25.0		114	80-120			

### Matrix Spike Analyzed: 03/10/2010 (10C1198-MS1)

Source: ITC0221-02

Benzene	23.5	0.50	0.28	ug/l	25.0	ND	94	65-125			
Carbon tetrachloride	26.1	0.50	0.28	ug/l	25.0	ND	104	65-140			
Chloroform	23.6	0.50	0.33	ug/l	25.0	ND	94	65-135			
1,1-Dichloroethane	22.6	0.50	0.40	ug/l	25.0	ND	91	65-130			
1,2-Dichloroethane	24.8	0.50	0.28	ug/l	25.0	ND	99	60-140			
1,1-Dichloroethene	23.5	0.50	0.42	ug/l	25.0	ND	94	60-130			
Ethylbenzene	25.5	0.50	0.25	ug/l	25.0	ND	102	65-130			
Tetrachloroethene	24.8	0.50	0.32	ug/l	25.0	ND	99	65-130			
Toluene	24.8	0.50	0.36	ug/l	25.0	ND	99	70-125			
1,1,1-Trichloroethane	24.0	0.50	0.30	ug/l	25.0	ND	96	65-140			
1,1,2-Trichloroethane	26.2	0.50	0.30	ug/l	25.0	ND	105	65-130			
Trichloroethene	25.2	0.50	0.26	ug/l	25.0	ND	101	65-125			
Trichlorofluoromethane	25.5	0.50	0.34	ug/l	25.0	ND	102	60-145			
Vinyl chloride	20.6	0.50	0.40	ug/l	25.0	ND	83	45-140			
Xylenes, Total	76.2	1.5	0.90	ug/l	75.0	ND	102	60-130			
Surrogate: 4-Bromofluorobenzene	28.5			ug/l	25.0		114	80-120			

### TestAmerica Irvine

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Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## 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
<b>Batch: 10C1198 Extracted: 03/10/10</b>											
<b>Matrix Spike Analyzed: 03/10/2010 (10C1198-MS1)</b>						<b>Source: ITC0221-02</b>					
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	28.4			ug/l	25.0		113	80-120			
<b>Matrix Spike Dup Analyzed: 03/10/2010 (10C1198-MSD1)</b>						<b>Source: ITC0221-02</b>					
Benzene	24.9	0.50	0.28	ug/l	25.0	ND	100	65-125	6	20	
Carbon tetrachloride	28.5	0.50	0.28	ug/l	25.0	ND	114	65-140	9	25	
Chloroform	25.2	0.50	0.33	ug/l	25.0	ND	101	65-135	7	20	
1,1-Dichloroethane	24.6	0.50	0.40	ug/l	25.0	ND	98	65-130	8	20	
1,2-Dichloroethane	26.2	0.50	0.28	ug/l	25.0	ND	105	60-140	5	20	
1,1-Dichloroethene	24.8	0.50	0.42	ug/l	25.0	ND	99	60-130	6	20	
Ethylbenzene	27.6	0.50	0.25	ug/l	25.0	ND	111	65-130	8	20	
Tetrachloroethene	26.8	0.50	0.32	ug/l	25.0	ND	107	65-130	8	20	
Toluene	26.8	0.50	0.36	ug/l	25.0	ND	107	70-125	8	20	
1,1,1-Trichloroethane	26.3	0.50	0.30	ug/l	25.0	ND	105	65-140	9	20	
1,1,2-Trichloroethane	27.5	0.50	0.30	ug/l	25.0	ND	110	65-130	5	25	
Trichloroethene	27.0	0.50	0.26	ug/l	25.0	ND	108	65-125	7	20	
Trichlorofluoromethane	27.4	0.50	0.34	ug/l	25.0	ND	110	60-145	7	25	
Vinyl chloride	23.6	0.50	0.40	ug/l	25.0	ND	94	45-140	13	30	
Xylenes, Total	81.8	1.5	0.90	ug/l	75.0	ND	109	60-130	7	20	
Surrogate: 4-Bromofluorobenzene	28.8			ug/l	25.0		115	80-120			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	28.1			ug/l	25.0		112	80-120			

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0555 Extracted: 03/04/10</b>											
<b>Blank Analyzed: 03/08/2010 (10C0555-BLK1)</b>											
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	19.3			ug/l	20.0		97	40-120			
Surrogate: 2-Fluorobiphenyl	9.74			ug/l	10.0		97	50-120			
Surrogate: 2-Fluorophenol	16.6			ug/l	20.0		83	30-120			
Surrogate: Nitrobenzene-d5	9.00			ug/l	10.0		90	45-120			
Surrogate: Phenol-d6	17.9			ug/l	20.0		90	35-120			
Surrogate: Terphenyl-d14	10.6			ug/l	10.0		106	50-125			
<b>LCS Analyzed: 03/08/2010 (10C0555-BS1)</b>											
Bis(2-ethylhexyl)phthalate	12.9	5.0	1.7	ug/l	10.0		129	65-130			
2,4-Dinitrotoluene	8.92	9.0	0.20	ug/l	10.0		89	65-120			J
N-Nitrosodimethylamine	7.20	8.0	0.10	ug/l	10.0		72	45-120			J
Pentachlorophenol	7.40	8.0	0.10	ug/l	10.0		74	50-120			J
2,4,6-Trichlorophenol	8.36	6.0	0.10	ug/l	10.0		84	55-120			
Surrogate: 2,4,6-Tribromophenol	18.8			ug/l	20.0		94	40-120			
Surrogate: 2-Fluorobiphenyl	8.50			ug/l	10.0		85	50-120			
Surrogate: 2-Fluorophenol	14.1			ug/l	20.0		70	30-120			
Surrogate: Nitrobenzene-d5	7.76			ug/l	10.0		78	45-120			
Surrogate: Phenol-d6	15.4			ug/l	20.0		77	35-120			
Surrogate: Terphenyl-d14	8.92			ug/l	10.0		89	50-125			
<b>LCS Dup Analyzed: 03/08/2010 (10C0555-BSD1)</b>											
Bis(2-ethylhexyl)phthalate	10.3	5.0	1.7	ug/l	10.0		103	65-130	23	20	R-7
2,4-Dinitrotoluene	9.20	9.0	0.20	ug/l	10.0		92	65-120	3	20	
N-Nitrosodimethylamine	8.26	8.0	0.10	ug/l	10.0		83	45-120	14	20	
Pentachlorophenol	8.14	8.0	0.10	ug/l	10.0		81	50-120	10	25	
2,4,6-Trichlorophenol	8.48	6.0	0.10	ug/l	10.0		85	55-120	1	30	
Surrogate: 2,4,6-Tribromophenol	19.4			ug/l	20.0		97	40-120			
Surrogate: 2-Fluorobiphenyl	8.66			ug/l	10.0		87	50-120			
Surrogate: 2-Fluorophenol	15.1			ug/l	20.0		76	30-120			
Surrogate: Nitrobenzene-d5	8.00			ug/l	10.0		80	45-120			
Surrogate: Phenol-d6	16.2			ug/l	20.0		81	35-120			

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0555 Extracted: 03/04/10</b>											
<b>LCS Dup Analyzed: 03/08/2010 (10C0555-BSD1)</b>											
Surrogate: Terphenyl-d14	9.50			ug/l	10.0		95	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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0551 Extracted: 03/04/10</b>											
<b>Blank Analyzed: 03/05/2010 (10C0551-BLK1)</b>											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	0.433			ug/l	0.500		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.369			ug/l	0.500		74	35-115			
<b>LCS Analyzed: 03/05/2010 (10C0551-BS1)</b>											
alpha-BHC	0.348	0.010	0.0025	ug/l	0.500		70	45-115			MNR1
Surrogate: Decachlorobiphenyl	0.432			ug/l	0.500		86	45-120			
Surrogate: Tetrachloro-m-xylene	0.353			ug/l	0.500		71	35-115			
<b>LCS Dup Analyzed: 03/05/2010 (10C0551-BSD1)</b>											
alpha-BHC	0.385	0.010	0.0025	ug/l	0.500		77	45-115	10	30	
Surrogate: Decachlorobiphenyl	0.435			ug/l	0.500		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.390			ug/l	0.500		78	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
<b>Batch: 10C1221 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/10/2010 (10C1221-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
<b>LCS Analyzed: 03/10/2010 (10C1221-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	19.3	5.0	1.4	mg/l	20.0		96	78-114			MNR1
<b>LCS Dup Analyzed: 03/10/2010 (10C1221-BSD1)</b>											
Hexane Extractable Material (Oil & Grease)	19.6	5.0	1.4	mg/l	20.0		98	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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0660 Extracted: 03/05/10</b>											
<b>Blank Analyzed: 03/08/2010 (10C0660-BLK1)</b>											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Zinc	ND	20	5.0	ug/l							
<b>LCS Analyzed: 03/08/2010 (10C0660-BS1)</b>											
Cadmium	87.2	1.0	0.10	ug/l	80.0		109	85-115			
Copper	81.3	2.0	0.50	ug/l	80.0		102	85-115			
Lead	84.8	1.0	0.20	ug/l	80.0		106	85-115			
Selenium	86.7	2.0	0.50	ug/l	80.0		108	85-115			
Zinc	85.8	20	5.0	ug/l	80.0		107	85-115			
<b>Matrix Spike Analyzed: 03/08/2010 (10C0660-MS1) Source: ITC0544-01</b>											
Cadmium	88.2	1.0	0.10	ug/l	80.0	ND	110	70-130			
Copper	79.4	2.0	0.50	ug/l	80.0	0.694	98	70-130			
Lead	83.3	1.0	0.20	ug/l	80.0	0.631	103	70-130			
Selenium	86.0	2.0	0.50	ug/l	80.0	1.08	106	70-130			
Zinc	82.4	20	5.0	ug/l	80.0	ND	103	70-130			
<b>Matrix Spike Analyzed: 03/08/2010 (10C0660-MS2) Source: ITC0407-01</b>											
Cadmium	79.2	1.0	0.10	ug/l	80.0	ND	99	70-130			
Copper	107	2.0	0.50	ug/l	80.0	33.8	91	70-130			
Lead	80.6	1.0	0.20	ug/l	80.0	2.23	98	70-130			
Selenium	84.8	2.0	0.50	ug/l	80.0	6.40	98	70-130			
Zinc	122	20	5.0	ug/l	80.0	35.1	108	70-130			
<b>Matrix Spike Dup Analyzed: 03/08/2010 (10C0660-MSD1) Source: ITC0544-01</b>											
Cadmium	88.4	1.0	0.10	ug/l	80.0	ND	110	70-130	0.2	20	
Copper	77.9	2.0	0.50	ug/l	80.0	0.694	96	70-130	2	20	
Lead	81.4	1.0	0.20	ug/l	80.0	0.631	101	70-130	2	20	
Selenium	86.7	2.0	0.50	ug/l	80.0	1.08	107	70-130	0.8	20	
Zinc	79.5	20	5.0	ug/l	80.0	ND	99	70-130	4	20	

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Project ID: Routine Outfall 018

Report Number: ITC0215

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 Received: 03/02/10

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0824 Extracted: 03/06/10</b>											
<b>Blank Analyzed: 03/06/2010 (10C0824-BLK1)</b>											
Iron	ND	0.040	0.015	mg/l							
Manganese	ND	20	7.0	ug/l							
<b>LCS Analyzed: 03/06/2010 (10C0824-BS1)</b>											
Iron	0.535	0.040	0.015	mg/l	0.500		107	85-115			
Manganese	517	20	7.0	ug/l	500		103	85-115			
<b>Matrix Spike Analyzed: 03/06/2010 (10C0824-MS1) Source: ITC0421-01</b>											
Iron	0.516	0.040	0.015	mg/l	0.500	ND	103	70-130			
Manganese	507	20	7.0	ug/l	500	8.79	100	70-130			
<b>Matrix Spike Analyzed: 03/06/2010 (10C0824-MS2) Source: ITC0362-01</b>											
Iron	0.937	0.040	0.015	mg/l	0.500	0.412	105	70-130			
Manganese	565	20	7.0	ug/l	500	57.8	101	70-130			
<b>Matrix Spike Dup Analyzed: 03/06/2010 (10C0824-MSD1) Source: ITC0421-01</b>											
Iron	0.522	0.040	0.015	mg/l	0.500	ND	104	70-130	1	20	
Manganese	513	20	7.0	ug/l	500	8.79	101	70-130	1	20	
<b>Batch: 10C1290 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/10/2010 (10C1290-BLK1)</b>											
Mercury	ND	0.20	0.10	ug/l							
<b>LCS Analyzed: 03/10/2010 (10C1290-BS1)</b>											
Mercury	8.33	0.20	0.10	ug/l	8.00		104	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
<b>Batch: 10C1290 Extracted: 03/10/10</b>											
<b>Matrix Spike Analyzed: 03/10/2010 (10C1290-MS1)</b>						<b>Source: ITC0758-01</b>					
Mercury	8.35	0.20	0.10	ug/l	8.00	ND	104	70-130			
<b>Matrix Spike Dup Analyzed: 03/10/2010 (10C1290-MSD1)</b>						<b>Source: ITC0758-01</b>					
Mercury	8.50	0.20	0.10	ug/l	8.00	ND	106	70-130	2	20	

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## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0936 Extracted: 03/08/10</b>											
<b>Blank Analyzed: 03/09/2010 (10C0936-BLK1)</b>											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Zinc	ND	20	5.0	ug/l							
<b>LCS Analyzed: 03/09/2010 (10C0936-BS1)</b>											
Cadmium	84.0	1.0	0.10	ug/l	80.0		105	85-115			
Copper	85.0	2.0	0.50	ug/l	80.0		106	85-115			
Lead	76.7	1.0	0.20	ug/l	80.0		96	85-115			
Selenium	81.8	2.0	0.50	ug/l	80.0		102	85-115			
Zinc	82.6	20	5.0	ug/l	80.0		103	85-115			
<b>Matrix Spike Analyzed: 03/09/2010 (10C0936-MS1) Source: ITC0421-01</b>											
Cadmium	83.3	1.0	0.10	ug/l	80.0	ND	104	70-130			
Copper	86.6	2.0	0.50	ug/l	80.0	1.38	107	70-130			
Lead	73.5	1.0	0.20	ug/l	80.0	ND	92	70-130			
Selenium	85.1	2.0	0.50	ug/l	80.0	ND	106	70-130			
Zinc	81.1	20	5.0	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 03/09/2010 (10C0936-MSD1) Source: ITC0421-01</b>											
Cadmium	84.2	1.0	0.10	ug/l	80.0	ND	105	70-130	1	20	
Copper	85.5	2.0	0.50	ug/l	80.0	1.38	105	70-130	1	20	
Lead	73.9	1.0	0.20	ug/l	80.0	ND	92	70-130	0.5	20	
Selenium	83.8	2.0	0.50	ug/l	80.0	ND	105	70-130	2	20	
Zinc	89.2	20	5.0	ug/l	80.0	ND	111	70-130	9	20	

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### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1105 Extracted: 03/09/10</b>											
<b>Blank Analyzed: 03/14/2010 (10C1105-BLK1)</b>											
Iron	0.0373	0.040	0.015	mg/l							J
Manganese	ND	20	7.0	ug/l							
<b>LCS Analyzed: 03/14/2010 (10C1105-BS1)</b>											
Iron	0.529	0.040	0.015	mg/l	0.500		106	85-115			
Manganese	504	20	7.0	ug/l	500		101	85-115			
<b>Matrix Spike Analyzed: 03/14/2010 (10C1105-MS1)</b>											
<b>Source: ITC0323-01</b>											
Iron	0.627	0.040	0.015	mg/l	0.500	0.103	105	70-130			
Manganese	560	20	7.0	ug/l	500	60.6	100	70-130			
<b>Matrix Spike Dup Analyzed: 03/14/2010 (10C1105-MSD1)</b>											
<b>Source: ITC0323-01</b>											
Iron	0.628	0.040	0.015	mg/l	0.500	0.103	105	70-130	0.1	20	
Manganese	558	20	7.0	ug/l	500	60.6	99	70-130	0.4	20	
<b>Batch: 10C1471 Extracted: 03/11/10</b>											
<b>Blank Analyzed: 03/11/2010 (10C1471-BLK1)</b>											
Mercury	ND	0.20	0.10	ug/l							
<b>LCS Analyzed: 03/11/2010 (10C1471-BS1)</b>											
Mercury	8.46	0.20	0.10	ug/l	8.00		106	85-115			
<b>Matrix Spike Analyzed: 03/11/2010 (10C1471-MS1)</b>											
<b>Source: ITC0421-01</b>											
Mercury	8.67	0.20	0.10	ug/l	8.00	ND	108	70-130			
<b>Matrix Spike Dup Analyzed: 03/11/2010 (10C1471-MSD1)</b>											
<b>Source: ITC0421-01</b>											
Mercury	8.62	0.20	0.10	ug/l	8.00	ND	108	70-130	0.5	20	

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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 10C0428 Extracted: 03/03/10</u></b>											
<b>Blank Analyzed: 03/03/2010 (10C0428-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							
<b>LCS Analyzed: 03/03/2010 (10C0428-BS1)</b>											
Total Cyanide	197	5.0	2.2	ug/l	200		98	90-110			
<b>Matrix Spike Analyzed: 03/03/2010 (10C0428-MS1)</b>											
						<b>Source: ITC0215-01</b>					
Total Cyanide	202	5.0	2.2	ug/l	200	ND	101	70-115			
<b>Matrix Spike Dup Analyzed: 03/03/2010 (10C0428-MSD1)</b>											
						<b>Source: ITC0215-01</b>					
Total Cyanide	200	5.0	2.2	ug/l	200	ND	100	70-115	0.9	15	
<b><u>Batch: 10C0448 Extracted: 03/04/10</u></b>											
<b>Blank Analyzed: 03/04/2010 (10C0448-BLK1)</b>											
Specific Conductance	ND	1.0									
<b>LCS Analyzed: 03/04/2010 (10C0448-BS1)</b>											
Specific Conductance	1400	1.0					99	90-110			
<b>Duplicate Analyzed: 03/04/2010 (10C0448-DUP1)</b>											
						<b>Source: ITC0042-04</b>					
Specific Conductance	32500	1.0				32400			0.3	5	
<b><u>Batch: 10C0480 Extracted: 03/04/10</u></b>											
<b>Blank Analyzed: 03/04/2010 (10C0480-BLK1)</b>											
Perchlorate	ND	4.0	0.90	ug/l							

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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0480 Extracted: 03/04/10</b>											
<b>LCS Analyzed: 03/04/2010 (10C0480-BS1)</b>											
Perchlorate	25.7	4.0	0.90	ug/l	25.0		103	85-115			
<b>Matrix Spike Analyzed: 03/04/2010 (10C0480-MS1) Source: ITB2837-02</b>											
Perchlorate	27.3	4.0	0.90	ug/l	25.0	1.62	103	80-120			
<b>Matrix Spike Dup Analyzed: 03/04/2010 (10C0480-MSD1) Source: ITB2837-02</b>											
Perchlorate	28.8	4.0	0.90	ug/l	25.0	1.62	109	80-120	5	20	
<b>Batch: 10C0489 Extracted: 03/04/10</b>											
<b>Blank Analyzed: 03/04/2010 (10C0489-BLK1)</b>											
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	0.357	0.50	0.20	mg/l							B4, J
<b>LCS Analyzed: 03/04/2010 (10C0489-BS1)</b>											
Chloride	4.97	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	1.55	0.15	0.090	mg/l	1.52		102	90-110			
Sulfate	10.5	0.50	0.20	mg/l	10.0		105	90-110			
<b>Matrix Spike Analyzed: 03/04/2010 (10C0489-MS1) Source: ITC0453-07</b>											
Chloride	5.59	0.50	0.25	mg/l	5.00	0.274	106	80-120			
Nitrate-N	2.68	0.11	0.060	mg/l	1.13	1.43	111	80-120			
Nitrite-N	1.63	0.15	0.090	mg/l	1.52	ND	107	80-120			
Sulfate	13.1	0.50	0.20	mg/l	10.0	1.73	113	80-120			

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### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 10C0489 Extracted: 03/04/10</u></b>											
<b>Matrix Spike Analyzed: 03/04/2010 (10C0489-MS2)</b>						<b>Source: ITC0453-10</b>					
Chloride	68.8	5.0	2.5	mg/l	50.0	20.1	97	80-120			
Nitrate-N	11.0	1.1	0.60	mg/l	11.3	0.305	95	80-120			
Nitrite-N	15.3	1.5	0.90	mg/l	15.2	ND	101	80-120			
Sulfate	220	5.0	2.0	mg/l	100	122	98	80-120			
<b>Matrix Spike Dup Analyzed: 03/04/2010 (10C0489-MSD1)</b>						<b>Source: ITC0453-07</b>					
Chloride	5.46	0.50	0.25	mg/l	5.00	0.274	104	80-120	2	20	
Nitrate-N	2.63	0.11	0.060	mg/l	1.13	1.43	107	80-120	2	20	
Nitrite-N	1.61	0.15	0.090	mg/l	1.52	ND	106	80-120	1	20	
Sulfate	12.9	0.50	0.20	mg/l	10.0	1.73	112	80-120	1	20	
<b><u>Batch: 10C0518 Extracted: 03/04/10</u></b>											
<b>Blank Analyzed: 03/04/2010 (10C0518-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							
<b>Duplicate Analyzed: 03/04/2010 (10C0518-DUP1)</b>						<b>Source: ITC0417-01</b>					
Turbidity	ND	1.0	0.040	NTU		ND				20	
<b><u>Batch: 10C0531 Extracted: 03/04/10</u></b>											
<b>Blank Analyzed: 03/09/2010 (10C0531-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l							
<b>LCS Analyzed: 03/09/2010 (10C0531-BS1)</b>											
Biochemical Oxygen Demand	206	100	25	mg/l	198		104	85-115			

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### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0531 Extracted: 03/04/10</b>											
<b>LCS Dup Analyzed: 03/09/2010 (10C0531-BSD1)</b>											
Biochemical Oxygen Demand	202	100	25	mg/l	198		102	85-115	2	20	
<b>Batch: 10C0559 Extracted: 03/04/10</b>											
<b>Blank Analyzed: 03/04/2010 (10C0559-BLK1)</b>											
Surfactants (MBAS)	ND	0.10	0.050	mg/l							
<b>LCS Analyzed: 03/04/2010 (10C0559-BS1)</b>											
Surfactants (MBAS)	0.245	0.10	0.050	mg/l	0.250		98	90-110			
<b>Matrix Spike Analyzed: 03/04/2010 (10C0559-MS1)</b>											
Surfactants (MBAS)	0.209	0.10	0.050	mg/l	0.250	ND	83	50-125			
<b>Matrix Spike Dup Analyzed: 03/04/2010 (10C0559-MSD1)</b>											
Surfactants (MBAS)	0.210	0.10	0.050	mg/l	0.250	ND	84	50-125	0.6	20	
<b>Batch: 10C0998 Extracted: 03/08/10</b>											
<b>Blank Analyzed: 03/08/2010 (10C0998-BLK1)</b>											
Total Suspended Solids	ND	10	1.0	mg/l							
<b>LCS Analyzed: 03/08/2010 (10C0998-BS1)</b>											
Total Suspended Solids	990	10	1.0	mg/l	1000		99	85-115			
<b>Duplicate Analyzed: 03/08/2010 (10C0998-DUP1)</b>											
Total Suspended Solids	20.0	10	1.0	mg/l					0	10	

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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
<b><u>Batch: 10C0998 Extracted: 03/08/10</u></b>											
<b>Duplicate Analyzed: 03/08/2010 (10C0998-DUP2)</b>						<b>Source: ITC0416-03</b>					
Total Suspended Solids	1790	100	10	mg/l		1780			0.6	10	
<b><u>Batch: 10C1017 Extracted: 03/09/10</u></b>											
<b>Blank Analyzed: 03/09/2010 (10C1017-BLK1)</b>											
Total Dissolved Solids	ND	10	1.0	mg/l							
<b>LCS Analyzed: 03/09/2010 (10C1017-BS1)</b>											
Total Dissolved Solids	994	10	1.0	mg/l	1000		99	90-110			
<b>Duplicate Analyzed: 03/09/2010 (10C1017-DUP1)</b>						<b>Source: ITC0415-01</b>					
Total Dissolved Solids	2100	20	2.0	mg/l		2160			3	10	
<b><u>Batch: 10C1299 Extracted: 03/10/10</u></b>											
<b>Blank Analyzed: 03/10/2010 (10C1299-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
<b>LCS Analyzed: 03/10/2010 (10C1299-BS1)</b>											
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
<b>Matrix Spike Analyzed: 03/10/2010 (10C1299-MS1)</b>						<b>Source: ITC0421-01</b>					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120			
<b>Matrix Spike Dup Analyzed: 03/10/2010 (10C1299-MSD1)</b>						<b>Source: ITC0421-01</b>					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120	0	15	

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### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: T000049 Extracted: 03/04/10</b>											
<b>High Cal Check Analyzed: 03/04/2010 (T000049-HCV1)</b>											
Chloride	26.0	NA	N/A	mg/l	25.0		104	0-200			
Nitrate-N	5.67	NA	N/A	mg/l	5.65		100	0-200			
Nitrite-N	7.96	NA	N/A	mg/l	7.60		105	0-200			
Sulfate	52.8	NA	N/A	mg/l	50.0		106	0-200			

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 Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## METHOD BLANK/QC DATA

### EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 68182 Extracted: 03/09/10</b>											
<b>Blank Analyzed: 03/12/2010 (G0C090000182B)</b>						<b>Source:</b>					
1,2,3,4,6,7,8-HpCDD	0.000057	0.00005	0.00000074	ug/L				-			
1,2,3,4,6,7,8-HpCDF	0.000059	0.00005	0.0000014	ug/L				-			
1,2,3,4,7,8,9-HpCDF	0.000061	0.00005	0.0000018	ug/L				-			
1,2,3,4,7,8-HxCDD	0.000042	0.00005	0.00000056	ug/L				-			Q, J
1,2,3,4,7,8-HxCDF	0.000048	0.00005	0.00000054	ug/L				-			J
1,2,3,6,7,8-HxCDD	0.000051	0.00005	0.00000052	ug/L				-			J
1,2,3,6,7,8-HxCDF	0.000046	0.00005	0.00000052	ug/L				-			J
1,2,3,7,8,9-HxCDD	0.000048	0.00005	0.00000049	ug/L				-			J
1,2,3,7,8,9-HxCDF	0.00005	0.00005	0.00000058	ug/L				-			J
1,2,3,7,8-PeCDD	0.000032	0.00005	0.0000006	ug/L				-			J
1,2,3,7,8-PeCDF	0.00003	0.00005	0.00000033	ug/L				-			J
2,3,4,6,7,8-HxCDF	0.000051	0.00005	0.00000048	ug/L				-			J
2,3,4,7,8-PeCDF	0.000038	0.00005	0.00000035	ug/L				-			J
2,3,7,8-TCDD	0.000005	0.00001	0.00000002	ug/L				-			J, Q
2,3,7,8-TCDF	0.000005	0.00001	0.00000002	ug/L				-			J
OCDD	0.00012	0.0001	0.00000044	ug/L				-			
OCDF	0.00011	0.0001	0.00000046	ug/L				-			
Total HpCDD	0.00006	0.00005	0.00000057	ug/L				-			J
Total HpCDF	0.00012	0.00005	0.0000014	ug/L				-			
Total HxCDD	0.00014	0.00005	0.00000005	ug/L				-			J, Q
Total HxCDF	0.00019	0.00005	0.00000052	ug/L				-			J
Total PeCDD	0.000032	0.00005	0.0000006	ug/L				-			J
Total PeCDF	0.000069	0.00005	0.00000003	ug/L				-			J
Total TCDD	0.000005	0.00001	0.00000002	ug/L				-			J
Total TCDF	0.000005	0.00001	0.00000002	ug/L				-			J
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0017			ug/L	0.00200		83				23-140
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0014			ug/L	0.00200		72				28-143
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0015			ug/L	0.00200		75				26-138
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0016			ug/L	0.00200		81				32-141
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0014			ug/L	0.00200		72				26-152
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0015			ug/L	0.00200		73				28-130
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0014			ug/L	0.00200		71				26-123
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0015			ug/L	0.00200		73				29-147
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0013			ug/L	0.00200		66				25-181
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0011			ug/L	0.00200		57				24-185

#### TestAmerica Irvine

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Received: 03/02/10

## METHOD BLANK/QC DATA

### EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 68182 Extracted: 03/09/10</b>											
<b>Blank Analyzed: 03/12/2010 (G0C090000182B)</b>						<b>Source:</b>					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0015			ug/L	0.00200		74	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0012			ug/L	0.00200		58	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0012			ug/L	0.00200		62	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0011			ug/L	0.00200		56	24-169			
Surrogate: 13C-OCDD	0.0033			ug/L	0.00400		82	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00074			ug/L	0.000800		92	35-197			
<b>LCS Analyzed: 03/12/2010 (G0C090000182C)</b>						<b>Source:</b>					
1,2,3,4,6,7,8-HpCDD	0.00103	0.00005	0.0000016	ug/L	0.00200		51	70-140			a, B
1,2,3,4,6,7,8-HpCDF	0.00108	0.00005	0.0000036	ug/L	0.00200		54	82-122			a, B
1,2,3,4,7,8,9-HpCDF	0.00108	0.00005	0.0000047	ug/L	0.00100		108	78-138			B
1,2,3,4,7,8-HxCDD	0.000922	0.00005	0.0000022	ug/L	0.00200		46	70-164			a, B
1,2,3,4,7,8-HxCDF	0.00109	0.00005	0.0000004	ug/L	0.00200		55	72-134			a, B
1,2,3,6,7,8-HxCDD	0.0011	0.00005	0.00000019	ug/L	0.00100		110	76-134			B
1,2,3,6,7,8-HxCDF	0.00106	0.00005	0.00000038	ug/L	0.00200		53	84-130			a, B
1,2,3,7,8,9-HxCDD	0.00101	0.00005	0.00000018	ug/L	0.00200		50	64-162			a, B
1,2,3,7,8,9-HxCDF	0.00105	0.00005	0.00000042	ug/L	0.00200		52	78-130			a, B
1,2,3,7,8-PeCDD	0.000949	0.00005	0.0000016	ug/L	0.00200		47	70-142			a, B
1,2,3,7,8-PeCDF	0.00106	0.00005	0.0000023	ug/L	0.00200		53	80-134			a, B
2,3,4,6,7,8-HxCDF	0.00106	0.00005	0.00000035	ug/L	0.00200		53	70-156			a, B
2,3,4,7,8-PeCDF	0.00106	0.00005	0.0000026	ug/L	0.00200		53	68-160			a, B
2,3,7,8-TCDD	0.000198	0.00001	0.0000002	ug/L	0.00200		10	67-158			a, B
2,3,7,8-TCDF	0.000196	0.00001	0.00000016	ug/L	0.00200		10	75-158			a, B
OCDD	0.00195	0.0001	0.0000017	ug/L	0.00200		98	78-144			B
OCDF	0.00188	0.0001	0.0000014	ug/L	0.00200		94	63-170			B
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00179			ug/L	0.00200		90	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00157			ug/L	0.00200		79	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00164			ug/L	0.00200		82	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0016			ug/L	0.00200		80	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00166			ug/L	0.00200		83	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00168			ug/L	0.00200		84	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00158			ug/L	0.00200		79	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00165			ug/L	0.00200		82	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00159			ug/L	0.00200		80	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00136			ug/L	0.00200		68	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00162			ug/L	0.00200		81	22-176			

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Project Manager

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Project ID: Routine Outfall 018  
Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## METHOD BLANK/QC DATA

### EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 68182 Extracted: 03/09/10</b>											
<b>LCS Analyzed: 03/12/2010 (G0C090000182C)</b>						<b>Source:</b>					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00135			ug/L	0.00200		68	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00157			ug/L	0.00200		78	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00145			ug/L	0.00200		73	22-152			
Surrogate: 13C-OCDD	0.00348			ug/L	0.00400		87	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000759			ug/L	0.000800		95	31-191			
<b>LCS Dup Analyzed: 03/12/2010 (G0C090000182L)</b>						<b>Source:</b>					
1,2,3,4,6,7,8-HpCDD	0.00102	0.00005	0.0000025	ug/L	0.00200		51	70-140	0.97	50	a, B
1,2,3,4,6,7,8-HpCDF	0.00107	0.00005	0.0000027	ug/L	0.00200		53	82-122	0.84	50	a, B
1,2,3,4,7,8,9-HpCDF	0.00107	0.00005	0.0000035	ug/L	0.00200		53	78-138	0.93	50	a, B
1,2,3,4,7,8-HxCDD	0.00102	0.00005	0.0000015	ug/L	0.00200		51	70-164	10	50	a, B
1,2,3,4,7,8-HxCDF	0.00107	0.00005	0.0000042	ug/L	0.00200		53	72-134	2.1	50	a, B
1,2,3,6,7,8-HxCDD	0.000962	0.00005	0.0000013	ug/L	0.00200		48	76-134	13	50	a, B
1,2,3,6,7,8-HxCDF	0.00105	0.00005	0.0000004	ug/L	0.00200		53	84-130	1	50	a, B
1,2,3,7,8,9-HxCDD	0.000978	0.00005	0.0000013	ug/L	0.00200		49	64-162	2.8	50	a, B
1,2,3,7,8,9-HxCDF	0.00104	0.00005	0.0000046	ug/L	0.00200		52	78-130	0.57	50	a, B
1,2,3,7,8-PeCDD	0.000938	0.00005	0.0000012	ug/L	0.00200		47	70-142	1.2	50	a, B
1,2,3,7,8-PeCDF	0.00103	0.00005	0.0000019	ug/L	0.00200		51	80-134	2.9	50	a, B
2,3,4,6,7,8-HxCDF	0.00103	0.00005	0.0000038	ug/L	0.00200		51	70-156	3.5	50	a, B
2,3,4,7,8-PeCDF	0.00104	0.00005	0.000002	ug/L	0.00200		52	68-160	2.3	50	a, B
2,3,7,8-TCDD	0.00019	0.00001	0.0000002	ug/L	0.00200		10	67-158	4.1	50	a, B
2,3,7,8-TCDF	0.000189	0.00001	0.0000028	ug/L	0.00200		9	75-158	3.6	50	a, B
OCDD	0.00198	0.0001	0.0000013	ug/L	0.00200		99	78-144	1.5	50	B
OCDF	0.00187	0.0001	0.0000012	ug/L	0.00200		94	63-170	0.53	50	B
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00177			ug/L	0.00200		89	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00151			ug/L	0.00200		76	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.00200		80	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00176			ug/L	0.00200		88	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0016			ug/L	0.00200		80	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00161			ug/L	0.00200		81	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00156			ug/L	0.00200		78	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00155			ug/L	0.00200		78	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0014			ug/L	0.00200		70	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00124			ug/L	0.00200		62	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00162			ug/L	0.00200		81	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00124			ug/L	0.00200		62	13-328			

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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
<b>Batch: 68182 Extracted: 03/09/10</b>											
<b>LCS Dup Analyzed: 03/12/2010 (G0C090000182L)</b>											
Surrogate: 13C-2,3,7,8-TCDD	0.00135			ug/L	0.00200		68	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00123			ug/L	0.00200		61	22-152			
Surrogate: 13C-OCDD	0.00347			ug/L	0.00400		87	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000708			ug/L	0.000800		89	31-191			
<b>Blank Analyzed: 03/19/2010 (G0C09000082RE1)</b>											
2,3,7,8-TCDF	0.0000059	0.00001	0.0000018	ug/L				-			J
Surrogate: 13C-2,3,7,8-TCDF	0.0014			ug/L	0.00200		68	24-169			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00078			ug/L	0.000800		97	35-197			

