

**APPENDIX G**  
**TABLE OF CONTENTS**

**Section No.**

1	Outfall 003, January 28, 2007 – MEC <sup>X</sup> Data Validation Reports
2	Outfall 003, January 28, 2007 – Test America Analytical Laboratory Report
3	Outfall 006, January 28, 2007 – MEC <sup>X</sup> Data Validation Reports
4	Outfall 006, January 28, 2007 – Test America Analytical Laboratory Report
5	Outfall 009, January 28, 2007 – MEC <sup>X</sup> Data Validation Reports
6	Outfall 009, January 28, 2007 – Test America Analytical Laboratory Report
7	Outfall 010, January 28, 2007 – MEC <sup>X</sup> Data Validation Reports
8	Outfall 010, January 28, 2007 – Test America Analytical Laboratory Report
9	Outfall 003, February 19, 2007 – MEC <sup>X</sup> Data Validation Reports
10	Outfall 003, February 19, 2007 – Test America Analytical Laboratory Report
11	Outfall 006, February 19, 2007 – MEC <sup>X</sup> Data Validation Reports
12	Outfall 006, February 19, 2007 – Test America Analytical Laboratory Report
13	Outfall 009, February 19, 2007 – MEC <sup>X</sup> Data Validation Reports
14	Outfall 009, February 19, 2007 – Test America Analytical Laboratory Report
15	Outfall 010, February 19, 2007 – MEC <sup>X</sup> Data Validation Reports
16	Outfall 010, February 19, 2007 – Test America Analytical Laboratory Report
17	Outfall 006, February 27, 2007 – MEC <sup>X</sup> Data Validation Reports
18	Outfall 006, February 27, 2007 – Test America Analytical Laboratory Report
19	Eberline Services Report, Q1 2007

# **APPENDIX G**

## **Section 1**

Outfall 003, January 28, 2007

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

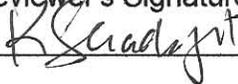
**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

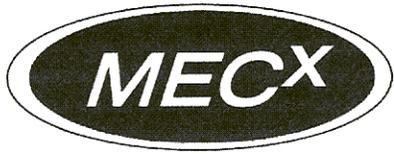
Package ID B4DF119  
 Task Order 1261.001D.05  
 SDG No. IQA2793

No. of Analyses 1

Laboratory Test America  
 Reviewer K. Shadowlight  
 Analysis/Method Dioxin/Furan by 1613

Date: February 27, 2007  
 Reviewer's Signature  


ACTION ITEMS <sup>a</sup>	
<b>1. Case Narrative Deficiencies</b>	  
<b>2. Out of Scope Analyses</b>	  
<b>3. Analyses Not Conducted</b>	  
<b>4. Missing Hardcopy Deliverables</b>	  
<b>5. Incorrect Hardcopy Deliverables</b>	  
<b>6. Deviations from Analysis Protocol, e.g.,</b>	<b>Qualifications were assigned for the following:</b>
Holding Times	*Any detects below the laboratory lower calibration level was qualified as estimated, "J/DNQ."
GC/MS Tune/Inst. Performance	*EMPCs were identified
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS <sup>b</sup>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Routine Outfall 003-Annual

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IQA2793

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title:	NPDES
Contract Task Order:	1261.001.01
Sample Delivery Group:	IQA2793
Project Manager:	P. Costa
Matrix:	Water
Analysis:	Dioxins/Furans
QC Level:	Level IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Reviewer:	K. Shadowlight
Date of Review:	February 25, 2007

The samples listed in Table 1 were 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 for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (TestAmerica-Irvine)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IQA2793-01	28670-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to TestAmerica-Irvine, custody seals were not required. Custody seals were present on the coolers from TestAmerica to Alta; however, no sample container custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). 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%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 10/24/2006 on instrument VG-5. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were 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 QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 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. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-8819-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was reported at 0.00000327 $\mu\text{g/L}$  in the method blank. OCDD was reported in the site sample; however, the concentration in the site sample exceeded five times the concentration of the method blank and required no qualification. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-8819-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." No further qualifications were required.

Sample ID: **IQA2793-01** *Out-fall 003* **EPA Method 1613**

**Client Data**  
 Name: Test America-Irvine  
 Project: IQA2793  
 Date Collected: 28-Jan-07  
 Time Collected: 1040

**Sample Data**  
 Matrix: Aqueous  
 Sample Size: 1.04 L

**Laboratory Data**  
 Lab Sample: 28670-001  
 QC Batch No.: 8819  
 Date Analyzed DB-5: 5-Feb-07  
 Date Received: 31-Jan-07  
 Date Extracted: 2-Feb-07  
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.0000112			IS 13C-2,3,7,8-TCDD	85.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0000126			13C-1,2,3,7,8-PeCDD	87.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0000205			13C-1,2,3,4,7,8-HxCDD	86.2	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0000216			13C-1,2,3,6,7,8-HxCDD	79.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0000204			13C-1,2,3,4,6,7,8-HpCDD	89.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000144			J	13C-OCDD	74.1	17 - 157	
OCDD	0.000109			B	13C-2,3,7,8-TCDF	84.1	24 - 169	
2,3,7,8-TCDF	ND	0.0000129			13C-1,2,3,7,8-PeCDF	87.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.0000118			13C-2,3,4,7,8-PeCDF	87.7	21 - 178	
2,3,4,7,8-PeCDF	ND	0.0000115			13C-1,2,3,4,7,8-HxCDF	86.3	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000757			13C-1,2,3,6,7,8-HxCDF	80.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000795			13C-2,3,4,6,7,8-HxCDF	86.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000826			13C-1,2,3,7,8,9-HxCDF	90.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.0000111			13C-1,2,3,4,6,7,8-HpCDF	93.3	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000328			J	13C-1,2,3,4,7,8,9-HpCDF	96.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.0000108			13C-OCDF	83.2	17 - 157	
OCDF	0.00000810			J	CRS 37Cl-2,3,7,8-TCDD	98.5	35 - 197	

**Totals**

Total TCDD	ND	0.0000112						
Total PeCDD	ND	0.0000126						
Total HxCDD	0.0000510							
Total HpCDD	0.0000347							
Total TCDF	ND	0.0000129						
Total PeCDF	ND	0.00000299						
Total HxCDF	0.0000170							
Total HpCDF	0.00000683							

**Footnotes**  
 a. Sample specific estimated detection limit.  
 b. Estimated maximum possible concentration.  
 c. Method detection limit.  
 d. Lower control limit - upper control limit.

Analyst: MAS  
 Approved By: William J. Luksemburg  
 Date: 07-Feb-2007 14:08

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>X</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4MT109  
 Task Order: 1261.001D.01  
 SDG No.: IQA2793

No. of Analyses: 1

Laboratory: Weck  
 Reviewer: P. Meeks  
 Analysis/Method: Mercury

Date: <u>February 28, 2007</u>
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 003

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQA2793

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQA2793  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: February 28, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Weck Laboratory ID	Matrix	COC Method
Outfall 003	IQA2793-01	7020845-01	Water	245.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica and the subcontract laboratory, Weck, within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$  at  $2.4^{\circ}\text{C}$ . No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original and transfer COCs was signed and dated by the appropriate field and/or laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. Custody seals were not present upon receipt at Weck. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

As ICP-MS was not utilized for the analysis, the ICP-MS tune criteria are not applicable.

### 2.3 CALIBRATION

The mercury initial calibration  $r^2$  was  $\geq 0.995$ . The ICV and CCV results showed acceptable recoveries, 85-115% for mercury. No qualifications were required.

### 2.4 BLANKS

Mercury was not detected in any of the blanks associated with the site sample analysis. No qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

As neither ICP nor ICP-MS were utilized for the analysis, the interference check sample results are not applicable.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recovery was within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As ICP-MS was not utilized for the analysis, the ICP-MS internal standard results are not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## **2.12 FIELD QC SAMPLES**

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### **2.12.1 Field Blanks and Equipment Rinsates**

The sample in this SDG had no associated field QC samples. No qualifications were required.