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## METHOD BLANK/QC DATA

### ASTM 5174-91

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

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## METHOD BLANK/QC DATA

### EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 68099 Extracted: 03/09/10</b>											
<b>Matrix Spike Analyzed: 03/14/2010 (F0C020462001S)</b>						<b>Source: F0C020462001</b>					
Gross Alpha	47.1	3	1.1	pCi/L	49.4	2.1	91	35-150			
Gross Beta	74.2	4	1	pCi/L	68.0	1.5	107	54-150			
<b>Duplicate Analyzed: 03/18/2010 (F0C020462001X)</b>						<b>Source: F0C020462001</b>					
Gross Alpha	1.89	3	1.1	pCi/L		2.1		-			Jb
Gross Beta	1.52	4	0.94	pCi/L		1.5		-			Jb
<b>Blank Analyzed: 03/15/2010 (F0C090000099B)</b>						<b>Source:</b>					
Gross Alpha	0.66	2	0.85	pCi/L				-			U
Gross Beta	0.69	4	1	pCi/L				-			U
<b>LCS Analyzed: 03/15/2010 (F0C090000099C)</b>						<b>Source:</b>					
Gross Alpha	51.5	3	1	pCi/L	49.4		104	62-134			
Gross Beta	63.9	4	0.8	pCi/L	68.0		94	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
<b>Batch: 67102 Extracted: 03/08/10</b>											
<b>Duplicate Analyzed: 03/18/2010 (F0C050563001X)</b>						<b>Source: ITC0421-01</b>					
Cesium 137	2.7	20	14	pCi/L		0		-			U
Potassium 40	-90	NA	200	pCi/L		-80		-			U
<b>Blank Analyzed: 03/18/2010 (F0C080000102B)</b>						<b>Source:</b>					
Cesium 137	-2	20	17	pCi/L				-			U
Potassium 40	-60	NA	220	pCi/L				-			U
<b>LCS Analyzed: 03/18/2010 (F0C080000102C)</b>						<b>Source:</b>					
Americium 241	149000	NA	500	pCi/L	141000		105	87-110			
Cobalt 60	88300	NA	200	pCi/L	87900		100	89-110			
Cesium 137	53600	20	200	pCi/L	53100		101	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
<b>Batch: 67053 Extracted: 03/08/10</b>											
<b>Blank Analyzed: 03/31/2010 (F0C080000053B)</b>						<b>Source:</b>					
Radium (226)	0.012	1	0.048	pCi/L				-			U
<b>LCS Analyzed: 03/31/2010 (F0C080000053C)</b>						<b>Source:</b>					
Radium (226)	10.8	1	0.05	pCi/L	11.3		96	68-136			
<b>LCS Dup Analyzed: 03/31/2010 (F0C080000053L)</b>						<b>Source:</b>					
Radium (226)	11.2	1	0.05	pCi/L	11.3		100	68-136	4	40	

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Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## 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
<b>Batch: 67054 Extracted: 03/08/10</b>											
<b>Blank Analyzed: 03/19/2010 (F0C080000054B)</b>											
Radium 228	0.13	1	0.54	pCi/L				-			U
<b>LCS Analyzed: 03/19/2010 (F0C080000054C)</b>											
Radium 228	6.86	1	0.55	pCi/L	6.37		108	60-142			
<b>LCS Dup Analyzed: 03/19/2010 (F0C080000054L)</b>											
Radium 228	7.48	1	0.59	pCi/L	6.37		117	60-142	9	40	

**TestAmerica Irvine**

Kathleen A. Robb For Heather Clark  
 Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## 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
<b>Batch: 67055 Extracted: 03/08/10</b>											
<b>Blank Analyzed: 03/17/2010 (F0C080000055B)</b>											
Strontium 90	-0.13	3	0.34	pCi/L		Source:		-			U
<b>LCS Analyzed: 03/17/2010 (F0C080000055C)</b>											
Strontium 90	7.67	3	0.32	pCi/L	6.79	Source:	113	80-130			
<b>LCS Dup Analyzed: 03/17/2010 (F0C080000055L)</b>											
Strontium 90	6.68	3	0.33	pCi/L	6.79	Source:	98	80-130	14	40	

TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
 Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## 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
<b>Batch: 67136 Extracted: 03/08/10</b>											
<b>Duplicate Analyzed: 03/09/2010 (F0C020462001X)</b>						<b>Source: F0C020462001</b>					
Tritium	86	500	130	pCi/L		49	-				U
<b>Matrix Spike Analyzed: 03/09/2010 (F0C020465001S)</b>						<b>Source: F0C020465001</b>					
Tritium	4260	500	130	pCi/L	4520	130	92	62-147			
<b>Blank Analyzed: 03/09/2010 (F0C080000136B)</b>						<b>Source:</b>					
Tritium	163	500	130	pCi/L							Jb
<b>LCS Analyzed: 03/09/2010 (F0C080000136C)</b>						<b>Source:</b>					
Tritium	4700	500	130	pCi/L	4520		104	85-112			

**TestAmerica Irvine**

Kathleen A. Robb For Heather Clark  
 Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## 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
ITC0215-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.76	4.7	15
ITC0215-01	624-Boeing 001/002Q (Fr113+X+Fr1,1-Dichloroethene		ug/l	0	0.50	6
ITC0215-01	624-Boeing 001/002Q (Fr113+X+FrTrichloroethene		ug/l	0	0.50	5
ITC0215-01	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	0.68	5.0	8.5
ITC0215-01	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
ITC0215-02	624-Boeing 001/002Q (Fr113+X+Fr1,1-Dichloroethene		ug/l	0	0.50	6
ITC0215-02	624-Boeing 001/002Q (Fr113+X+FrTrichloroethene		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
ITC0421-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0096	0.03
ITC0421-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.8	13
ITC0421-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.7	18
ITC0421-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.64	4.8	4
ITC0421-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.7	16
ITC0421-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.7	16
ITC0421-01	Ammonia-N, Titr 4500NH3-C (w/disAmmonia-N (Distilled)		mg/l	0	0.50	10
ITC0421-01	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	1.00	2.0	30
ITC0421-01	Cadmium-200.8	Cadmium	ug/l	0	1.0	3.1
ITC0421-01	Chloride - 300.0	Chloride	mg/l	20	0.50	150
ITC0421-01	Copper-200.8	Copper	ug/l	1.66	2.0	14
ITC0421-01	Iron-200.7, Diss	Iron	mg/l	0.0028	0.040	0.3
ITC0421-01	Lead-200.8	Lead	ug/l	0.0050	1.0	5.2
ITC0421-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.038	0.10	0.5
ITC0421-01	Nitrate-N, 300.0	Nitrate-N	mg/l	0.048	0.11	8

### TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

MWH-Pasadena/Boeing  
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

ITC0421-01	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITC0421-01	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.048	0.26	8
ITC0421-01	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
ITC0421-01	Selenium-200.8	Selenium	ug/l	0.45	2.0	5
ITC0421-01	Sulfate-300.0	Sulfate	mg/l	153	5.0	300
ITC0421-01	TDS - SM2540C	Total Dissolved Solids	mg/l	358	10	950
ITC0421-01	TSS - SM2540D	Total Suspended Solids	mg/l	8.00	10	45
ITC0421-01	Zinc-200.8	Zinc	ug/l	0	20	120

## 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 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## DATA QUALIFIERS AND DEFINITIONS

- a** Spiked analyte recovery is outside stated control limits.
- B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- B-1** Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
- B4** Target analyte detected in blank at/above method acceptance criteria.
- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- J** 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.
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- Q** Estimated maximum possible concentration (EMPC).
- R-7** LCS/LCSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- 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

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

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
 Received: 03/02/10

## 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](http://www.testamericainc.com)*

### Subcontracted Laboratories

### TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
 Project Manager

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Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0215

Sampled: 03/02/10-03/03/10  
Received: 03/02/10

## TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91  
Samples: ITC0421-01

Method Performed: EPA 900.0 MOD  
Samples: ITC0421-01

Method Performed: EPA 901.1 MOD  
Samples: ITC0421-01

Method Performed: EPA 903.0 MOD  
Samples: ITC0421-01

Method Performed: EPA 904 MOD  
Samples: ITC0421-01

Method Performed: EPA 905 MOD  
Samples: ITC0421-01

Method Performed: EPA 906.0 MOD  
Samples: ITC0421-01

## TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B  
Samples: ITC0421-01

## TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

### CHAIN OF CUSTODY FORM

ITCO 215

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES <b>Routine Outfall 018</b> <b>GRAB</b>		ANALYSIS REQUIRED																				
Test America Contact: Joseph Doak		Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691		Fax Number: (626) 568-6515		VOCs 624 + xylenes	Settleable Solids	Oil & Grease (1664-HEM)	Cyanide (total recoverable)	Conductivity	Total Residual Chlorine										Field readings: (Log in and include in report Temp and pH)  Temp °F = 57.7 pH = 7.5  Time of readings = 1450	
Sampler: S Dawson																							Comments	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #																		
Outfall 018	W	VOAs	5	3/2/10 1450	HCl	1A, 1B, 1C, 1D, 1E	X																	
Outfall 018	W	1L Poly	1	SD	None	2		X																
Outfall 018	W	1L Amber	2			HCl	3A, 3B			X														
Outfall 018	W	500 mL Poly	1	↓	NaOH	4				X														
Outfall 018	W	500 mL Poly	2	3/2/10 1450	None	5A, 5B					X													
Trip Blanks	W	VOAs	3	3/2/10 0700	HCl	6A, 6B, 6C	X																	
Outfall 018	W	150 mL Poly	1		None	7						X												
<b>These Samples are the Grab Portion of Outfall 018 for this storm event. Composite samples will follow and are to be added to this work order.</b>																								
Relinquished By: [Signature] 3-216 1500				Received By: [Signature] 3-220 1500				Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: _____ 48 Hour: _____ 5 Day: _____ Normal: <input checked="" type="checkbox"/>																
Relinquished By: [Signature] 3-210 1755				Received By: [Signature] 3-22/10 1755				Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>																
Relinquished By: _____				Received By: _____				Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>																
#105 1-65																								



TestAmerica Laboratories, Inc.

## ANALYTICAL REPORT

REVISED

PROJECT NO. ITC0421

MWH-Pasadena Boeing

Lot #: F0C050563

Kathleen Robb

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

TESTAMERICA LABORATORIES, INC.

A handwritten signature in black ink, appearing to read "Lynn Fussner", is positioned above the printed name and title.

Lynn Fussner  
Project Manager

April 1, 2010

Case Narrative  
LOT NUMBER: F0C050563  
Revised 04-01-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 5, 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.

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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 Radium 226 with 21 day ingrowth.**

**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:**

F0C050563 (1): ITC0421-01

**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:**

F0C050563 (1): ITC0421-01



**METHODS SUMMARY**

FOC050563

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
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**

F0C050563

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LWC98	001	ITC0421-01	03/03/10	13:05

**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: ITC0421-01

## Radiochemistry

Lab Sample ID: F0C050563-001  
 Work Order: LWC98  
 Matrix: WATER

Date Collected: 03/03/10 1305  
 Date Received: 03/05/10 0845

Parameter	Result	Qual	Total Uncert. (2 $\sigma$ +/-)	RL	mdc	Prep Date	Analysis Date
<b>Gamma Cs-137 &amp; Hits by EPA 901.1 MOD</b>							
				pCi/L		Batch # 0067102	Yld %
Cesium 137	0.0	U	12	20	22	03/08/10	03/18/10
Potassium 40	-80	U	3300		200	03/08/10	03/18/10
<b>Gross Alpha/Beta EPA 900</b>							
				pCi/L		Batch # 0068099	Yld %
Gross Alpha	2.6	U	1.9	3.0	2.7	03/09/10	03/15/10
Gross Beta	3.6	J	1.0	4.0	1.2	03/09/10	03/15/10
<b>SR-90 BY GFPC EPA-905 MOD</b>							
				pCi/L		Batch # 0067055	Yld % 81
Strontium 90	-0.06	U	0.21	3.00	0.38	03/08/10	03/17/10
<b>TRITIUM (Distill) by EPA 906.0 MOD</b>							
				pCi/L		Batch # 0067136	Yld %
Tritium	85	U	86	500	130	03/08/10	03/09/10
<b>Total Uranium by KPA ASTM 5174-91</b>							
				pCi/L		Batch # 0067296	Yld %
Total Uranium	0.520	J	0.061	0.693	0.21	03/10/10	03/12/10
<b>Radium 226 by EPA 903.0 MOD</b>							
				pCi/L		Batch # 0067053	Yld % 98
Radium (226)	0.075	J	0.042	1.00	0.051	03/08/10	03/31/10
<b>Radium 228 by GFPC EPA 904 MOD</b>							
				pCi/L		Batch # 0067054	Yld % 88
Radium 228	0.05	U	0.38	1.00	0.65	03/08/10	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: FOC050563  
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 $\sigma$ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
Radium 226 by EPA 903.0 MOD			pCi/L	Batch #	0067053	Yld %	108 FOC080000-053B
Radium (226)	0.012	U	0.027	1.00	0.048	03/08/10	03/31/10
Radium 228 by GFPC EPA 904 MOD			pCi/L	Batch #	0067054	Yld %	100 FOC080000-054B
Radium 228	0.13	U	0.32	1.00	0.54	03/08/10	03/19/10
SR-90 BY GFPC EPA-905 MOD			pCi/L	Batch #	0067055	Yld %	84 FOC080000-055B
Strontium 90	-0.13	U	0.18	3.00	0.34	03/08/10	03/17/10
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	Batch #	0067136	Yld %	FOC080000-136B
Tritium	163	J	99	500	130	03/08/10	03/09/10
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	Batch #	0067102	Yld %	FOC080000-102B
Cesium 137	-2.0	U	9.2	20.0	17	03/08/10	03/18/10
Potassium 40	-60	U	270		220	03/08/10	03/18/10
Gross Alpha/Beta EPA 900			pCi/L	Batch #	0068099	Yld %	FOC090000-099B
Gross Alpha	0.66	U	0.59	2.00	0.85	03/09/10	03/15/10
Gross Beta	0.69	U	0.65	4.00	1.0	03/09/10	03/15/10
Total Uranium by KPA ASTM 5174-91			pCi/L	Batch #	0067296	Yld %	FOC080000-296B
Total Uranium	0.315	J	0.039	0.693	0.21	03/10/10	03/12/10

## 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: F0C050563  
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 $\sigma$ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
Gamma Cs-137 & Hits by EPA 901.1 MOD			pCi/L	901.1 MOD			F0C080000-102C
Americium 241	141000	149000	12000	500		105	(87 - 110)
Cesium 137	53100	53600	3100	200		101	(90 - 110)
Cobalt 60	87900	88300	5000	200		100	(89 - 110)
	Batch #:	0067102				Analysis Date:	03/18/10
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			F0C080000-136C
Tritium	4520	4700	480	130		104	(85 - 112)
	Batch #:	0067136				Analysis Date:	03/09/10
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
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F0C090000-099C
Gross Beta	68.0	63.9	5.4	0.8		94	(58 - 133)
	Batch #:	0068099				Analysis Date:	03/15/10
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F0C090000-099C
Gross Alpha	49.4	51.5	5.8	1.0		104	(62 - 134)
	Batch #:	0068099				Analysis Date:	03/15/10

## 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: F0C050563  
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 $\sigma$ +/-)	% Yld	% Rec	Lab Sample ID	
						QC Control Limits	Precision
Radium 226 by EPA	903.0 MOD		pCi/L	903.0 MOD			F0C080000-053C
Radium (226)	11.3	10.8	0.92	107	96	(68 - 136)	
Spk 2	11.3	11.2	0.96	103	100	(68 - 136)	4 %RPD
	Batch #:	0067053		Analysis Date:	03/31/10		
Radium 228 by GFPC EPA	904 MOD		pCi/L	904 MOD			F0C080000-054C
Radium 228	6.37	6.86	0.82	100	108	(60 - 142)	
Spk 2	6.37	7.48	0.88	94	117	(60 - 142)	9 %RPD
	Batch #:	0067054		Analysis Date:	03/19/10		
SR-90 BY GFPC EPA-	905 MOD		pCi/L	905 MOD			F0C080000-055C
Strontium 90	6.79	7.67	0.85	80	113	(80 - 130)	
Spk 2	6.79	6.68	0.76	84	98	(80 - 130)	14 %RPD
	Batch #:	0067055		Analysis Date:	03/17/10		

## NOTE(S)

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

## MATRIX SPIKE REPORT

## Radiochemistry

Client Lot Id: F0C020462  
 Matrix: WATER

Date Sampled: 02/26/10  
 Date Received: 03/02/10

Parameter	Spike Amount	Spike Result	Total Uncert. (2σ +/-)	Spike Yld.	Sample Result	Total Uncert. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F0C020462-001		
Gross Alpha	49.4	47.1	5.5	2.1	1.2		91		(35 - 150)
	Batch #:	0068099		Analysis Date:	03/14/10				
Gross Alpha/Beta EPA 900			pCi/L	900.0 MOD			F0C020462-001		
Gross Beta	68.0	74.2	6.2	1.50	0.79		107		(54 - 150)
	Batch #:	0068099		Analysis Date:	03/14/10				
TRITIUM (Distill) by EPA 906.0 MOD			pCi/L	906.0 MOD			F0C020465-001		
Tritium	4520	4260	450	130	92		92		(62 - 147)
	Batch #:	0067136		Analysis Date:	03/09/10				

**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: FOB230452  
 Matrix: WATER

Date Sampled: 02/20/10 1349  
 Date Received: 02/23/10 0910

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2 σ +/-)	Spike Yld	SAMPLE Result	Total Uncert. (2 σ +/-)	QC Sample ID		QC Control Limits
							% Yld	%Rec	
Total Uranium by KPA ASTM 5			pCi/L	5174-91			FOB230452-001		
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: F0C050563  
 Matrix: WATER

Date Sampled: 02/26/10  
 Date Received: 03/02/10

Parameter	SAMPLE Result		Total Uncert. (2σ +/-)	% Yld	DUPLICATE Result		Total Uncert. (2σ +/-)	% Yld	QC Sample ID
									Precision
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	906.0 MOD				F0C020462-001
Tritium	49	U	79		86	U	84		55 %RPD
	Batch #:		0067136 (Sample)		0067136 (Duplicate)				
Gross Alpha/Beta EPA 900				pCi/L	900.0 MOD				F0C020462-001
Gross Alpha	2.1	J	1.2		1.89	J	0.97		9 %RPD
Gross Beta	1.50	J	0.79		1.52	J	0.70		1 %RPD
	Batch #:		0068099 (Sample)		0068099 (Duplicate)				
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD				F0C050563-001
Cesium 137	0.0	U	12		2.7	U	8.0		200 %RPD
Potassium 40	-80	U	3300		-90	U	3600		8 %RPD
	Batch #:		0067102 (Sample)		0067102 (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.

**CONDITION UPON RECEIPT FORM**

Client: TA Irvine

Quote No: 85844

COC/RFA No: ITC0421

357

Initiated By: SN

Date: 3.5.10

Time: 0845

Shipping Information

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

Shipping # (s):\*

Sample Temperature (s):\*\*

1. <u>4289 2133 5786</u>	6. _____	1. <u>ambient</u>	6. _____
2. _____	7. _____	2. _____	7. _____
3. _____	8. _____	3. _____	8. _____
4. _____	9. _____	4. _____	9. _____
5. _____	10. _____	5. _____	10. _____

\*Numbered shipping lines correspond to Numbered Sample Temp lines

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

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

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

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

Notes:

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Corrective Action:

- Client Contact Name: \_\_\_\_\_
- Sample(s) processed "as is"
- Sample(s) on hold until: \_\_\_\_\_
- Project Management Review: Jaymak Pohl

Informed by: \_\_\_\_\_

If released, notify: \_\_\_\_\_

Date: 3-9-10

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.

*cut  
351*

**SUBCONTRACT ORDER**  
TestAmerica Irvine  
**ITC0421**

**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: ITC0421-01 (Outfall 018 - Water)

Sampled: 03/03/10 13:05

Gamma Spec-O	mg/kg	03/12/10	03/03/11 13:05	\$200.00	50%	Out St Louis, K-40 and CS-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	03/12/10	08/30/10 13:05	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/12/10	08/30/10 13:05	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 Data Package - Out	N/A	03/12/10	03/31/10 13:05	\$0.00	0%	Boeing, J flags
Radium 226-O	pCi/L	03/12/10	03/03/11 13:05	\$88.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 228-O	pCi/L	03/12/10	03/03/11 13:05	\$84.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/12/10	03/03/11 13:05	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/12/10	03/03/11 13:05	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/12/10	03/03/11 13:05	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

*Containers Supplied:*

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

Released By \_\_\_\_\_ Date/Time 3/4/10 17:00

Received By FedEx Date/Time 3/4/10 17:00

Released By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received By [Signature] Date/Time 3.5.10 0845

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# **APPENDIX G**

## **Section 68**

Outfall 018 - BMP Effectiveness March 2 - 4, 2010

Test America Analytical Laboratory Report

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## LABORATORY REPORT

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

Project: BMP Effectiveness 2009  
Effectiveness Monitoring Program

Sampled: 03/02/10-03/04/10  
Received: 03/04/10  
Issued: 03/17/10 07:34

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

## SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
ITC0584-01	018 EFF-1	Water
ITC0584-02	018 EFF-2	Water
ITC0584-03	018 EFF-3	Water

Reviewed By:

*Debby Wilson*

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
Project Manager

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

Project ID: BMP Effectiveness 2009  
 Effectiveness Monitoring Program  
 Report Number: ITC0584

Sampled: 03/02/10-03/04/10  
 Received: 03/04/10

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0584-01 (018 EFF-1 - Water)</b>					<b>Sampled: 03/02/10</b>				
Reporting Units: g/cc									
Density	Displacement	10C1826	N/A	NA	0.99	1	03/15/10	03/15/10	
<b>Sample ID: ITC0584-02 (018 EFF-2 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: g/cc									
Density	Displacement	10C1826	N/A	NA	1.0	1	03/15/10	03/15/10	
<b>Sample ID: ITC0584-03 (018 EFF-3 - Water)</b>					<b>Sampled: 03/04/10</b>				
Reporting Units: g/cc									
Density	Displacement	10C1826	N/A	NA	1.0	1	03/15/10	03/15/10	
<b>Sample ID: ITC0584-01 (018 EFF-1 - Water)</b>					<b>Sampled: 03/02/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10C1828	10	10	ND	1	03/15/10	03/15/10	
<b>Sample ID: ITC0584-02 (018 EFF-2 - Water)</b>					<b>Sampled: 03/03/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10C1828	10	10	ND	1	03/15/10	03/15/10	
<b>Sample ID: ITC0584-03 (018 EFF-3 - Water)</b>					<b>Sampled: 03/04/10</b>				
Reporting Units: mg/l									
Sediment	ASTM D3977	10C1828	10	10	ND	1	03/15/10	03/15/10	

### TestAmerica Irvine

Debby Wilson For Heather Clark  
 Project Manager



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

Project ID: BMP Effectiveness 2009  
Effectiveness Monitoring Program  
Report Number: ITC0584

Sampled: 03/02/10-03/04/10  
Received: 03/04/10

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1826 Extracted: 03/15/10</b>										
<b>Duplicate Analyzed: 03/15/2010 (10C1826-DUP1)</b>										
Density	0.996	NA	N/A	g/cc		Source: ITC0583-01 0.996		0.05	20	

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

**ITC0584 <Page 3 of 5>**

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

Project ID: BMP Effectiveness 2009  
Effectiveness Monitoring Program  
Report Number: ITC0584

Sampled: 03/02/10-03/04/10  
Received: 03/04/10

## DATA QUALIFIERS AND DEFINITIONS

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.  
**RPD** Relative Percent Difference

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

**ITC0584 <Page 4 of 5>**

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

Project ID: BMP Effectiveness 2009  
Effectiveness Monitoring Program  
Report Number: ITC0584

Sampled: 03/02/10-03/04/10  
Received: 03/04/10

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at [www.testamericainc.com](http://www.testamericainc.com)*

### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

Client Name/Address:  
**MWH-Pasadena**  
 618 Michillinda Ave, Suite 200  
 Pasadena, CA 91007  
  
 Test America Contact: Joe Doak

Project: **Boeing BMP**  
**Effectiveness Monitoring**  
**Program**

ANALYSIS REQUIRED									

Project Manager: Bronwyn Kelly  
  
 Sampler: EW/SD

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Suspended Sediment Concentration (SSC, ASTM-D3977-1997)		Comments									
018 EFF-1	W	500 mL Poly	1	3/2/10; 1450	None	1	X											
018 EFF-2	W	500 mL Poly	1	3/3/10; 1445	None	2	X											
018 EFF-3	W	500 mL poly	1	3/4/10; 1420	none	3	X											

ITC 0584  
 Comments

20:45  
 3/4/10  
 [Signature]

Relinquished By: [Signature]  
 Date/Time: 3-4-10 1435

Received By: [Signature]  
 Date/Time: 3-4-10 1435

Turn around Time: (check)  
 24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 72 Hours \_\_\_\_\_ Normal

Relinquished By: [Signature]  
 Date/Time: 3-4-10 1845

Received By: [Signature]  
 Date/Time: 3-4-10 1845

Relinquished By:  
 Date/Time:

Received By:  
 Date/Time:

Perchlorate Only 72 Hours \_\_\_\_\_  
 Metals Only 72 Hours \_\_\_\_\_ 270  
 Sample Integrity: (Check)  
 Intact  On Ice:

# **APPENDIX G**

## **Section 69**

Outfall 018 – March 6 & 7, 2010

MEC<sup>X</sup> Data Validation Report

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# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITC0791

Prepared by

MEC<sup>x</sup>, 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: ITC0791  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 2  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 018 (COMPOSITE)	ITC0791-03	G0C090502-001, FOC090512-001	WATER	3/7/2010 7:00:00 AM	ASTM 5174-91, 180.1, 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD
Outfall 018 (GRAB)	ITC0791-01		WATER	3/6/2010 2:30:00 PM	120.1

**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 TestAmerica-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<sup>x</sup> 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  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  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 approximately half of all target compounds. 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 except total PeCDD, which was not detected in the method blank, were qualified as 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. Total PeCDD was comprised of a single EMPC peak, and was therefore qualified as an estimated nondetect, "UJ," at the level of the EMPC. 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 METHOD 245.1—Mercury

Reviewed By: P. Meeks

Date Reviewed: April 8, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> 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  $\geq 0.995$

and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were above the control limit; however, mercury was not detected in the site sample.

- 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 on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- 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: 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 nondetected results for these analytes were qualified as estimated, "UJ." The remaining detector efficiencies were greater than 20%.

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

- **Blanks:** 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:** No laboratory duplicate analyses were performed on the sample in this SDG.
- **Matrix Spike/Matrix Spike Duplicate:** No MS/MSD analyses were performed for the sample in this SDG. A matrix spike analysis was performed on the sample in this SDG for tritium. The recovery was within the laboratory-established control limits. Method accuracy for the 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. According to the case narrative, total uranium was analyzed at a dilution due to matrix interference.

- 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<sup>X</sup> 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  $\geq 0.995$  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: No laboratory duplicate analyses were performed on the sample in this SDG.
- 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.

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# Validated Sample Result Forms ITC0791

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## *Analysis Method*    *ASTM 5174-91*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	ND	1.39	0.43	pCi/L	Jb	U	B

## *Analysis Method*    *EPA 120.1*

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

**Lab Sample Name:**    ITC0791-01    **Sample Date:** 3/6/2010 2:30:00 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 018 (COMPOSITE Matrix Type: Water    **Validation Level:** IV

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	0.39	1.0	0.040	NTU	Ja	J	DNQ

## *Analysis Method*    *EPA 245.1*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

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

## *Analysis Method*    *EPA 245.1-Diss*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 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 018 (COMPOSITE Matrix Type: WATER    **Validation Level:** IV

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	0.6	3	2	pCi/L	U	UJ	C
Gross Beta	12587-47-2	4.5	4	2.1	pCi/L			

*Analysis Method*    *EPA 901.1 MOD*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	3.8	20	14	pCi/L	U	U	
Potassium 40	13966-00-2	-90	0	200	pCi/L	U	U	

*Analysis Method*    *EPA 903.0 MOD*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.058	1	0.066	pCi/L	U	UJ	C

*Analysis Method*    *EPA 904 MOD*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.37	1	0.61	pCi/L	U	U	

*Analysis Method*    *EPA 905 MOD*

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

**Lab Sample Name:**    ITC0791-03    **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.61	3	0.51	pCi/L	Jb	J	DNQ

*Analysis Method EPA 906.0 MOD*

**Sample Name** Outfall 018 (COMPOSITE Matrix Type: WATER **Validation Level:** IV  
**Lab Sample Name:** ITC0791-03 **Sample Date:** 3/7/2010 7:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	-17	500	150	pCi/L	U	U	

*Analysis Method EPA-5 1613B*

**Sample Name** Outfall 018 (COMPOSITE Matrix Type: WATER **Validation Level:** IV  
**Lab Sample Name:** ITC0791-03 **Sample Date:** 3/7/2010 7:00:00 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	2e-006	0.0000014	ug/L	J, Q, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	6.4e-007	0.0000009	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000015	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000011	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	6.6e-007	0.0000001	ug/L	J, Q, Ba	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.000001	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000001	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000008	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000001	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000008	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000005	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000001	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	0.0000006	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000004	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000021	ug/L	J, Ba	U	B
OCDF	39001-02-0	ND	0.0001	0.0000016	ug/L		U	
Total HpCDD	37871-00-4	ND	4.8e-006	0.0000014	ug/L	J, Q, Ba	U	B
Total HpCDF	38998-75-3	ND	6.4e-007	0.0000009	ug/L	J, Q, Ba	U	B
Total HxCDD	34465-46-8	ND	0.00005	0.0000008	ug/L		U	
Total HxCDF	55684-94-1	ND	6.6e-007	0.0000001	ug/L	J, Q, Ba	U	B
Total PeCDD	36088-22-9	ND	1.8e-006	0.0000008	ug/L	J, Q	UJ	*III
Total PeCDF	30402-15-4	ND	0.00005	0.0000004	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000006	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000004	ug/L		U	

# **APPENDIX G**

## **Section 70**

Outfall 018 – March 6 & 7, 2010

Test America Analytical Laboratory Report

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## LABORATORY REPORT

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

Project: Routine Outfall 018

Sampled: 03/06/10-03/07/10  
Received: 03/08/10  
Revised: 04/16/10 17:27

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.  
This entire report was reviewed and approved for release.*

### CASE NARRATIVE

**SAMPLE RECEIPT:** Samples were received intact, at 4°C, on ice and with chain of custody documentation.

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

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

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

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

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

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

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

There are no other anomalies associated with this project.

Revised report to provide corrected units and results for Conductivity. Form 1 results reported correctly.

### TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0791

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

**LABORATORY ID**

ITC0791-01  
ITC0791-02  
ITC0791-03

**CLIENT ID**

Outfall 018 (GRAB)  
Trip Blanks  
Outfall 018 (COMPOSITE)

**MATRIX**

Water  
Water  
Water

Reviewed By:



**TestAmerica Irvine**

Kathleen A. Robb For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

**ITC0791 <Page 2 of 51>**



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

Project ID: Routine Outfall 018

Report Number: ITC0791

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
<b>Sample ID: ITC0791-01 (Outfall 018 (GRAB) - Water)</b>					<b>Sampled: 03/06/10</b>				
<b>Reporting Units: ug/l</b>									
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	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					111 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					108 %				
<b>Sample ID: ITC0791-02 (Trip Blanks - Water)</b>					<b>Sampled: 03/06/10</b>				
<b>Reporting Units: ug/l</b>									
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	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					97 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					107 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					107 %				

### TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

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

Project ID: Routine Outfall 018

Report Number: ITC0791

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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: ug/l</b>									
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	
<i>Surrogate: 2,4,6-Tribromophenol (40-120%)</i>					92 %				
<i>Surrogate: 2-Fluorobiphenyl (50-120%)</i>					81 %				
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					69 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					77 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					71 %				
<i>Surrogate: Terphenyl-d14 (50-125%)</i>					87 %				

### TestAmerica Irvine

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 Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0791

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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: ug/l</b>									
alpha-BHC	EPA 608	10C1222	0.0024	0.0094	ND	0.943	03/10/10	03/12/10	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					93 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					56 %				

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Report Number: ITC0791

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
<b>Sample ID: ITC0791-01 (Outfall 018 (GRAB) - Water)</b>					<b>Sampled: 03/06/10</b>				
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10C1956	1.3	4.7	ND	1	03/16/10	03/16/10	

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Report Number: ITC0791

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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: mg/l									
<b>Iron</b>	EPA 200.7	10C1395	0.015	0.040	<b>0.17</b>	1	03/11/10	03/17/10	
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: ug/l									
Mercury	EPA 245.1	10C2010	0.10	0.20	ND	1	03/16/10	03/16/10	
<b>Manganese</b>	EPA 200.7	10C1395	7.0	20	<b>9.7</b>	1	03/11/10	03/17/10	Ja
Cadmium	EPA 200.8	10C1320	0.10	1.0	ND	1	03/10/10	03/12/10	
<b>Copper</b>	EPA 200.8	10C1320	0.50	2.0	<b>1.4</b>	1	03/10/10	03/11/10	Ja
<b>Lead</b>	EPA 200.8	10C1320	0.20	1.0	<b>0.23</b>	1	03/10/10	03/11/10	Ja
<b>Selenium</b>	EPA 200.8	10C1320	0.50	2.0	<b>0.54</b>	1	03/10/10	03/11/10	Ja
Zinc	EPA 200.8	10C1320	5.0	20	ND	1	03/10/10	03/11/10	

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 Received: 03/08/10

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	10C1739	0.015	0.040	ND	1	03/14/10	03/17/10	
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10C2011	0.10	0.20	ND	1	03/16/10	03/16/10	
<b>Manganese</b>	EPA 200.7-Diss	10C1739	7.0	20	<b>19</b>	1	03/14/10	03/17/10	Ja
Cadmium	EPA 200.8-Diss	10C1740	0.10	1.0	ND	1	03/14/10	03/16/10	
<b>Copper</b>	EPA 200.8-Diss	10C1740	0.50	2.0	<b>2.6</b>	1	03/14/10	03/16/10	B
Lead	EPA 200.8-Diss	10C1740	0.20	1.0	ND	1	03/14/10	03/16/10	
Selenium	EPA 200.8-Diss	10C1740	0.50	2.0	ND	1	03/14/10	03/16/10	
<b>Zinc</b>	EPA 200.8-Diss	10C1740	5.0	20	<b>6.7</b>	1	03/14/10	03/16/10	Ja

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 Received: 03/08/10

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: mg/l</b>									
Ammonia-N (Distilled)	SM4500NH3-C	10C1299	0.50	0.50	ND	1	03/10/10	03/10/10	
<b>Biochemical Oxygen Demand</b>	SM5210B	10C0996	0.50	2.0	<b>0.50</b>	1	03/08/10	03/13/10	Ja
<b>Chloride</b>	EPA 300.0	10C0921	0.25	0.50	<b>15</b>	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	
<b>Sulfate</b>	EPA 300.0	10C0921	4.0	10	<b>160</b>	20	03/08/10	03/08/10	
<b>Surfactants (MBAS)</b>	SM5540-C	10C0982	0.050	0.10	<b>0.074</b>	1	03/08/10	03/08/10	Ja
<b>Total Dissolved Solids</b>	SM2540C	10C1348	1.0	10	<b>370</b>	1	03/11/10	03/11/10	
Total Suspended Solids	SM 2540D	10C1462	1.0	10	ND	1	03/11/10	03/11/10	

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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0791-01 (Outfall 018 (GRAB) - Water)</b>					<b>Sampled: 03/06/10</b>				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	10C0938	0.10	0.10	ND	1	03/08/10	03/08/10	
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: NTU									
Turbidity	EPA 180.1	10C0939	0.040	1.0	0.39	1	03/08/10	03/08/10	Ja
<b>Sample ID: ITC0791-01 (Outfall 018 (GRAB) - Water)</b>					<b>Sampled: 03/06/10</b>				
Reporting Units: ug/l									
Total Cyanide	SM4500CN-E	10C1460	2.2	5.0	ND	1	03/11/10	03/11/10	
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10C1095	0.90	4.0	ND	1	03/09/10	03/10/10	
<b>Sample ID: ITC0791-01 (Outfall 018 (GRAB) - Water)</b>					<b>Sampled: 03/06/10</b>				
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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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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: ug/L</b>									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	76166	0.0000014	0.00005	2e-006	0.95	03/17/10	03/19/10	J, Q, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	76166	0.00000094	0.00005	6.4e-007	0.95	03/17/10	03/19/10	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	76166	0.0000015	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	76166	0.0000011	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	76166	0.00000013	0.00005	6.6e-007	0.95	03/17/10	03/19/10	J, Q, Ba
1,2,3,6,7,8-HxCDD	EPA-5 1613B	76166	0.000001	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	76166	0.00000013	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	76166	0.00000088	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	76166	0.00000016	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,7,8-PeCDD	EPA-5 1613B	76166	0.00000083	0.00005	ND	0.95	03/17/10	03/19/10	
1,2,3,7,8-PeCDF	EPA-5 1613B	76166	0.00000056	0.00005	ND	0.95	03/17/10	03/19/10	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	76166	0.00000011	0.00005	ND	0.95	03/17/10	03/19/10	
2,3,4,7,8-PeCDF	EPA-5 1613B	76166	0.00000058	0.00005	ND	0.95	03/17/10	03/19/10	
2,3,7,8-TCDD	EPA-5 1613B	76166	0.0000006	0.00001	ND	0.95	03/17/10	03/19/10	
2,3,7,8-TCDF	EPA-5 1613B	76166	0.00000042	0.00001	ND	0.95	03/17/10	03/19/10	
OCDD	EPA-5 1613B	76166	0.0000021	0.0001	1.9e-005	0.95	03/17/10	03/19/10	J, Ba
OCDF	EPA-5 1613B	76166	0.0000016	0.0001	ND	0.95	03/17/10	03/19/10	
Total HpCDD	EPA-5 1613B	76166	0.0000014	0.00005	4.8e-006	0.95	03/17/10	03/19/10	J, Q, Ba
Total HpCDF	EPA-5 1613B	76166	0.00000094	0.00005	6.4e-007	0.95	03/17/10	03/19/10	J, Q, Ba
Total HxCDD	EPA-5 1613B	76166	0.00000088	0.00005	ND	0.95	03/17/10	03/19/10	
Total HxCDF	EPA-5 1613B	76166	0.00000011	0.00005	6.6e-007	0.95	03/17/10	03/19/10	J, Q, Ba
Total PeCDD	EPA-5 1613B	76166	0.00000083	0.00005	1.8e-006	0.95	03/17/10	03/19/10	J, Q
Total PeCDF	EPA-5 1613B	76166	0.00000049	0.00005	ND	0.95	03/17/10	03/19/10	
Total TCDD	EPA-5 1613B	76166	0.0000006	0.00001	ND	0.95	03/17/10	03/19/10	
Total TCDF	EPA-5 1613B	76166	0.00000042	0.00001	ND	0.95	03/17/10	03/19/10	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	80 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	81 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	71 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	71 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	70 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	72 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	68 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	67 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	63 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	64 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	69 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	64 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	63 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	67 %
Surrogate: 13C-OCDD (17-157%)	33 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	89 %

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Project ID: Routine Outfall 018

Report Number: ITC0791

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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: pCi/L</b>									
<b>Total Uranium</b>	ASTM 5174-91	67296	0.43	1.39	<b>0.673</b>	1	03/10/10	03/12/10	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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	70220	2	3	0.6	1	03/11/10	03/14/10	U
Gross Beta	EPA 900.0 MOD	70220	2.1	4	4.5	1	03/11/10	03/14/10	

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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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	69127	14	20	3.8	1	03/10/10	03/20/10	U
Potassium 40	EPA 901.1 MOD	69127	200	NA	-90	1	03/10/10	03/20/10	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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: pCi/L</b>									
<b>Radium (226)</b>	EPA 903.0 MOD	69101	0.066	1	<b>0.058</b>	1	03/10/10	04/02/10	U

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## EPA 904 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
Reporting Units: pCi/L									
<b>Radium 228</b>	EPA 904 MOD	69102	0.61	1	<b>0.37</b>	1	03/10/10	03/19/10	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
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: pCi/L</b>									
<b>Strontium 90</b>	EPA 905 MOD	69104	0.51	3	<b>0.61</b>	1	03/10/10	03/20/10	Jb

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Received: 03/08/10

## EPA 906.0 MOD

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)</b>					<b>Sampled: 03/07/10</b>				
<b>Reporting Units: pCi/L</b>									
Tritium	EPA 906.0 MOD	77060	150	500	-17	1	03/18/10	03/23/10	U

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

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: Outfall 018 (GRAB) (ITC0791-01) - Water</b>					
SM2540F	2	03/06/2010 14:30	03/08/2010 03:45	03/08/2010 09:40	03/08/2010 09:40
<b>Sample ID: Outfall 018 (COMPOSITE) (ITC0791-03) - Water</b>					
EPA 180.1	2	03/07/2010 07:00	03/08/2010 03:45	03/08/2010 12:30	03/08/2010 12:30
EPA 300.0	2	03/07/2010 07:00	03/08/2010 03:45	03/08/2010 14:00	03/08/2010 14:11
Filtration	1	03/07/2010 07:00	03/08/2010 03:45	03/08/2010 16:42	03/08/2010 16:43
SM5210B	2	03/07/2010 07:00	03/08/2010 03:45	03/08/2010 19:35	03/13/2010 06:00
SM5540-C	2	03/07/2010 07:00	03/08/2010 03:45	03/08/2010 19:29	03/08/2010 20:20

### 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 018

Report Number: ITC0791

Sampled: 03/06/10-03/07/10  
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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1689 Extracted: 03/14/10</b>											
<b>Blank Analyzed: 03/14/2010 (10C1689-BLK1)</b>											
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 Manager

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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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1689 Extracted: 03/14/10</b>											
<b>LCS Analyzed: 03/14/2010 (10C1689-BS1)</b>											
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			
<b>Matrix Spike Analyzed: 03/14/2010 (10C1689-MS1) Source: ITC0791-01</b>											
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-Dichloroethane	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			
<b>Matrix Spike Dup Analyzed: 03/14/2010 (10C1689-MSD1) Source: ITC0791-01</b>											
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-Dichloroethane	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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Project Manager

MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: ITC0791

Sampled: 03/06/10-03/07/10  
 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
<b>Batch: 10C1689 Extracted: 03/14/10</b>											
<b>Matrix Spike Dup Analyzed: 03/14/2010 (10C1689-MSD1)</b>						<b>Source: ITC0791-01</b>					
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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1114 Extracted: 03/09/10</b>											
<b>Blank Analyzed: 03/11/2010 (10C1114-BLK1)</b>											
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			
<b>LCS Analyzed: 03/11/2010 (10C1114-BS1)</b>											
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			
<b>LCS Dup Analyzed: 03/11/2010 (10C1114-BSD1)</b>											
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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Project Manager

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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
<b>Batch: 10C1114 Extracted: 03/09/10</b>											
<b>LCS Dup Analyzed: 03/11/2010 (10C1114-BSD1)</b>											
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
<b>Batch: 10C1222 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/11/2010 (10C1222-BLK1)</b>											
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			
<b>LCS Analyzed: 03/11/2010 (10C1222-BS1)</b>											
alpha-BHC	0.342	0.010	0.0025	ug/l	0.500		68	45-115			MNR1
Surrogate: Decachlorobiphenyl	0.473			ug/l	0.500		95	45-120			
Surrogate: Tetrachloro-m-xylene	0.331			ug/l	0.500		66	35-115			
<b>LCS Dup Analyzed: 03/11/2010 (10C1222-BSD1)</b>											
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
<b>Batch: 10C1956 Extracted: 03/16/10</b>											
<b>Blank Analyzed: 03/16/2010 (10C1956-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
<b>LCS Analyzed: 03/16/2010 (10C1956-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	19.7	5.0	1.4	mg/l	20.0		98	78-114			MNR1
<b>LCS Dup Analyzed: 03/16/2010 (10C1956-BSD1)</b>											
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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1320 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/11/2010-03/12/2010 (10C1320-BLK1)</b>											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Zinc	ND	20	5.0	ug/l							
<b>LCS Analyzed: 03/11/2010-03/12/2010 (10C1320-BS1)</b>											
Cadmium	79.4	1.0	0.10	ug/l	80.0		99	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			
Selenium	79.9	2.0	0.50	ug/l	80.0		100	85-115			
Zinc	76.5	20	5.0	ug/l	80.0		96	85-115			
<b>Matrix Spike Analyzed: 03/11/2010-03/12/2010 (10C1320-MS1) Source: ITC0790-03</b>											
Cadmium	81.1	1.0	0.10	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			
Selenium	80.3	2.0	0.50	ug/l	80.0	ND	100	70-130			
Zinc	76.9	20	5.0	ug/l	80.0	ND	96	70-130			
<b>Matrix Spike Analyzed: 03/11/2010-03/12/2010 (10C1320-MS2) Source: ITC0791-03</b>											
Cadmium	81.3	1.0	0.10	ug/l	80.0	ND	102	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			
Selenium	82.0	2.0	0.50	ug/l	80.0	0.542	102	70-130			
Zinc	74.1	20	5.0	ug/l	80.0	ND	93	70-130			
<b>Matrix Spike Dup Analyzed: 03/11/2010-03/12/2010 (10C1320-MSD1) Source: ITC0790-03</b>											
Cadmium	78.2	1.0	0.10	ug/l	80.0	ND	98	70-130	4	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	
Selenium	82.2	2.0	0.50	ug/l	80.0	ND	103	70-130	2	20	
Zinc	75.4	20	5.0	ug/l	80.0	ND	94	70-130	2	20	

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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1395 Extracted: 03/11/10</b>											
<b>Blank Analyzed: 03/17/2010 (10C1395-BLK1)</b>											
Iron	ND	0.040	0.015	mg/l							
Manganese	ND	20	7.0	ug/l							
<b>LCS Analyzed: 03/17/2010 (10C1395-BS1)</b>											
Iron	0.518	0.040	0.015	mg/l	0.500		104	85-115			
Manganese	504	20	7.0	ug/l	500		101	85-115			
<b>Matrix Spike Analyzed: 03/17/2010 (10C1395-MS1) Source: ITC0790-03</b>											
Iron	0.698	0.040	0.015	mg/l	0.500	0.165	106	70-130			
Manganese	520	20	7.0	ug/l	500	9.67	102	70-130			
<b>Matrix Spike Dup Analyzed: 03/17/2010 (10C1395-MSD1) Source: ITC0790-03</b>											
Iron	0.725	0.040	0.015	mg/l	0.500	0.165	112	70-130	4	20	
Manganese	526	20	7.0	ug/l	500	9.67	103	70-130	1	20	
<b>Batch: 10C2010 Extracted: 03/16/10</b>											
<b>Blank Analyzed: 03/16/2010 (10C2010-BLK1)</b>											
Mercury	ND	0.20	0.10	ug/l							
<b>LCS Analyzed: 03/16/2010 (10C2010-BS1)</b>											
Mercury	8.36	0.20	0.10	ug/l	8.00		105	85-115			
<b>Matrix Spike Analyzed: 03/16/2010 (10C2010-MS1) Source: ITC1476-01</b>											
Mercury	8.41	0.20	0.10	ug/l	8.00	ND	105	70-130			
<b>Matrix Spike Dup Analyzed: 03/16/2010 (10C2010-MSD1) Source: ITC1476-01</b>											
Mercury	8.38	0.20	0.10	ug/l	8.00	ND	105	70-130	0.5	20	

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Project ID: Routine Outfall 018

Report Number: ITC0791

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Received: 03/08/10

## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C1739 Extracted: 03/14/10</b>											
<b>Blank Analyzed: 03/17/2010 (10C1739-BLK1)</b>											
Iron	ND	0.040	0.015	mg/l							
Manganese	ND	20	7.0	ug/l							
<b>LCS Analyzed: 03/17/2010 (10C1739-BS1)</b>											
Iron	0.547	0.040	0.015	mg/l	0.500		109	85-115			
Manganese	526	20	7.0	ug/l	500		105	85-115			
<b>Matrix Spike Analyzed: 03/17/2010 (10C1739-MS1) Source: ITC0790-03</b>											
Iron	0.558	0.040	0.015	mg/l	0.500	0.0164	108	70-130			
Manganese	531	20	7.0	ug/l	500	ND	106	70-130			
<b>Matrix Spike Dup Analyzed: 03/17/2010 (10C1739-MSD1) Source: ITC0790-03</b>											
Iron	0.540	0.040	0.015	mg/l	0.500	0.0164	105	70-130	3	20	
Manganese	518	20	7.0	ug/l	500	ND	104	70-130	2	20	
<b>Batch: 10C1740 Extracted: 03/14/10</b>											
<b>Blank Analyzed: 03/16/2010 (10C1740-BLK1)</b>											
Cadmium	ND	1.0	0.10	ug/l							
Copper	0.692	2.0	0.50	ug/l							Ja
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Zinc	ND	20	5.0	ug/l							
<b>LCS Analyzed: 03/16/2010 (10C1740-BS1)</b>											
Cadmium	81.0	1.0	0.10	ug/l	80.0		101	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			
Selenium	82.0	2.0	0.50	ug/l	80.0		103	85-115			
Zinc	81.8	20	5.0	ug/l	80.0		102	85-115			

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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
<b>Batch: 10C1740 Extracted: 03/14/10</b>											
<b>Matrix Spike Analyzed: 03/16/2010 (10C1740-MS1)</b>						<b>Source: ITC1128-01</b>					
Cadmium	77.6	1.0	0.10	ug/l	80.0	ND	97	70-130			
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			
Selenium	95.3	2.0	0.50	ug/l	80.0	13.5	102	70-130			
Zinc	78.5	20	5.0	ug/l	80.0	ND	98	70-130			
<b>Matrix Spike Analyzed: 03/16/2010 (10C1740-MS2)</b>						<b>Source: ITC1128-02</b>					
Cadmium	77.7	1.0	0.10	ug/l	80.0	ND	97	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			
Selenium	102	2.0	0.50	ug/l	80.0	20.5	102	70-130			
Zinc	77.1	20	5.0	ug/l	80.0	ND	96	70-130			
<b>Matrix Spike Dup Analyzed: 03/16/2010 (10C1740-MSD1)</b>						<b>Source: ITC1128-01</b>					
Cadmium	79.0	1.0	0.10	ug/l	80.0	ND	99	70-130	2	20	
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	
Selenium	97.0	2.0	0.50	ug/l	80.0	13.5	104	70-130	2	20	
Zinc	79.4	20	5.0	ug/l	80.0	ND	99	70-130	1	20	
<b>Batch: 10C2011 Extracted: 03/16/10</b>											
<b>Blank Analyzed: 03/16/2010 (10C2011-BLK1)</b>											
Mercury	ND	0.20	0.10	ug/l							
<b>LCS Analyzed: 03/16/2010 (10C2011-BS1)</b>											
Mercury	8.65	0.20	0.10	ug/l	8.00		108	85-115			

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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
<b>Batch: 10C2011 Extracted: 03/16/10</b>											
<b>Matrix Spike Analyzed: 03/16/2010 (10C2011-MS1)</b>						<b>Source: ITC1128-01</b>					
Mercury	8.49	0.20	0.10	ug/l	8.00	ND	106	70-130			
<b>Matrix Spike Dup Analyzed: 03/16/2010 (10C2011-MSD1)</b>						<b>Source: ITC1128-01</b>					
Mercury	8.36	0.20	0.10	ug/l	8.00	ND	104	70-130	2	20	

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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0921 Extracted: 03/08/10</b>											
<b>Blank Analyzed: 03/08/2010 (10C0921-BLK1)</b>											
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							
<b>LCS Analyzed: 03/08/2010 (10C0921-BS1)</b>											
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			
<b>Matrix Spike Analyzed: 03/08/2010 (10C0921-MS1) Source: ITC0793-02</b>											
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			
<b>Matrix Spike Analyzed: 03/08/2010 (10C0921-MS2) Source: ITC0878-02</b>											
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			
<b>Matrix Spike Dup Analyzed: 03/08/2010 (10C0921-MSD1) Source: ITC0793-02</b>											
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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## METHOD BLANK/QC DATA

### INORGANICS

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

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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C0996 Extracted: 03/08/10</b>											
<b>LCS Dup Analyzed: 03/13/2010 (10C0996-BSD1)</b>											
Biochemical Oxygen Demand	196	100	25	mg/l	198		99	85-115	2	20	
<b>Batch: 10C1095 Extracted: 03/09/10</b>											
<b>Blank Analyzed: 03/09/2010 (10C1095-BLK1)</b>											
Perchlorate	ND	4.0	0.90	ug/l							
<b>LCS Analyzed: 03/09/2010 (10C1095-BS1)</b>											
Perchlorate	24.2	4.0	0.90	ug/l	25.0		97	85-115			
<b>Matrix Spike Analyzed: 03/09/2010 (10C1095-MS1)</b>											
						<b>Source: ITC0793-02</b>					
Perchlorate	25.1	4.0	0.90	ug/l	25.0	ND	100	80-120			
<b>Matrix Spike Dup Analyzed: 03/09/2010 (10C1095-MSD1)</b>											
						<b>Source: ITC0793-02</b>					
Perchlorate	24.7	4.0	0.90	ug/l	25.0	ND	99	80-120	1	20	
<b>Batch: 10C1299 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/10/2010 (10C1299-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.50	mg/l							
<b>LCS Analyzed: 03/10/2010 (10C1299-BS1)</b>											
Ammonia-N (Distilled)	9.80	0.50	0.50	mg/l	10.0		98	80-115			
<b>Matrix Spike Analyzed: 03/10/2010 (10C1299-MS1)</b>											
						<b>Source: ITC0421-01</b>					
Ammonia-N (Distilled)	10.1	0.50	0.50	mg/l	10.0	ND	101	70-120			

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### INORGANICS

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

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## METHOD BLANK/QC DATA

### INORGANICS

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

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## METHOD BLANK/QC DATA

### EPA-5 1613B

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 76166 Extracted: 03/17/10</b>											
<b>Blank Analyzed: 03/18/2010 (G0C170000166B)</b>						<b>Source:</b>					
1,2,3,4,6,7,8-HpCDD	1.1e-005	0.00005	0.000002	ug/L				-			J, Q
1,2,3,4,6,7,8-HpCDF	1.5e-006	0.00005	0.00000059	ug/L				-			J, Q
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000011	ug/L				-			J
1,2,3,4,7,8-HxCDD	1.2e-006	0.00005	0.000001	ug/L				-			J
1,2,3,4,7,8-HxCDF	9.6e-007	0.00005	0.0000003	ug/L				-			J, Q
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000009	ug/L				-			J, Q
1,2,3,6,7,8-HxCDF	2.5e-007	0.00005	0.00000028	ug/L				-			J, Q
1,2,3,7,8,9-HxCDD	1.3e-006	0.00005	0.00000079	ug/L				-			J
1,2,3,7,8,9-HxCDF	3.5e-007	0.00005	0.00000032	ug/L				-			J, Q
1,2,3,7,8-PeCDD	ND	0.00005	0.00000072	ug/L				-			J
1,2,3,7,8-PeCDF	ND	0.00005	0.00000052	ug/L				-			J
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000026	ug/L				-			J, Q
2,3,4,7,8-PeCDF	ND	0.00005	0.00000056	ug/L				-			J
2,3,7,8-TCDD	ND	0.00001	0.00000053	ug/L				-			J, Q
2,3,7,8-TCDF	ND	0.00001	0.00000056	ug/L				-			J
OCDD	6.1e-005	0.0001	0.0000018	ug/L				-			J
OCDF	8.5e-006	0.0001	0.000001	ug/L				-			J
Total HpCDD	5e-005	0.00005	0.000002	ug/L				-			J, Q
Total HpCDF	4.4e-006	0.00005	0.0000008	ug/L				-			J, Q
Total HxCDD	5.9e-006	0.00005	0.00000089	ug/L				-			J
Total HxCDF	1.9e-006	0.00005	0.00000029	ug/L				-			J, Q
Total PeCDD	ND	0.00005	0.00000072	ug/L				-			J
Total PeCDF	ND	0.00005	0.00000052	ug/L				-			J
Total TCDD	ND	0.00001	0.00000053	ug/L				-			J
Total TCDF	ND	0.00001	0.00000056	ug/L				-			J
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018			ug/L	0.00200		92	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.002			ug/L	0.00200		100	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.00200		82	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0016			ug/L	0.00200		81	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0016			ug/L	0.00200		80	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0015			ug/L	0.00200		77	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0016			ug/L	0.00200		79	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0016			ug/L	0.00200		79	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0015			ug/L	0.00200		76	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0015			ug/L	0.00200		73	24-185			

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Project Manager

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

Project ID: Routine Outfall 018

Report Number: ITC0791

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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 76166 Extracted: 03/17/10</b>											
<b>Blank Analyzed: 03/18/2010 (G0C170000166B)</b>											
<b>Source:</b>											
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0016			ug/L	0.00200		81	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0015			ug/L	0.00200		75	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0013			ug/L	0.00200		67	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0014			ug/L	0.00200		71	24-169			
Surrogate: 13C-OCDD	0.0027			ug/L	0.00400		68	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00074			ug/L	0.000800		92	35-197			
<b>LCS Analyzed: 03/18/2010 (G0C170000166C)</b>											
<b>Source:</b>											
1,2,3,4,6,7,8-HpCDD	0.00105	0.00005	0.0000077	ug/L	0.00100		105	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00104	0.00005	0.0000049	ug/L	0.00100		104	82-122			Ba
1,2,3,4,7,8,9-HpCDF	0.00119	0.00005	0.0000082	ug/L	0.00100		119	78-138			
1,2,3,4,7,8-HxCDD	0.00112	0.00005	0.0000098	ug/L	0.00100		112	70-164			Ba
1,2,3,4,7,8-HxCDF	0.00111	0.00005	0.0000039	ug/L	0.00100		111	72-134			Ba
1,2,3,6,7,8-HxCDD	0.00107	0.00005	0.0000092	ug/L	0.00100		107	76-134			
1,2,3,6,7,8-HxCDF	0.00108	0.00005	0.0000037	ug/L	0.00100		108	84-130			Ba
1,2,3,7,8,9-HxCDD	0.00106	0.00005	0.0000079	ug/L	0.00100		106	64-162			Ba
1,2,3,7,8,9-HxCDF	0.00109	0.00005	0.0000043	ug/L	0.00100		109	78-130			Ba
1,2,3,7,8-PeCDD	0.00108	0.00005	0.0000027	ug/L	0.00100		108	70-142			
1,2,3,7,8-PeCDF	0.00108	0.00005	0.0000028	ug/L	0.00100		108	80-134			
2,3,4,6,7,8-HxCDF	0.00108	0.00005	0.0000034	ug/L	0.00100		108	70-156			
2,3,4,7,8-PeCDF	0.00114	0.00005	0.0000031	ug/L	0.00100		114	68-160			
2,3,7,8-TCDD	0.000231	0.00001	0.0000078	ug/L	0.000200		116	67-158			
2,3,7,8-TCDF	0.00022	0.00001	0.0000093	ug/L	0.000200		110	75-158			
OCDD	0.00256	0.0001	0.0000049	ug/L	0.00200		128	78-144			Ba
OCDF	0.00248	0.0001	0.0000041	ug/L	0.00200		124	63-170			Ba
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00145			ug/L	0.00200		73	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00157			ug/L	0.00200		78	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00134			ug/L	0.00200		67	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00124			ug/L	0.00200		62	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00124			ug/L	0.00200		62	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00129			ug/L	0.00200		65	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00127			ug/L	0.00200		64	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00127			ug/L	0.00200		64	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00126			ug/L	0.00200		63	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00119			ug/L	0.00200		60	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00128			ug/L	0.00200		64	22-176			

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Project ID: Routine Outfall 018

Report Number: ITC0791

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
<b>Batch: 76166 Extracted: 03/17/10</b>											
<b>LCS Analyzed: 03/18/2010 (G0C170000166C)</b>											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00119			ug/L	0.00200		60	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00112			ug/L	0.00200		56	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00119			ug/L	0.00200		60	22-152			
Surrogate: 13C-OCDD	0.00151			ug/L	0.00400		38	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000752			ug/L	0.000800		94	31-191			

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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
<b>Batch: 67296 Extracted: 03/10/10</b>											
<b>Matrix Spike Dup Analyzed: 03/12/2010 (F0B230452001D)</b>						<b>Source: F0B230452001</b>					
Total Uranium	26.9	0.7	0.2	pCi/L	27.7	0.677	95	62-150	4	20	
<b>Matrix Spike Analyzed: 03/12/2010 (F0B230452001S)</b>						<b>Source: F0B230452001</b>					
Total Uranium	28.1	0.7	0.2	pCi/L	27.7	0.677	99	62-150			
<b>Blank Analyzed: 03/12/2010 (F0C080000296B)</b>						<b>Source:</b>					
Total Uranium	0.315	0.693	0.21	pCi/L				-			Jb
<b>LCS Analyzed: 03/12/2010 (F0C080000296C)</b>						<b>Source:</b>					
Total Uranium	5.62	0.69	0.21	pCi/L	5.54		101	90-120			

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## METHOD BLANK/QC DATA

### EPA 900.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 70220 Extracted: 03/11/10</b>											
<b>Matrix Spike Analyzed: 03/14/2010 (F0C090509001S)</b>						<b>Source: F0C090509001</b>					
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			
<b>Duplicate Analyzed: 03/14/2010 (F0C090509001X)</b>						<b>Source: F0C090509001</b>					
Gross Alpha	1.9	3	2.1	pCi/L		0.3		-			U
Gross Beta	4.8	4	2.1	pCi/L		3.9		-			U
<b>Blank Analyzed: 03/14/2010 (F0C110000220B)</b>						<b>Source:</b>					
Gross Alpha	-0.16	3	0.79	pCi/L				-			U
Gross Beta	0.37	4	1.5	pCi/L				-			U
<b>LCS Analyzed: 03/14/2010 (F0C110000220C)</b>						<b>Source:</b>					
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
<b>Batch: 69127 Extracted: 03/10/10</b>											
<b>Duplicate Analyzed: 03/20/2010 (F0C090509001X)</b>						<b>Source: F0C090509001</b>					
Cesium 137	-0.3	20	13	pCi/L		4.5	-				U
Potassium 40	-50	NA	220	pCi/L		-50	-				U
<b>Blank Analyzed: 03/21/2010 (F0C100000127B)</b>						<b>Source:</b>					
Cesium 137	1.9	20	14	pCi/L			-				U
Potassium 40	12	NA	210	pCi/L			-				U
<b>LCS Analyzed: 03/21/2010 (F0C100000127C)</b>						<b>Source:</b>					
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
<b>Batch: 69101 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 04/02/2010 (F0C100000101B)</b>						<b>Source:</b>					
Radium (226)	0.025	1	0.051	pCi/L				-			U
<b>LCS Analyzed: 04/02/2010 (F0C100000101C)</b>						<b>Source:</b>					
Radium (226)	10.6	1	0.05	pCi/L	11.3		94	68-136			
<b>LCS Dup Analyzed: 04/02/2010 (F0C100000101L)</b>						<b>Source:</b>					
Radium (226)	10.1	1	0.05	pCi/L	11.3		89	68-136	6	40	

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## METHOD BLANK/QC DATA

### EPA 904 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 69102 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/19/2010 (F0C100000102B)</b>											
Radium 228	0.19	1	0.39	pCi/L				-			U
<b>LCS Analyzed: 03/19/2010 (F0C100000102C)</b>											
Radium 228	7.41	1	0.36	pCi/L	6.37		116	60-142			
<b>LCS Dup Analyzed: 03/19/2010 (F0C100000102L)</b>											
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
<b>Batch: 69104 Extracted: 03/10/10</b>											
<b>Blank Analyzed: 03/20/2010 (F0C100000104B)</b>											
Strontium 90	0.01	3	0.43	pCi/L				-			U
<b>LCS Analyzed: 03/20/2010 (F0C100000104C)</b>											
Strontium 90	6.64	3	0.4	pCi/L	6.79		98	80-130			
<b>LCS Dup Analyzed: 03/20/2010 (F0C100000104L)</b>											
Strontium 90	6.75	3	0.39	pCi/L	6.79		99	80-130	2	40	

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## METHOD BLANK/QC DATA

### EPA 906.0 MOD

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 77060 Extracted: 03/18/10</b>											
<b>Duplicate Analyzed: 03/23/2010 (F0C090509001X)</b>						<b>Source: F0C090509001</b>					
Tritium	-26	500	150	pCi/L		34	-				U
<b>Matrix Spike Analyzed: 03/24/2010 (F0C090512001S)</b>						<b>Source: ITC0791-03</b>					
Tritium	4170	500	150	pCi/L	4510	-17	93	62-147			
<b>Blank Analyzed: 03/23/2010 (F0C180000060B)</b>						<b>Source:</b>					
Tritium	83	500	150	pCi/L							U
<b>LCS Analyzed: 03/23/2010 (F0C180000060C)</b>						<b>Source:</b>					
Tritium	4450	500	150	pCi/L	4510		99	85-112			

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## Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
ITC0791-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.7	15
ITC0791-01	624-Boeing 001/002Q (Fr113+X+Fr1,1-Dichloroethene		ug/l	0	0.50	6
ITC0791-01	624-Boeing 001/002Q (Fr113+X+FrTrichloroethene		ug/l	0	0.50	5
ITC0791-01	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	-1	5.0	8.5
ITC0791-01	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
ITC0791-02	624-Boeing 001/002Q (Fr113+X+Fr1,1-Dichloroethene		ug/l	0	0.50	6
ITC0791-02	624-Boeing 001/002Q (Fr113+X+FrTrichloroethene		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
ITC0791-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.00054	0.0094	0.03
ITC0791-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	13
ITC0791-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.6	18
ITC0791-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.59	4.8	4
ITC0791-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.6	16
ITC0791-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.6	16
ITC0791-03	Ammonia-N, Titr 4500NH3-C (w/disAmmonia-N (Distilled)		mg/l	0	0.50	10
ITC0791-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	0.50	2.0	30
ITC0791-03	Cadmium-200.8	Cadmium	ug/l	0.025	1.0	3.1
ITC0791-03	Chloride - 300.0	Chloride	mg/l	15	0.50	150
ITC0791-03	Copper-200.8	Copper	ug/l	1.36	2.0	14
ITC0791-03	Iron-200.7, Diss	Iron	mg/l	0.0049	0.040	0.3
ITC0791-03	Lead-200.8	Lead	ug/l	0.23	1.0	5.2
ITC0791-03	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.074	0.10	0.5
ITC0791-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.024	0.11	8

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ITC0791-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
ITC0791-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.024	0.26	8
ITC0791-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
ITC0791-03	Selenium-200.8	Selenium	ug/l	0.54	2.0	5
ITC0791-03	Sulfate-300.0	Sulfate	mg/l	163	10	300
ITC0791-03	TDS - SM2540C	Total Dissolved Solids	mg/l	367	10	950
ITC0791-03	TSS - SM2540D	Total Suspended Solids	mg/l	-1	10	45
ITC0791-03	Zinc-200.8	Zinc	ug/l	0	20	120

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## DATA QUALIFIERS AND DEFINITIONS

<b>B</b>	Analyte was detected in the associated Method Blank.
<b>Ba</b>	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
<b>J</b>	Estimated result. Result is less than the reporting limit.
<b>Ja</b>	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.
<b>Jb</b>	Result is greater than sample detection limit but less than stated reporting limit.
<b>MNR1</b>	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
<b>Q</b>	Estimated maximum possible concentration (EMPC).
<b>U</b>	Result is less than the sample detection limit.
<b>ND</b>	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
<b>RPD</b>	Relative Percent Difference

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**ITC0791 <Page 49 of 51>**

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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](http://www.testamericainc.com)*

### Subcontracted Laboratories

### TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*



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

Project ID: Routine Outfall 018

Report Number: ITC0791

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

## TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91  
Samples: ITC0791-03

Method Performed: EPA 900.0 MOD  
Samples: ITC0791-03

Method Performed: EPA 901.1 MOD  
Samples: ITC0791-03

Method Performed: EPA 903.0 MOD  
Samples: ITC0791-03

Method Performed: EPA 904 MOD  
Samples: ITC0791-03

Method Performed: EPA 905 MOD  
Samples: ITC0791-03

Method Performed: EPA 906.0 MOD  
Samples: ITC0791-03

## TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B  
Samples: ITC0791-03

## TestAmerica Irvine

Kathleen A. Robb For Heather Clark  
Project Manager

# CHAIN OF CUSTODY FORM

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007				Project: Boeing-SSFL NPDES Routine Outfall 018 GRAB			ANALYSIS REQUIRED													Field readings: (Log in and include in report Temp and pH)  Temp °F = <u>12.5°C BK</u> <u>54.5°F</u>  pH = <u>7.5</u>  Time of readings = <u>2:30</u>  Comments																				
Test America Contact: Joseph Doak				Project Manager: Bronwyn Kelly			Phone Number: (626) 568-6691																																	
Sampler: <u>MJRW</u>				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																												
Outfall 018	W	VOAs	5	<u>3/6/10 2:30</u>	HCl	1A, 1B, 1C, 1D, 1E	X																																	
Outfall 018	W	1L Poly	1		None	2		X																																
Outfall 018	W	1L Amber	2		HCl	3A, 3B			X																															
Outfall 018	W	500 mL Poly	1		NaOH	4				X																														
Outfall 018	W	500 mL Poly	2		None	5A, 5B					X																													
Trip Blanks	W	VOAs	3		HCl	6A, 6B, 6C	X																																	
<del>Outfall 018</del>	<del>W</del>	<del>150 mL Poly</del>	<del>1</del>		<del>None</del>	<del>7</del>						X																												

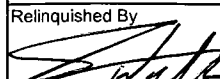
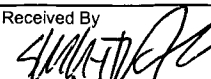
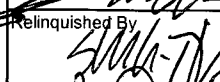
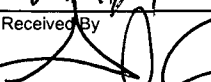
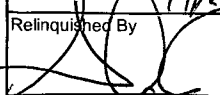
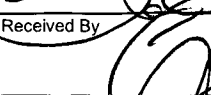
These Samples are the Grab Portion of Outfall 018 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By: <u>Brooks</u> Date/Time: <u>3/6/2010 3:25</u>	Received By: <u>[Signature]</u> Date/Time: <u>3/6/10 1525</u>	Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: <u>X</u> 48 Hour: _____ 5 Day: _____ Normal: _____
Relinquished By: <u>[Signature]</u> Date/Time: <u>3/7/10 1415</u>	Received By: <u>[Signature]</u> Date/Time: <u>3/7/10 1415</u>	Sample Integrity: (Check) Intact: <u>✓</u> On Ice: <u>X 4°C</u>
Relinquished By: <u>[Signature]</u> Date/Time: <u>3/7/10 1645</u>	Received By: <u>[Signature]</u> Date/Time: <u>From ac rec fridge 3/8/10 0345</u>	Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <u>X</u>

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007  Test America Contact: Joseph Doak				Project: Boeing-SSFL NPDES Routine Outfall 018 COMPOSITE			ANALYSIS REQUIRED														Chronic Toxicity	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn	Comments
Project Manager: Bronwyn Kelly  Sampler: EW/BRAN				Phone Number: (626) 568-6691 Fax Number: (626) 568-6515			Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn	TCDD (and all congeners)	BOD <sub>5</sub> (20 degrees C)	Surfactants (MBAS)	Cl <sup>-</sup> , SO <sub>4</sub> , NO <sub>3</sub> +NO <sub>2</sub> -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)						
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #																	
Outfall 018	W	1L Poly	1	3/7/10-0700	HNO <sub>3</sub>	8A	X																
Outfall 018 Dup	W	1L Poly	1	3/7/10-0700	HNO <sub>3</sub>	8B	X																
Outfall 018	W	1L Amber	2		None	9A, 9B		X															
Outfall 018	W	1L Poly	1		None	10			X														
Outfall 018	W	500 mL Poly	2		None	11A, 11B			X														
Outfall 018	W	500 mL Poly	2		None	12A, 12B				X													
Outfall 018	W	500 mL Poly	1		None	13					X												
Outfall 018	W	500 mL Poly	2		None	14A, 14B						X											
Outfall 018	W	500 mL Poly	1		H <sub>2</sub> SO <sub>4</sub>	15							X										
Outfall 018	W	1L Amber	2		None	16A, 16B								X									
Outfall 018	W	1L Amber	2		None	17A, 17B									X								
Outfall 018	W	2.5 Gal Cube	1		None	18A										X		Unfiltered and unpreserved analysis					
Outfall 018	W	500 mL Amber	1		None	18B																	
Outfall 018	W	1 Gal Cube	1		None	19												Only test if first and second rain event of the year					
Outfall 018	W	1L Poly	1	3/7/10-0700	None	20											X	Filter w/in 24hrs of receipt at lab					

COC Page 2 of 2 lists the composite samples for Outfall 018 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 018 for the same event.

Relinquished By: 	Date/Time: 3/7/10 1300	Received By: 	Date/Time: 3/7/10 1300	Turn-around time: (Check) 24 Hour: _____ 48 Hour: _____	72 Hour: _____ 5 Day: _____	10 Day: <u>X</u> Normal: _____
Relinquished By: 	Date/Time: 3/7/10 1415	Received By: 	Date/Time: 3/7/10 1415	Sample Integrity: (Check) Intact: _____	On Ice: <u>X</u>	
Relinquished By: 	Date/Time: 3/7/10 1645	Received By: 	Date/Time: 3/8/10 0345 From screw fridge	Data Requirements: (Check) No Level IV: _____	All Level IV: _____	NPDES Level IV: <u>X</u>

EW

Time Weighted

EW

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

**ANALYTICAL REPORT**

PROJECT NO. ITC0791

MWH-Pasadena Boeing

Lot #: F0C090512

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: F0C090512

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:**

F0C090512 (1): ITC0791-03

**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:**

F0C090512 (1): ITC0791-03

**Total Uranium by KPA (ASTM 5174-91)**

The samples were analyzed at a dilution due to the presence of matrix interferences which caused low sample correlations (R squared). The reporting limit has been adjusted for the dilution.

**Affected Samples:**

F0C090512 (1): ITC0791-03

**METHODS SUMMARY**

FOC090512

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
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 Phosphorimetry	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**

F0C090512

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LWFW4	001	ITC0791-03	03/07/10	07:00

**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: ITC0791-03

## Radiochemistry

Lab Sample ID: FOC090512-001  
 Work Order: LFWF4  
 Matrix: WATER

Date Collected: 03/07/10 0700  
 Date Received: 03/09/10 0915

Parameter	Result	Qual	Total Uncert. (2 $\sigma$ +/-)	RL	mdc	Prep Date	Analysis Date
<b>Gamma Cs-137 &amp; Hits by EPA 901.1 MOD</b>							
				pCi/L		Batch # 0069127	Yld %
Cesium 137	3.8	U	7.8	20.0	14	03/10/10	03/20/10
Potassium 40	-90	U	3600		200	03/10/10	03/20/10
<b>Gross Alpha/Beta EPA 900</b>							
				pCi/L		Batch # 0070220	Yld %
Gross Alpha	0.6	U	1.2	3.0	2.0	03/11/10	03/14/10
Gross Beta	4.5		1.5	4.0	2.1	03/11/10	03/14/10
<b>SR-90 BY GFPC EPA-905 MOD</b>							
				pCi/L		Batch # 0069104	Yld % 76
Strontium 90	0.61	J	0.34	3.00	0.51	03/10/10	03/20/10
<b>TRITIUM (Distill) by EPA 906.0 MOD</b>							
				pCi/L		Batch # 0077060	Yld %
Tritium	-17	U	74	500	150	03/18/10	03/23/10
<b>Total Uranium by KPA ASTM 5174-91</b>							
				pCi/L		Batch # 0067296	Yld %
Total Uranium	0.673	J	0.082	1.39	0.43	03/10/10	03/12/10
<b>Radium 226 by EPA 903.0 MOD</b>							
				pCi/L		Batch # 0069101	Yld % 71
Radium (226)	0.058	U	0.046	1.00	0.066	03/10/10	04/02/10
<b>Radium 228 by GFPC EPA 904 MOD</b>							
				pCi/L		Batch # 0069102	Yld % 65
Radium 228	0.37	U	0.38	1.00	0.61	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: FOC090512  
 Matrix: WATER

Parameter	Result	Qual	Total Uncert. (2 $\sigma$ +/-)	RL	MDC	Prep Date	Lab Sample ID Analysis Date
<b>Total Uranium by KPA ASTM 5174-91</b>							
Total Uranium	0.315	J	0.039	0.693	0.21	03/10/10	FOC080000-296B 03/12/10
<b>Radium 226 by EPA 903.0 MOD</b>							
Radium (226)	0.025	U	0.031	1.00	0.051	03/10/10	FOC100000-101B 04/02/10
<b>Radium 228 by GFPC EPA 904 MOD</b>							
Radium 228	0.19	U	0.24	1.00	0.39	03/10/10	FOC100000-102B 03/19/10
<b>SR-90 BY GFPC EPA-905 MOD</b>							
Strontium 90	0.01	U	0.24	3.00	0.43	03/10/10	FOC100000-104B 03/20/10
<b>Gamma Cs-137 &amp; Hits by EPA 901.1 MOD</b>							
Cesium 137	1.9	U	7.6	20.0	14	03/10/10	FOC100000-127B 03/21/10
Potassium 40	12	U	93		210	03/10/10	03/21/10
<b>Gross Alpha/Beta EPA 900</b>							
Gross Alpha	-0.16	U	0.35	3.00	0.79	03/11/10	FOC110000-220B 03/14/10
Gross Beta	0.37	U	0.91	4.00	1.5	03/11/10	03/14/10
<b>TRITIUM (Distill) by EPA 906.0 MOD</b>							
Tritium	83	U	94	500	150	03/18/10	FOC180000-060B 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: F0C090512  
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 $\sigma$ +/-)	MDC	% Yld	% Rec	Lab Sample ID QC Control Limits
<b>Total Uranium by KPA ASTM 5174-91</b>			<b>pCi/L</b>	<b>5174-91</b>			<b>F0C080000-296C</b>
Total Uranium	27.7	28.6	3.5	0.2		103	(90 - 120)
	Batch #:	0067296		Analysis Date:	03/12/10		
<b>Total Uranium by KPA ASTM 5174-91</b>			<b>pCi/L</b>	<b>5174-91</b>			<b>F0C080000-296C</b>
Total Uranium	5.54	5.62	0.58	0.21		101	(90 - 120)
	Batch #:	0067296		Analysis Date:	03/12/10		
<b>Gamma Cs-137 &amp; Hits by EPA 901.1 MOD</b>			<b>pCi/L</b>	<b>901.1 MOD</b>			<b>F0C100000-127C</b>
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		
<b>Gross Alpha/Beta EPA 900</b>			<b>pCi/L</b>	<b>900.0 MOD</b>			<b>F0C110000-220C</b>
Gross Alpha	49.4	31.9	3.8	0.8		64	(62 - 134)
	Batch #:	0070220		Analysis Date:	03/14/10		
<b>Gross Alpha/Beta EPA 900</b>			<b>pCi/L</b>	<b>900.0 MOD</b>			<b>F0C110000-220C</b>
Gross Beta	67.9	53.0	4.7	1.5		78	(58 - 133)
	Batch #:	0070220		Analysis Date:	03/14/10		
<b>TRITIUM (Distill) by EPA 906.0 MOD</b>			<b>pCi/L</b>	<b>906.0 MOD</b>			<b>F0C180000-060C</b>
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: F0C090512  
 Matrix: WATER

Parameter	Spike Amount	Result	Total Uncert. (2 $\sigma$ +/-)	% Yld	% Rec	QC Control Limits	Lab Sample ID Precision
<b>Radium 226 by EPA</b>	<b>903.0 MOD</b>		<b>pCi/L</b>	<b>903.0 MOD</b>			<b>F0C100000-101C</b>
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		
<b>Radium 228 by GFPC EPA</b>	<b>904 MOD</b>		<b>pCi/L</b>	<b>904 MOD</b>			<b>F0C100000-102C</b>
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		
<b>SR-90 BY GFPC EPA-905</b>	<b>MOD</b>		<b>pCi/L</b>	<b>905 MOD</b>			<b>F0C100000-104C</b>
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: FOC090512  
 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. (2σ +/-)	QC Sample ID		QC Control Limits
							%YLD	%REC	
TRITIUM (Distill) by EPA	906.0	MOD	pCi/L		906.0	MOD			FOC090512-001
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			FOC090509-001
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			FOC090509-001
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: FOB230452  
 Matrix: WATER

Date Sampled: 02/20/10 1349  
 Date Received: 02/23/10 0910

Parameter	Spike Amount	SPIKE Result	Total Uncert. (2σ+/-)	Spike Yld	SAMPLE Result	Total Uncert. (2σ+/-)	QC Sample ID		QC Control Limits
							% Yld	%Rec	
Total Uranium by KPA ASTM 5			pCi/L	5174-91			FOB230452-001		
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: FOC090512  
 Matrix: WATER

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

Parameter	SAMPLE Result		Total Uncert. (2σ+/-)	% Yld	DUPLICATE Result	Total Uncert. (2σ+/-)	% Yld	QC Sample ID	
								Precision	
Gamma Cs-137 & Hits by EPA 901.1 MOD				pCi/L	901.1 MOD			FOC090509-001	
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			FOC090509-001	
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			FOC090509-001	
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.

*add 342*

**SUBCONTRACT ORDER**

TestAmerica Irvine

**ITC0791**

**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
----------	-------	-----	---------	----------------	-------	----------

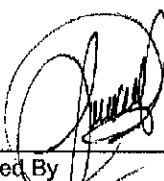
Sample ID: ITC0791-03 (Outfall 018 (COMPOSITE) - Water)

Sampled: 03/07/10 07:00

EDD + Level 4	N/A	03/17/10	04/04/10 07:00	\$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 07:00	\$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 07:00	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	03/17/10	09/03/10 07:00	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 226-O	pCi/L	03/17/10	03/07/11 07:00	\$88.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Radium 228-O	pCi/L	03/17/10	03/07/11 07:00	\$84.00	0%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	03/17/10	03/07/11 07:00	\$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	03/17/10	03/07/11 07:00	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	03/17/10	03/07/11 07:00	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!

Containers Supplied:

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

  
 Released By \_\_\_\_\_  
 Date/Time \_\_\_\_\_

Released By \_\_\_\_\_  
 Date/Time \_\_\_\_\_

3/8/10  
 Date/Time

Fed-Ex 3/8/10 1700  
 Received By \_\_\_\_\_  
 Date/Time

3.9.10 0915  
 Received By \_\_\_\_\_  
 Date/Time

CHAIN OF CUSTODY FORM

JTC0701

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Routine Outfall 018 COMPOSITE		Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Test America Contact: Joseph Doak	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	ANALYSIS REQUIRED Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn TCDD (and all congeners) BOD <sub>5</sub> (20 degrees C) Surfactants (MBAS) Cr, SO <sub>4</sub> , NO <sub>3</sub> +NO <sub>2</sub> -N, Perchlorate Nitrate-N, Nitrite-N Turbidity, TDS, TSS Ammonia-N (350.2) Alpha BHC (608) + Pesticides + PP 2,4,6 TCP, 2,4 Dinitrofluorene, Bis(2-ethylhexyl)phthalate, NDMA, PCP (SVOCs 625) Gross Alpha(900.0), Gross Beta(900.0), Tritium (t-3) (906.0), Sr-90 (906.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, Cs-137 (901.0 or 901.1) Chronic Toxicity Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn Comments Time Weighed
Outfall 018	W	1L Poly	1	3/7/10 - 0700	HNO <sub>3</sub>	8A	
Outfall 018 Dup	W	1L Poly	1	3/7/10 - 0700	HNO <sub>3</sub>	8B	
Outfall 018	W	1L Amber	2		None	9A, 9B	
Outfall 018	W	1L Poly	1		None	10	
Outfall 018	W	500 mL Poly	2		None	11A, 11B	
Outfall 018	W	500 mL Poly	2		None	12A, 12B	
Outfall 018	W	500 mL Poly	1		None	13	
Outfall 018	W	500 mL Poly	2		None	14A, 14B	
Outfall 018	W	500 mL Poly	1		H <sub>2</sub> SO <sub>4</sub>	15	
Outfall 018	W	1L Amber	2		None	16A, 16B	
Outfall 018	W	1L Amber	2		None	17A, 17B	
Outfall 018	W	2.5 Gal Cube	1		None	18A	
		500 mL Amber	1			18B	
Outfall 018	W	1 Gal Cube	1		None	19	
Outfall 018	W	1L Poly	1	3/7/10 - 0700	None	20	

COC Page 2 of 2 lists the composite samples for Outfall 018 for this storm event.

These must be added to the same work order for COC Page 1 of 2 for Outfall 018 for the same event.

Relinquished By: <i>[Signature]</i>	Date/Time: 3/7/10 1300	Turn-around time: (Check) 24 Hour: <input checked="" type="checkbox"/> 48 Hour: <input type="checkbox"/> 72 Hour: <input type="checkbox"/> 10 Day: <input checked="" type="checkbox"/> Normal: <input type="checkbox"/>
Relinquished By: <i>[Signature]</i>	Date/Time: 3/7/10 1415	On Ice: <input checked="" type="checkbox"/>
Relinquished By: <i>[Signature]</i>	Date/Time: 3/7/10 1645	Date Requirements: (Check) No Level IV: <input type="checkbox"/> All Level IV: <input type="checkbox"/> NPDES Level IV: <input checked="" type="checkbox"/>



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): FOC090509:523  
512;526  
516  
518  
526

## CONDITION UPON RECEIPT FORM

Client: TA Irvine

Quote No: 85044, 77635

COC/RFA No: below

342

Initiated By: JW

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. <u>4289 2133 6598</u>	1. <u>ambient</u>
2. <u>6576</u>	2. <u>↓</u>
3. <u>6587</u>	3. <u>↓</u>
4. _____	4. _____
5. _____	5. _____
6. _____	6. _____
7. _____	7. _____
8. _____	8. _____
9. _____	9. _____
10. _____	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. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on bottles?
2. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. <input checked="" type="radio"/> Y <input type="radio"/> N	Was sample received broken?	13. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was Internal COC/Workshare received?
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was pH taken by original TestAmerica lab?

<sup>1</sup> 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  
798  
791

### Corrective Action:

Client Contact Name: \_\_\_\_\_  
 Sample(s) processed "as is"  
 Sample(s) on hold until: \_\_\_\_\_  
 Project Management Review: K.S.

Informed by: \_\_\_\_\_

If released, notify: \_\_\_\_\_

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.

ADMIN-0004, REVISED 10/21/08 \\slsvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc

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# **APPENDIX G**

## **Section 71**

Outfall 018 - BMP Effectiveness March 7, 2010

Test America Analytical Laboratory Report

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## LABORATORY REPORT

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

Project: BMP Effectiveness  
Monitoring Program

Sampled: 03/07/10  
Received: 03/08/10  
Issued: 03/18/10 13:56

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.*

*This entire report was reviewed and approved for release.*

### CASE NARRATIVE

**SAMPLE RECEIPT:** Samples were received intact, at 4°C, on ice and with chain of custody documentation.

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

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

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

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

**SUBCONTRACTED:** No analyses were subcontracted to an outside laboratory.

**LABORATORY ID**

ITC0795-01

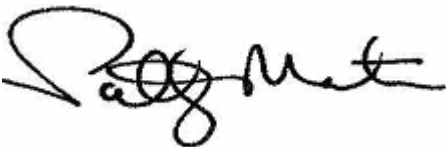
**CLIENT ID**

018 EFF-1

**MATRIX**

Water

Reviewed By:



**TestAmerica Irvine**

Patty Mata For Heather Clark  
Project Manager

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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: ITC0795

Sampled: 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
<b>Sample ID: ITC0795-01 (018 EFF-1 - Water)</b>									
Reporting Units: g/cc									
Density	Displacement	10C2037	N/A	NA	<b>0.99</b>	1	03/16/10	03/16/10	
<b>Sample ID: ITC0795-01 (018 EFF-1 - Water)</b>									
Reporting Units: mg/l									
Sediment	ASTM D3977	10C2043	10	10	<b>11</b>	1	03/07/10	03/16/10	

### TestAmerica Irvine

Patty Mata For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: ITC0795

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

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10C2037 Extracted: 03/16/10</b>										
<b>Duplicate Analyzed: 03/16/2010 (10C2037-DUP1)</b>										
Density	0.994	NA	N/A	g/cc		Source: ITC0795-01 0.994		0.06	20	

TestAmerica Irvine

Patty Mata For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

ITC0795 <Page 3 of 5>

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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: ITC0795

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

## DATA QUALIFIERS AND DEFINITIONS

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.  
**RPD** Relative Percent Difference

**TestAmerica Irvine**

Patty Mata For Heather Clark  
Project Manager

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**ITC0795 <Page 4 of 5>**



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

Project ID: BMP Effectiveness  
Monitoring Program  
Report Number: ITC0795

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

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		
SM 2540D	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](http://www.testamericainc.com)*

### TestAmerica Irvine

Patty Mata For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

Client Name/Address: MWH-Pasadena 618 Michillinda Ave, Suite 200 Pasadena, CA 91007				Project: <b>Boeing BMP Effectiveness Monitoring Program</b>			ANALYSIS REQUIRED																
Test America Contact: Joe Doak				Phone Number: (626) 568-6691			Suspended Sediment Concentration (SSC, ASTM-D3977-1997)																Comments
Project Manager: Bronwyn Kelly				Fax Number: (626) 568-6515																			
Sampler: Eric Walker																							
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #																	
018 EFF-1	W	1 L Poly Gal	1	3/7/10-0700	None	1	X																
MS. 3/8/10 7:45																							
Relinquished By:				Date/Time: 3/7/10 1300			Received By:				Date/Time: 3/7/10 1300			Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal <input checked="" type="checkbox"/> X _____									
Relinquished By:				Date/Time: 3/7/10 1415			Received By:				Date/Time: 3/7/10 1415			Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____									
Relinquished By:				Date/Time: 3/7/10 1645			Received By:				Date/Time: 3/8/10 0345			Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice: 4°C									
				to sc rec fridge							From sc rec fridge												

# **APPENDIX G**

## **Section 72**

Arroyo Simi Receiving Water February 11, 2010

MEC<sup>X</sup> Data Validation Report

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# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITB1475

Prepared by

MECX, 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: ITB1475  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 1  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Arroyo Simi-FP	ITB1475-01	N/A	WATER	2/11/2010 12:00:00 PM	200.7, 525.2, SM2340B

**II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered from the field to the laboratory, no custody seals were required. If necessary, the client ID was added to the sample result summary by the reviewer.

---

### Data Qualifier Reference Table

---

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

---

### Qualification Code Reference Table

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



**Qualification Code Reference Table Cont.**

---

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

---

### III. Method Analyses

#### A. EPA METHOD 200.7—Metals

Reviewed By: P. Meeks

Date Reviewed: March 30, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7 and SM2340B*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, six months for ICP metals, was met.
- Tuning: Not applicable to these analyses.
- Calibration: Calibration criteria were met. All initial and continuing calibration recoveries were within 90-110%. CRDL/CRI recoveries were within the control limits of 70-130%.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Recoveries were within the method-established control limits. There were no target compounds present in the ICSA solution at concentrations indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated base on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to these analyses.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

## **B. EPA METHOD 525.2—Semivolatile Organic Compounds (SVOCs)**

Reviewed By: P. Meeks

Date Reviewed: March 30, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 525.2*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted within 24 hours of collection and analyzed within 30 days of extraction.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria were met. The initial calibration average RRFs were  $\geq 0.05$  and %RSDs  $\leq 30\%$ . The continuing calibration RRFs were  $\geq 0.05$  and recoveries were within the method QC limits of 70-130%.
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on the LCS/LCSD results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the method control limits established by the continuing calibration standards of  $\pm 30\%$ .
- Compound Identification: Compound identification was verified. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this analysis.
- System Performance: Review of the raw data indicated no problems with system performance.

---

# Validated Sample Result Forms ITB1475

---

## *Analysis Method*    *EPA 200.7*

**Sample Name**    Arroyo Simi-FP                      **Matrix Type:** Water                      **Validation Level:** IV

**Lab Sample Name:**    ITB1475-01                      **Sample Date:** 2/11/2010 12:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Calcium	7440-70-2	230	0.10	0.050	mg/l			
Magnesium	7439-95-4	74	0.020	0.012	mg/l			

## *Analysis Method*    *EPA 525.2*

**Sample Name**    Arroyo Simi-FP                      **Matrix Type:** Water                      **Validation Level:** IV

**Lab Sample Name:**    ITB1475-01                      **Sample Date:** 2/11/2010 12:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	2921-88-2	ND	1.0	0.10	ug/l		U	
Diazinon	333-41-5	ND	0.25	0.10	ug/l		U	

## *Analysis Method*    *SM2340B*

**Sample Name**    Arroyo Simi-FP                      **Matrix Type:** Water                      **Validation Level:** IV

**Lab Sample Name:**    ITB1475-01                      **Sample Date:** 2/11/2010 12:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3		880	0.33	0.17	mg/l			

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# **APPENDIX G**

## **Section 73**

Arroyo Simi Receiving Water February 11, 2010

Test America Analytical Laboratory Report

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## LABORATORY REPORT

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

Project: Quartely Arroyo Simi-Frontier  
Park  
Quarterly Arroyo Simi-Frontier  
Sampled: 02/11/10  
Received: 02/11/10  
Issued: 02/25/10 16:44

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.  
This entire report was reviewed and approved for release.*

### CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

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

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

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

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

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

**LABORATORY ID**

ITB1475-01

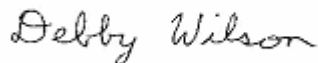
**CLIENT ID**

Arroyo Simi-FP

**MATRIX**

Water

Reviewed By:



**TestAmerica Irvine**

Debby Wilson For Joseph Doak  
Project Manager

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

Project ID: Quartely Arroyo Simi-Frontier Park  
 Quarterly Arroyo Simi-Frontier Park  
 Report Number: ITB1475

Sampled: 02/11/10  
 Received: 02/11/10

## ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1475-01 (Arroyo Simi-FP - Water)</b>									
<b>Reporting Units: ug/l</b>									
Chlorpyrifos	EPA 525.2	10B1503	0.10	1.0	ND	1	02/12/10	02/17/10	
Diazinon	EPA 525.2	10B1503	0.10	0.25	ND	1	02/12/10	02/17/10	
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					90 %				
<i>Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)</i>					90 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					109 %				
<i>Surrogate: Triphenylphosphate (70-130%)</i>					109 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					97 %				
<i>Surrogate: Perylene-d12 (70-130%)</i>					97 %				

**TestAmerica Irvine**

Debby Wilson For Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing  
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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Quartely Arroyo Simi-Frontier Park  
 Quarterly Arroyo Simi-Frontier Park  
 Report Number: ITB1475

Sampled: 02/11/10  
 Received: 02/11/10

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1475-01 (Arroyo Simi-FP - Water)</b>									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	10B1716	0.0019	0.0048	ND	0.952	02/15/10	02/17/10	
4,4'-DDE	EPA 608	10B1716	0.0029	0.0048	ND	0.952	02/15/10	02/17/10	
4,4'-DDT	EPA 608	10B1716	0.0038	0.0095	ND	0.952	02/15/10	02/17/10	
Dieldrin	EPA 608	10B1716	0.0019	0.0048	ND	0.952	02/15/10	02/17/10	
Chlordane	EPA 608	10B1716	0.038	0.095	ND	0.952	02/15/10	02/17/10	
Toxaphene	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/17/10	
Surrogate: Decachlorobiphenyl (45-120%)					67 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					51 %				

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 Quarterly Arroyo Simi-Frontier Park  
 Report Number: ITB1475

Sampled: 02/11/10  
 Received: 02/11/10

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1475-01 (Arroyo Simi-FP - Water) - cont.</b>									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Aroclor 1221	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Aroclor 1232	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Aroclor 1242	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Aroclor 1248	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Aroclor 1254	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Aroclor 1260	EPA 608	10B1716	0.24	0.48	ND	0.952	02/15/10	02/15/10	
Surrogate: Decachlorobiphenyl (45-120%)					70 %				

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 Project Manager

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Project ID: Quartely Arroyo Simi-Frontier Park  
Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1475-01 (Arroyo Simi-FP - Water)</b>									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	<b>880</b>	1	02/19/10	02/19/10	
Calcium	EPA 200.7	10B2417	0.050	0.10	<b>230</b>	1	02/19/10	02/19/10	
Magnesium	EPA 200.7	10B2417	0.012	0.020	<b>74</b>	1	02/19/10	02/19/10	

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

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Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: Arroyo Simi-FP (ITB1475-01) - Water</b> EPA 525.2	1	02/11/2010 12:00	02/11/2010 19:45	02/12/2010 08:08	02/17/2010 10:46

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

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Attention: Bronwyn Kelly

Project ID: Quartely Arroyo Simi-Frontier Park  
Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1503 Extracted: 02/12/10</b>											
<b>Blank Analyzed: 02/17/2010 (10B1503-BLK1)</b>											
Chlorpyrifos	ND	1.0	0.10	ug/l							
Diazinon	ND	0.25	0.10	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.30			ug/l	5.00		106	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	5.30			ug/l	5.00		106	70-130			
Surrogate: Triphenylphosphate	5.34			ug/l	5.00		107	70-130			
Surrogate: Triphenylphosphate	5.34			ug/l	5.00		107	70-130			
Surrogate: Perylene-d12	4.90			ug/l	5.00		98	70-130			
Surrogate: Perylene-d12	4.90			ug/l	5.00		98	70-130			
<b>LCS Analyzed: 02/17/2010 (10B1503-BS1)</b>											
Chlorpyrifos	5.20	1.0	0.10	ug/l	5.00		104	70-130			
Diazinon	5.30	0.25	0.10	ug/l	5.00		106	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.79			ug/l	5.00		96	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.79			ug/l	5.00		96	70-130			
Surrogate: Triphenylphosphate	4.66			ug/l	5.00		93	70-130			
Surrogate: Triphenylphosphate	4.66			ug/l	5.00		93	70-130			
Surrogate: Perylene-d12	4.49			ug/l	5.00		90	70-130			
Surrogate: Perylene-d12	4.49			ug/l	5.00		90	70-130			
<b>LCS Dup Analyzed: 02/17/2010 (10B1503-BSD1)</b>											
Chlorpyrifos	5.12	1.0	0.10	ug/l	5.00		102	70-130	2	30	
Diazinon	4.83	0.25	0.10	ug/l	5.00		97	70-130	9	30	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.67			ug/l	5.00		93	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.67			ug/l	5.00		93	70-130			
Surrogate: Triphenylphosphate	4.95			ug/l	5.00		99	70-130			
Surrogate: Triphenylphosphate	4.95			ug/l	5.00		99	70-130			
Surrogate: Perylene-d12	5.40			ug/l	5.00		108	70-130			
Surrogate: Perylene-d12	5.40			ug/l	5.00		108	70-130			

#### TestAmerica Irvine

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Project ID: Quartely Arroyo Simi-Frontier Park  
Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1716 Extracted: 02/15/10</b>											
<b>Blank Analyzed: 02/16/2010 (10B1716-BLK1)</b>											
4,4'-DDD	ND	0.0050	0.0020	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
Endrin ketone	ND	0.010	0.0030	ug/l							
gamma-BHC (Lindane)	ND	0.020	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Methoxychlor	ND	0.0050	0.0035	ug/l							
Chlordane	ND	0.10	0.040	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.426			ug/l	0.500		85	45-120			
Surrogate: Tetrachloro-m-xylene	0.287			ug/l	0.500		57	35-115			

### LCS Analyzed: 02/16/2010 (10B1716-BS1)

4,4'-DDD	0.447	0.0050	0.0020	ug/l	0.500		89	55-120			
4,4'-DDE	0.419	0.0050	0.0030	ug/l	0.500		84	50-120			
4,4'-DDT	0.456	0.010	0.0040	ug/l	0.500		91	55-120			
Aldrin	0.308	0.0050	0.0015	ug/l	0.500		62	40-115			
alpha-BHC	0.299	0.0050	0.0025	ug/l	0.500		60	45-115			
beta-BHC	0.404	0.010	0.0040	ug/l	0.500		81	55-115			
delta-BHC	0.397	0.0050	0.0035	ug/l	0.500		79	55-115			
Dieldrin	0.398	0.0050	0.0020	ug/l	0.500		80	55-115			
Endosulfan I	0.408	0.0050	0.0020	ug/l	0.500		82	55-115			
Endosulfan II	0.479	0.0050	0.0030	ug/l	0.500		96	55-120			
Endosulfan sulfate	0.501	0.010	0.0030	ug/l	0.500		100	60-120			
Endrin	0.420	0.0050	0.0020	ug/l	0.500		84	55-115			

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager



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Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1716 Extracted: 02/15/10</b>											
<b>LCS Analyzed: 02/16/2010 (10B1716-BS1)</b>											
Endrin aldehyde	0.488	0.010	0.0020	ug/l	0.500		98	50-120			
Endrin ketone	0.492	0.010	0.0030	ug/l	0.500		98	55-120			
gamma-BHC (Lindane)	0.304	0.020	0.0030	ug/l	0.500		61	45-115			
Heptachlor	0.320	0.010	0.0030	ug/l	0.500		64	45-115			
Heptachlor epoxide	0.389	0.0050	0.0025	ug/l	0.500		78	55-115			
Methoxychlor	0.518	0.0050	0.0035	ug/l	0.500		104	60-120			
Surrogate: Decachlorobiphenyl	0.428			ug/l	0.500		86	45-120			
Surrogate: Tetrachloro-m-xylene	0.291			ug/l	0.500		58	35-115			
<b>Matrix Spike Analyzed: 02/17/2010 (10B1716-MS1)</b>											
<b>Source: ITB1357-01</b>											
4,4'-DDD	0.446	0.014	0.0057	ug/l	0.472	ND	94	50-125			
4,4'-DDE	0.425	0.014	0.0085	ug/l	0.472	ND	90	45-125			
4,4'-DDT	0.438	0.028	0.011	ug/l	0.472	ND	93	50-125			
Aldrin	0.380	0.014	0.0042	ug/l	0.472	ND	81	35-120			
alpha-BHC	0.365	0.014	0.0071	ug/l	0.472	ND	77	40-120			
beta-BHC	0.458	0.028	0.011	ug/l	0.472	ND	97	50-120			
delta-BHC	0.420	0.014	0.0099	ug/l	0.472	ND	89	50-120			
Dieldrin	0.423	0.014	0.0057	ug/l	0.472	ND	90	50-120			
Endosulfan I	0.437	0.014	0.0057	ug/l	0.472	ND	93	50-120			
Endosulfan II	0.480	0.014	0.0085	ug/l	0.472	ND	102	50-125			
Endosulfan sulfate	0.482	0.028	0.0085	ug/l	0.472	ND	102	55-125			
Endrin	0.440	0.014	0.0057	ug/l	0.472	ND	93	50-120			
Endrin aldehyde	0.460	0.028	0.0057	ug/l	0.472	ND	97	45-125			
Endrin ketone	0.473	0.028	0.0085	ug/l	0.472	ND	100	50-125			
gamma-BHC (Lindane)	0.375	0.057	0.0085	ug/l	0.472	ND	80	40-120			
Heptachlor	0.395	0.028	0.0085	ug/l	0.472	ND	84	40-120			
Heptachlor epoxide	0.430	0.014	0.0071	ug/l	0.472	ND	91	50-120			
Methoxychlor	0.483	0.014	0.0099	ug/l	0.472	ND	102	55-125			
Surrogate: Decachlorobiphenyl	0.427			ug/l	0.472		91	45-120			
Surrogate: Tetrachloro-m-xylene	0.349			ug/l	0.472		74	35-115			

#### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
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Project ID: Quartely Arroyo Simi-Frontier Park  
 Quarterly Arroyo Simi-Frontier Park  
 Report Number: ITB1475

Sampled: 02/11/10  
 Received: 02/11/10

## 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
<b>Batch: 10B1716 Extracted: 02/15/10</b>											
<b>Matrix Spike Dup Analyzed: 02/17/2010 (10B1716-MSD1)</b>						<b>Source: ITB1357-01</b>					
4,4'-DDD	0.429	0.014	0.0057	ug/l	0.472	ND	91	50-125	4	30	
4,4'-DDE	0.402	0.014	0.0085	ug/l	0.472	ND	85	45-125	6	30	
4,4'-DDT	0.414	0.028	0.011	ug/l	0.472	ND	88	50-125	6	30	
Aldrin	0.343	0.014	0.0042	ug/l	0.472	ND	73	35-120	10	30	
alpha-BHC	0.325	0.014	0.0071	ug/l	0.472	ND	69	40-120	12	30	
beta-BHC	0.435	0.028	0.011	ug/l	0.472	ND	92	50-120	5	30	
delta-BHC	0.399	0.014	0.0099	ug/l	0.472	ND	85	50-120	5	30	
Dieldrin	0.400	0.014	0.0057	ug/l	0.472	ND	85	50-120	6	30	
Endosulfan I	0.419	0.014	0.0057	ug/l	0.472	ND	89	50-120	4	30	
Endosulfan II	0.460	0.014	0.0085	ug/l	0.472	ND	98	50-125	4	30	
Endosulfan sulfate	0.464	0.028	0.0085	ug/l	0.472	ND	98	55-125	4	30	
Endrin	0.416	0.014	0.0057	ug/l	0.472	ND	88	50-120	5	30	
Endrin aldehyde	0.444	0.028	0.0057	ug/l	0.472	ND	94	45-125	3	30	
Endrin ketone	0.452	0.028	0.0085	ug/l	0.472	ND	96	50-125	5	30	
gamma-BHC (Lindane)	0.343	0.057	0.0085	ug/l	0.472	ND	73	40-120	9	30	
Heptachlor	0.356	0.028	0.0085	ug/l	0.472	ND	75	40-120	11	30	
Heptachlor epoxide	0.402	0.014	0.0071	ug/l	0.472	ND	85	50-120	7	30	
Methoxychlor	0.462	0.014	0.0099	ug/l	0.472	ND	98	55-125	4	30	
Surrogate: Decachlorobiphenyl	0.411			ug/l	0.472		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.312			ug/l	0.472		66	35-115			