### **2.12.2 Field Duplicates**

There were no field duplicate analyses performed in association with the site sample.

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003  
 Report Number: IQA2793

Sampled: 01/28/07  
 Received: 01/29/07

### Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rw Qual	Qual Code
<b>Sample ID: IQA2793-01 (Outfall 003 - Water) - cont.</b>										
<b>Reporting Units: ug/l</b>										
Mercury, Dissolved	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	U	
Mercury, Total	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	U	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

LEVEL IV

*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.*

IQA2793 <Page 5 of 14>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>X</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4RA9  
 Task Order: 1261.001D.01  
 SDG No.: IQA2793

No. of Analyses: 1

Laboratory: Eberline  
 Reviewer: P. Meeks  
 Analysis/Method: Radionuclides

Date: <u>March 11, 2007</u>
Reviewer's Signature <i>Patt Meeks</i>

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications were applied for a low detector efficiency and LCS result.
Holding Times	
GC/MS Tune/Inst. Performance	<i>Gross Beta Original Results Accepted over Reanalysis Result</i>
Calibration	
Method blanks	
Surrogates	<i>Holding times exceeded for Gamma Scan analytes in BE1</i>
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS <sup>b</sup>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 003

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUP: IQA2793

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQA2793  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Radionuclides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 1  
Reviewer: P. Meeks  
Date of Review: April 25, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *EPA Prescribed Procedures for Measurements of Radioactivity in Drinking Water, Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0*, and validation procedures outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Eberline)	Matrix	COC Method
Outfall 003	IQA2793-01	8655-001	Water	900.0, 903.1, 904.0, 905.0, 906.0
Outfall 003 RE1	IQA2793-01	8655-001	Water	900.0, 901.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica within the temperature limits of  $4\pm 2^{\circ}\text{C}$ . No temperature information was provided by Eberline, the subcontract laboratory; however, as it is not necessary to chill radiological samples, no qualifications were required. The samples were noted to have been received intact, in good condition, with cooler and sample container custody seals intact.

According to the Los Angeles Regional Water Quality Control Board's (LARWQCB) guidance letter dated 01/12/05, samples collected for tritium analysis should be submitted in glass containers to avoid potential loss of tritium by sorption onto the plastic container. The tritium sample for Outfall 003 was received unpreserved in a glass container.

According to the LARWQCB guidance letter dated 01/12/05, unfiltered samples should not be preserved and filtered aliquots should be preserved after filtration. All aliquots were received at Eberline unfiltered and unpreserved and were neither preserved nor filtered after receipt. No qualifications were required.

#### 2.1.2 Chain of Custody

The original COC was signed and dated by field and laboratory personnel. The transfer COC was signed by personnel from both laboratories. After the initial analyses were complete, MWH personnel requested that gross beta be reanalyzed and that analysis by gamma spectroscopy be performed. To differentiate between the original gross beta analysis and the subsequent analyses for gross beta and gamma spectroscopy, the client ID for the reanalyses was appended with "RE1." Eberline did not list the MWH ID on the Form I; therefore, the reviewer edited the Form Is to reflect this ID. No qualifications were required.

#### 2.1.3 Holding Times

The tritium sample was analyzed within 180 days of collection. Aliquots for gross alpha, gross beta, radium-226, radium-228, and strontium-90 were prepared within the five-day analytical holding time for unpreserved samples. The gross beta reanalysis and the gamma spectroscopy analysis were performed beyond the five-day analytical holding time; therefore, all retained results for Outfall 003 RE1 were qualified as estimated, "UJ," for nondetects. No further qualifications were necessary.

## 2.2 CALIBRATION

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

### Gross Alpha and Gross Beta

The initial calibration included with the data was performed in February 2003. The gross alpha detector efficiency was less than 20%; therefore, the gross alpha result was qualified as an estimated nondetect, "UJ." The remaining detector efficiencies were above 20% and no further qualifications were required.

### Tritium

No calibration standards were analyzed for this method. According to the laboratory, the sample was spiked for efficiency determination; therefore, no calibration was necessary. The detector efficiency for the sample was at least 20% and was considered acceptable. The internal spike efficiency to default efficiency ratios was near 1, indicating that quenching did not occur.

### Strontium-90

The initial calibrations were performed in June 1995. The strontium chemical yield was at least 70% and was considered acceptable. The strontium continuing calibration results were within the laboratory control limits. No qualifications were necessary.

### Radium

The radium-226 cell efficiencies were determined in September 2006. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 calibration utilized actinium-228 and was verified in February 2001. The radium-228 tracer, yttrium oxalate yields were greater than 70%. No qualifications were necessary.

### Gamma Spectroscopy

The gamma spectroscopy geometry-specific, detector efficiencies were determined in September 1999. All analytes were determined at the maximum photopeak energy.

## 2.3 BLANKS

No measurable activities were detected in the method blanks; therefore, no qualifications were necessary.

## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Aqueous blank spikes were analyzed in association with the sample in this SDG. The gross alpha recovery was below the laboratory-established control limit at 64%; therefore, the

nondetect result for gross alpha was qualified as estimated, "UJ." The remaining blank spike results were within the laboratory-established control limits. No qualifications were necessary.

## 2.5 LABORATORY DUPLICATES

The laboratory performed duplicate analyses on Outfall 003 and Outfall 003 RE1 for all analytes. All RPDs were within the laboratory-established control limits. No qualifications were necessary.

## 2.6 MATRIX SPIKES

The laboratory performed matrix spike analyses on Outfall 003 for gross alpha, gross beta, tritium, and radium 226 and on Outfall 003 RE1 for gross beta. Gross alpha was recovered above the control limit at 134%; however, as gross alpha was not reported in Outfall 003, no qualifications were required. The remaining recoveries were within the laboratory-established control limits. No qualifications were necessary.

## 2.7 SAMPLE RESULT VERIFICATION

An EPA Level IV review was performed for the sample in this data package. Sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. As the gross beta reanalysis yielded a result similar to the original analysis, the reviewer rejected the gross beta reanalysis result, Outfall 003 RE1, in favor of the original result, Outfall 003. No further qualifications were necessary.

## 2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample.

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate samples in this SDG.

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8655</u> Work Order <u>R701193-01</u> Received Date <u>01/31/07</u>	Client <u>TA IRVINE</u> Contract <u>PROJECT# IQA2793</u> Matrix <u>WATER</u>
----------------------------------------------------------------------------------	------------------------------------------------------------------------------------

Client	Lab							Rev Qual	Qual Code
Sample ID	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA		
Outfall 003 IQA2793-01	8655-001	01/28/07	02/20/07	GrossAlpha	-1.15 ± 0.75	pCi/L	1.3	UJ	R,L
			02/20/07	Gross Beta	56.3 ± 1.9	pCi/L	1.3		
			02/15/07	Ra-228	0.013 ± 0.092	pCi/L	0.26	U	
			02/12/07	H-3	47.7 ± 93	pCi/L	150	↓	
			02/16/07	Ra-226	0.254 ± 0.45	pCi/L	0.79		
			02/09/07	Sr-90	0.004 ± 0.24	pCi/L	0.49		

LEVEL IV

Certified by <u>292</u> Report Date <u>02/23/07</u> Page 1
------------------------------------------------------------------

Eberline Services

ANALYSIS RESULTS

SDG <u>8655</u>	Client <u>TA IRVINE</u>
Work Order <u>R703151-01</u>	Contract <u>PROJECT# IQA2793</u>
Received Date <u>03/22/07</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results + 2σ	Units	MDA
TA IRVINE	8655-001	RE1	01/28/07	03/28/07	Gross Beta	57.8 ± 3.2	pCi/L	1.90
				03/28/07	K-40 (G)	U	pCi/L	350
				03/28/07	Mn-54 (G)	U	pCi/L	13.1
				03/28/07	Co-58 (G)	U	pCi/L	19.0
				03/28/07	Co-60 (G)	U	pCi/L	13.4
				03/28/07	Cs-137 (G)	U	pCi/L	13.1
				03/28/07	Eu-152 (G)	U	pCi/L	36.6
				03/28/07	Eu-154 (G)	U	pCi/L	42.6
				03/28/07	Ra-226 (G)	U	pCi/L	27.9
				03/28/07	Th-228 (G)	U	pCi/L	21.7
				03/28/07	Th-232 (G)	U	pCi/L	59.2
				03/28/07	U-238 (G)	U	pCi/L	1520
				03/28/07	Am-241 (G)	U	pCi/L	17.5
				03/28/07	Am-243 (G)	U	pCi/L	140

*Raw*  
*Qual*  
*Code*

*u.s.R*

*11*  
*4*

LEVEL IV

Certified by <u><i>[Signature]</i></u>
Report Date <u>04/19/07</u>
Page 1

# **APPENDIX G**

## **Section 2**

Outfall 003, January 28, 2007

Test America Analytical Laboratory Report

**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Routine Outfall 003

Sampled: 01/28/07  
Received: 01/29/07  
Revised: 02/24/07 14:09

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*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:** Enclosed are complete final results. The results for the EPA 1613 Dioxin's and radiochemistry were added. Also, the report was revised to remove the results for Mercury analyzed by TestAmerica and to add those analyzed by Weck Laboratories.

**LABORATORY ID**  
IQA2793-01

**CLIENT ID**  
Outfall 003

**MATRIX**  
Water

Reviewed By:



**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2793-01 (Outfall 003 - Water)</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	7A30083	0.050	2.0	<b>2.9</b>	1	01/30/07	01/30/07	
Cadmium	EPA 200.8	7A30083	0.025	1.0	<b>0.062</b>	1	01/30/07	01/30/07	J
Copper	EPA 200.8	7A30083	0.25	2.0	<b>6.3</b>	1	01/30/07	01/30/07	
Lead	EPA 200.8	7A30083	0.040	1.0	<b>0.59</b>	1	01/30/07	01/30/07	J
Thallium	EPA 200.8	7A30083	0.15	1.0	ND	1	01/30/07	01/30/07	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2793-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Antimony	EPA 200.8-Diss	7A29136	0.050	2.0	<b>2.5</b>	1	01/29/07	01/29/07	
Cadmium	EPA 200.8-Diss	7A29136	0.025	1.0	<b>0.032</b>	1	01/29/07	01/29/07	J
Copper	EPA 200.8-Diss	7A29136	0.25	2.0	<b>4.1</b>	1	01/29/07	01/29/07	
Lead	EPA 200.8-Diss	7A29136	0.040	1.0	<b>0.065</b>	1	01/29/07	01/29/07	J
Thallium	EPA 200.8-Diss	7A29136	0.15	1.0	ND	1	01/29/07	01/29/07	

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 Project Manager

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2793-01 (Outfall 003 - Water) - cont.</b>									
Reporting Units: mg/l									
Chloride	EPA 300.0	7A29043	0.15	0.50	<b>2.0</b>	1	01/29/07	01/29/07	
Nitrate/Nitrite-N	EPA 300.0	7A29043	0.080	0.15	<b>0.48</b>	1	01/29/07	01/29/07	
Oil & Grease	EPA 413.1	7A31063	0.89	4.7	<b>1.5</b>	1	01/31/07	01/31/07	J
Sulfate	EPA 300.0	7A29043	0.45	0.50	<b>26</b>	1	01/29/07	01/29/07	
Total Dissolved Solids	SM2540C	7B02074	10	10	<b>280</b>	1	02/02/07	02/02/07	
Total Suspended Solids	EPA 160.2	7A30113	10	10	ND	1	01/30/07	01/30/07	

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IQA2793 <Page 4 of 14>

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2793-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	
Mercury, Total	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 003 (IQA2793-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	01/28/2007 10:40	01/29/2007 16:35	01/29/2007 20:30	01/29/2007 20:54

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003  
 Report Number: IQA2793

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A30083 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30083-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/30/2007 (7A30083-BS1)</b>											
Antimony	83.3	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	80.3	1.0	0.025	ug/l	80.0		100	85-115			
Copper	79.5	2.0	0.25	ug/l	80.0		99	85-115			
Lead	83.4	1.0	0.040	ug/l	80.0		104	85-115			
Thallium	81.8	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS1) Source: IQA2576-01</b>											
Antimony	84.0	2.0	0.050	ug/l	80.0	0.078	105	70-130			
Cadmium	79.9	1.0	0.025	ug/l	80.0	0.18	100	70-130			
Copper	84.5	2.0	0.25	ug/l	80.0	5.9	98	70-130			
Lead	87.8	1.0	0.040	ug/l	80.0	4.9	104	70-130			
Thallium	83.5	1.0	0.15	ug/l	80.0	ND	104	70-130			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS2) Source: IQA2794-01</b>											
Antimony	84.8	2.0	0.050	ug/l	80.0	0.85	105	70-130			
Cadmium	74.9	1.0	0.025	ug/l	80.0	0.038	94	70-130			
Copper	76.2	2.0	0.25	ug/l	80.0	0.49	95	70-130			
Lead	70.5	1.0	0.040	ug/l	80.0	0.19	88	70-130			
Thallium	70.7	1.0	0.15	ug/l	80.0	ND	88	70-130			
<b>Matrix Spike Dup Analyzed: 01/30/2007 (7A30083-MSD1) Source: IQA2576-01</b>											
Antimony	84.4	2.0	0.050	ug/l	80.0	0.078	105	70-130	1	20	
Cadmium	81.5	1.0	0.025	ug/l	80.0	0.18	102	70-130	2	20	
Copper	83.4	2.0	0.25	ug/l	80.0	5.9	97	70-130	1	20	
Lead	85.1	1.0	0.040	ug/l	80.0	4.9	100	70-130	3	20	
Thallium	81.2	1.0	0.15	ug/l	80.0	ND	102	70-130	3	20	

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Project ID: Routine Outfall 003  
 Report Number: IQA2793

Sampled: 01/28/07  
 Received: 01/29/07

## 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: 7A29136 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29136-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.050	ug/l							
Copper	ND	2.0	0.40	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/29/2007 (7A29136-BS1)</b>											
Antimony	83.0	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	84.1	1.0	0.050	ug/l	80.0		105	85-115			
Copper	83.1	2.0	0.40	ug/l	80.0		104	85-115			
Lead	81.1	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	81.5	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29136-MS1) Source: IQA2792-01</b>											
Antimony	84.9	2.0	0.050	ug/l	80.0	0.35	106	70-130			
Cadmium	80.0	1.0	0.050	ug/l	80.0	ND	100	70-130			
Copper	82.8	2.0	0.40	ug/l	80.0	2.7	100	70-130			
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130			
Thallium	80.7	1.0	0.15	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29136-MSD1) Source: IQA2792-01</b>											
Antimony	86.4	2.0	0.050	ug/l	80.0	0.35	108	70-130	2	20	
Cadmium	82.3	1.0	0.050	ug/l	80.0	ND	103	70-130	3	20	
Copper	83.5	2.0	0.40	ug/l	80.0	2.7	101	70-130	1	20	
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130	0	20	
Thallium	79.5	1.0	0.15	ug/l	80.0	ND	99	70-130	1	20	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003  
 Report Number: IQA2793

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A29043 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29043-BLK1)</b>											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
<b>LCS Analyzed: 01/29/2007 (7A29043-BS1)</b>											
Chloride	4.87	0.50	0.15	mg/l	5.00		97	90-110			M-3
Sulfate	9.22	0.50	0.45	mg/l	10.0		92	90-110			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29043-MS1)</b>											
					<b>Source: IQA2737-01</b>						
Sulfate	10.7	0.50	0.45	mg/l	10.0	1.5	92	80-120			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29043-MSD1)</b>											
					<b>Source: IQA2737-01</b>						
Sulfate	10.8	0.50	0.45	mg/l	10.0	1.5	93	80-120	1	20	
<b>Batch: 7A30113 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30113-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/30/2007 (7A30113-BS1)</b>											
Total Suspended Solids	934	10	10	mg/l	1000		93	85-115			
<b>Duplicate Analyzed: 01/30/2007 (7A30113-DUP1)</b>											
					<b>Source: IQA2794-01</b>						
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b>Batch: 7A31063 Extracted: 01/31/07</b>											
<b>Blank Analyzed: 01/31/2007 (7A31063-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							