TestAmerica Irvine

Debby Wilson For Joseph Doak  
 Project Manager

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

Project ID: Quartely Arroyo Simi-Frontier Park  
Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1716 Extracted: 02/15/10</b>											
<b>Blank Analyzed: 02/15/2010 (10B1716-BLK1)</b>											
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.410			ug/l	0.500		82	45-120			
<b>LCS Analyzed: 02/15/2010 (10B1716-BS2)</b>											
Aroclor 1016	2.85	0.50	0.25	ug/l	4.00		71	50-115			
Aroclor 1260	3.28	0.50	0.25	ug/l	4.00		82	60-120			
Surrogate: Decachlorobiphenyl	0.397			ug/l	0.500		79	45-120			
<b>Matrix Spike Analyzed: 02/15/2010 (10B1716-MS2) Source: ITB1357-01</b>											
Aroclor 1016	2.66	0.47	0.24	ug/l	3.77	ND	70	45-120			
Aroclor 1260	3.40	0.47	0.24	ug/l	3.77	ND	90	55-125			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.472		87	45-120			
<b>Matrix Spike Dup Analyzed: 02/15/2010 (10B1716-MSD2) Source: ITB1357-01</b>											
Aroclor 1016	2.64	0.47	0.24	ug/l	3.77	ND	70	45-120	0.4	30	
Aroclor 1260	3.39	0.47	0.24	ug/l	3.77	ND	90	55-125	0.06	25	
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.472		87	45-120			

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

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

Project ID: Quartely Arroyo Simi-Frontier Park  
 Quarterly Arroyo Simi-Frontier Park  
 Report Number: ITB1475

Sampled: 02/11/10  
 Received: 02/11/10

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2417 Extracted: 02/19/10</b>											
<b>Blank Analyzed: 02/22/2010 (10B2417-BLK1)</b>											
Calcium	0.0503	0.10	0.050	mg/l							J
Magnesium	ND	0.020	0.012	mg/l							
<b>LCS Analyzed: 02/19/2010-02/22/2010 (10B2417-BS1)</b>											
Calcium	0.524	0.10	0.050	mg/l	0.500		105	85-115			
Magnesium	0.525	0.020	0.012	mg/l	0.500		105	85-115			
<b>Matrix Spike Analyzed: 02/19/2010-02/22/2010 (10B2417-MS1) Source: ITB1490-01</b>											
Calcium	474	0.10	0.050	mg/l	0.500	476	-371	70-130			MHA
Magnesium	7.00	0.020	0.012	mg/l	0.500	6.46	107	70-130			MHA
<b>Matrix Spike Analyzed: 02/22/2010 (10B2417-MS2) Source: ITB1425-05</b>											
Calcium	308	0.10	0.050	mg/l	0.500	306	411	70-130			MHA
Magnesium	198	0.020	0.012	mg/l	0.500	196	439	70-130			MHA
<b>Matrix Spike Dup Analyzed: 02/19/2010-02/22/2010 (10B2417-MSD1) Source: ITB1490-01</b>											
Calcium	457	0.10	0.050	mg/l	0.500	476	-3880	70-130	4	20	MHA
Magnesium	6.81	0.020	0.012	mg/l	0.500	6.46	70	70-130	3	20	MHA

**TestAmerica Irvine**

Debby Wilson For Joseph Doak  
 Project Manager

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

Project ID: Quartely Arroyo Simi-Frontier Park  
Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## DATA QUALIFIERS AND DEFINITIONS

- J** 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.
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**TestAmerica Irvine**

Debby Wilson For Joseph Doak  
Project Manager

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**ITB1475 <Page 13 of 14>**

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

Project ID: Quartely Arroyo Simi-Frontier Park  
Quarterly Arroyo Simi-Frontier Park  
Report Number: ITB1475

Sampled: 02/11/10  
Received: 02/11/10

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 200.7	Water	X	X
EPA 525.2	Water		
EPA 608	Water	X	X
SM2340B	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](http://www.testamericainc.com)*

### TestAmerica Irvine

Debby Wilson For Joseph Doak  
Project Manager

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**ITB1475 <Page 14 of 14>**

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

Project: **Boeing-SSFL NPDES**  
 Quarterly Arroyo Simi-Frontier  
 Park

Test America Contact: **Joseph Doak**  
 Project Manager: **Bronwyn Kelly**

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

Sampler: **Van Vathenger**  
**Shelby Dawson**

Field readings: **SD**  
 Temp = **14.6** **58.3**  
 pH = **7.41**  
 Time of readings = **1200 hrs**  
 Water Velocity  $(Ft/second) = 0.12$

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Arroyo Simi-FP	W	1L Poly	1	2-11-2010 / 1200	HNO <sub>3</sub>	1
Arroyo Simi-FP	W	1L Amber	2		None	2A, 2B
Arroyo Simi-FP	W	1L Amber	2		HCl	3A, 3B
Arroyo Simi-FP	W	1L Amber	2		None	4A, 4B

PCBs (608)	Hardness as CaCO <sub>3</sub>	Chlorpyrifos, Diazinon (525.2)	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT	ANALYSIS REQUIRED
X	X	X	X	

Relinquished By: *[Signature]* Date/Time: 2-11-10 14:30

Received By: *[Signature]* Date/Time: 2-11-10 14:30

Turn around Time: (check) 5 Days \_\_\_\_\_  
 24 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ Normal  72 Hours \_\_\_\_\_

Sample integrity: (check) Intact \_\_\_\_\_ On Ice: \_\_\_\_\_  
 Data Requirements: (check) No Level IV \_\_\_\_\_ All Level IV \_\_\_\_\_  
 NPDES Level IV

# CHAIN OF CUSTODY FORM

Client Name/Address: <b>MWH-Arcadia</b> 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007				Project: Boeing-SSFL NPDES Quarterly Arroyo Simi-Frontier Park			ANALYSIS REQUIRED												Field readings: Temp = 14.6 pH = 7.4 Time of readings = 1200 hrs <b>Comments</b>							
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly Sampler: <i>Van Vathanagin</i> <i>Shelby Dawson</i>				Phone Number: (626) 568-6691 Fax Number: (626) 568-6515			Hardness as CaCO <sub>3</sub>	PCBs (608)	Chlorpyrifos, Diazinon (525.2)	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT																
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #																				
Arroyo Simi-FP	W	1L Poly	1	<del>2-11-2010</del> 1200	HNO <sub>3</sub>	1					X															
Arroyo Simi-FP	W	1L Amber	2	↓ ↓	None	2A, 2B		X																		
Arroyo Simi-FP	W	1L Amber	2	↓ ↓	HCl	3A, 3B			X																	
Arroyo Simi-FP	W	1L Amber	2	↓ ↓	None	4A, 4B				X																
<del>                     Last time 2-11-2010  </del>																										
Relinquished By <i>[Signature]</i>				Date/Time: 2-11-10 14:30			Received By <i>[Signature]</i>				Date/Time: 2-11-10 14:30				Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Data Requirements: (check) No Level IV _____ All Level IV _____ NPDES Level IV _____											
Relinquished By <i>[Signature]</i>				Date/Time: 2-11-10 19:45			Received By <i>[Signature]</i>				Date/Time: 2-11-10 19:45															
Relinquished By <i>[Signature]</i>				Date/Time: _____			Received By _____				Date/Time: _____															

4.2 M2115



## LABORATORY REPORT

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

Project: Annual Sediment Arroyo  
Simi-Frontier Park  
Boeing SSFL NPDES  
Sampled: 02/11/10  
Received: 02/11/10  
Issued: 03/19/10 15:12

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

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.*

*This entire report was reviewed and approved for release.*

## SAMPLE CROSS REFERENCE

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

**LABORATORY ID**

ITB1519-01

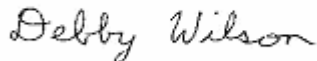
**CLIENT ID**

Arroyo Simi-FP

**MATRIX**

Soil

Reviewed By:



**TestAmerica Irvine**

Debby Wilson For Heather Clark  
Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
 Boeing SSFL NPDES  
 Report Number: ITB1519

Sampled: 02/11/10  
 Received: 02/11/10

## ORGANOCHLORINE PESTICIDES (EPA 8081A)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>									
Reporting Units: ug/kg									
4,4'-DDD	EPA 3545/8081A	10B2001	1.5	5.0	ND	1	02/17/10	02/17/10	
4,4'-DDE	EPA 3545/8081A	10B2001	1.5	5.0	ND	1	02/17/10	02/17/10	
4,4'-DDT	EPA 3545/8081A	10B2001	1.5	5.0	ND	1	02/17/10	02/17/10	C-2
Dieldrin	EPA 3545/8081A	10B2001	1.5	5.0	ND	1	02/17/10	02/17/10	
Chlordane	EPA 3545/8081A	10B2001	10	50	ND	1	02/17/10	02/17/10	
Toxaphene	EPA 3545/8081A	10B2001	50	200	ND	1	02/17/10	02/17/10	
Surrogate: Decachlorobiphenyl (45-120%)					79 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					83 %				

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
 Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
 Boeing SSFL NPDES  
 Report Number: ITB1519

Sampled: 02/11/10  
 Received: 02/11/10

## POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>									
<b>Reporting Units: ug/kg</b>									
Aroclor 1016	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
Aroclor 1221	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
Aroclor 1232	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
Aroclor 1242	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
Aroclor 1248	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
Aroclor 1254	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
Aroclor 1260	EPA 8082	10B2001	6.7	50	ND	1	02/17/10	02/18/10	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					73 %				

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
 Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>									
Reporting Units: %									
Percent Moisture	EPA 160.3	10B2316	0.10	0.10	30	1	02/18/10	02/18/10	
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>									
Reporting Units: mg/kg									
Ammonia-N	SM4500NH3-D, MOD.	10B2438	2.0	5.0	ND	0.997	02/19/10	02/19/10	

### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## TOTAL ORGANIC CARBON (EPA 9060A MOD.)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>									
Reporting Units: mg/kg									
Total Organic Carbon	EPA 9060A MOD.	10B1995	1700	5000	ND	0.997	02/17/10	02/17/10	

### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
 Boeing SSFL NPDES  
 Report Number: ITB1519

Sampled: 02/11/10  
 Received: 02/11/10

## D422

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>									
Reporting Units: %									
Clay	D422	'[none]'	N/A	NA	<b>32.9</b>	1	02/19/10	02/24/10	
Coarse Sand	D422	'[none]'	N/A	NA	<b>0.5</b>	1	02/19/10	02/24/10	
Fine Sand	D422	'[none]'	N/A	NA	<b>28.8</b>	1	02/19/10	02/24/10	
Gravel	D422	'[none]'	N/A	NA	<b>0.9</b>	1	02/19/10	02/24/10	
Medium Sand	D422	'[none]'	N/A	NA	<b>11.5</b>	1	02/19/10	02/24/10	
Silt	D422	'[none]'	N/A	NA	<b>25.5</b>	1	02/19/10	02/24/10	

### TestAmerica Irvine

Debby Wilson For Heather Clark  
 Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 8081A)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2001 Extracted: 02/17/10</b>											
<b>Blank Analyzed: 02/17/2010 (10B2001-BLK1)</b>											
4,4'-DDD	ND	5.0	1.5	ug/kg							
4,4'-DDE	ND	5.0	1.5	ug/kg							
4,4'-DDT	ND	5.0	1.5	ug/kg							
Aldrin	ND	5.0	1.5	ug/kg							
alpha-BHC	ND	5.0	1.5	ug/kg							
alpha-Chlordane	ND	5.0	2.0	ug/kg							
beta-BHC	ND	5.0	1.5	ug/kg							
delta-BHC	ND	10	1.5	ug/kg							
Dieldrin	ND	5.0	1.5	ug/kg							
Endosulfan I	ND	5.0	1.5	ug/kg							
Endosulfan II	ND	5.0	1.5	ug/kg							
Endosulfan sulfate	ND	10	2.0	ug/kg							
Endrin	ND	5.0	1.5	ug/kg							
Endrin aldehyde	ND	5.0	1.5	ug/kg							
Endrin ketone	ND	5.0	2.0	ug/kg							
gamma-BHC (Lindane)	ND	5.0	1.5	ug/kg							
gamma-Chlordane	ND	5.0	1.5	ug/kg							
Heptachlor	ND	5.0	2.0	ug/kg							
Heptachlor epoxide	ND	5.0	2.0	ug/kg							
Methoxychlor	ND	5.0	1.5	ug/kg							
Chlordane	ND	50	10	ug/kg							
Toxaphene	ND	200	50	ug/kg							
Surrogate: Decachlorobiphenyl	29.4			ug/kg	33.3		88	45-120			
Surrogate: Tetrachloro-m-xylene	27.2			ug/kg	33.3		82	35-115			

### LCS Analyzed: 02/17/2010 (10B2001-BS1)

4,4'-DDD	31.0	5.0	1.5	ug/kg	33.3		93	60-120			
4,4'-DDE	30.3	5.0	1.5	ug/kg	33.3		91	60-120			
4,4'-DDT	29.6	5.0	1.5	ug/kg	33.3		89	65-120			
Aldrin	29.7	5.0	1.5	ug/kg	33.3		89	50-115			
alpha-BHC	30.4	5.0	1.5	ug/kg	33.3		91	60-115			
beta-BHC	29.2	5.0	1.5	ug/kg	33.3		88	60-115			
delta-BHC	31.1	10	1.5	ug/kg	33.3		93	60-115			
Dieldrin	30.1	5.0	1.5	ug/kg	33.3		90	65-115			
Endosulfan I	29.2	5.0	1.5	ug/kg	33.3		88	40-120			
Endosulfan II	29.1	5.0	1.5	ug/kg	33.3		87	55-120			

### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 8081A)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2001 Extracted: 02/17/10</b>											
<b>LCS Analyzed: 02/17/2010 (10B2001-BS1)</b>											
Endosulfan sulfate	27.9	10	2.0	ug/kg	33.3		84	65-115			
Endrin	29.3	5.0	1.5	ug/kg	33.3		88	55-120			
Endrin aldehyde	28.9	5.0	1.5	ug/kg	33.3		87	55-115			
Endrin ketone	30.2	5.0	2.0	ug/kg	33.3		91	65-115			
gamma-BHC (Lindane)	30.4	5.0	1.5	ug/kg	33.3		91	55-115			
Heptachlor	30.7	5.0	2.0	ug/kg	33.3		92	55-115			
Heptachlor epoxide	29.5	5.0	2.0	ug/kg	33.3		89	55-115			
Methoxychlor	28.6	5.0	1.5	ug/kg	33.3		86	65-120			
Surrogate: Decachlorobiphenyl	29.5			ug/kg	33.3		89	45-120			
Surrogate: Tetrachloro-m-xylene	28.0			ug/kg	33.3		84	35-115			
<b>Matrix Spike Analyzed: 02/17/2010 (10B2001-MS1)</b>											
<b>Source: ITB1620-01</b>											
4,4'-DDD	27.8	5.0	1.5	ug/kg	33.3	ND	84	40-130			
4,4'-DDE	33.4	5.0	1.5	ug/kg	33.3	3.89	88	35-130			
4,4'-DDT	28.0	5.0	1.5	ug/kg	33.3	ND	84	35-130			
Aldrin	27.4	5.0	1.5	ug/kg	33.3	ND	82	40-115			
alpha-BHC	28.4	5.0	1.5	ug/kg	33.3	ND	85	40-115			
beta-BHC	26.6	5.0	1.5	ug/kg	33.3	ND	80	40-120			
delta-BHC	28.5	10	1.5	ug/kg	33.3	ND	86	45-120			
Dieldrin	27.5	5.0	1.5	ug/kg	33.3	ND	83	40-125			
Endosulfan I	27.1	5.0	1.5	ug/kg	33.3	ND	81	40-120			
Endosulfan II	26.4	5.0	1.5	ug/kg	33.3	ND	79	40-125			
Endosulfan sulfate	27.2	10	2.0	ug/kg	33.3	ND	82	45-120			
Endrin	28.7	5.0	1.5	ug/kg	33.3	ND	86	45-125			
Endrin aldehyde	23.9	5.0	1.5	ug/kg	33.3	ND	72	30-120			
Endrin ketone	26.7	5.0	2.0	ug/kg	33.3	ND	80	40-120			
gamma-BHC (Lindane)	28.2	5.0	1.5	ug/kg	33.3	ND	85	40-120			
Heptachlor	28.8	5.0	2.0	ug/kg	33.3	ND	87	40-115			
Heptachlor epoxide	27.2	5.0	2.0	ug/kg	33.3	ND	82	45-115			
Methoxychlor	26.5	5.0	1.5	ug/kg	33.3	ND	79	40-135			
Surrogate: Decachlorobiphenyl	26.7			ug/kg	33.3		80	45-120			
Surrogate: Tetrachloro-m-xylene	28.2			ug/kg	33.3		84	35-115			

#### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager



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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
 Boeing SSFL NPDES  
 Report Number: ITB1519

Sampled: 02/11/10  
 Received: 02/11/10

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 8081A)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2001 Extracted: 02/17/10</b>											
<b>Matrix Spike Dup Analyzed: 02/17/2010 (10B2001-MSD1)</b>						<b>Source: ITB1620-01</b>					
4,4'-DDD	27.3	5.0	1.5	ug/kg	33.3	ND	82	40-130	2	30	
4,4'-DDE	32.2	5.0	1.5	ug/kg	33.3	3.89	85	35-130	4	30	
4,4'-DDT	26.9	5.0	1.5	ug/kg	33.3	ND	81	35-130	4	30	
Aldrin	26.3	5.0	1.5	ug/kg	33.3	ND	79	40-115	4	30	
alpha-BHC	27.0	5.0	1.5	ug/kg	33.3	ND	81	40-115	5	30	
beta-BHC	25.9	5.0	1.5	ug/kg	33.3	ND	78	40-120	3	30	
delta-BHC	27.4	10	1.5	ug/kg	33.3	ND	82	45-120	4	30	
Dieldrin	26.8	5.0	1.5	ug/kg	33.3	ND	80	40-125	3	30	
Endosulfan I	26.3	5.0	1.5	ug/kg	33.3	ND	79	40-120	3	30	
Endosulfan II	25.7	5.0	1.5	ug/kg	33.3	ND	77	40-125	3	30	
Endosulfan sulfate	25.9	10	2.0	ug/kg	33.3	ND	78	45-120	5	30	
Endrin	27.9	5.0	1.5	ug/kg	33.3	ND	84	45-125	3	30	
Endrin aldehyde	23.6	5.0	1.5	ug/kg	33.3	ND	71	30-120	1	30	
Endrin ketone	25.7	5.0	2.0	ug/kg	33.3	ND	77	40-120	4	30	
gamma-BHC (Lindane)	26.9	5.0	1.5	ug/kg	33.3	ND	81	40-120	5	30	
Heptachlor	27.6	5.0	2.0	ug/kg	33.3	ND	83	40-115	5	30	
Heptachlor epoxide	26.4	5.0	2.0	ug/kg	33.3	ND	79	45-115	3	30	
Methoxychlor	25.5	5.0	1.5	ug/kg	33.3	ND	76	40-135	4	30	
Surrogate: Decachlorobiphenyl	25.8			ug/kg	33.3		77	45-120			
Surrogate: Tetrachloro-m-xylene	27.0			ug/kg	33.3		81	35-115			

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
 Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## METHOD BLANK/QC DATA

### POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2001 Extracted: 02/17/10</b>											
<b>Blank Analyzed: 02/18/2010 (10B2001-BLK1)</b>											
Aroclor 1016	ND	50	6.7	ug/kg							
Aroclor 1221	ND	50	6.7	ug/kg							
Aroclor 1232	ND	50	6.7	ug/kg							
Aroclor 1242	ND	50	6.7	ug/kg							
Aroclor 1248	ND	50	6.7	ug/kg							
Aroclor 1254	ND	50	6.7	ug/kg							
Aroclor 1260	ND	50	6.7	ug/kg							
Surrogate: Decachlorobiphenyl	26.7			ug/kg	33.3		80	45-120			
<b>LCS Analyzed: 02/18/2010 (10B2001-BS2)</b>											
Aroclor 1016	236	50	6.7	ug/kg	267		89	65-115			
Aroclor 1260	242	50	6.7	ug/kg	267		91	65-115			
Surrogate: Decachlorobiphenyl	27.1			ug/kg	33.3		81	45-120			
<b>Matrix Spike Analyzed: 02/18/2010 (10B2001-MS2) Source: ITB1620-01</b>											
Aroclor 1016	233	50	6.7	ug/kg	267	ND	87	50-120			
Aroclor 1260	225	50	6.7	ug/kg	267	ND	84	50-125			
Surrogate: Decachlorobiphenyl	24.2			ug/kg	33.3		72	45-120			
<b>Matrix Spike Dup Analyzed: 02/18/2010 (10B2001-MSD2) Source: ITB1620-01</b>											
Aroclor 1016	233	50	6.7	ug/kg	267	ND	87	50-120	0.2	30	
Aroclor 1260	223	50	6.7	ug/kg	267	ND	84	50-125	0.8	30	
Surrogate: Decachlorobiphenyl	23.8			ug/kg	33.3		71	45-120			

#### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager

MWH-Pasadena/Boeing  
 618 Michillinda Avenue, Suite 200  
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Project ID: Annual Sediment Arroyo Simi-Frontier Park  
 Boeing SSFL NPDES  
 Report Number: ITB1519

Sampled: 02/11/10  
 Received: 02/11/10

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B2316 Extracted: 02/18/10</b>											
<b>Duplicate Analyzed: 02/18/2010 (10B2316-DUP1)</b>						<b>Source: ITA2245-02</b>					
Percent Moisture	13.6	0.10	0.10	%		13.5			1	20	
<b>Batch: 10B2438 Extracted: 02/19/10</b>											
<b>Blank Analyzed: 02/19/2010 (10B2438-BLK1)</b>											
Ammonia-N	ND	5.0	2.0	mg/kg							
<b>LCS Analyzed: 02/19/2010 (10B2438-BS1)</b>											
Ammonia-N	47.2	5.0	2.0	mg/kg	50.0		94	85-115			
<b>Matrix Spike Analyzed: 02/19/2010 (10B2438-MS1)</b>						<b>Source: ITB1519-01</b>					
Ammonia-N	48.5	4.9	2.0	mg/kg	49.5	ND	98	75-125			
<b>Matrix Spike Dup Analyzed: 02/19/2010 (10B2438-MSD1)</b>						<b>Source: ITB1519-01</b>					
Ammonia-N	48.4	4.9	2.0	mg/kg	49.4	ND	98	75-125	0.2	15	

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
 Project Manager

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Project ID: Annual Sediment Arroyo Simi-Frontier Park  
 Boeing SSFL NPDES  
 Report Number: ITB1519

Sampled: 02/11/10  
 Received: 02/11/10

## METHOD BLANK/QC DATA

### TOTAL ORGANIC CARBON (EPA 9060A MOD.)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1995 Extracted: 02/17/10</b>											
<b>Blank Analyzed: 02/17/2010 (10B1995-BLK1)</b>											
Total Organic Carbon	ND	5000	1700	mg/kg							
<b>LCS Analyzed: 02/17/2010 (10B1995-BS1)</b>											
Total Organic Carbon	10100	5000	1700	mg/kg	10000		101	90-110			
<b>Matrix Spike Analyzed: 02/17/2010 (10B1995-MS1) Source: ITB1557-01</b>											
Total Organic Carbon	19800	5000	1700	mg/kg	20000	ND	99	70-130			
<b>Matrix Spike Dup Analyzed: 02/17/2010 (10B1995-MSD1) Source: ITB1557-01</b>											
Total Organic Carbon	20000	5000	1700	mg/kg	19900	ND	100	70-130	1	30	

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## GC CALIBRATION CHECK CRITERIA

Per Method 8000B of SW-846, the percent recovery of the calibration checks for GC analyses must be within  $\pm 15\%$  from the true value for each individual compound or the average % recovery of all compounds in the calibration check solution must be within  $\pm 15\%$  recovery. Per Method 8000B, the end user is to be notified if the latter situation occurs.

The % recovery for the following individual compounds fell outside the  $\pm 15\%$  criteria, however the average % recovery of all compounds in the calibration check solution was within  $\pm 15\%$ , thus meeting the overall calibration check criteria.

<u>Compound</u>	<u>Footnote</u>	<u>Calibration Check</u> <u>% Recovery</u>	<u>Lab Number</u>	<u>Batch</u>
4,4'-DDT	2	80	ITB1519-01	10B2001

Footnotes:

- 1 The calibration demonstrated a high bias for this compound. Samples were flagged to indicate a possible high bias in the result for this compound.
- 2 The calibration demonstrated a low bias for this compound. Samples were flagged to indicate a possible low bias in the result for this compound.

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
Project Manager

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## DATA QUALIFIERS AND DEFINITIONS

- C-2** Calibration Verification recovery was below the method control limit for this analyte, however the average % difference for all analytes met method criteria. See Calibration Summary form.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**TestAmerica Irvine**

Debby Wilson For Heather Clark  
Project Manager

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**ITB1519 <Page 14 of 15>**

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

Project ID: Annual Sediment Arroyo Simi-Frontier Park  
Boeing SSFL NPDES  
Report Number: ITB1519

Sampled: 02/11/10  
Received: 02/11/10

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 160.3	Soil		
EPA 3545/8081A	Soil	X	X
EPA 8082	Soil	X	X
EPA 9060A MOD.	Soil	N/A	N/A
SM4500NH3-D, MOD.	Soil		

*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](http://www.testamericainc.com)*

### Subcontracted Laboratories

#### ABC Laboratories *California Cert #1907*

29 N. Olive Street - Ventura, CA 93001

Analysis Performed: Bioassay-Haz. Waste  
Samples: ITB1519-01

Analysis Performed: Bioassay-Haz. Waste Def  
Samples: ITB1519-01

#### TestAmerica Burlington

30 Community Drive, Suite 11 - South Burlington, VT 05403

Method Performed: D422  
Samples: ITB1519-01

### TestAmerica Irvine

Debby Wilson For Heather Clark  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.*

# CHAIN OF CUSTODY FORM

Test America Version 6/29/09

Client Name/Address: MWH-Arcadia 618 Michilinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Annual Sediment Arroyo Simi - Frontier Park		ANALYSIS REQUIRED Chronic 10-day echaustorius estuarinus Toxicity		Field readings: Temp = <del>44.6</del> 58.3 pH = 7.41 DO = 4.89 Conductivity = 2.19 Time of readings = 12:00								
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly Sampler: <i>Shelby Dawson</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas)		Comments Keep sample in cooler in the dark until delivered to ABC Labs								
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Chronic 10-day echaustorius estuarinus Toxicity	48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas)	Total Ammonia	% Moisture	Particle Size Distribution	Total Organic Carbon	PCBs (608)	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT
Arroyo Simi-FP	S	1L wide mouth Plastic	4	2-11-2010 / 1150	4C in the Dark	1A, 1B, 1C, 1D	X	X	X					
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	2A								
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	3A			X					
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	4A				X				
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	5A						X		
<del>                     Arroyo Simi-FP                      S                      9 oz Jar                      1                      ↓                      4 deg C                      6A                      ↓                      4 deg C                      7A                      ↓                      4 deg C                      8A                      ↓                      4 deg C                      9A                      ↓                      4 deg C                      10A                      ↓                      4 deg C                      11A                      ↓                      4 deg C                      12A                      ↓                      4 deg C                      13A                      ↓                      4 deg C                      14A                      ↓                      4 deg C                      15A                      ↓                      4 deg C                      16A                      ↓                      4 deg C                      17A                      ↓                      4 deg C                      18A                      ↓                      4 deg C                      19A                      ↓                      4 deg C                      20A                 </del>														
Relinquished By	<i>[Signature]</i>	Date/Time:	2-11-10 14:30	Received By	<i>[Signature]</i>	Date/Time:	2-11-10 14:30	Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal <input checked="" type="checkbox"/>						
Relinquished By	<i>[Signature]</i>	Date/Time:	2-11-10 14:30	Received By	<i>[Signature]</i>	Date/Time:	2-11-10 14:30	Sample Integrity: (check) Intact _____ On Ice: _____ Data Requirements: (check) No Level IV _____ All Level IV <input checked="" type="checkbox"/>						
Relinquished By	<i>[Signature]</i>	Date/Time:		Received By	<i>[Signature]</i>	Date/Time:		NPDES Level IV _____ On Ice: <input checked="" type="checkbox"/>						



**CHAIN OF CUSTODY FORM**

Test America Version 6/29/09

<b>Client Name/Address:</b> MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007			<b>Project:</b> Boeing-SSFL NPDES Annual Sediment Arroyo Simi - Frontier Park			<b>ANALYSIS REQUIRED</b> Field readings: Temp = 14.6 pH = 7.41 DO = 4.89 Conductivity = 2.19 Time of readings = 12:00										
<b>Test America Contact:</b> Joseph Doak <b>Project Manager:</b> Bronwyn Kelly <b>Sampler:</b> <i>Shelby Dawson</i>			Phone Number: (626) 568-6691 Fax Number: (626) 568-6515			<b>Comments</b> Keep sample in cooler in the dark until delivered to ABC Labs										
<b>Sample Description</b>	<b>Sample Matrix</b>	<b>Container Type</b>	<b># of Cont.</b>	<b>Sampling Date/Time</b>	<b>Preservative</b>	<b>Bottle #</b>	<b>Chronic 10-day eohausorius</b>	<b>48-hour Bivalve Embryo toxicity</b>	<b>48-hour Bivalve or Crassostrea</b>	<b>Total Ammonia</b>	<b>% Moisture</b>	<b>Particle Size Distribution</b>	<b>Total Organic Carbon</b>	<b>PCBs (608)</b>	<b>Chlordane, Dieldrin, Toxaphene</b>	<b>DDT</b>
Arroyo Simi-FP	S	1L wide mouth Plastic	4	2-11-10 / 1150	4C in the Dark	1A, 1B, 1C, 1D	X	X								
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	2A				X						
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	3A				X		X				
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	4A					X					
Arroyo Simi-FP	S	9 oz Jar	1	↓	4 deg C	5A							X	X		
<i>Good base</i> 2-11-10 11:50 16:15 2-11-10 12:00																
<b>Relinquished By:</b> <i>[Signature]</i> Date/Time: 2-11-10 14:38							<b>Received By:</b> <i>[Signature]</i> Date/Time: 2-11-10 14:30									
<b>Relinquished By:</b> <i>[Signature]</i> Date/Time: 2-11-10 19:45							<b>Received By:</b> <i>[Signature]</i> Date/Time: 2-11-10 19:45									
<b>Relinquished By:</b> <i>[Signature]</i> Date/Time:							<b>Received By:</b> <i>[Signature]</i> Date/Time:									
Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal <input checked="" type="checkbox"/> Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Data Requirements: (check) No Level IV _____ All Level IV <input checked="" type="checkbox"/> NPDES Level IV _____ On Ice: <input checked="" type="checkbox"/>																

2-5 M2112



TOXICITY TESTING • OCEANOGRAPHIC RESEARCH

March 10, 2010

Mr. Joseph Doak  
TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Dear Mr. Doak:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Methods for Assessing the Toxicity of Sediment-associated Contaminants with Estuarine and Marine Amphipods, Method EPA/600/R-94/025*. Results were as follows:

CLIENT:	TestAmerica Irvine
SAMPLE I.D.:	ITB1519-01 (Arroyo Simi-FP-Soil)
DATE RECEIVED:	15 Feb - 10
ABC LAB. NO.:	TAM0310.033

**CHRONIC EOHAUSTORIUS SURVIVAL BIOASSAY**

SURVIVAL = 94.00%

Yours very truly,

for Thomas (Tim) Mikel  
Laboratory Director

**CETIS Summary Report**

Report Date: 10 Mar-10 10:09 (p 1 of 1)  
 Test Code: 18-2330-0588/TAM0310033eoh

**Eohaustorius 10-d Survival and Reburial Sediment Test**

Aquatic Bioassay & Consulting Labs, Inc.

<b>Batch ID:</b> 10-1406-8141	<b>Test Type:</b> Survival-Reburial	<b>Analyst:</b>
<b>Start Date:</b> 23 Feb-10 12:00	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 05 Mar-10 12:00	<b>Species:</b> Eohaustorius estuarius	<b>Brine:</b> Not Applicable
<b>Duration:</b> 10d 0h	<b>Source:</b> Northwestern Aquatic Science, OR	<b>Age:</b>
<b>Sample ID:</b> 15-1789-4853	<b>Code:</b> TAM0310033e	<b>Client:</b> Test America Irvine
<b>Sample Date:</b> 11 Feb-10 11:50	<b>Material:</b> Sediment	<b>Project:</b> ITB1519
<b>Receive Date:</b> 15 Feb-10 11:15	<b>Source:</b> Bioassay Report	
<b>Sample Age:</b> 12d 0h (3.6 °C)	<b>Station:</b> ITB1519-01 (arroyo Simi-FP-Soil)	

**Comparison Summary**

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
16-1469-1325	Survival Rate	100	>100	N/A	3.38%	1	Equal Variance t Two-Sample Test

**Point Estimate Summary**

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
12-5858-9985	Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
12-5858-9985	Survival Rate	Control Resp	0.92	0.9 - NL	Yes	Result Within Limits
16-1469-1325	Survival Rate	Control Resp	0.92	0.9 - NL	Yes	Result Within Limits

**Survival Rate Summary**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	5	0.92	0.9098	0.9302	0.9	0.95	0.005	0.02739	2.98%	0.0%
100		5	0.94	0.9317	0.9483	0.9	0.95	0.004082	0.02236	2.38%	-2.17%

**Survival Rate Detail**

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9	0.9	0.95	0.9	0.95
100		0.95	0.95	0.9	0.95	0.95



**CETIS Analytical Report**

Report Date: 10 Mar-10 10:09 (p 1 of 2)  
 Test Code: 18-2330-0588/TAM0310033eoh

**Eohaustorius 10-d Survival and Reburial Sediment Test**

**Aquatic Bioassay & Consulting Labs, Inc.**

<b>Analysis ID:</b> 16-1469-1325	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.7.0
<b>Analyzed:</b> 10 Mar-10 9:49	<b>Analysis:</b> Parametric-Two Sample	<b>Official Results:</b> Yes
<b>Batch ID:</b> 10-1406-8141	<b>Test Type:</b> Survival-Reburial	<b>Analyst:</b>
<b>Start Date:</b> 23 Feb-10 12:00	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 05 Mar-10 12:00	<b>Species:</b> Eohaustorius estuarius	<b>Brine:</b> Not Applicable
<b>Duration:</b> 10d 0h	<b>Source:</b> Northwestern Aquatic Science, OR	<b>Age:</b>
<b>Sample ID:</b> 15-1789-4853	<b>Code:</b> TAM0310033e	<b>Client:</b> Test America Irvine
<b>Sample Date:</b> 11 Feb-10 11:50	<b>Material:</b> Sediment	<b>Project:</b> ITB1519
<b>Receive Date:</b> 15 Feb-10 11:15	<b>Source:</b> Bioassay Report	
<b>Sample Age:</b> 12d 0h (3.6 °C)	<b>Station:</b> ITB1519-01 (arroyo Simi-FP-Soil)	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	3.38%

**Equal Variance t Two-Sample Test**

Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Negative Control		100	-1.265	1.86	0.05659	0.8792	Non-Significant Effect

**Test Acceptability**

Attribute	Test Stat	TAC Limits	Overlap	Decision
Control Resp	0.92	0.9 - NL	Yes	Result Within Limits

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.697	2.29	0.6884	No Outliers Detected

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003704635	0.003704635	1	1.6	0.2415	Non-Significant Effect
Error	0.01852318	0.002315397	8			
Total	0.02222781	0.006020033	9			

**ANOVA Assumptions**

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.5	23.15	0.7040	Equal Variances
Variances	Mod Levene Equality of Variance	0.4286	13.75	0.5370	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8904		0.1713	Normal Distribution
Distribution	Kolmogorov-Smirnov	0.2643	0.3025	0.0461	Normal Distribution
Distribution	D'Agostino Skewness	0.4789	2.576	0.6320	Normal Distribution

**Survival Rate Summary**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	5	0.92	0.9096	0.9304	0.9	0.95	0.005085	0.02739	2.98%	0.0%
100		5	0.94	0.9315	0.9485	0.9	0.95	0.004152	0.02236	2.38%	-2.17%

**Angular (Corrected) Transformed Summary**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Contr	5	1.288	1.267	1.308	1.249	1.345	0.009788	0.05271	4.09%	0.0%
100		5	1.326	1.31	1.342	1.249	1.345	0.007992	0.04304	3.25%	-2.99%

Eohaustorius 10-d Survival and Reburial Sediment Test

Aquatic Bioassay & Consulting Labs, Inc.