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Project ID: Routine Outfall 003  
 Report Number: IQA2793

Sampled: 01/28/07  
 Received: 01/29/07

## 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: 7A31063 Extracted: 01/31/07</u></b>											
<b>LCS Analyzed: 01/31/2007 (7A31063-BS1)</b>											
Oil & Grease	20.6	5.0	0.94	mg/l	20.0		103	65-120			MNRI
<b>LCS Dup Analyzed: 01/31/2007 (7A31063-BSD1)</b>											
Oil & Grease	22.0	5.0	0.94	mg/l	20.0		110	65-120	7	20	
<b><u>Batch: 7B02074 Extracted: 02/02/07</u></b>											
<b>Blank Analyzed: 02/02/2007 (7B02074-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/02/2007 (7B02074-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 02/02/2007 (7B02074-DUP1)</b>											
Total Dissolved Solids	1400	10	10	mg/l		1400			0	10	

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 Report Number: IQA2793

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: W7B0476 Extracted: 02/13/07</b>											
<b>Blank Analyzed: 02/14/2007 (W7B0476-BLK1)</b>											
Mercury, Total	ND	0.10	0.025	ug/l							
Mercury, Dissolved	ND	0.10	0.025	ug/l							
<b>LCS Analyzed: 02/14/2007 (W7B0476-BS1)</b>											
Mercury, Total	0.932	0.10	0.025	ug/l	1.00		93	85-115			
Mercury, Dissolved	0.932	0.10	0.025	ug/l	1.00		93	85-115			
<b>Matrix Spike Analyzed: 02/14/2007 (W7B0476-MS1) Source: 7020846-47</b>											
Mercury, Dissolved	1.07	0.10	0.025	ug/l	1.00	ND	107	70-130			
Mercury, Total	1.07	0.10	0.025	ug/l	1.00	ND	107	70-130			
<b>Matrix Spike Analyzed: 02/14/2007 (W7B0476-MS2) Source: 7020942-01</b>											
Mercury, Total	0.997	0.10	0.025	ug/l	1.00	ND	100	70-130			
Mercury, Dissolved	0.997	0.10	0.025	ug/l	1.00	ND	100	70-130			
<b>Matrix Spike Dup Analyzed: 02/14/2007 (W7B0476-MSD1) Source: 7020846-47</b>											
Mercury, Dissolved	0.991	0.10	0.025	ug/l	1.00	ND	99	70-130	8	20	
Mercury, Total	0.991	0.10	0.025	ug/l	1.00	ND	99	70-130	8	20	
<b>Matrix Spike Dup Analyzed: 02/14/2007 (W7B0476-MSD2) Source: 7020942-01</b>											
Mercury, Dissolved	0.970	0.10	0.025	ug/l	1.00	ND	97	70-130	3	20	
Mercury, Total	0.970	0.10	0.025	ug/l	1.00	ND	97	70-130	3	20	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## 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
IQA2793-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.50	4.7	15
IQA2793-01	Antimony-200.8	Antimony	ug/l	2.90	2.0	6.00
IQA2793-01	Antimony-200.8, Diss	Antimony	ug/l	2.50	2.0	6.00
IQA2793-01	Cadmium-200.8	Cadmium	ug/l	0.062	1.0	4.00
IQA2793-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.032	1.0	4.00
IQA2793-01	Chloride - 300.0	Chloride	mg/l	2.00	0.50	150
IQA2793-01	Copper-200.8	Copper	ug/l	6.30	2.0	14
IQA2793-01	Copper-200.8, Diss	Copper	ug/l	4.10	2.0	14
IQA2793-01	Lead-200.8	Lead	ug/l	0.59	1.0	5.20
IQA2793-01	Lead-200.8, Diss	Lead	ug/l	0.065	1.0	5.20
IQA2793-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.48	0.15	10.00
IQA2793-01	Sulfate-300.0	Sulfate	mg/l	26	0.50	250
IQA2793-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	280	10	850
IQA2793-01	Thallium-200.8	Thallium	ug/l	0.0050	1.0	2.00
IQA2793-01	Thallium-200.8, Diss	Thallium	ug/l	0	1.0	2.00

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## 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.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**TestAmerica - Irvine, CA**  
Michele Chamberlin  
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.*

**IQA2793 <Page 13 of 14>**

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IQA2793

Sampled: 01/28/07

Received: 01/29/07

## Certification Summary

### TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
SM2540C	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

#### Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gross Alpha  
 Samples: IQA2793-01

Analysis Performed: Gross Beta  
 Samples: IQA2793-01

Analysis Performed: Radium, Combined  
 Samples: IQA2793-01

Analysis Performed: Strontium 90  
 Samples: IQA2793-01

Analysis Performed: Tritium  
 Samples: IQA2793-01

#### Alta Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
 Samples: IQA2793-01

#### Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 245.1  
 Samples: IQA2793-01

### TestAmerica - Irvine, CA

Michele Chamberlin  
 Project Manager

# Del Mar Analytical CHAIN OF CUSTODY FORM

50112 KES

Client Name/Address:  
**MWH-Pasadena**  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101

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

Project Manager: Bronwyn Kelly  
 Phone Number:  
 (626) 568-6691  
 Fax Number:  
 (626) 568-6515

Sampler: **BANAGA**

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Outfall 003	W	1L Poly	1	1-28-07 10:40	HNO3	1A
Outfall 003-Dup	W	1L Poly	1	1-28-07 10:40	HNO3	1B
Outfall 003	W	1L Amber	2		None	2A, 2B
Outfall 003	W	1L Amber	2		HCl	3A, 3B
Outfall 003	W	Poly-500 ml	2		None	4A, 4B
Outfall 003	W	Poly-500 ml	2		None	5A, 5B
Outfall 003	W	1 Gal Cube 100 ml Amber Voa	3		None	6A, 6B, 6C, 6D, 6E, 6F
Outfall 003	W	Poly-1L	1	1-28-07 10:40	None	7

Relinquished By: *Kelly Kelly* Date/Time: \_\_\_\_\_  
 Relinquished By: *Jay Kelly* Date/Time: 1-29-07 1635  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: *Kelly Kelly* Date/Time: 1-29-07 1630  
 Received By: *Shamirah* Date/Time: 1-29-07 1635  
 Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

ANALYSIS REQUIRED							Field readings: Temp = 52 pH = 9.61	Comments
Total Recoverable Metals Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	Gross Alpha, Gross Beta Tritium (906.0*), SR-90 Radium 226& 228	Total Dissolved Metals: Sb Cd, Cu, Pb, Hg, Tl		
X	X						unfiltered and unpreserved analysis Filter w/in 24hr of receipt, at lab	
X			X					
		X						
				X				
			X					
					X			
					X			

Turn around Time: (check)  
 24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 72 Hours \_\_\_\_\_ Normal \_\_\_\_\_  
 Perchlorate Only 72 Hours \_\_\_\_\_  
 Metals Only 72 Hours \_\_\_\_\_  
 Sample Integrity: (Check)  
 Intact  On Ice:  2.4

VB  
 1/29  
 18  
 1/29/07

\*Strontium-90 to be analyzed per 13267



February 08, 2007

**Alta Project I.D.: 28670**

Ms. Michele Chamberlin  
Test America-Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 31, 2007 under your Project Name "IQA2793". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.*