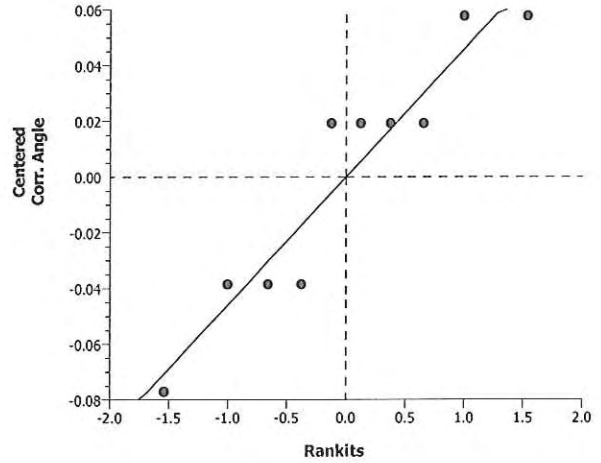
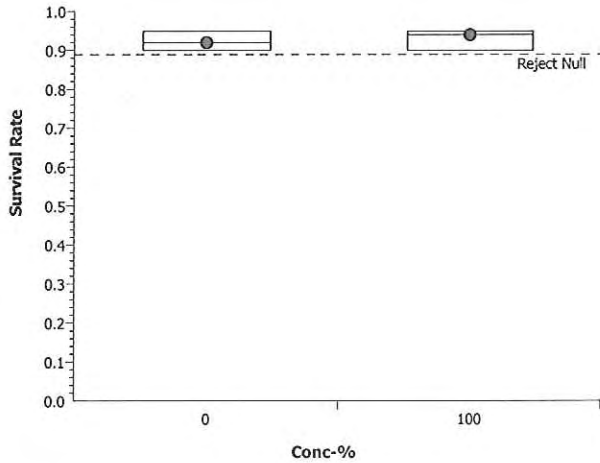
Analysis ID: 16-1469-1325      Endpoint: Survival Rate  
Analyzed: 10 Mar-10 9:49      Analysis: Parametric-Two Sample

CETIS Version: CETISv1.7.0  
Official Results: Yes

Survival Rate Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9	0.9	0.95	0.9	0.95
100		0.95	0.95	0.9	0.95	0.95

Graphics





**CETIS Analytical Report**

Report Date: 10 Mar-10 10:09 (p 1 of 2)  
 Test Code: 18-2330-0588/TAM0310033eoh

**Eohaustorius 10-d Survival and Reburial Sediment Test**

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 12-5858-9985	Endpoint: Survival Rate	CETIS Version: CETISv1.7.0
Analyzed: 10 Mar-10 9:49	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Batch ID: 10-1406-8141	Test Type: Survival-Reburial	Analyst:
Start Date: 23 Feb-10 12:00	Protocol: EPA/600/R-94/025 (1994)	Diluent: Laboratory Seawater
Ending Date: 05 Mar-10 12:00	Species: Eohaustorius estuarius	Brine: Not Applicable
Duration: 10d 0h	Source: Northwestern Aquatic Science, OR	Age:
Sample ID: 15-1789-4853	Code: TAM0310033e	Client: Test America Irvine
Sample Date: 11 Feb-10 11:50	Material: Sediment	Project: ITB1519
Receive Date: 15 Feb-10 11:15	Source: Bioassay Report	
Sample Age: 12d 0h (3.6 °C)	Station: ITB1519-01 (arroyo Simi-FP-Soil)	

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	5334240	280	Yes	Two-Point Interpolation

**Test Acceptability**

Attribute	Test Stat	TAC Limits	Overlap	Decision
Control Resp	0.92	0.9 - NL	Yes	Result Within Limits

**Residual Analysis**

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Extreme Value	Grubbs Extreme Value	1.697	2.29	0.6884	No Outliers Detected

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	N/A	N/A
EC10	>100	N/A	N/A	<1	N/A	N/A
EC15	>100	N/A	N/A	<1	N/A	N/A
EC20	>100	N/A	N/A	<1	N/A	N/A
EC25	>100	N/A	N/A	<1	N/A	N/A
EC40	>100	N/A	N/A	<1	N/A	N/A
EC50	>100	N/A	N/A	<1	N/A	N/A

**Survival Rate Summary**

Conc-%	Control Type	Count	Calculated Variate(A/B)								
			Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Negative Control	5	0.92	0.9	0.95	0.005	0.02739	2.98%	0.0%	92	100
100		5	0.94	0.9	0.95	0.004082	0.02236	2.38%	-2.17%	94	100

**Survival Rate Detail**

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9	0.9	0.95	0.9	0.95
100		0.95	0.95	0.9	0.95	0.95



**CETIS Measurement Report**

Report Date: 10 Mar-10 10:09 (p 1 of 2)  
 Test Code: 18-2330-0588/TAM0310033eoh

**Eohaustorius 10-d Survival and Reburial Sediment Test**

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 10-1406-8141	Test Type: Survival-Reburial	Analyst:
Start Date: 23 Feb-10 12:00	Protocol: EPA/600/R-94/025 (1994)	Diluent: Laboratory Seawater
Ending Date: 05 Mar-10 12:00	Species: Eohaustorius estuarius	Brine: Not Applicable
Duration: 10d 0h	Source: Northwestern Aquatic Science, OR	Age:
Sample ID: 15-1789-4853	Code: TAM0310033e	Client: Test America Irvine
Sample Date: 11 Feb-10 11:50	Material: Sediment	Project: ITB1519
Receive Date: 15 Feb-10 11:15	Source: Bioassay Report	
Sample Age: 12d 0h (3.6 °C)	Station: ITB1519-01 (arroyo Simi-FP-Soil)	

**Dissolved Oxygen-mg/L**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	10.1	10.1	10.1	10.1	10.1	0	0	0.0%	0
100		2	10.15	10.08	10.22	10	10.3	0.03536	0.2121	2.09%	0
Overall		4	10.13			10	10.3				0 (0%)

**Total Ammonia (N)-mg/L**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	0			0	0	0	0		0
100		1	0			0	0	0	0		0
Overall		2	0			0	0				0 (0%)

**pH-Units**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
100		2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
Overall		4	7.825			7.7	7.9				0 (0%)

**Salinity-ppt**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	20	20	20	20	20	0	0	0.0%	0
100		2	20	20	20	20	20	0	0	0.0%	0
Overall		4	20			20	20				0 (0%)

**Temperature-°C**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	14.9	14.9	14.9	14.9	14.9	0	0	0.0%	0
100		2	14.9	14.9	14.9	14.9	14.9	0	0	0.0%	0
Overall		4	14.9			14.9	14.9				0 (0%)



# CETIS Measurement Report

Report Date: 10 Mar-10 10:09 (p 2 of 2)  
Test Code: 18-2330-0588/TAM0310033eoh

Eohaustorius 10-d Survival and Reburial Sediment Test

Aquatic Bioassay & Consulting Labs, Inc.

## Dissolved Oxygen-mg/L

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		10.1					
100			10.3					
0	Negative Contr 2		10.1					
100			10					

## Total Ammonia (N)-mg/L

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		0					
100			0					

## pH-Units

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		7.8					
100			7.9					
0	Negative Contr 2		7.7					
100			7.9					

## Salinity-ppt

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		20					
100			20					
0	Negative Contr 2		20					
100			20					

## Temperature-°C

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		14.9					
100			14.9					
0	Negative Contr 2		14.9					
100			14.9					



TOXICITY TESTING • OCEANOGRAPHIC RESEARCH

March 10, 2010

Mr. Joseph Doak  
TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Dear Mr. Doak:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA/R-95/136*. Results were as follows:

CLIENT:	TestAmerica Irvine
SAMPLE I.D.:	IRB1519-01 (Arroyo Simi-FP-Soil)
DATE RECEIVED:	15 February 2010
ABC LAB. NO.:	TAM0310.033

#### CHRONIC MYTILUS DEVELOPMENT BIOASSAY

NOEC =	100.00 %
TU <sub>c</sub> =	1.00
IC <sub>25</sub> =	>100.00 %
IC <sub>50</sub> =	>100.00 %

Yours very truly,

*T.M.* Thomas (Tim) Mikel  
Laboratory Director

**CETIS Summary Report**

Report Date: 10 Mar-10 10:08 (p 1 of 1)  
 Test Code: 02-9099-5544/TAM0310033myt

Mussel Shell Development Test				Aquatic Bioassay & Consulting Labs, Inc.			
Batch ID:	01-5868-5140	Test Type:	Development-Survival	Analyst:			
Start Date:	23 Feb-10 12:01	Protocol:	EPA/600/R-95/136 (1995)	Diluent:	Laboratory Water		
Ending Date:	25 Feb-10 12:01	Species:	Mytilis galloprovincialis	Brine:			
Duration:	48h	Source:	Carlsbad Aquafarms CA	Age:			
Sample ID:	19-3935-0221	Code:	TAM0310033m	Client:	Test America Irvine		
Sample Date:	18 Feb-10 11:50	Material:	Sediment	Project:	ITB1519		
Receive Date:	15 Feb-10 11:15	Source:	Bioassay Report				
Sample Age:	5d 0h (3.6 °C)	Station:	ITB1519-01 (arroyo Simi-FP-Soil)				

**Comparison Summary**

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-7342-3361	Combined Proportion Norm	100	>100	N/A	3.58%	1	Equal Variance t Two-Sample Test

**Point Estimate Summary**

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
01-9378-2761	Combined Proportion Norm	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	

**Test Acceptability**

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
13-7342-3361	Combined Proportion Norm	PMSD	0.03582	NL - 0.25	No	Result Within Limits

**Combined Proportion Normal Summary**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	5	0.9781	0.9732	0.983	0.9605	0.9912	0.002402	0.01316	1.35%	0.0%
100		5	0.95	0.9362	0.9638	0.9035	1	0.006762	0.03703	3.9%	2.87%

**Combined Proportion Normal Detail**

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9912	0.9737	0.9605	0.9912	0.9737
100		1	0.9605	0.9035	0.9254	0.9605



**CETIS Analytical Report**

Report Date: 10 Mar-10 10:08 (p 1 of 2)  
 Test Code: 02-9099-5544/TAM0310033myt

<b>Mussel Shell Development Test</b>				<b>Aquatic Bioassay &amp; Consulting Labs, Inc.</b>			
Analysis ID: 13-7342-3361	Endpoint: Combined Proportion Normal	CETIS Version: CETISv1.7.0					
Analyzed: 10 Mar-10 10:08	Analysis: Parametric-Two Sample	Official Results: Yes					
Batch ID: 01-5868-5140	Test Type: Development-Survival	Analyst:					
Start Date: 23 Feb-10 12:01	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Water					
Ending Date: 25 Feb-10 12:01	Species: Mytilus galloprovincialis	Brine:					
Duration: 48h	Source: Carlsbad Aquafarms CA	Age:					
Sample ID: 19-3935-0221	Code: TAM0310033m	Client: Test America Irvine					
Sample Date: 18 Feb-10 11:50	Material: Sediment	Project: ITB1519					
Receive Date: 15 Feb-10 11:15	Source: Bioassay Report						
Sample Age: 5d 0h (3.6 °C)	Station: ITB1519-01 (arroyo Simi-FP-Soil)						

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A	1	3.58%

Equal Variance t Two-Sample Test							
Control	vs	Conc-%	Test Stat	Critical	MSD	P-Value	Decision(5%)
Negative Control		100	1.181	1.86	0.0983	0.1358	Non-Significant Effect

Test Acceptability				
Attribute	Test Stat	TAC Limits	Overlap	Decision
PMSD	0.03582	NL - 0.25	No	Result Within Limits

Auxiliary Tests					
Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	2.183	2.29	0.0965	No Outliers Detected

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.009739579	0.009739579	1	1.394	0.2716	Non-Significant Effect
Error	0.05589143	0.006986429	8			
Total	0.06563101	0.01672601	9			

ANOVA Assumptions					
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	5.289	23.15	0.1356	Equal Variances
Variances	Mod Levene Equality of Variance	1.401	13.75	0.2813	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9358		0.5074	Normal Distribution
Distribution	Kolmogorov-Smirnov	0.1742	0.3025	0.6068	Normal Distribution
Distribution	D'Agostino Skewness	1.419	2.576	0.1558	Normal Distribution

Combined Proportion Normal Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	5	0.9781	0.9731	0.9831	0.9605	0.9912	0.002443	0.01316	1.35%	0.0%
100		5	0.95	0.9359	0.9641	0.9035	1	0.006877	0.03703	3.9%	2.87%

Angular (Corrected) Transformed Summary											
Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Contr	5	1.428	1.41	1.446	1.371	1.477	0.008753	0.04714	3.3%	0.0%
100		5	1.366	1.324	1.407	1.255	1.538	0.02013	0.1084	7.94%	4.37%

# CETIS Analytical Report

Report Date: 10 Mar-10 10:08 (p 2 of 2)  
 Test Code: 02-9099-5544/TAM0310033myt

## Mussel Shell Development Test

Aquatic Bioassay & Consulting Labs, Inc.

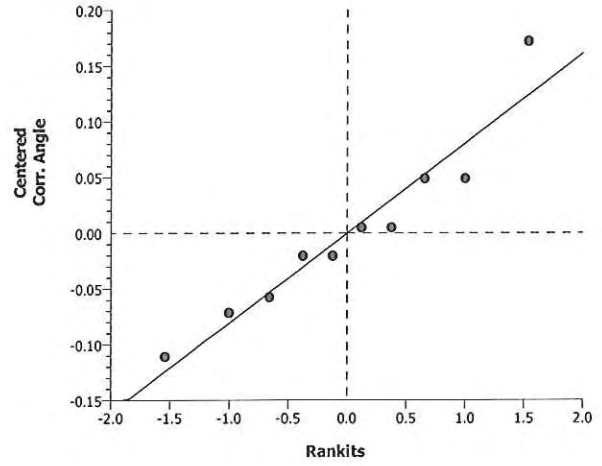
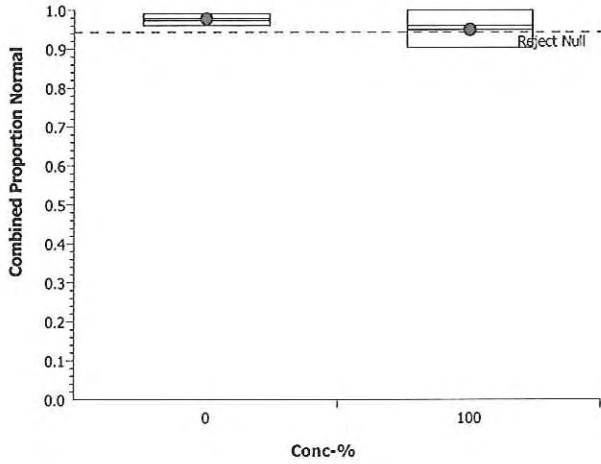
Analysis ID: 13-7342-3361      Endpoint: Combined Proportion Normal  
 Analyzed: 10 Mar-10 10:08      Analysis: Parametric-Two Sample

CETIS Version: CETISv1.7.0  
 Official Results: Yes

### Combined Proportion Normal Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9912	0.9737	0.9605	0.9912	0.9737
100		1	0.9605	0.9035	0.9254	0.9605

### Graphics







**CETIS Measurement Report**

Report Date: 10 Mar-10 10:08 (p 1 of 2)  
 Test Code: 02-9099-5544/TAM0310033myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

<b>Batch ID:</b> 01-5868-5140	<b>Test Type:</b> Development-Survival	<b>Analyst:</b>
<b>Start Date:</b> 23 Feb-10 12:01	<b>Protocol:</b> EPA/600/R-95/136 (1995)	<b>Diluent:</b> Laboratory Water
<b>Ending Date:</b> 25 Feb-10 12:01	<b>Species:</b> Mytilis galloprovincialis	<b>Brine:</b>
<b>Duration:</b> 48h	<b>Source:</b> Carlsbad Aquafarms CA	<b>Age:</b>
<b>Sample ID:</b> 19-3935-0221	<b>Code:</b> TAM0310033m	<b>Client:</b> Test America Irvine
<b>Sample Date:</b> 18 Feb-10 11:50	<b>Material:</b> Sediment	<b>Project:</b> ITB1519
<b>Receive Date:</b> 15 Feb-10 11:15	<b>Source:</b> Bioassay Report	
<b>Sample Age:</b> 5d 0h (3.6 °C)	<b>Station:</b> ITB1519-01 (arroyo Simi-FP-Soil)	

**Dissolved Oxygen-mg/L**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	9.15	9.126	9.174	9.1	9.2	0.01179	0.07072	0.77%	0
100		2	9.25	9.226	9.274	9.2	9.3	0.01179	0.07075	0.76%	0
Overall		4	9.2			9.1	9.3				0 (0%)

**Total Ammonia (N)-mg/L**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	0			0	0	0	0		0
100		1	0			0	0	0	0		0
Overall		2	0			0	0				0 (0%)

**pH-Units**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
100		2	8.05	8.026	8.074	8	8.1	0.01179	0.07073	0.88%	0
Overall		4	7.975			7.9	8.1				0 (0%)

**Salinity-ppt**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	34	34	34	34	34	0	0	0.0%	0
100		2	34	34	34	34	34	0	0	0.0%	0
Overall		4	34			34	34				0 (0%)

**Temperature-°C**

Conc-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
100		2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
Overall		4	14.85			14.8	14.9				0 (0%)

**CETIS Measurement Report**

Report Date: 10 Mar-10 10:08 (p 2 of 2)  
 Test Code: 02-9099-5544/TAM0310033myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

**Dissolved Oxygen-mg/L**

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		9.1					
100			9.3					
0	Negative Contr 2		9.2					
100			9.2					

**Total Ammonia (N)-mg/L**

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		0					
100			0					

**pH-Units**

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		7.9					
100			8					
0	Negative Contr 2		7.9					
100			8.1					

**Salinity-ppt**

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		34					
100			34					
0	Negative Contr 2		34					
100			34					

**Temperature-°C**

Conc-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		14.9					
100			14.9					
0	Negative Contr 2		14.8					
100			14.8					





TOXICITY TESTING • OCEANOGRAPHIC RESEARCH

**96 Hour *Eohaustorius estuarius* Survival Bioassay - Standard Toxicant**

DATE: 26 February 2010

STANDARD TOXICANT: Ammonium Chloride

ENDPOINT: SURVIVAL

UNIONIZED AMMONIA

NOEC = 0.368 mg/L

IC25 = 0.5249 mg/L

IC50 = 0.8411 mg/L

Yours very truly,

*For*  
Thomas (Tim) Mikel  
Laboratory Director

**CETIS Summary Report**

Report Date: 10 Mar-10 09:40 (p 1 of 1)  
 Test Code: 09-1794-0873/EOH022610e

Reference Toxicant 96-h Acute Survival Test Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 09-2836-6539	Test Type: Survival	Analyst:
Start Date: 26 Feb-10 12:00	Protocol: EPA/600/R-94/025 (1994)	Diluent: Laboratory Seawater
Ending Date: 02 Mar-10 12:00	Species: Eohaustorius estuarius	Brine: Not Applicable
Duration: 96h	Source: Northwestern Aquatic Science, OR	Age:

Sample ID: 05-9211-9044	Code: EOH022610	Client: Internal Lab
Sample Date: 26 Feb-10	Material: Ammonia (Unionized)	Project: REF TOX
Receive Date: 26 Feb-10	Source: Reference Toxicant	
Sample Age: 12h	Station: REF TOX	

**Comparison Summary**

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
16-6141-9107	Survival Rate	0.368	0.647	0.488	12.01%		Dunnett's Multiple Comparison Test

**Point Estimate Summary**

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
13-7746-9954	Survival Rate	EC5	0.304	0.1062	0.4608		Linear Interpolation (ICPIN)
		EC10	0.3889	0.2169	0.4804		
		EC15	0.4343	0.3282	0.5514		
		EC20	0.4796	0.3754	0.6403		
		EC25	0.5249	0.4226	0.7091		
		EC40	0.6729	0.5199	0.9326		
		EC50	0.8411	0.5306	1.04		

**Survival Rate Summary**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	4	0.975	0.9563	0.9937	0.9	1	0.009129	0.05	5.13%	0.0%
0.185		4	0.975	0.9563	0.9937	0.9	1	0.009129	0.05	5.13%	0.0%
0.368		4	0.9	0.8695	0.9305	0.8	1	0.01491	0.08165	9.07%	7.69%
0.647		4	0.6	0.5472	0.6528	0.5	0.8	0.02582	0.1414	23.57%	38.46%
1.337		4	0.2	0.1695	0.2305	0.1	0.3	0.01491	0.08165	40.82%	79.49%
2.789		4	0	0	0	0	0	0	0		100.0%

**Survival Rate Detail**

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9	1	1
0.185		1	0.9	1	1
0.368		0.8	0.9	0.9	1
0.647		0.6	0.5	0.8	0.5
1.337		0.3	0.2	0.2	0.1
2.789		0	0	0	0

**CETIS Analytical Report**

Report Date: 10 Mar-10 09:40 (p 1 of 2)  
 Test Code: 09-1794-0873/EOH022610e

**Reference Toxicant 96-h Acute Survival Test**

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 16-6141-9107	Endpoint: Survival Rate	CETIS Version: CETISv1.7.0
Analyzed: 10 Mar-10 9:40	Analysis: Parametric-Control vs Treatments	Official Results: Yes
Batch ID: 09-2836-6539	Test Type: Survival	Analyst:
Start Date: 26 Feb-10 12:00	Protocol: EPA/600/R-94/025 (1994)	Diluent: Laboratory Seawater
Ending Date: 02 Mar-10 12:00	Species: Eohaustorius estuarius	Brine: Not Applicable
Duration: 96h	Source: Northwestern Aquatic Science, OR	Age:
Sample ID: 05-9211-9044	Code: EOH022610	Client: Internal Lab
Sample Date: 26 Feb-10	Material: Ammonia (Unionized)	Project: REF TOX
Receive Date: 26 Feb-10	Source: Reference Toxicant	
Sample Age: 12h	Station: REF TOX	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	0.368	0.647	0.488		12.01%

**Dunnett's Multiple Comparison Test**

Control	vs	Conc-mg/L	Test Stat	Critical	MSD	P-Value	Decision(5%)
Negative Control		0.185	0	2.356	0.187	0.8000	Non-Significant Effect
		0.368	1.474	2.356	0.187	0.2113	Non-Significant Effect
		0.647*	6.053	2.356	0.187	<0.0001	Significant Effect
		1.337*	11.52	2.356	0.187	<0.0001	Significant Effect

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	2.168	2.708	0.4306	No Outliers Detected

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.492385	0.6230962	4	49.48	<0.0001	Significant Effect
Error	0.1888913	0.01259275	15			
Total	2.681276	0.6356889	19			

**ANOVA Assumptions**

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	1.562	13.28	0.8156	Equal Variances
Variances	Mod Levene Equality of Variance	0.3785	4.893	0.8204	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9202		0.0998	Normal Distribution
Distribution	Kolmogorov-Smirnov	0.1914	0.2235	0.0531	Normal Distribution
Distribution	D'Agostino Skewness	0.5579	2.576	0.5769	Normal Distribution
Distribution	D'Agostino Kurtosis	0.0208	2.576	0.9834	Normal Distribution
Distribution	D'Agostino Omnibus	0.3117	9.21	0.8557	Normal Distribution



**CETIS Analytical Report**

Report Date: 10 Mar-10 09:40 (p 2 of 2)  
 Test Code: 09-1794-0873/EOH022610e

Reference Toxicant 96-h Acute Survival Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 16-6141-9107      Endpoint: Survival Rate  
 Analyzed: 10 Mar-10 9:40      Analysis: Parametric-Control vs Treatments

CETIS Version: CETISv1.7.0  
 Official Results: Yes

Survival Rate Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	4	0.975	0.956	0.994	0.9	1	0.009285	0.05	5.13%	0.0%
0.185		4	0.975	0.956	0.994	0.9	1	0.009285	0.05	5.13%	0.0%
0.368		4	0.9	0.8689	0.9311	0.8	1	0.01516	0.08165	9.07%	7.69%
0.647		4	0.6	0.5462	0.6538	0.5	0.8	0.02626	0.1414	23.57%	38.46%
1.337		4	0.2	0.1689	0.2311	0.1	0.3	0.01516	0.08165	40.82%	79.49%
2.789		4	0	0	0	0	0	0	0		100.0%

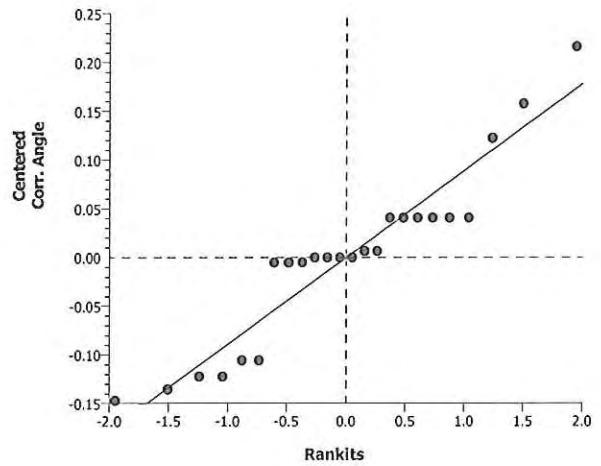
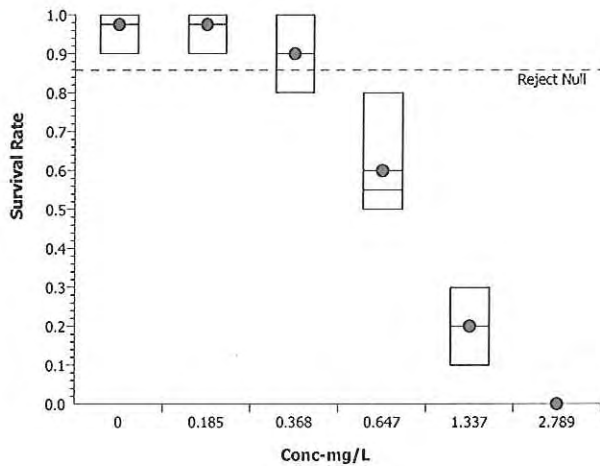
Angular (Corrected) Transformed Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Contr	4	1.371	1.34	1.402	1.249	1.412	0.01513	0.08149	5.94%	0.0%
0.185		4	1.371	1.34	1.402	1.249	1.412	0.01513	0.08149	5.94%	0.0%
0.368		4	1.254	1.207	1.302	1.107	1.412	0.02314	0.1246	9.94%	8.53%
0.647		4	0.891	0.8333	0.9487	0.7854	1.107	0.02817	0.1517	17.03%	35.02%
1.337		4	0.4572	0.417	0.4973	0.3218	0.5796	0.0196	0.1055	23.09%	66.66%
2.789		4	0.1588	0.1588	0.1588	0.1588	0.1588	0	0	0.0%	88.42%

Survival Rate Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9	1	1
0.185		1	0.9	1	1
0.368		0.8	0.9	0.9	1
0.647		0.6	0.5	0.8	0.5
1.337		0.3	0.2	0.2	0.1
2.789		0	0	0	0

Graphics



**CETIS Analytical Report**

Report Date: 10 Mar-10 09:40 (p 1 of 2)  
 Test Code: 09-1794-0873/EOH022610e

**Reference Toxicant 96-h Acute Survival Test**

**Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID: 13-7746-9954      Endpoint: Survival Rate      CETIS Version: CETISv1.7.0  
 Analyzed: 10 Mar-10 9:40      Analysis: Linear Interpolation (ICPIN)      Official Results: Yes

Batch ID: 09-2836-6539      Test Type: Survival      Analyst:  
 Start Date: 26 Feb-10 12:00      Protocol: EPA/600/R-94/025 (1994)      Diluent: Laboratory Seawater  
 Ending Date: 02 Mar-10 12:00      Species: Eohaustorius estuarius      Brine: Not Applicable  
 Duration: 96h      Source: Northwestern Aquatic Science, OR      Age:

Sample ID: 05-9211-9044      Code: EOH022610      Client: Internal Lab  
 Sample Date: 26 Feb-10      Material: Ammonia (Unionized)      Project: REF TOX  
 Receive Date: 26 Feb-10      Source: Reference Toxicant  
 Sample Age: 12h      Station: REF TOX

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	7055475	280	Yes	Two-Point Interpolation

**Residual Analysis**

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Extreme Value	Grubbs Extreme Value	2.385	2.802	0.2703	No Outliers Detected

**Point Estimates**

Level	mg/L	95% LCL	95% UCL
EC5	0.304	0.1062	0.4608
EC10	0.3889	0.2169	0.4804
EC15	0.4343	0.3282	0.5514
EC20	0.4796	0.3754	0.6403
EC25	0.5249	0.4226	0.7091
EC40	0.6729	0.5199	0.9326
EC50	0.8411	0.5306	1.04

**Survival Rate Summary**

**Calculated Variate(A/B)**

Conc-mg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Negative Control	4	0.975	0.9	1	0.009129	0.05	5.13%	0.0%	39	40
0.185		4	0.975	0.9	1	0.009129	0.05	5.13%	0.0%	39	40
0.368		4	0.9	0.8	1	0.01491	0.08165	9.07%	7.69%	36	40
0.647		4	0.6	0.5	0.8	0.02582	0.1414	23.57%	38.46%	24	40
1.337		4	0.2	0.1	0.3	0.01491	0.08165	40.82%	79.49%	8	40
2.789		4	0	0	0	0	0		100.0%	0	40

**Survival Rate Detail**

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9	1	1
0.185		1	0.9	1	1
0.368		0.8	0.9	0.9	1
0.647		0.6	0.5	0.8	0.5
1.337		0.3	0.2	0.2	0.1
2.789		0	0	0	0

# CETIS Analytical Report

Report Date: 10 Mar-10 09:40 (p 2 of 2)  
Test Code: 09-1794-0873/EOH022610e

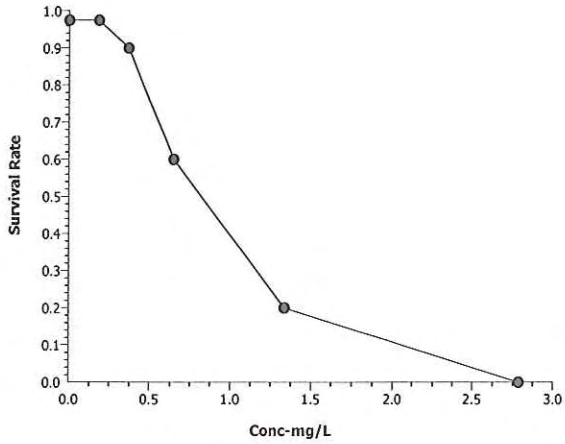
Reference Toxicant 96-h Acute Survival Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 13-7746-9954      Endpoint: Survival Rate  
Analyzed: 10 Mar-10 9:40      Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.7.0  
Official Results: Yes

## Graphics





**CETIS Measurement Report**

Report Date: 10 Mar-10 09:40 (p 1 of 3)  
 Test Code: 09-1794-0873/EOH022610e

**Reference Toxicant 96-h Acute Survival Test**

**Aquatic Bioassay & Consulting Labs, Inc.**

<b>Batch ID:</b> 09-2836-6539	<b>Test Type:</b> Survival	<b>Analyst:</b>
<b>Start Date:</b> 26 Feb-10 12:00	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 02 Mar-10 12:00	<b>Species:</b> Eohaustorius estuarius	<b>Brine:</b> Not Applicable
<b>Duration:</b> 96h	<b>Source:</b> Northwestern Aquatic Science, OR	<b>Age:</b>
<b>Sample ID:</b> 05-9211-9044	<b>Code:</b> EOH022610	<b>Client:</b> Internal Lab
<b>Sample Date:</b> 26 Feb-10	<b>Material:</b> Ammonia (Unionized)	<b>Project:</b> REF TOX
<b>Receive Date:</b> 26 Feb-10	<b>Source:</b> Reference Toxicant	
<b>Sample Age:</b> 12h	<b>Station:</b> REF TOX	

**Dissolved Oxygen-mg/L**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	6.35	6.135	6.565	5.9	6.8	0.1061	0.6364	10.02%	0
0.185		2	6.2	6.009	6.391	5.8	6.6	0.09428	0.5657	9.12%	0
0.368		2	6.25	6.035	6.465	5.8	6.7	0.1061	0.6364	10.18%	0
0.647		2	6.3	6.109	6.491	5.9	6.7	0.09428	0.5657	8.98%	0
1.337		2	6.25	6.083	6.417	5.9	6.6	0.0825	0.495	7.92%	0
2.789		2	6.2	6.009	6.391	5.8	6.6	0.09428	0.5657	9.12%	0
Overall		12	6.258			5.8	6.8				0 (0%)

**Total Ammonia (N)-mg/L**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	0			0	0	0	0	0.0%	0
0.185		1	12.5			12.5	12.5	0	0	0.0%	0
0.368		1	24.8			24.8	24.8	0	0	0.0%	0
0.647		1	43.6			43.6	43.6	0	0	0.0%	0
1.337		1	90.1			90.1	90.1	0	0	0.0%	0
2.789		1	188			188	188	0	0	0.0%	0
Overall		6	59.83			0	188				0 (0%)

**pH-Units**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
0.185		2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
0.368		2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
0.647		2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
1.337		2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
2.789		2	7.75	7.726	7.774	7.7	7.8	0.01179	0.07072	0.91%	0
Overall		12	7.75			7.7	7.8				0 (0%)

**Salinity-ppt**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	20	20	20	20	20	0	0	0.0%	0
0.185		2	20	20	20	20	20	0	0	0.0%	0
0.368		2	20	20	20	20	20	0	0	0.0%	0
0.647		2	20	20	20	20	20	0	0	0.0%	0
1.337		2	20	20	20	20	20	0	0	0.0%	0
2.789		2	20	20	20	20	20	0	0	0.0%	0
Overall		12	20			20	20				0 (0%)

**Temperature-°C**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	14.9	14.9	14.9	14.9	14.9	0	0	0.0%	0
0.185		2	14.95	14.93	14.97	14.9	15	0.01179	0.07075	0.47%	0
0.368		2	14.95	14.93	14.97	14.9	15	0.01179	0.07075	0.47%	0
0.647		2	14.95	14.93	14.97	14.9	15	0.01179	0.07075	0.47%	0
1.337		2	14.95	14.93	14.97	14.9	15	0.01179	0.07075	0.47%	0
2.789		2	14.95	14.93	14.97	14.9	15	0.01179	0.07075	0.47%	0
Overall		12	14.94			14.9	15				0 (0%)

**CETIS Measurement Report**

Report Date: 10 Mar-10 09:40 (p 2 of 3)  
 Test Code: 09-1794-0873/EOH022610e

Reference Toxicant 96-h Acute Survival Test

Aquatic Bioassay & Consulting Labs, Inc.

**Dissolved Oxygen-mg/L**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		6.8					
0.185		6.6						
0.368		6.7						
0.647		6.7						
1.337		6.6						
2.789		6.6						
0		Negative Contr 2		5.9				
0.185	5.8							
0.368	5.8							
0.647	5.9							
1.337	5.9							
2.789	5.8							

**Total Ammonia (N)-mg/L**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		0					
0.185		12.5						
0.368		24.8						
0.647		43.6						
1.337		90.1						
2.789		188						

**pH-Units**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		7.8					
0.185		7.8						
0.368		7.8						
0.647		7.8						
1.337		7.8						
2.789		7.8						
0		Negative Contr 2		7.7				
0.185	7.7							
0.368	7.7							
0.647	7.7							
1.337	7.7							
2.789	7.7							

**Salinity-ppt**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		20					
0.185		20						
0.368		20						
0.647		20						
1.337		20						
2.789		20						
0		Negative Contr 2		20				
0.185	20							
0.368	20							
0.647	20							
1.337	20							
2.789	20							



# CETIS Measurement Report

Report Date: 10 Mar-10 09:40 (p 3 of 3)  
Test Code: 09-1794-0873/EOH022610e

Reference Toxicant 96-h Acute Survival Test

Aquatic Bioassay & Consulting Labs, Inc.

## Temperature-°C

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr	1	14.9					
0.185			14.9					
0.368			14.9					
0.647			14.9					
1.337			14.9					
2.789			14.9					
0	Negative Contr	2	14.9					
0.185			15					
0.368			15					
0.647			15					
1.337			15					
2.789			15					



TOXICITY TESTING • OCEANOGRAPHIC RESEARCH

### CHRONIC MYTILUS DEVELOPMENT BIOASSAY

DATE: 23 February 2010

STANDARD TOXICANT: Unionized Ammonia

NOEC = 0.032 mg/l

IC25 = 0.079 mg/l

IC50 = 0.096 mg/l

Yours very truly,

Thomas (Tim) Mikel  
Laboratory Director

# CETIS Summary Report

Report Date: 10 Mar-10 09:59 (p 1 of 1)  
 Test Code: 01-3844-4523/MYT022310myt

## Mussel Shell Development Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 10-0504-5266	Test Type: Development-Survival	Analyst:
Start Date: 23 Feb-10 12:00	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Seawater
Ending Date: 25 Feb-10 12:00	Species: Mytilus galloprovincialis	Brine: Not Applicable
Duration: 48h	Source: Carlsbad Aquafarms CA	Age:
Sample ID: 02-9949-1709	Code: MYT022310	Client: Internal Lab
Sample Date: 23 Feb-10	Material: Ammonia (Unionized)	Project:
Receive Date: 23 Feb-10	Source: Reference Toxicant	
Sample Age: 12h	Station:	

## Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
02-9822-7674	Combined Proportion Norm	0.032	0.061	0.04418	4.1%		Bonferroni Adj t Test

## Point Estimate Summary

Analysis ID	Endpoint	Level	mg/L	95% LCL	95% UCL	TU	Method
12-0454-3247	Combined Proportion Norm	EC5	0.04712	0.03428	0.06754		Linear Interpolation (ICPIN)
		EC10	0.06261	0.04923	0.06751		
		EC15	0.06812	0.06207	0.072		
		EC20	0.07362	0.06846	0.07821		
		EC25	0.07912	0.07429	0.08454		
		EC40	0.08997	0.08722	0.09293		
		EC50	0.0964	0.09275	0.09998		

## Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
02-9822-7674	Combined Proportion Norm	PMSD	0.04096	NL - 0.25	No	Result Within Limits

## Combined Proportion Normal Summary

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	2	0.9876	0.9811	0.9941	0.9752	1	0.003201	0.01753	1.78%	0.0%
0.032		4	0.9762	0.9724	0.9801	0.9628	0.9876	0.001886	0.01033	1.06%	1.15%
0.061		5	0.9033	0.8874	0.9192	0.8512	0.9545	0.007778	0.0426	4.72%	8.54%
0.082		5	0.7149	0.7017	0.728	0.6901	0.7769	0.006424	0.03518	4.92%	27.62%
0.11		5	0.2851	0.2571	0.3132	0.1694	0.3636	0.01373	0.07518	26.37%	71.13%
0.127		5	0	0	0	0	0	0	0		100.0%

## Combined Proportion Normal Detail

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9752				1
0.032		0.9752		0.9876	0.9628	0.9793
0.061		0.9545	0.905	0.9339	0.8512	0.8719
0.082		0.7769	0.6901	0.7066	0.6983	0.7025
0.11		0.3223	0.314	0.2562	0.1694	0.3636
0.127		0	0	0	0	0



**CETIS Analytical Report**

Report Date: 10 Mar-10 09:59 (p 1 of 2)  
 Test Code: 01-3844-4523/MYT022310myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

<b>Analysis ID:</b> 02-9822-7674	<b>Endpoint:</b> Combined Proportion Normal	<b>CETIS Version:</b> CETISv1.7.0
<b>Analyzed:</b> 10 Mar-10 9:59	<b>Analysis:</b> Parametric-Multiple Comparison	<b>Official Results:</b> Yes
<b>Batch ID:</b> 10-0504-5266	<b>Test Type:</b> Development-Survival	<b>Analyst:</b>
<b>Start Date:</b> 23 Feb-10 12:00	<b>Protocol:</b> EPA/600/R-95/136 (1995)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 25 Feb-10 12:00	<b>Species:</b> Mytilis galloprovincialis	<b>Brine:</b> Not Applicable
<b>Duration:</b> 48h	<b>Source:</b> Carlsbad Aquafarms CA	<b>Age:</b>
<b>Sample ID:</b> 02-9949-1709	<b>Code:</b> MYT022310	<b>Client:</b> Internal Lab
<b>Sample Date:</b> 23 Feb-10	<b>Material:</b> Ammonia (Unionized)	<b>Project:</b>
<b>Receive Date:</b> 23 Feb-10	<b>Source:</b> Reference Toxicant	
<b>Sample Age:</b> 12h	<b>Station:</b>	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	0.032	0.061	0.04418		4.1%

**Bonferroni Adj t Test**

Control	vs	Conc-mg/L	Test Stat	Critical	MSD	P-Value	Decision(5%)
Negative Control		0.032	0.9929	2.473	0.1416	0.6711	Non-Significant Effect
		0.061*	3.884	2.473	0.1368	0.0026	Significant Effect
		0.082*	8.449	2.473	0.1368	<0.0001	Significant Effect
		0.11*	16.55	2.473	0.1368	<0.0001	Significant Effect

**Test Acceptability**

Attribute	Test Stat	TAC Limits	Overlap	Decision
PMSD	0.04096	NL - 0.25	No	Result Within Limits

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	2.298	2.734	0.2979	No Outliers Detected

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	2.312099	0.5780246	4	132.2	<0.0001	Significant Effect
Error	0.06998163	0.004373852	16			
Total	2.38208	0.5823985	20			

**ANOVA Assumptions**

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	3.668	13.28	0.4529	Equal Variances
Variances	Mod Levene Equality of Variance	1.42	5.205	0.2821	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9759		0.8574	Normal Distribution
Distribution	Kolmogorov-Smirnov	0.1022	0.2186	0.9243	Normal Distribution
Distribution	D'Agostino Skewness	0.7073	2.576	0.4794	Normal Distribution
Distribution	D'Agostino Kurtosis	0.1365	2.576	0.8915	Normal Distribution
Distribution	D'Agostino Omnibus	0.5189	9.21	0.7715	Normal Distribution

**CETIS Analytical Report**

Report Date: 10 Mar-10 09:59 (p 2 of 2)  
 Test Code: 01-3844-4523/MYT022310myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 02-9822-7674      Endpoint: Combined Proportion Normal  
 Analyzed: 10 Mar-10 9:59      Analysis: Parametric-Multiple Comparison

CETIS Version: CETISv1.7.0  
 Official Results: Yes

**Combined Proportion Normal Summary**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Control	2	0.9876	0.9809	0.9943	0.9752	1	0.003255	0.01753	1.78%	0.0%
0.032		4	0.9762	0.9723	0.9802	0.9628	0.9876	0.001918	0.01033	1.06%	1.15%
0.061		5	0.9033	0.8871	0.9195	0.8512	0.9545	0.007911	0.0426	4.72%	8.54%
0.082		5	0.7149	0.7015	0.7283	0.6901	0.7769	0.006534	0.03518	4.92%	27.62%
0.11		5	0.2851	0.2565	0.3137	0.1694	0.3636	0.01396	0.07518	26.37%	71.13%
0.127		5	0	0	0	0	0	0	0	100.0%	

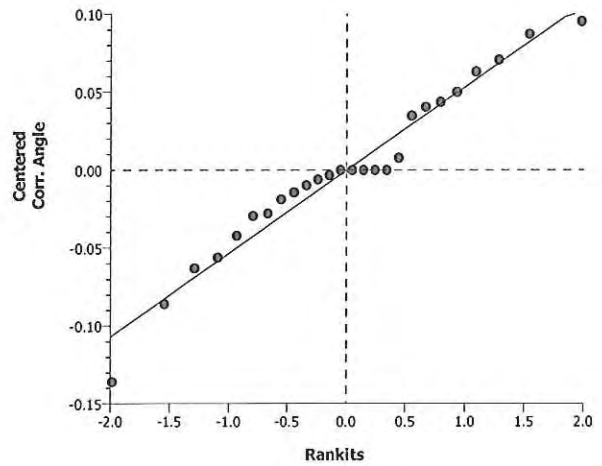
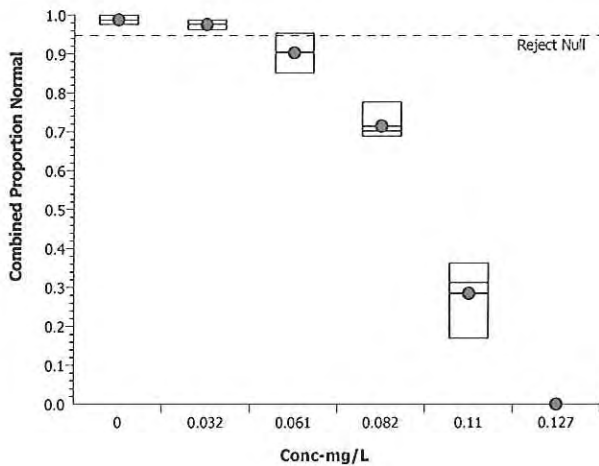
**Angular (Corrected) Transformed Summary**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Negative Contr	2	1.476	1.442	1.51	1.413	1.539	0.01654	0.08907	6.04%	0.0%
0.032		4	1.419	1.406	1.432	1.377	1.459	0.006344	0.03416	2.41%	3.85%
0.061		5	1.261	1.232	1.289	1.175	1.356	0.0138	0.07431	5.89%	14.56%
0.082		5	1.008	0.9929	1.023	0.9804	1.079	0.007437	0.04005	3.97%	31.68%
0.11		5	0.5602	0.5272	0.5931	0.4242	0.6473	0.01609	0.08666	15.47%	62.04%
0.127		5	0.03215	0.03214	0.03215	0.03215	0.03215	0	0	0.0%	97.82%

**Combined Proportion Normal Detail**

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9752	1			
0.032		0.9752	0.9876	0.9628	0.9793	
0.061		0.9545	0.905	0.9339	0.8512	0.8719
0.082		0.7769	0.6901	0.7066	0.6983	0.7025
0.11		0.3223	0.314	0.2562	0.1694	0.3636
0.127		0	0	0	0	0

**Graphics**





**CETIS Analytical Report**

Report Date: 10 Mar-10 09:59 (p 1 of 2)  
 Test Code: 01-3844-4523/MYT022310myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 12-0454-3247	Endpoint: Combined Proportion Normal	CETIS Version: CETISv1.7.0
Analyzed: 10 Mar-10 9:59	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Batch ID: 10-0504-5266	Test Type: Development-Survival	Analyst:
Start Date: 23 Feb-10 12:00	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Seawater
Ending Date: 25 Feb-10 12:00	Species: Mytilis galloprovincialis	Brine: Not Applicable
Duration: 48h	Source: Carlsbad Aquafarms CA	Age:
Sample ID: 02-9949-1709	Code: MYT022310	Client: Internal Lab
Sample Date: 23 Feb-10	Material: Ammonia (Unionized)	Project:
Receive Date: 23 Feb-10	Source: Reference Toxicant	
Sample Age: 12h	Station:	

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	5795186	280	Yes	Two-Point Interpolation

**Residual Analysis**

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Extreme Value	Grubbs Extreme Value	2.57	2.841	0.1558	No Outliers Detected

**Point Estimates**

Level	mg/L	95% LCL	95% UCL
EC5	0.04712	0.03428	0.06754
EC10	0.06261	0.04923	0.06751
EC15	0.06812	0.06207	0.072
EC20	0.07362	0.06846	0.07821
EC25	0.07912	0.07429	0.08454
EC40	0.08997	0.08722	0.09293
EC50	0.0964	0.09275	0.09998

**Combined Proportion Normal Summary**

**Calculated Variate(A/B)**

Conc-mg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Negative Control	2	0.9876	0.9752	1	0.003201	0.01753	1.78%	0.0%	478	484
0.032		4	0.9762	0.9628	0.9876	0.001886	0.01033	1.06%	1.15%	945	968
0.061		5	0.9033	0.8512	0.9545	0.007778	0.0426	4.72%	8.54%	1093	1210
0.082		5	0.7149	0.6901	0.7769	0.006424	0.03518	4.92%	27.62%	865	1210
0.11		5	0.2851	0.1694	0.3636	0.01373	0.07518	26.37%	71.13%	345	1210
0.127		5	0	0	0	0	0	100.0%		0	1210

**Combined Proportion Normal Detail**

Conc-mg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Negative Control	0.9752	1			
0.032		0.9752	0.9876	0.9628	0.9793	
0.061		0.9545	0.905	0.9339	0.8512	0.8719
0.082		0.7769	0.6901	0.7066	0.6983	0.7025
0.11		0.3223	0.314	0.2562	0.1694	0.3636
0.127		0	0	0	0	0

# CETIS Analytical Report

Report Date: 10 Mar-10 09:59 (p 2 of 2)  
 Test Code: 01-3844-4523/MYT022310myt

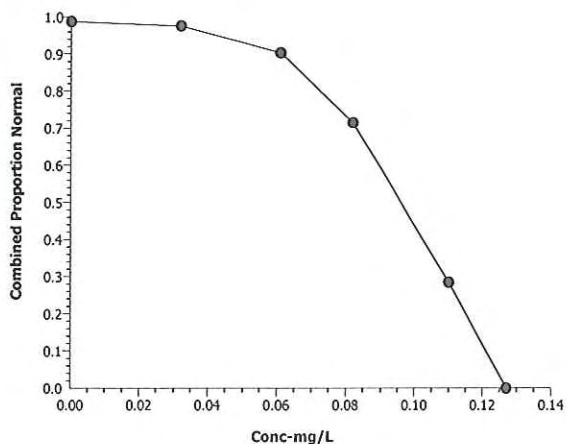
Mussel Shell Development Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 12-0454-3247     Endpoint: Combined Proportion Normal  
 Analyzed: 10 Mar-10 9:59     Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.7.0  
 Official Results: Yes

## Graphics





**CETIS Measurement Report**

Report Date: 10 Mar-10 09:59 (p 1 of 3)  
 Test Code: 01-3844-4523/MYT022310myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 10-0504-5266	Test Type: Development-Survival	Analyst:
Start Date: 23 Feb-10 12:00	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Seawater
Ending Date: 25 Feb-10 12:00	Species: Mytilis galloprovincialis	Brine: Not Applicable
Duration: 48h	Source: Carlsbad Aquafarms CA	Age:
Sample ID: 02-9949-1709	Code: MYT022310	Client: Internal Lab
Sample Date: 23 Feb-10	Material: Ammonia (Unionized)	Project:
Receive Date: 23 Feb-10	Source: Reference Toxicant	
Sample Age: 12h	Station:	

**Dissolved Oxygen-mg/L**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	6.35	6.135	6.565	5.9	6.8	0.1061	0.6364	10.02%	0
0.032		2	6.25	6.035	6.465	5.8	6.7	0.1061	0.6364	10.18%	0
0.061		2	6.15	5.887	6.413	5.6	6.7	0.1296	0.7778	12.65%	0
0.082		2	6.1	5.861	6.339	5.6	6.6	0.1179	0.7071	11.59%	0
0.11		2	6.25	5.987	6.513	5.7	6.8	0.1296	0.7778	12.45%	0
0.127		2	6.2	5.961	6.439	5.7	6.7	0.1179	0.7071	11.4%	0
Overall		12	6.217			5.6	6.8				0 (0%)

**Total Ammonia (N)-mg/L**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	0			0	0	0	0	0.0%	0
0.032		1	1.9			1.9	1.9	0	0	0.0%	0
0.061		1	3.6			3.6	3.6	0	0	0.0%	0
0.082		1	4.8			4.8	4.8	0	0	0.0%	0
0.11		1	6.5			6.5	6.5	0	0	0.0%	0
0.127		1	7.5			7.5	7.5	0	0	0.0%	0
Overall		6	4.05			0	7.5				0 (0%)

**pH-Units**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
0.032		2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
0.061		2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
0.082		2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
0.11		2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
0.127		2	7.9	7.899	7.901	7.9	7.9	0	0	0.0%	0
Overall		12	7.9			7.9	7.9				0 (0%)

**Salinity-ppt**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	34	34	34	34	34	0	0	0.0%	0
0.032		2	34	34	34	34	34	0	0	0.0%	0
0.061		2	34	34	34	34	34	0	0	0.0%	0
0.082		2	34	34	34	34	34	0	0	0.0%	0
0.11		2	34	34	34	34	34	0	0	0.0%	0
0.127		2	34	34	34	34	34	0	0	0.0%	0
Overall		12	34			34	34				0 (0%)

**Temperature-°C**

Conc-mg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
0.032		2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
0.061		2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
0.082		2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
0.11		2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
0.127		2	14.85	14.83	14.87	14.8	14.9	0.0118	0.07077	0.48%	0
Overall		12	14.85			14.8	14.9				0 (0%)



**CETIS Measurement Report**

Report Date: 10 Mar-10 09:59 (p 2 of 3)  
 Test Code: 01-3844-4523/MYT022310myt

**Mussel Shell Development Test**

Aquatic Bioassay & Consulting Labs, Inc.

**Dissolved Oxygen-mg/L**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		6.8					
0.032			6.7					
0.061			6.7					
0.082			6.6					
0.11			6.8					
0.127			6.7					
0		Negative Contr 2		5.9				
0.032			5.8					
0.061			5.6					
0.082			5.6					
0.11			5.7					
0.127			5.7					

**Total Ammonia (N)-mg/L**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		0					
0.032			1.9					
0.061			3.6					
0.082			4.8					
0.11			6.5					
0.127			7.5					

**pH-Units**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		7.9					
0.032			7.9					
0.061			7.9					
0.082			7.9					
0.11			7.9					
0.127			7.9					
0		Negative Contr 2		7.9				
0.032			7.9					
0.061			7.9					
0.082			7.9					
0.11			7.9					
0.127			7.9					

**Salinity-ppt**

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		34					
0.032			34					
0.061			34					
0.082			34					
0.11			34					
0.127			34					
0		Negative Contr 2		34				
0.032			34					
0.061			34					
0.082			34					
0.11			34					
0.127			34					

# CETIS Measurement Report

Report Date: 10 Mar-10 09:59 (p 3 of 3)  
Test Code: 01-3844-4523/MYT022310myt

Mussel Shell Development Test

Aquatic Bioassay & Consulting Labs, Inc.

## Temperature-°C

Conc-mg/L	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Negative Contr 1		14.9					
0.032			14.9					
0.061			14.9					
0.082			14.9					
0.11			14.9					
0.127			14.9					
0	Negative Contr 2		14.8					
0.032			14.8					
0.061			14.8					
0.082			14.8					
0.11			14.8					
0.127			14.8					

**SUBCONTRACT ORDER**  
**TestAmerica Irvine**

**ITB1519**

**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:**

ABC Laboratories-SUB  
 29 N. Olive Street  
 Ventura, CA 93001  
 Phone : (805) 643-5621  
 Fax: (805) 643-2930  
 Project Location: CA - CALIFORNIA  
 Receipt Temperature: 3.6 °C      Ice: Y / N

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

Analysis	Units	Expires	Comments
<b>Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)</b>			
		Sampled: 02/11/10 11:50	Temp=14.6, pH=7.41, DO=4.89, Conductivi
Bioassay-Haz. Waste	N/A	02/18/10 11:50	Chronic 10 day(eohaustorius) Out to ABC Labs
Bioassay-Haz. Waste Def	N/A	02/18/10 11:50	48hr Bivalve Embryo TOX(mytilus edulis) Out to ABC
Level 4 Data Package	N/A	03/11/10 11:50	
<i>Containers Supplied:</i>			
1 L Poly W/M (E)	1 L Poly W/M (F)	1 L Poly W/M (G)	1 L Poly W/M (H)

TAM0310.033

~~Released By~~ [Signature] 2/15/10 0710  
 Date/Time  
 Released By [Signature] 2/18/10 1115  
 Date/Time

Received By [Signature] 2/15/10 0710  
 Date/Time  
 Received By [Signature] 2/18/10 1115  
 Date/Time

TestAmerica  
South Burlington, VT  
Extended Data Package

ITB1519

TestAmerica Laboratories, Inc.

February 24, 2010

Mr. Joseph Doak  
TestAmerica, Inc.  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Re: Laboratory Project No. 28000  
Case: BOEING; SDG: ITB1519

Dear Mr. Doak:

Enclosed are the analytical results for the sample that was received by TestAmerica Burlington on February 17<sup>th</sup>, 2010. A laboratory identification number was assigned, and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
	Received: 02/17/10 ETR No: 136034		
820745	ITB1519-01	02/11/10	SOIL

Documentation of the condition of the sample at the time of receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal.

**Particle Size Analysis by ASTM D422**

There were no exceptions to the method quality control criteria during the analysis of this sample.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.



If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Carabillo', followed by a long horizontal line extending to the right.

For...

Joseph Carabillo  
Project Manager

<b>Chain of Custody .....</b>	<b>1</b>
<b>Particle Size Results .....</b>	<b>4</b>
<b>Sample Handling .....</b>	<b>10</b>



## **Chain of Custody**



**SUBCONTRACT ORDER**  
**TestAmerica Irvine**  
**ITB1519**

**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 Burlington  
 30 Community Drive, Suite 11  
 South Burlington, VT 05403  
 Phone : (802) 655-1203  
 Fax: (802) 655-1248  
 Project Location: CA - CALIFORNIA  
 Receipt Temperature: 3.4 °C      Ice: (Y) / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
----------	-------	-----	---------	----------------	-------	----------

Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)

Sampled: 02/11/10 11:50      Temp=14.6, pH=7.41, DO=4.89, Conductivi

Level 4 Data Package - Out	N/A	02/22/10	03/11/10 11:50	\$0.00	0%	
Particulatesize-OUT	% by Weight	02/22/10	03/11/10 11:50	\$108.00	0%	Boeing, J flags, OUT to TA- Burlington

Containers Supplied:  
 9 oz Jar (D)

Nancy [Signature]      2/16/10 17:00  
 Released By      Date/Time

FedEx      2/16/10 17:00  
 Received By      Date/Time

\_\_\_\_\_  
 Released By      Date/Time

Chauhan      2/17/10 10:32  
 Received By      Date/Time

CHAIN OF CUSTODY FORM

Test America Version 6/29/09

Client Name/Address: MWH-Arcadia 618 Michilinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES Annual Sediment Arroyo Simi - Frontier Park		ANALYSIS REQUIRED																									
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly Sampler: <b>Shelby Dawson</b>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Field readings: Temp = 14.6 pH = 7.41 DO = 4.89 Conductivity = 2.19 Time of readings = 12:00																									
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Chronic 10-day echaustorius estuarus Toxicity	48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas)	Total Ammonia	% Moisture	Particle Size Distribution	Total Organic Carbon	PCBs (608)	Chlordane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4-DDT	Comments														
Arroyo Simi-FP	S	1L wide mouth Plastic	4	2-11-10 11:50	4C in the Dark	1A, 1B, 1C, 1D	X	X							Keep sample in cooler in the dark until delivered to ABC Labs														
Arroyo Simi-FP	S	9 oz Jar	1	2-11-10 14:30	4 deg C	2A		X							<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">                     16:45 2/12/10 MS                 </div>														
Arroyo Simi-FP	S	9 oz Jar	1	2-11-10 14:30	4 deg C	3A			X																				
Arroyo Simi-FP	S	9 oz Jar	1	2-11-10 14:30	4 deg C	4A				X																			
Arroyo Simi-FP	S	9 oz Jar	1	2-11-10 14:30	4 deg C	5A							X																
Arroyo Simi-FP	S	9 oz Jar	1	2-11-10 14:30	4 deg C																								
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Turn around Time: (check)	24 Hours	5 Days	48 Hours	10 Days	72 Hours	Normal	Sample Integrity: (check)	Intact	On Ice:	Data Requirements: (check)	No Level IV	All Level IV	NPDES Level IV	On Ice:			
Shelby Dawson	2-11-10 14:30	Shelby Dawson	2-11-10 14:30	Shelby Dawson	2-11-10 14:30	Shelby Dawson	2-11-10 14:30	Shelby Dawson	2-11-10 14:30	Shelby Dawson	2-11-10 14:30	14:30							X			X							
Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45	Shelby Dawson	2-11-10 19:45



## Particle Size Results

## Particle Size by ASTM D4464

**Client Code:**

TACAI

**Sample ID:**

ITB1519-01

**Laboratory ID:**

820745 - Average

**SDG/ETR:**

ITB1519

**Analyzed:**

Monday, February 22, 2010 10:15:41 AM

**Measured by:**

DJP

**Instrument Name:**

Hydro 2000G (A)

**SOP Name:**

STL-BTV-D4464

**Analysis model:**

General purpose

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Size range:**

0.020 to 2000.000 um

**Weighted Residual:**

0.864 %

**Sensitivity:**

Enhanced

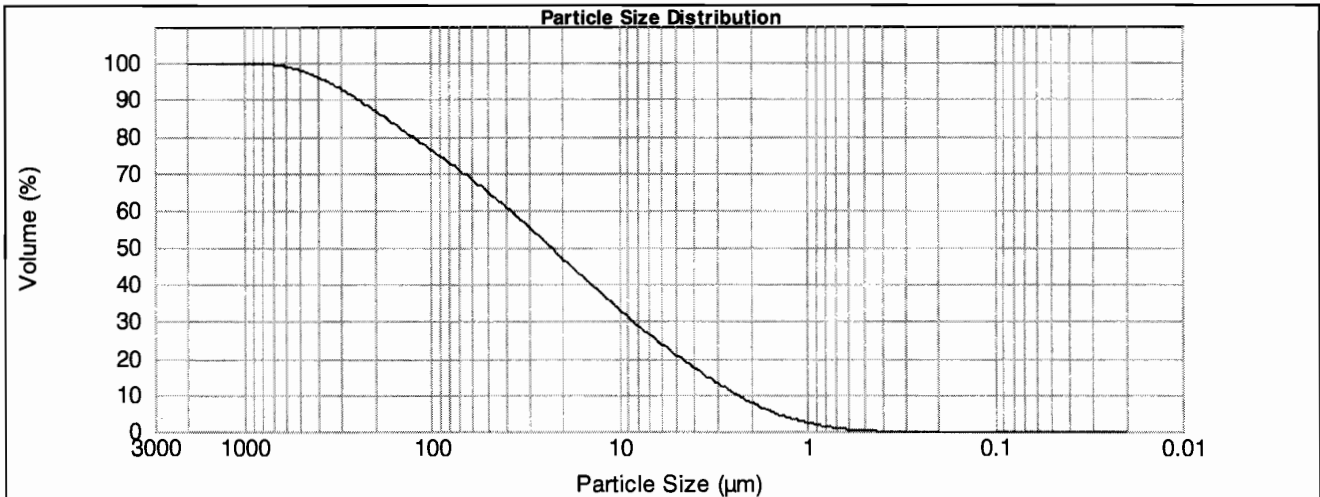
**Obscuration:**

26.52 %

d(0.1): 2.390 um

d(0.5): 22.895 um

d(0.9): 243.685 um



**Clay 21 %**

**Silt 50.79 %**

**Sand 28.21 %**

Size (µm)	Volume In %
0.010	0.00
0.011	0.00
0.013	0.00
0.015	0.00
0.017	0.00
0.020	0.00
0.023	0.00
0.026	0.00
0.030	0.00
0.035	0.00
0.040	0.00
0.046	0.00
0.052	0.00
0.060	0.00
0.069	0.00
0.079	0.00
0.091	0.00
0.105	0.00

Size (µm)	Volume In %
0.105	0.00
0.120	0.00
0.138	0.00
0.158	0.00
0.182	0.00
0.209	0.00
0.240	0.00
0.275	0.00
0.316	0.00
0.363	0.00
0.417	0.08
0.479	0.19
0.550	0.31
0.631	0.41
0.724	0.52
0.832	0.62
0.955	0.73
1.096	0.73

Size (µm)	Volume In %
1.096	0.86
1.259	1.01
1.445	1.20
1.660	1.40
1.905	1.59
2.188	1.76
2.512	1.90
2.884	2.01
3.311	2.09
3.802	2.16
4.365	2.23
5.012	2.30
5.754	2.37
6.607	2.45
7.586	2.53
8.710	2.60
10.000	2.67
11.482	2.67

Size (µm)	Volume In %
11.482	2.74
13.183	2.79
15.136	2.83
17.378	2.84
19.953	2.84
22.909	2.81
26.303	2.76
30.200	2.69
34.674	2.61
39.811	2.52
45.709	2.43
52.481	2.35
60.256	2.28
69.183	2.23
79.433	2.19
91.201	2.17
104.713	2.16
120.226	2.16

Size (µm)	Volume In %
120.226	2.15
138.038	2.14
158.489	2.13
181.970	2.10
208.930	2.04
239.883	1.94
275.423	1.80
316.228	1.62
363.078	1.41
416.869	1.17
478.630	0.92
549.541	0.66
630.957	0.43
724.436	0.21
831.764	0.07
954.993	0.00
1096.478	0.00
1258.925	0.00

Size (µm)	Volume In %
1258.925	0.00
1445.440	0.00
1659.587	0.00
1905.461	0.00
2187.762	0.00
2511.886	0.00
2884.032	0.00
3311.311	0.00
3801.894	0.00
4365.158	0.00
5011.872	0.00
5754.399	0.00
6606.934	0.00
7585.776	0.00
8709.636	0.00
10000.000	0.00

## Particle Size of Soils by ASTM D422

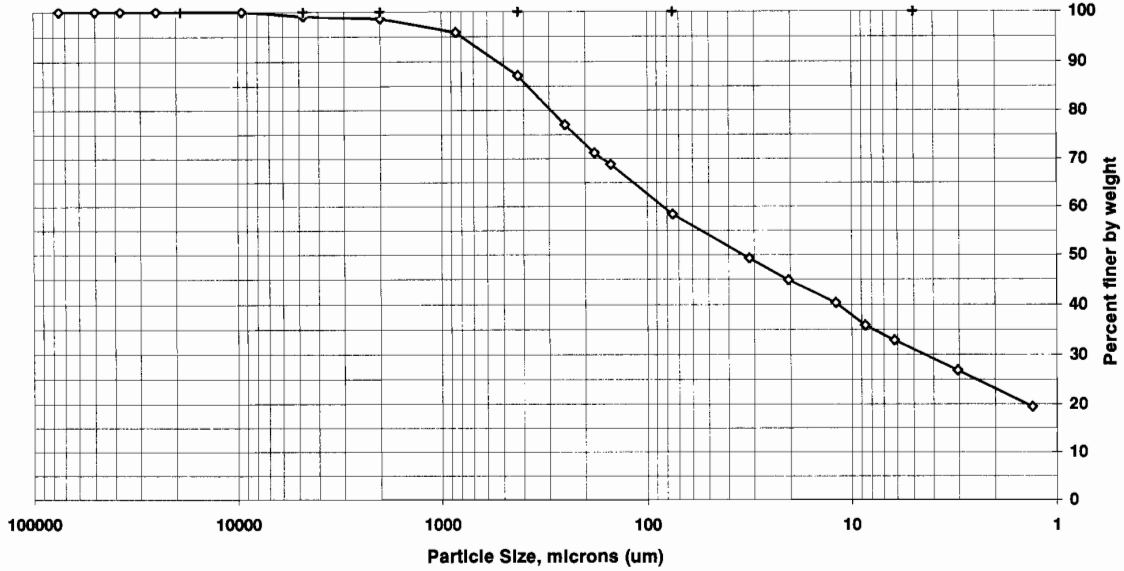
Client Code: TACAI  
 Sample ID: ITB1519-01  
 Lab ID: 820745

SDG: ITB1519  
 ETR(s): 136034

Date Received: 02/17/10  
 Start Date: 02/19/10  
 End Date: 02/24/10

Percent Solids: 73.7%  
 Specific Gravity: 2.650  
 Maximum Particle Size: 9.5 mm

Non-soil material: plant  
 Shape (> #10): angular  
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.1	0.9
#10	2000	98.6	0.5
#20	850	95.8	2.8
#40	425	87.1	8.7
#60	250	77.0	10.2
#80	180	71.2	5.8
#100	150	68.8	2.4
#200	75	58.4	10.4
Hydrometer	31.6	49.3	9.1
	20.4	44.8	4.5
	12.0	40.3	4.5
	8.6	35.9	4.5
	6.2	32.9	3.0
	3.0	26.9	6.0
V	1.3	19.4	7.5

Soil Classification	Percent of Total Sample
Gravel	0.9
Sand	40.7
Coarse Sand	0.5
Medium Sand	11.5
Fine Sand	28.8
Silt	25.5
Clay	32.9