**Alta Analytical Laboratory, Inc.**

1104 Windfield Way  
El Dorado Hills, CA 95762

(916) 933-1640  
FAX (916) 673-0106

Project 28670

Page 1 of 243

**Section I: Sample Inventory Report**

**Date Received: 1/31/2007**

Alta Lab. ID

Client Sample ID

28670-001

IQA2793-01

## SECTION II

Method Blank		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	8819	Lab Sample:	0-MB001	
Sample Size:	1.00 L	Date Extracted:	2-Feb-07	Date Analyzed DB-5:	5-Feb-07	
				Date Analyzed DB-225:	NA	
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000100		13C-2,3,7,8-TCDD	83.3	25 - 164
1,2,3,7,8-PeCDD	ND	0.00000151		13C-1,2,3,7,8-PeCDD	84.9	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000201		13C-1,2,3,4,7,8-HxCDD	76.9	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000214		13C-1,2,3,6,7,8-HxCDD	73.7	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000201		13C-1,2,3,4,6,7,8-HpCDD	79.1	23 - 140
1,2,3,4,6,7,8-HpCDD	ND	0.00000313		13C-OCDD	63.6	17 - 157
OCDD	0.00000327			13C-2,3,7,8-TCDF	76.3	24 - 169
2,3,7,8-TCDF	ND	0.000000787		13C-1,2,3,7,8-PeCDF	84.9	24 - 185
1,2,3,7,8-PeCDF	ND	0.000000922		13C-2,3,4,7,8-PeCDF	86.3	21 - 178
2,3,4,7,8-PeCDF	ND	0.000000929		13C-1,2,3,4,7,8-HxCDF	75.6	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.00000127		13C-1,2,3,6,7,8-HxCDF	71.3	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.00000141		13C-2,3,4,6,7,8-HxCDF	79.1	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000100		13C-1,2,3,7,8,9-HxCDF	79.5	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000132		13C-1,2,3,4,6,7,8-HpCDF	80.2	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.000000751		13C-1,2,3,4,7,8,9-HpCDF	81.0	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.000000809		13C-OCDF	70.0	17 - 157
OCDF	ND	0.00000275		CRS 37Cl-2,3,7,8-TCDD	99.8	35 - 197
<b>Totals</b>						
Total TCDD	ND	0.00000100				
Total PeCDD	ND	0.00000151				
Total HxCDD	ND	0.00000205				
Total HpCDD	ND	0.00000313				
Total TCDF	ND	0.000000787				
Total PeCDF	ND	0.000000925				
Total HxCDF	ND	0.00000149				
Total HpCDF	ND	0.000000779				
<b>Footnotes</b>						
a. Sample specific estimated detection limit.						
b. Estimated maximum possible concentration.						
c. Method detection limit.						
d. Lower control limit - upper control limit.						

Analyst: MAS

Approved By:

William J. Luksemburg 07-Feb-2007 14:08

OPR Results				EPA Method 1613			
Matrix	Aqueous	QC Batch No	8819	Lab Sample	0-OPR001	Date Analyzed DB-5:	5-Feb-07
Sample Size	1.00 L	Date Extracted	2-Feb-07	Date Analyzed DB-225:			NA
Analyte	Spike Conc. (ng/mL)	OPR Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	10.7	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	68.6	25 - 164	
1,2,3,7,8-PeCDD	50.0	52.1	35 - 71	13C-1,2,3,7,8-PeCDD	74.1	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	51.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	70.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.8	38 - 67	13C-1,2,3,6,7,8-HxCDD	69.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	54.2	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	80.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	52.5	35 - 70	13C-OCDD	71.2	17 - 157	
OCDD	100	108	78 - 144	13C-2,3,7,8-TCDF	66.6	24 - 169	
2,3,7,8-TCDF	10.0	10.4	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	76.5	24 - 185	
1,2,3,7,8-PeCDF	50.0	52.2	40 - 67	13C-2,3,4,7,8-PeCDF	75.9	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	74.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.9	36 - 67	13C-1,2,3,6,7,8-HxCDF	70.4	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	53.2	42 - 65	13C-2,3,4,6,7,8-HxCDF	73.2	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	53.2	35 - 78	13C-1,2,3,7,8,9-HxCDF	77.0	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	53.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	81.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.0	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	86.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.2	39 - 69	13C-OCDF	76.0	17 - 157	
OCDF	100	107	63 - 170	CRS 37Cl-2,3,7,8-TCDD	92.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 07-Feb-2007 14:08

Sample ID: IQA2793-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name	Test America-Irvine	Matrix:	Aqueous	Lab Sample:	28670-001		
Project	IQA2793	Sample Size	1.04 L	QC Batch No	8819		
Date Collected:	28-Jan-07			Date Analyzed DB-5:	5-Feb-07		
Time Collected:	1040			Date Analyzed DB-225	N/A		
				Date Received	31-Jan-07		
				Date Extracted	2-Feb-07		
				Date Analyzed DB-225	N/A		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000112			85.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000126			87.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000205			86.2	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000216			79.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000204			89.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000144			J	74.1	17 - 157	
OCDD	0.000109			B	84.1	24 - 169	
2,3,7,8-TCDF	ND	0.00000129			87.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000118			87.7	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115			86.3	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000757			80.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000795			86.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000826			90.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000111			93.3	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000328			J	96.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000108			83.2	17 - 157	
OCDF	0.00000810			J	98.5	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000112					
Total PeCDD	ND	0.00000126					
Total HxCDD	0.00000510						
Total HpCDD	0.0000347						
Total TCDF	ND	0.00000129					
Total PeCDF	ND	0.00000299					
Total HxCDF	0.00000170						
Total HpCDF	0.00000683						

**Footnotes**  
a. Sample specific estimated detection limit.  
b. Estimated maximum possible concentration.  
c. Method detection limit.  
d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg 07-Feb-2007 14:08

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

# TestAmerica

ANALYTICAL TESTING CORPORATION

## SUBCONTRACT ORDER - PROJECT # IQA2793 28670

<p><b>SENDING LABORATORY:</b></p> <p>TestAmerica - Irvine, CA          17461 Derian Avenue, Suite 100          Irvine, CA 92614          Phone: (949) 261-1022          Fax: (949) 260-3297          Project Manager: Michele Chamberlin</p>	<p><b>RECEIVING LABORATORY:</b></p> <p>Alta Analytical <span style="float: right;">3.5°C</span>          1104 Windfield Way          El Dorado Hills, CA 95762          Phone : (916) 933-1640          Fax: (916) 673-0106</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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

Analysis	Expiration	Comments
<p><b>Sample ID: IQA2793-01 Water</b>      <b>Sampled: 01/28/07 10:40</b></p> <p>1613-Dioxin-HR-Alta      02/04/07 10:40</p> <p>EDD - Level 4      02/25/07 10:40</p>		<p>J flags, 17 congeners, no TEQ, ug/L, sub=Alta</p> <p>Excel EDD email to pm, Include Std logs for Lvl IV</p>
<p><b>Containers Supplied:</b></p> <p>1 L Amber (IQA2793-01C)</p> <p>1 L Amber (IQA2793-01D)</p>		

SAMPLE INTEGRITY:					
All containers intact:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Sample labels/COC agree:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Custody Seals Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Samples Preserved Properly:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received On Ice::	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received at (temp):	_____	

<i>Va Bandy</i>	<i>1/30/07</i>		<i>Bettina G. Benedict</i>	<i>1/31/07</i>	<i>0850</i>
Released By	Date	Time	Received By	Date	Time
Released By	Date	Time	Received By	Date	Time

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 28670 TAT Standard

Samples Arrival:	Date/Time 1/31/07 0840	Initials: UBB	Location: <u>WR-2</u>
			Shelf/Rack: <u>N/A</u>
Logged In:	Date/Time 1/31/07 1106	Initials: UBB	Location: <u>WR-2</u>
			Shelf/Rack: <u>C-3</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
		<input type="checkbox"/> None	
Temp °C	3.5°C	Time: 0848	Thermometer ID: IR-2

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk #	7985 9666 9898		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?			None
Shipping Container	Alta	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:



February 23, 2007

Ms. Michele Chamberlin  
Test America, Inc.  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Reference: Test America Project No. IQA2793  
Eberline Services NELAP Cert #01120CA (exp. 01/31/08)  
Eberline Services Report R701193-8655