Preparation Method: **D2217**  
 Dispersion Device: Mechanical mixer with a metal paddle.  
 Dispersion Period: 1 minute

Particle Size Analysis of Soils  
By ASTM D422  
Hydrometer Data

Set Number  
**ITB1519**

Client Code: TACAL  
SDG: ITB1519  
ETR(s): 136034

Date Received: 17-Feb-10  
Start Date: 19-Feb-10  
End Date: 24-Feb-10

Date and Analyst		Percent Solids		Weighed		Mixed		Hydrometer		Large sieves		Small sieves	
		MAP 2/19/10	DJP 2/22/10	MAP 2/19/10	MAP 2/19/10	MAP 2/19/10	MAP 2/19/10	DJP 2/22/10	DJP 2/22/10	MAP 2/19/10	DJP 2/22/10	SAF 02/23/10	DJP 2/24/10

1	Test number	2	3	4	5	6	7	8	9	10	11	12
820745	Lab number											
2	Time, min. (2)	2	2	2	2	2	2	2	2	2	2	2
1.0210	Reading											
20.0	Temperature, C											
5	Time, min. (5)	5	5	5	5	5	5	5	5	5	5	5
1.0195	Reading											
20.0	Temperature, C											
15	Time, min. (15)	15	15	15	15	15	15	15	15	15	15	15
1.0180	Reading											
20.0	Temperature, C											
30	Time, min. (30)	30	29	29	31	31	31	32	30	30	30	31
1.0165	Reading											
20.0	Temperature, C											
59	Time, min. (60)	58	58	63	60	59	59	60	63	57	63	57
1.0155	Reading											
20.0	Temperature, C											
256	Time, min. (250)	256	250	250	240	234	265	259	253	247	241	235
1.0135	Reading											
20.0	Temperature, C											
1440	Time, min. (1440)	1440	1434	1434	1424	1418	1412	1406	1400	1394	1388	1382
1.0110	Reading											
20.0	Temperature, C											

Hydrometer used: 705151 Model #: ASTM 151H  
 Manufacturer: HB Instrument  
 Calibrations: L temp, C 17.0 L read 1.0050 H Temp, C 23.0 H read 1.0040  
 Hydrometer start time: 7:00  
 Hydrometer data entered: 01/06/09

Particle Size Analysis of Soils  
By ASTM D422  
Hydrometer Data

Set Number  
ITB1519

Client Code: TACAI  
SDG: ITB1519  
ETR(s): 136034

Date Received: 17-Feb-10  
Start Date: 19-Feb-10  
End Date: 2-27-10

Date and Analyst

Percent Solids	Weighted	Mixed	Hydrometer	Large sieves	Small sieves
MAP 2-19-10 DJY 2-22-10	MAP 2-19-10 DJY 2-23-10	MAP 2-19-10	DJY 2-22-10 DJY 2-23-10	MAP 2-19-10 DJY 2-22-10	SAFORZ DJY 2-24-10

Test number	1	2	3	4	5	6	7	8	9	10	11	12
Lab number	820745											
Time, min. (2)	2	2	2	2	2	2	2	2	2	2	2	2
Reading	1.0216											
Temperature, C	20.0											
Time, min. (5)	5	5	5	5	5	5	5	5	5	5	5	5
Reading	1.0195											
Temperature, C	20.0											
Time, min. (15)	15	15	15	15	15	15	15	15	15	15	15	15
Reading	1.0180											
Temperature, C	20.0											
Time, min. (30)	30	30	29	29	31	31	31	32	30	30	30	31
Reading	1.0165											
Temperature, C	20.0											
Time, min. (60)	59	58	58	63	60	59	59	60	63	57	63	57
Reading	1.0155											
Temperature, C	20.0											
Time, min. (250)	256	256	250	250	240	234	265	259	253	247	241	235
Reading	1.0135											
Temperature, C	20.0											
Time, min. (1440)	1440	1440	1434	1434	1424	1418	1412	1406	1400	1394	1388	1382
Reading	1.0110											
Temperature, C	20.0											

Hydrometer used:  
Model #: ASTM 151H

Manufacturer:  
Cal. Date:

Hydrometer data entered:  
Hydrometer start time: 7:00

Calibrations:	L temp, C	L read	H Temp, C	H read
	17.0		23.0	

**Particle Size Analysis of Soils By ASTM D422**  
Sieve Data

Client Code: TACA

ETR(s): 196034  
SDG: ITB1519

Date Rec: 17-Feb-10 Start Date: 19-Feb-10  
End Date: 24-Feb-10

SET: ITB1519

Test	1	2	3	4	5	6	7	8	9	10	11	12
Laboratory No	820745											
Sample ID	ITB1519-01											

Dry prep = D421  
Wet prep = D2217

Sample Prep D2217  
Pan, g 72.95  
Pan/sample, g  
Pan/dry sample, g

Standard Values

Sieve	Opening, um
3 inch	75000
2 inch	50000
1.5 inch	37500
1 inch	25000
3/4 inch	19000
3/8 inch	9500
#4	4750
#10	2000
#20	850
#40	425
#60	250
#80	180
#100	150
#200	75

Hygroscopic Moisture correction factor (HMCF) for dry prep / Percent Solids for dry and wet prep

Pan, g 1.00  
Pan/sample, g 26.79  
Pan/dry sample, g 20.00  
HMCF 100.0%

Description of >#10 particles  
Non-soil material plant  
Shape angular  
Hardness hard

Sample % Solids 73.7%

Dry sample wt, g 53.74

Sieve (tars)

Sieve	Mass, g
3 inch	488.21
2 inch	452.95
1.5 inch	391.52
1 inch	355.95
3/4 inch	325.97
3/8 inch	313.65
#4	329.60
#10	326.25
#20	
#40	
#60	
#80	
#100	
#200	

Sieve + Sample Weights

Size	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g
3 inch	488.70											
2 inch	463.21											
1.5 inch	393.01											
1 inch	360.62											
3/4 inch	331.43											
3/8 inch	316.76											
#4	330.91											
#10	381.83											

Maximum Particle size

9.5 mm

Default SG

2.65

Specific gravity

2.650

Sample Mass Parameters

Sample Mass >#10, g	0.75	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Sample mass <#10, g	52.99	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00





## **Sample Handling**

ORIGIN ID: APVA (849)261-1022  
TESTAMERICA-IRVINE/SAMPLE CONTROL  
TESTAMERICA ANALYTICAL  
17461 DERIAN AVE  
SUITE 100  
IRVINE, CA 92614  
UNITED STATES US

SHIP DATE: 16FEB10  
ACTWGT: 6.6 LB  
CAD: 616730/CAFE2434

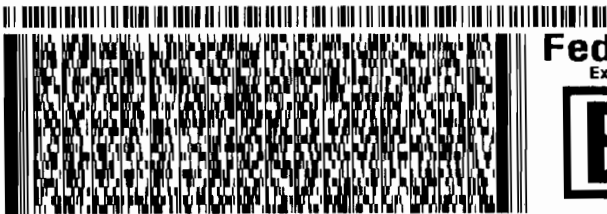
BILL THIRD PARTY

**TO SAMPLE RECEIVING**  
**TESTAMERICA - BURLINGTON**  
**30 COMMUNITY DRIVE, SUITE 11**

**SOUTH BURLINGTON VT 05403**

(802)855-1203  
DEPT: ALWAYS BILL RECIPIENT

REF: TA-BURLINGTON

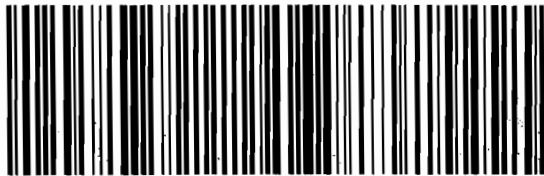


TRK# 4289 2133 3533  
0201

**WED - 17FEB AA**  
**PRIORITY OVERNIGHT**

**XH BTVA**

**05403**  
VT-US  
BTV



<b>TestAmerica Burlington SAMPLE RECEIPT &amp; LOG IN CHECKLIST</b>					
Client: TACAI	Date Received: 02/17/10	Log In Date: 02/19/10			
ETR: 136034	Time Received: 1032	By: VP			
SDG: ITB1519	Received By: CK	Signature: [Signature]			
Project: 298000	# Coolers Received: 1	PM Signature: [Signature]			
Samples Delivered By: <input checked="" type="checkbox"/> Shipping Service <input type="checkbox"/> Courier <input type="checkbox"/> Hand <input type="checkbox"/> Other (specify)		Date: 2.22.10			
List Air bill Number(s) or Attach a photocopy of the Air Bill:					
COOLER SCREEN	YES	NO	NA	COMMENTS	
There is <b>no</b> evidence to indicate tampering	X				
Custody seals are present and intact	X				
Custody seal numbers are present		X			
If yes, list custody seal numbers:					
Thermal Preservation Type: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other (specify)					
IR Gun ID: 96	Correction Factor (CF) = 0 °C				
Cooler 1: 3.4	°C	Cooler 6	°C	Cooler 11	°C
Cooler 2:	°C	Cooler 7	°C	Cooler 12	°C
Cooler 3:	°C	Cooler 8	°C	Cooler 13	°C
Cooler 4:	°C	Cooler 9	°C	Cooler 14	°C
Cooler 5:	°C	Cooler 10	°C	Cooler 15	°C
Cooler 16	°C	Cooler 17	°C	Cooler 18	°C
Cooler 19	°C	Cooler 20	°C		
<i>Unless otherwise documented, the recorded temperature readings are adjusted readings to account for the CF of the IR Gun</i>					
<i>EPA Criteria: 0-6°C, except for air and geo samples which should be at ambient temperature and tissue samples, which may be frozen.</i>					
<i>Some clients require thermal preservation criteria of 2-4°C or other such criteria. The PM must notify SM when alternate criteria is specified.</i>					
SAMPLE CONDITION	YES	NO	NA	COMMENTS	
Sample containers were received intact	X				
Legible sample labels are affixed to each container	X				
CHAIN OF CUSTODY (COC)	YES	NO	NA	COMMENTS	
COC is present and includes the following information for each container:					
• Sample ID / Sample Description	X				
• Date of Sample Collection	X				
• Time of Sample Collection	X				
• Identification of the Sampler	X				
• Preservation Type			X		
• Requested Tests Method(s)	X				
• Necessary Signatures	X				
Internal Chain of Custody (ICOC) Required		X			
If yes to above, ICOC Record initiated for every Worksheet			X		
SAMPLE INTEGRITY / USABILITY	YES	NO	NA	COMMENTS	
The sample container matches the COC	X				
Appropriate sample containers were received for the tests requested	X				
Samples were received within holding time	X				
Sufficient amount of sample is provided for requested analyses	X				
VOA vials do not have headspace or a bubble >6mm (1/4" diameter)			X		
Appropriate preservatives were used for the tests requested			X		
pH of inorganic samples checked and is within method specification			X		
If no, attach Inorganic Sample pH Adjustment Form			X		
ANOMALY / NCR SUMMARY					

TestAmerica  
South Burlington, VT  
Extended Data Package

ITB1519

TestAmerica Laboratories, Inc.

February 24, 2010

Mr. Joseph Doak  
TestAmerica, Inc.  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Re: Laboratory Project No. 28000  
Case: BOEING; SDG: ITB1519

Dear Mr. Doak:

Enclosed are the analytical results for the sample that was received by TestAmerica Burlington on February 17<sup>th</sup>, 2010. A laboratory identification number was assigned, and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
	Received: 02/17/10 ETR No: 136034		
820745	ITB1519-01	02/11/10	SOIL

Documentation of the condition of the sample at the time of receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal.

**Particle Size Analysis by ASTM D422**

There were no exceptions to the method quality control criteria during the analysis of this sample.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.



If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Carabillo", is written over a horizontal line that extends to the right.

For...

Joseph Carabillo  
Project Manager

<b>Chain of Custody .....</b>	<b>1</b>
<b>Particle Size Results .....</b>	<b>4</b>
<b>Sample Handling .....</b>	<b>10</b>



## **Chain of Custody**



**SUBCONTRACT ORDER**  
**TestAmerica Irvine**  
**ITB1519**

**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 Burlington  
 30 Community Drive, Suite 11  
 South Burlington, VT 05403  
 Phone : (802) 655-1203  
 Fax: (802) 655-1248  
 Project Location: CA - CALIFORNIA  
 Receipt Temperature: 3.4 °C      Ice: (Y) / N

Analysis	Units	Due	Expires	Interlab Price	Surch	Comments
----------	-------	-----	---------	----------------	-------	----------

Sample ID: ITB1519-01 (Arroyo Simi-FP - Soil)

Sampled: 02/11/10 11:50      Temp=14.6, pH=7.41, DO=4.89, Conductivi

Level 4 Data Package - Out	N/A	02/22/10	03/11/10 11:50	\$0.00	0%	
Particulatesize-OUT	% by Weight	02/22/10	03/11/10 11:50	\$108.00	0%	Boeing, J flags, OUT to TA- Burlington

Containers Supplied:  
 9 oz Jar (D)

Nancy [Signature]      2/16/10 17:00  
 Released By      Date/Time

FedEx      2/16/10 17:00  
 Received By      Date/Time

\_\_\_\_\_  
 Released By      Date/Time

Chauhan      2/17/10 10:32  
 Received By      Date/Time

CHAIN OF CUSTODY FORM

Test America Version 6/29/09

<b>Client Name/Address:</b> MWH-Arcadia 618 Michilinda Avenue, Suite 200 Arcadia, CA 91007		<b>Project:</b> Boeing-SSFL NPDES Annual Sediment Arroyo Simi - Frontier Park		<b>ANALYSIS REQUIRED</b> Field readings: Temp = 14.6 pH = 7.41 DO = 4.89 Conductivity = 2.19 Time of readings = 12:00		
<b>Test America Contact:</b> Joseph Doak <b>Project Manager:</b> Bronwyn Kelly <b>Sampler:</b> Shelby Dawson		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Chlorane, Dieldrin, Toxaphene (608), 4,4-DDD, 4,4-DDE, 4,4- DDT PCBs (608) Total Organic Carbon Particle Size Distribution % Moisture Total Ammonia (Mytilus edulis or Crassostrea gigas) 48-hour Bivalve Embryo toxicity Chronic 10-day echaustorius estuarinus Toxicity		
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Arroyo Simi-FP	S	1L wide mouth Plastic	4	2-11-10 11:50	4C in the Dark	1A, 1B, 1C, 1D
Arroyo Simi-FP	S	9 oz Jar	1		4 deg C	2A
Arroyo Simi-FP	S	9 oz Jar	1		4 deg C	3A
Arroyo Simi-FP	S	9 oz Jar	1		4 deg C	4A
Arroyo Simi-FP	S	9 oz Jar	1		4 deg C	5A
Relinquished By: <i>[Signature]</i> Date/Time: 2-11-10 14:30 Received By: <i>[Signature]</i> Date/Time: 2-11-10 14:30						
Relinquished By: <i>[Signature]</i> Date/Time: 2-11-10 19:45 Received By: <i>[Signature]</i> Date/Time: 2-11-10 19:45						
Relinquished By: <i>[Signature]</i> Date/Time: Received By: <i>[Signature]</i> Date/Time:						
Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal <input checked="" type="checkbox"/> Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/> Data Requirements: (check) No Level IV _____ All Level IV <input checked="" type="checkbox"/> NPDES Level IV _____ On Ice: <input checked="" type="checkbox"/>						

ITB1519

16:45  
2/12/10  
M.S.

Shelby Dawson  
2117110 1032

2.15 112112



## Particle Size Results

## Particle Size by ASTM D4464

**Client Code:**

TACAI

**Sample ID:**

ITB1519-01

**Laboratory ID:**

820745 - Average

**SDG/ETR:**

ITB1519

**Analyzed:**

Monday, February 22, 2010 10:15:41 AM

**Measured by:**

DJP

**Instrument Name:**

Hydro 2000G (A)

**SOP Name:**

STL-BTV-D4464

**Analysis model:**

General purpose

**Dispersant Name:**

Water

**Dispersant RI:**

1.330

**Size range:**

0.020 to 2000.000 um

**Weighted Residual:**

0.864 %

**Sensitivity:**

Enhanced

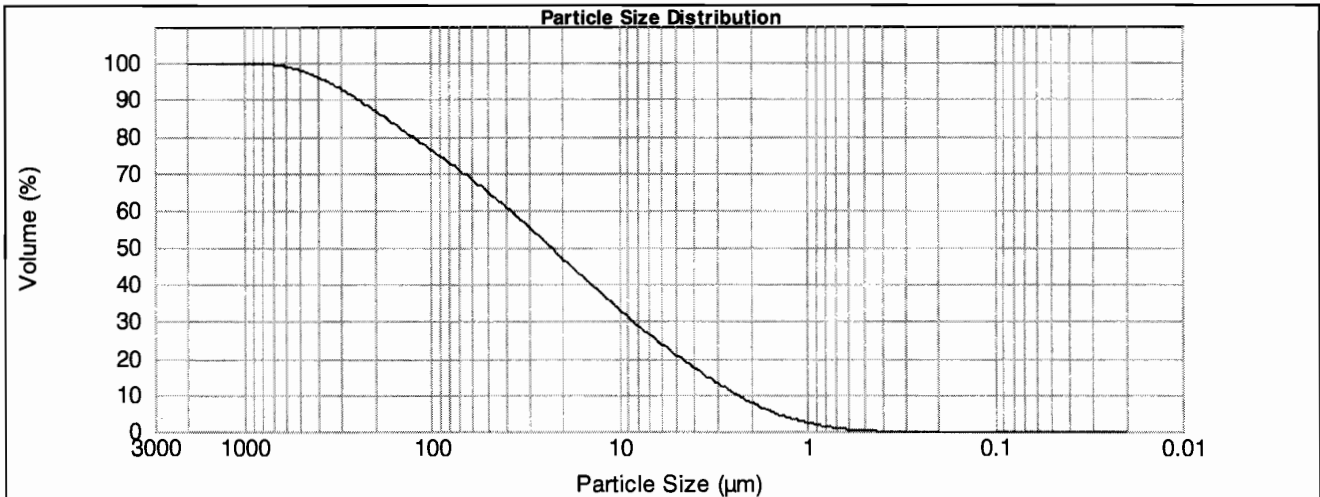
**Obscuration:**

26.52 %

d(0.1): 2.390 um

d(0.5): 22.895 um

d(0.9): 243.685 um



**Clay 21 %**

**Silt 50.79 %**

**Sand 28.21 %**

Size (µm)	Volume In %
0.010	0.00
0.011	0.00
0.013	0.00
0.015	0.00
0.017	0.00
0.020	0.00
0.023	0.00
0.026	0.00
0.030	0.00
0.035	0.00
0.040	0.00
0.046	0.00
0.052	0.00
0.060	0.00
0.069	0.00
0.079	0.00
0.091	0.00
0.105	0.00

Size (µm)	Volume In %
0.105	0.00
0.120	0.00
0.138	0.00
0.158	0.00
0.182	0.00
0.209	0.00
0.240	0.00
0.275	0.00
0.316	0.00
0.363	0.00
0.417	0.08
0.479	0.19
0.550	0.31
0.631	0.41
0.724	0.52
0.832	0.62
0.955	0.73
1.096	0.73

Size (µm)	Volume In %
1.096	0.86
1.259	1.01
1.445	1.20
1.660	1.40
1.905	1.59
2.188	1.76
2.512	1.90
2.884	2.01
3.311	2.09
3.802	2.16
4.365	2.23
5.012	2.30
5.754	2.37
6.607	2.45
7.586	2.53
8.710	2.60
10.000	2.67
11.482	2.67

Size (µm)	Volume In %
11.482	2.74
13.183	2.79
15.136	2.83
17.378	2.84
19.953	2.84
22.909	2.81
26.303	2.76
30.200	2.69
34.674	2.61
39.811	2.52
45.709	2.43
52.481	2.35
60.256	2.28
69.183	2.23
79.433	2.19
91.201	2.17
104.713	2.16
120.226	2.16

Size (µm)	Volume In %
120.226	2.15
138.038	2.14
158.489	2.13
181.970	2.10
208.930	2.04
239.883	1.94
275.423	1.80
316.228	1.62
363.078	1.41
416.869	1.17
478.630	0.92
549.541	0.66
630.957	0.43
724.436	0.21
831.764	0.07
954.993	0.00
1096.478	0.00
1258.925	0.00

Size (µm)	Volume In %
1258.925	0.00
1445.440	0.00
1659.587	0.00
1905.461	0.00
2187.762	0.00
2511.886	0.00
2884.032	0.00
3311.311	0.00
3801.894	0.00
4365.158	0.00
5011.872	0.00
5754.399	0.00
6606.934	0.00
7585.776	0.00
8709.636	0.00
10000.000	0.00

# Particle Size of Soils by ASTM D422

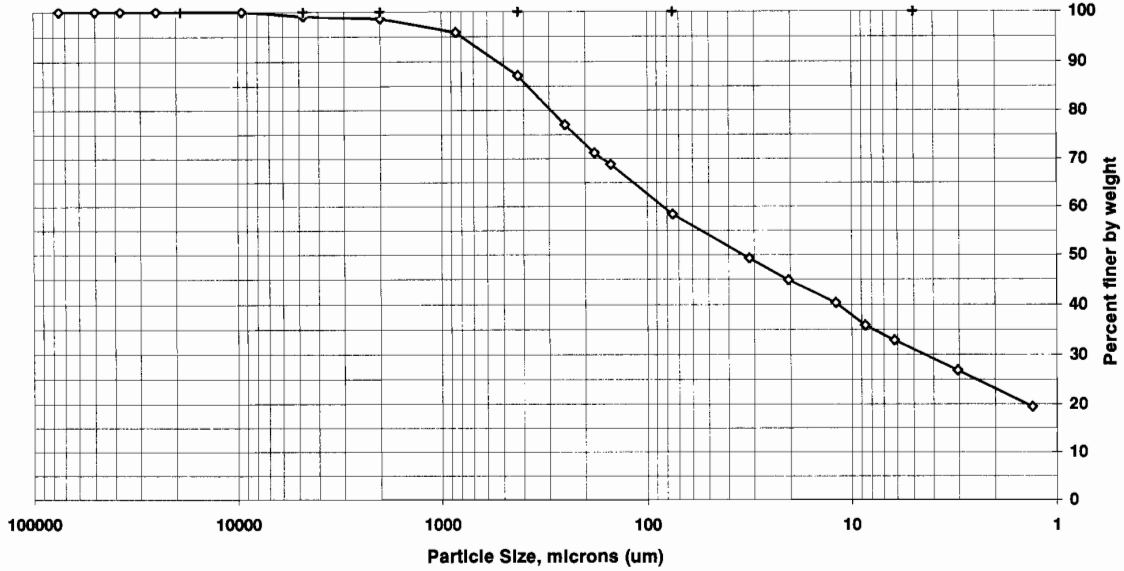
Client Code: TACAI  
 Sample ID: ITB1519-01  
 Lab ID: 820745

SDG: ITB1519  
 ETR(s): 136034

Date Received: 02/17/10  
 Start Date: 02/19/10  
 End Date: 02/24/10

Percent Solids: 73.7%  
 Specific Gravity: 2.650  
 Maximum Particle Size: 9.5 mm

Non-soil material: plant  
 Shape (> #10): angular  
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.1	0.9
#10	2000	98.6	0.5
#20	850	95.8	2.8
#40	425	87.1	8.7
#60	250	77.0	10.2
#80	180	71.2	5.8
#100	150	68.8	2.4
#200	75	58.4	10.4
Hydrometer	31.6	49.3	9.1
	20.4	44.8	4.5
	12.0	40.3	4.5
	8.6	35.9	4.5
	6.2	32.9	3.0
	3.0	26.9	6.0
V	1.3	19.4	7.5

Soil Classification	Percent of Total Sample
Gravel	0.9
Sand	40.7
Coarse Sand	0.5
Medium Sand	11.5
Fine Sand	28.8
Silt	25.5
Clay	32.9

Preparation Method: **D2217**  
 Dispersion Device: Mechanical mixer with a metal paddle.  
 Dispersion Period: 1 minute

Particle Size Analysis of Soils  
By ASTM D422  
Hydrometer Data

Set Number  
**ITB1519**

Client Code: TACAL  
SDG: ITB1519  
ETR(s): 136034

Date Received: 17-Feb-10  
Start Date: 19-Feb-10  
End Date: 24-Feb-10

Date and Analyst		Percent Solids		Weighed		Mixed		Hydrometer		Large sieves		Small sieves	
		MAP 2/19/10	DJP 2/22/10	MAP 2/19/10	MAP 2/19/10	MAP 2/19/10	MAP 2/19/10	DJP 2/22/10	DJP 2/22/10	MAP 2/19/10	DJP 2/22/10	SAF 02/23/10	DJP 2/24/10

1	Test number	2	3	4	5	6	7	8	9	10	11	12
820745	Lab number											
2	Time, min. (2)	2	2	2	2	2	2	2	2	2	2	2
1.0210	Reading											
20.0	Temperature, C											
5	Time, min. (5)	5	5	5	5	5	5	5	5	5	5	5
1.0195	Reading											
20.0	Temperature, C											
15	Time, min. (15)	15	15	15	15	15	15	15	15	15	15	15
1.0180	Reading											
20.0	Temperature, C											
30	Time, min. (30)	30	29	29	31	31	31	32	30	30	30	31
1.0165	Reading											
20.0	Temperature, C											
59	Time, min. (60)	58	58	63	60	59	59	60	63	57	63	57
1.0155	Reading											
20.0	Temperature, C											
256	Time, min. (250)	256	250	250	240	234	265	259	253	247	241	235
1.0135	Reading											
20.0	Temperature, C											
1440	Time, min. (1440)	1440	1434	1434	1424	1418	1412	1406	1400	1394	1388	1382
1.0110	Reading											
20.0	Temperature, C											

Hydrometer used: 705151 Model #: ASTM 151H  
 L read: 17.0 H read: 1.0040  
 Manufacturer: HB Instrument  
 Cal. Date: 01/06/09  
 Hydrometer start time: 7:00  
 Hydrometer data entered:

FSL024:07:29.05:0  
TestAmerica Burlington

ITB1519PS 02/24/10

Particle Size Analysis of Soils  
By ASTM D422  
Hydrometer Data

Set Number  
ITB1519

Client Code: TACAI  
SDG: ITB1519  
ETR(s): 136034

Date Received: 17-Feb-10  
Start Date: 19-Feb-10  
End Date: 2-27-10

Date and Analyst

Percent Solids	Weighted	Mixed	Hydrometer	Large sieves	Small sieves
MAP 2-19-10 DJY 2-22-10	MAP 2-19-10 DJY 2-23-10	MAP 2-19-10	DJY 2-22-10 DJY 2-23-10	MAP 2-19-10 DJY 2-22-10	SAFORZ DJY 2-24-10

Test number	1	2	3	4	5	6	7	8	9	10	11	12
Lab number	820745											
Time, min. (2)	2	2	2	2	2	2	2	2	2	2	2	2
Reading	1.0216											
Temperature, C	20.0											
Time, min. (5)	5	5	5	5	5	5	5	5	5	5	5	5
Reading	1.0195											
Temperature, C	20.0											
Time, min. (15)	15	15	15	15	15	15	15	15	15	15	15	15
Reading	1.0180											
Temperature, C	20.0											
Time, min. (30)	30	30	29	29	31	31	31	32	30	30	30	31
Reading	1.0165											
Temperature, C	20.0											
Time, min. (60)	59	58	58	63	60	59	59	60	63	57	63	57
Reading	1.0155											
Temperature, C	20.0											
Time, min. (250)	256	256	250	250	240	234	265	259	253	247	241	235
Reading	1.0135											
Temperature, C	20.0											
Time, min. (1440)	1440	1440	1434	1434	1424	1418	1412	1406	1400	1394	1388	1382
Reading	1.0110											
Temperature, C	20.0											

Hydrometer used:  
Calibrations:

Model #: ASTM 151H	L read	H Temp. C	H read
	17.0	23.0	

Manufacturer:  
Cal. Date:

Hydrometer data entered:  
Hydrometer start time: 7:00

**Particle Size Analysis of  
Soils By ASTM D422**

Client Code: **TACA1**

ETR(s): **196034**  
SDG: **ITB1519**

Date Rec: **17-Feb-10** Start Date: **19-Feb-10**  
End Date: **24-Feb-10**

**Sieve Data**

SET:	1	2	3	4	5	6	7	8	9	10	11	12
Test	ITB1519											
Laboratory No	820745											
Sample ID	ITB1519-01											
Sample Prep	D2217											
Pan, g	72.95											
Pan/sample, g												
Pan/dry sample, g												

Dry prep = D421  
Wet prep = D2217

**Standard Values**

Sieve	Opening, um
3 inch	75000
2 inch	50000
1.5 inch	37500
1 inch	25000
3/4 inch	19000
3/8 inch	9500
#4	4750
#10	2000
#20	850
#40	425
#60	250
#80	180
#100	150
#200	75

**Hygroscopic Moisture correction factor (HMCF) for dry prep / Percent Solids for dry and wet prep**

Pan, g	1.00
Pan/sample, g	26.79
Pan/dry sample, g	20.00
HMCF	100.0%

**Description of >#10 particles**

Non-soil material	plant
Shape	angular
Hardness	hard

**Sample % Solids**

73.7%

**Dry sample wt, g**

53.74

**Sieve + Sample Weights**

Sieve (tare)	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g
3 inch	488.21	488.70										
2 inch	482.95	463.21										
1.5 inch	391.52	393.01										
1 inch	355.95	360.62										
3/4 inch	325.97	331.43										
3/8 inch	313.65	316.76										
#4	329.60	330.91										
#10	326.25	331.83										
#20												
#40												
#60												
#80												
#100												
#200												

**Maximum Particle size**

9.5 mm

**Specific gravity**

2.650

**Sample Mass Parameters**

Sample Mass >#10, g	0.75	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Sample mass <#10, g	52.99	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!





## **Sample Handling**

ORIGIN ID: APVA (849)261-1022  
TESTAMERICA-IRVINE/SAMPLE CONTROL  
TESTAMERICA ANALYTICAL  
17461 DERIAN AVE  
SUITE 100  
IRVINE, CA 92614  
UNITED STATES US

SHIP DATE: 16FEB10  
ACTWGT: 6.6 LB  
CAD: 616730/CAFE2434

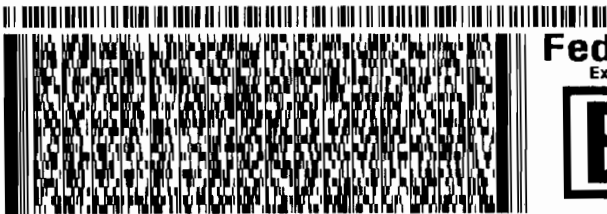
BILL THIRD PARTY

**TO SAMPLE RECEIVING**  
**TESTAMERICA - BURLINGTON**  
**30 COMMUNITY DRIVE, SUITE 11**

**SOUTH BURLINGTON VT 05403**

(802)855-1203  
DEPT: ALWAYS BILL RECIPIENT

REF: TA-BURLINGTON



**FedEx**  
Express



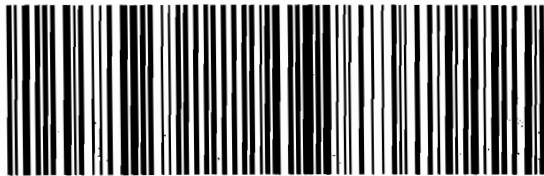
CG012090021224

TRK# 4289 2133 3533  
0201

**WED - 17FEB AA**  
**PRIORITY OVERNIGHT**

**XH BTVA**

**05403**  
VT-US  
BTV



TestAmerica Burlington SAMPLE RECEIPT & LOG IN CHECKLIST					
Client: TACAI	Date Received: 02/17/10	Log In Date: 02/19/10			
ETR: 136034	Time Received: 1032	By: VP			
SDG: ITB1519	Received By: CK	Signature: <i>[Signature]</i>			
Project: 298000	# Coolers Received: 1	PM Signature: <i>[Signature]</i>			
Samples Delivered By: <input checked="" type="checkbox"/> Shipping Service <input type="checkbox"/> Courier <input type="checkbox"/> Hand <input type="checkbox"/> Other (specify)		Date: 2.22.10			
List Air bill Number(s) or Attach a photocopy of the Air Bill:					
<b>COOLER SCREEN</b>					
	YES	NO	NA	COMMENTS	
There is <i>no</i> evidence to indicate tampering	<input checked="" type="checkbox"/>				
Custody seals are present and intact	<input checked="" type="checkbox"/>				
Custody seal numbers are present		<input checked="" type="checkbox"/>			
If yes, list custody seal numbers:					
Thermal Preservation Type: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other (specify)					
IR Gun ID: 96	Correction Factor (CF) = 0 °C				
Cooler 1: 3.4	°C	Cooler 6	°C	Cooler 11	°C
Cooler 2:	°C	Cooler 7	°C	Cooler 12	°C
Cooler 3:	°C	Cooler 8	°C	Cooler 13	°C
Cooler 4:	°C	Cooler 9	°C	Cooler 14	°C
Cooler 5:	°C	Cooler 10	°C	Cooler 15	°C
Cooler 16					
Cooler 17					
Cooler 18					
Cooler 19					
Cooler 20					
Unless otherwise documented, the recorded temperature readings are adjusted readings to account for the CF of the IR Gun					
EPA Criteria: 0-6°C, except for air and geo samples which should be at ambient temperature and tissue samples, which may be frozen.					
Some clients require thermal preservation criteria of 2-4°C or other such criteria. The PM must notify SM when alternate criteria is specified.					
<b>SAMPLE CONDITION</b>					
	YES	NO	NA	COMMENTS	
Sample containers were received intact	<input checked="" type="checkbox"/>				
Legible sample labels are affixed to each container	<input checked="" type="checkbox"/>				
<b>CHAIN OF CUSTODY (COC)</b>					
	YES	NO	NA	COMMENTS	
COC is present and includes the following information for each container:					
• Sample ID / Sample Description	<input checked="" type="checkbox"/>				
• Date of Sample Collection	<input checked="" type="checkbox"/>				
• Time of Sample Collection	<input checked="" type="checkbox"/>				
• Identification of the Sampler	<input checked="" type="checkbox"/>				
• Preservation Type			<input checked="" type="checkbox"/>		
• Requested Tests Method(s)	<input checked="" type="checkbox"/>				
• Necessary Signatures	<input checked="" type="checkbox"/>				
Internal Chain of Custody (ICOC) Required		<input checked="" type="checkbox"/>			
If yes to above, ICOC Record initiated for every Worksheet			<input checked="" type="checkbox"/>		
<b>SAMPLE INTEGRITY / USABILITY</b>					
	YES	NO	NA	COMMENTS	
The sample container matches the COC	<input checked="" type="checkbox"/>				
Appropriate sample containers were received for the tests requested	<input checked="" type="checkbox"/>				
Samples were received within holding time	<input checked="" type="checkbox"/>				
Sufficient amount of sample is provided for requested analyses	<input checked="" type="checkbox"/>				
VOA vials do not have headspace or a bubble >6mm (1/4" diameter)			<input checked="" type="checkbox"/>		
Appropriate preservatives were used for the tests requested			<input checked="" type="checkbox"/>		
pH of inorganic samples checked and is within method specification			<input checked="" type="checkbox"/>		
If no, attach Inorganic Sample pH Adjustment Form			<input checked="" type="checkbox"/>		
<b>ANOMALY / NCR SUMMARY</b>					

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