Dear Ms. Chamberlin:

Enclosed are results from the analyses of one water sample received at Eberline Services on January 31, 2007. The sample was analyzed according to the accompanying Test America Subcontract Order Form. The requested analyses were gross alpha/gross beta (EPA900.0), tritium (H-3, EPA906.0), and strontium-90 (Sr-90, EPA905.0), Ra-226 (EPA903.1), and Ra-228 (EPA904.0). The samples were not filtered prior to analysis; all analyses, except tritium, were prepared for analysis within 5 days of collection. Quality control samples consisted of LCS's, blank analyses, duplicate analyses, and matrix spikes (excluding Sr-90 and Ra-228). All QC sample results were within the limits defined in Eberline Services Quality Control Procedures Manual. Analyses that involve the yielding of an analytical tracer or carrier, such as Sr-90 and Ra-228, do not require matrix spike analyses to be performed. A level IV data package will follow within one week.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

*MCM/njv*

*Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice*

Analytical Services  
2030 Wright Avenue  
P.O. Box 4040  
Richmond, California 94804-0040  
(510) 235-2633 Fax (510) 235-0438  
Toll Free (800) 841-5487  
[www.eberlineservices.com](http://www.eberlineservices.com)

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8655</u>	Client <u>TA IRVINE</u>
Work Order <u>R701193-01</u>	Contract <u>PROJECT# IQA2793</u>
Received Date <u>01/31/07</u>	Matrix <u>WATER</u>

<u>Client</u>	<u>Lab</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
<u>IQA2793-01</u>	<u>8655-001</u>	<u>01/28/07</u>	<u>02/20/07</u>	<u>GrossAlpha</u>	<u>-1.15 ± 0.75</u>	<u>pCi/L</u>	<u>1.3</u>
			<u>02/20/07</u>	<u>Gross Beta</u>	<u>56.3 ± 1.9</u>	<u>pCi/L</u>	<u>1.3</u>
			<u>02/15/07</u>	<u>Ra-228</u>	<u>0.013 ± 0.092</u>	<u>pCi/L</u>	<u>0.26</u>
			<u>02/12/07</u>	<u>H-3</u>	<u>47.7 ± 93</u>	<u>pCi/L</u>	<u>150</u>
			<u>02/16/07</u>	<u>Ra-226</u>	<u>0.254 ± 0.45</u>	<u>pCi/L</u>	<u>0.79</u>
			<u>02/09/07</u>	<u>Sr-90</u>	<u>0.004 ± 0.24</u>	<u>pCi/L</u>	<u>0.49</u>

Certified by <u></u>
Report Date <u>02/23/07</u>
Page 1

# Eberline Services

## QC RESULTS

SDG <u>8655</u>	Client <u>TA IRVINE</u>
Work Order <u>R701193-01</u>	Contract <u>PROJECT# IQA2793</u>
Received Date <u>01/31/07</u>	Matrix <u>WATER</u>

Lab	<u>Sample ID</u>	<u>Nuclide</u>	<u>Results</u>	<u>Units</u>	<u>Amount Added</u>	<u>MDA</u>	<u>Evaluation</u>
<u>LCS</u>							
	8655-002	GrossAlpha	7.14 ± 0.56	pCi/Smpl	11.1	0.24	64% recovery
		Gross Beta	11.7 ± 0.47	pCi/Smpl	11.5	0.46	102% recovery
		Ra-228	12.0 ± 0.70	pCi/Smpl	11.2	0.46	107% recovery
		H-3	224 ± 14	pCi/Smpl	232	16	97% recovery
		Ra-226	5.90 ± 0.27	pCi/Smpl	5.58	0.084	106% recovery
		Sr-90	12.8 ± 0.61	pCi/Smpl	12.0	0.23	107% recovery
<u>BLANK</u>							
	8655-003	GrossAlpha	-0.097 ± 0.12	pCi/Smpl	NA	0.23	<MDA
		Gross Beta	-0.021 ± 0.16	pCi/Smpl	NA	0.26	<MDA
		Ra-228	-0.099 ± 0.16	pCi/Smpl	NA	0.46	<MDA
		H-3	-1.48 ± 9.0	pCi/Smpl	NA	15	<MDA
		Ra-226	0.006 ± 0.040	pCi/Smpl	NA	0.078	<MDA
		Sr-90	0.058 ± 0.13	pCi/Smpl	NA	0.26	<MDA

<u>DUPLICATES</u>				<u>ORIGINALS</u>				
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>3σ</u>	
							<u>RPD (Tot)</u>	<u>Eval</u>
8655-004	GrossAlpha	-1.30 ± 0.68	1.2	8655-001	-1.15 ± 0.75	1.3	-	0 satis.
	Gross Beta	55.8 ± 1.9	1.5		56.3 ± 1.9	1.3	1	43 satis.
	Ra-228	0.006 ± 0.11	0.25		0.013 ± 0.092	0.26	-	0 satis.
	H-3	32.9 ± 93	160		47.7 ± 93	150	-	0 satis.
	Ra-226	-0.049 ± 0.37	0.74		0.254 ± 0.45	0.79	-	0 satis.
	Sr-90	0.044 ± 0.44	0.93		0.004 ± 0.24	0.49	-	0 satis.

<u>SPIKED SAMPLE</u>				<u>ORIGINAL SAMPLE</u>				
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Added</u>	<u>%Recv</u>
8655-005	GrossAlpha	137 ± 3.2	0.71	8655-001	-1.15 ± 0.75	1.3	103	134
	Gross Beta	158 ± 3.0	1.2		56.3 ± 1.9	1.3	96.1	106
	H-3	19300 ± 420	210		47.7 ± 93	150	21200	91
	Ra-226	121 ± 4.4	0.76		0.254 ± 0.45	0.79	123	98

Certified by

Report Date 02/23/07

Page 2

## SUBCONTRACT ORDER - PROJECT # IQA2793

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

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

8655

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

Analysis	Expiration	Comments
<b>Sample ID: IQA2793-01 Water</b>	<b>Sampled: 01/28/07 10:40</b>	
Gross Alpha-O	07/27/07 10:40	EPA 900.0, DONT FILTER, 5 day HT!, sub to Eberline
Gross Beta-O	07/27/07 10:40	EPA 900.0, DONT FILTER, 5 day HT!, sub to Eberline
Level 4 + EDD-OUT	02/25/07 10:40	**LEVEL IV QC, ACCESS 7 EDD**
Radium, Combined-O	01/28/08 10:40	EPA 903.1 & 904.0, DONT FILTER, sub to Eberline
Strontium 90-O	01/28/08 10:40	EPA 905.0, DONT FILTER, 5 day HT!, sub to Eberline
Tritium-O	01/28/08 10:40	EPA 906.0, DONT FILTER, sub to Eberline

**Containers Supplied:**

- 1 gal Poly (IQA2793-01L)
- 1 gal Poly (IQA2793-01M)
- 1 gal Poly (IQA2793-01N)
- 40 ml Amber Voa Vial (IQA2793-01O)
- 40 ml Amber Voa Vial (IQA2793-01P)
- 40 ml Amber Voa Vial (IQA2793-01Q)

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No  
 Sample labels/COC agree:  Yes  No  
 Samples Received On Ice::  Yes  No  
 Custody Seals Present:  Yes  No  
 Samples Preserved Properly:  Yes  No  
 Samples Received at (temp): \_\_\_\_\_

Released By: Vu Bank Date: 1/30/07 Time: \_\_\_\_\_ Received By: [Signature] Date: 01/31/07 Time: 9:15

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Client: TEST AMERICA City IRVINE State CA  
 Date/Time received 01/31/07 9:15 CoC No. 10A2793 JMK 1/31/07  
 Container I.D. No. ICE CHEST Requested TAT (Days) - P.O. Received Yes [ ] No [ ]

INSPECTION

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

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date \_\_\_\_\_  
 15. Inspected by JMK Date: 01/31/07 Time: 9:35

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe

Ion Chamber Ser. No. \_\_\_\_\_ Calibration date \_\_\_\_\_  
 Alpha Meter Ser. No. \_\_\_\_\_ Calibration date \_\_\_\_\_  
 Beta/Gamma Meter Ser. No. \_\_\_\_\_ Calibration date \_\_\_\_\_



### CERTIFICATE OF ANALYSIS

**Client:** TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine, CA 92614  
Attention: Michele Chamberlin

Phone: (949) 261-1022

Fax: (949) 260-3297

**Report Date:** 02/22/07 16:49

**Received Date:** 02/08/07 08:40

**Turn Around:** Normal

**Work Order #:** 7020845

**Client Project:** IQA2793

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

*The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.*

Dear Michele Chamberlin :

Enclosed are the results of analyses for samples received 02/08/07 08:40 with the Chain of Custody document. The samples were received in good condition, at 2.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager

Page 1 of 6





Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020845  
Project ID: IQA2793

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQA2793-01	client		7020845-01	Water	01/28/07 10:40



Weck Laboratories, Inc.  
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Industry, CA 91745  
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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020845  
Project ID: IQA2793

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

**IQA2793-01 7020845-01 (Water)**

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0476	02/13/07	02/14/07	jl
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0476	02/13/07	02/14/07	jl



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# QUALITY CONTROL SECTION



Weck Laboratories, Inc.  
 14859 E. Clark Ave.  
 Industry, CA 91745  
 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 7020845  
 Project ID: IQA2793

Date Received: 02/08/07 08:40  
 Date Reported: 02/22/07 16:49

**Metals by EPA 200 Series Methods - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch W7B0476 - EPA 245.1</b>										
<b>Blank (W7B0476-BLK1)</b>										
				Analyzed: 02/14/07						
Mercury, Total	ND	0.10	ug/l							
Mercury, Dissolved	ND	0.10	ug/l							
<b>LCS (W7B0476-BS1)</b>										
				Analyzed: 02/14/07						
Mercury, Total	0.932	0.10	ug/l	1.00		93.2	85-115			
Mercury, Dissolved	0.932	0.10	ug/l	1.00		93.2	85-115			
<b>Matrix Spike (W7B0476-MS1)</b>										
				Source: 7020846-47			Analyzed: 02/14/07			
Mercury, Total	1.07	0.10	ug/l	1.00	ND	107	70-130			
Mercury, Dissolved	1.07	0.10	ug/l	1.00	ND	107	70-130			
<b>Matrix Spike (W7B0476-MS2)</b>										
				Source: 7020942-01			Analyzed: 02/14/07			
Mercury, Total	0.997	0.10	ug/l	1.00	ND	99.7	70-130			
Mercury, Dissolved	0.997	0.10	ug/l	1.00	ND	99.7	70-130			
<b>Matrix Spike Dup (W7B0476-MSD1)</b>										
				Source: 7020846-47			Analyzed: 02/14/07			
Mercury, Total	0.991	0.10	ug/l	1.00	ND	99.1	70-130	7.67	20	
Mercury, Dissolved	0.991	0.10	ug/l	1.00	ND	99.1	70-130	7.67	20	
<b>Matrix Spike Dup (W7B0476-MSD2)</b>										
				Source: 7020942-01			Analyzed: 02/14/07			
Mercury, Total	0.970	0.10	ug/l	1.00	ND	97.0	70-130	2.75	20	
Mercury, Dissolved	0.970	0.10	ug/l	1.00	ND	97.0	70-130	2.75	20	



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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020845  
Project ID: IQA2793

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

### Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

## **APPENDIX G**

### **Section 3**

Outfall 006, January 28, 2007

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

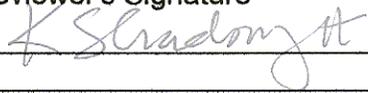
**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID B4DF117  
 Task Order 1261.001D.05  
 SDG No. IQA2794

No. of Analyses 1

Laboratory Test America  
 Reviewer K. Shadowlight  
 Analysis/Method Dioxin/Furan by 1613

Date: February 27, 2007  
 Reviewer's Signature  


ACTION ITEMS <sup>a</sup>	
<b>1. Case Narrative Deficiencies</b>	  
<b>2. Out of Scope Analyses</b>	  
<b>3. Analyses Not Conducted</b>	  
<b>4. Missing Hardcopy Deliverables</b>	  
<b>5. Incorrect Hardcopy Deliverables</b>	  
<b>6. Deviations from Analysis Protocol, e.g.,</b>	<b>Qualifications were assigned for the following:</b>
Holding Times	* Method blank contamination
GC/MS Tune/Inst. Performance	* EMPCs were identified
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS <sup>b</sup>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Routine Outfall 006-Annual

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IQA2794

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IQA2794  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: February 25, 2007

The samples listed in Table 1 were 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 for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (TestAmerica-Irvine)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 006	IQA2794-01	28671-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to TestAmerica-Irvine, custody seals were not required. Custody seals were present on the coolers from TestAmerica to Alta; however, no sample container custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). 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%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 10/24/2006 on instrument VG-5. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were 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 QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 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. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-8819-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was reported at  $0.00000327\mu\text{g/L}$  in the method blank. OCDD was also reported in the site sample at a concentration less than five times the concentration of the method blank; therefore, the detect for OCDD was qualified as an estimated nondetect, "UJ," at the level of contamination in the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-8819-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." No further qualifications were required.

Sample ID: **QA2794-01** *Outfall 006* **EPA Method 1613**

**Client Data**  
 Name: Test America-Irvine  
 Project: IQA2794  
 Date Collected: 28-Jan-07  
 Time Collected: 1010

**Sample Data**  
 Matrix: Aqueous  
 Sample Size: 1.04 L

**Laboratory Data**  
 Lab Sample: 28671-001  
 QC Batch No.: 8819  
 Date Analyzed DB-5: 6-Feb-07  
 Date Received: 31-Jan-07  
 Date Extracted: 2-Feb-07  
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.000000947			IS 13C-2,3,7,8-TCDD	83.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000117			13C-1,2,3,7,8-PeCDD	80.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000113			13C-1,2,3,4,7,8-HxCDD	78.2	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000114			13C-1,2,3,6,7,8-HxCDD	75.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000110			13C-1,2,3,4,6,7,8-HpCDD	87.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000145			13C-OCDD	76.1	17 - 157	
OCDD	0.0000139			J,B	13C-2,3,7,8-TCDF	83.6	24 - 169	
2,3,7,8-TCDF	ND	0.00000772			13C-1,2,3,7,8-PeCDF	81.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000931			13C-2,3,4,7,8-PeCDF	81.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000904			13C-1,2,3,4,7,8-HxCDF	77.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000475			13C-1,2,3,6,7,8-HxCDF	76.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000496			13C-2,3,4,6,7,8-HxCDF	82.1	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000537			13C-1,2,3,7,8,9-HxCDF	84.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000695			13C-1,2,3,4,6,7,8-HpCDF	87.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000876			13C-1,2,3,4,7,8,9-HpCDF	90.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000479			13C-OCDF	81.5	17 - 157	
OCDF	ND	0.00000202			CRS 37Cl-2,3,7,8-TCDD	105	35 - 197	

**Totals**

Total TCDD	ND	0.000000947						
Total PeCDD	ND	0.00000226						
Total HxCDD	ND	0.00000112						
Total HpCDD	ND	0.00000350						
Total TCDF	ND	0.00000772						
Total PeCDF	ND	0.00000917						
Total HxCDF	ND	0.00000546						
Total HpCDF	ND	0.00000901						

**Footnotes**  
 a. Sample specific estimated detection limit.  
 b. Estimated maximum possible concentration.  
 c. Method detection limit.  
 d. Lower control limit - upper control limit.

Analyst: MAS  
 Approved By: William J. Luksemburg  
 Date: 07-Feb-2007 14:17

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4MT110  
 Task Order: 1261.001D.01  
 SDG No.: IQA2794

No. of Analyses: 1

Laboratory: Weck  
 Reviewer: P. Meeks  
 Analysis/Method: Mercury

Date: February 28, 2007
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 006

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQA2794

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQA2794  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: February 28, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Weck Laboratory ID	Matrix	COC Method
Outfall 006	IQA2794-01	7020847-01	Water	245.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica and the subcontract laboratory, Weck, within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$  at  $2.4^{\circ}\text{C}$ . No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original and transfer COCs was signed and dated by the appropriate field and/or laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. Custody seals were not present upon receipt at Weck. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

As ICP-MS was not utilized for the analysis, the ICP-MS tune criteria are not applicable.

### 2.3 CALIBRATION

The mercury initial calibration  $r^2$  was  $\geq 0.995$ . The ICV and CCV results showed acceptable recoveries, 85-115% for mercury. No qualifications were required.

### 2.4 BLANKS

Mercury was not detected in any of the blanks associated with the site sample analysis. No qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

As neither ICP nor ICP-MS were utilized for the analysis, the interference check sample results are not applicable.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recovery was within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As ICP-MS was not utilized for the analysis, the ICP-MS internal standard results are not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.12 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.

# TestAmerica

ANALYTICAL TESTING CORPORATION

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 006  
Report Number: IQA2794

Sampled: 01/28/07  
Received: 01/29/07

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2794-01 (Outfall 006 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	U
Mercury, Total	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	U

Rev  
Qual | Qual  
Code

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

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LEVEL IV

IQA2794 <Page 5 of 15>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4WC95  
 Task Order: 1261.001D.01  
 SDG No.: IQA2794

No. of Analyses: 1

Laboratory: TestAmerica  
 Reviewer: P. Meeks  
 Analysis/Method: Perchlorate General Minerals

Date: <u>March 1, 2007</u>
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
<b>1. Case Narrative Deficiencies</b>	_____
<b>2. Out of Scope Analyses</b>	_____
<b>3. Analyses Not Conducted</b>	_____
<b>4. Missing Hardcopy Deliverables</b>	_____
<b>5. Incorrect Hardcopy Deliverables</b>	_____
<b>6. Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 006

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IQA2794

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQA2794  
Project Manager: P. Costa  
Matrix: Water  
Analysis: General Minerals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 1  
Reviewer: P. Meeks  
Date of Review: March 1, 2007

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Method 300.0*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 006	IQA2794-01	Water	General Minerals
Outfall 006 RE1	IQA2794-01RE1	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . No preservation problems were noted by the laboratory and no qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. The laboratory reanalyzed Outfall 006 for chloride but did not append the sample ID with "RE1". The reviewer edited the sample ID to include this information. No qualifications were required.

#### 2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the dates of analyses. The analyses were performed within the method-specified holding time. No qualifications were required.

### 2.2 CALIBRATION

The initial calibration  $r^2$  results were  $\geq 0.995$  and the ICV and CCV results were within the control limits of 90-110%. No qualifications were required.

### 2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No qualifications were required.

## 2.5 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of method accuracy was based on the LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form I were verified against the raw data. The laboratory reanalyzed Outfall 006 for chloride. As the original and reanalysis results were similar, the reviewer rejected, "R," the reanalysis result, Outfall 006 RE1, in favor of the original result. No further qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006  
 Report Number: IQA2794

Sampled: 01/28/07  
 Received: 01/29/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data		
									Qualifiers		
										Rev	Qual
										Qual	Code
<b>Sample ID: IQA2794-01 (Outfall 006 - Water) - cont.</b>											
Reporting Units: mg/l											
Chloride	EPA 300.0	7A29043	3.0	10	210	20	01/29/07	01/30/07			
Nitrate/Nitrite-N	EPA 300.0	7A29043	0.080	0.15	1.1	1	01/29/07	01/29/07	*		
Oil & Grease	EPA 413.1	7A31063	0.89	4.7	ND	1	01/31/07	01/31/07			
Sulfate	EPA 300.0	7A29043	0.45	0.50	30	1	01/29/07	01/29/07			
Total Dissolved Solids	SM2540C	7B02074	10	10	780	1	02/02/07	02/02/07			
Total Suspended Solids	EPA 160.2	7A30113	10	10	ND	1	01/30/07	01/30/07			
<b>Sample ID: IQA2794-01RE1 (Outfall 006 - Water)</b> Outfall 006 RE1											
Reporting Units: mg/l											
Chloride	EPA 300.0	7B02041	7.5	25	200	50	02/02/07	02/02/07	R	D	

\* Analysis not validated

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

LEVEL IV

## **APPENDIX G**

### **Section 4**

Outfall 006, January 28, 2007

Test America Analytical Laboratory Report

**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Routine Outfall 006

Sampled: 01/28/07  
Received: 01/29/07  
Revised: 02/24/07 14:14

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*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:** Enclosed are complete final results. The results for the EPA 1613 Dioxin's were added. Also, the report was revised to remove the results for Mercury analyzed by TestAmerica and to add those analyzed by Weck Laboratories.

**LABORATORY ID**  
IQA2794-01

**CLIENT ID**  
Outfall 006

**MATRIX**  
Water

Reviewed By:



**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: IQA2794

Sampled: 01/28/07

Received: 01/29/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2794-01 (Outfall 006 - Water)</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	7A30083	0.050	2.0	<b>0.85</b>	1	01/30/07	01/30/07	J
Cadmium	EPA 200.8	7A30083	0.025	1.0	<b>0.038</b>	1	01/30/07	01/30/07	J
Copper	EPA 200.8	7A30083	0.25	2.0	<b>0.49</b>	1	01/30/07	01/30/07	J
Lead	EPA 200.8	7A30083	0.040	1.0	<b>0.19</b>	1	01/30/07	01/30/07	J
Thallium	EPA 200.8	7A30083	0.15	1.0	ND	1	01/30/07	01/30/07	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: IQA2794

Sampled: 01/28/07

Received: 01/29/07

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2794-01 (Outfall 006 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Antimony	EPA 200.8-Diss	7A29136	0.050	2.0	<b>0.84</b>	1	01/29/07	01/29/07	J
Cadmium	EPA 200.8-Diss	7A29136	0.050	1.0	ND	1	01/29/07	01/29/07	
Copper	EPA 200.8-Diss	7A29136	0.40	2.0	ND	1	01/29/07	01/29/07	
Lead	EPA 200.8-Diss	7A29136	0.10	1.0	ND	1	01/29/07	01/29/07	
Thallium	EPA 200.8-Diss	7A29136	0.15	1.0	ND	1	01/29/07	01/29/07	

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: IQA2794

Sampled: 01/28/07

Received: 01/29/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2794-01 (Outfall 006 - Water) - cont.</b>									
Reporting Units: mg/l									
Chloride	EPA 300.0	7A29043	3.0	10	<b>210</b>	20	01/29/07	01/30/07	
Nitrate/Nitrite-N	EPA 300.0	7A29043	0.080	0.15	<b>1.1</b>	1	01/29/07	01/29/07	
Oil & Grease	EPA 413.1	7A31063	0.89	4.7	ND	1	01/31/07	01/31/07	
Sulfate	EPA 300.0	7A29043	0.45	0.50	<b>30</b>	1	01/29/07	01/29/07	
Total Dissolved Solids	SM2540C	7B02074	10	10	<b>780</b>	1	02/02/07	02/02/07	
Total Suspended Solids	EPA 160.2	7A30113	10	10	ND	1	01/30/07	01/30/07	

### Sample ID: IQA2794-01RE1 (Outfall 006 - Water)

Reporting Units: mg/l

Chloride	EPA 300.0	7B02041	7.5	25	<b>200</b>	50	02/02/07	02/02/07	
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TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: IQA2794

Sampled: 01/28/07

Received: 01/29/07

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2794-01 (Outfall 006 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	
Mercury, Total	EPA 245.1	W7B0476	0.050	0.20	ND	1	02/13/07	02/14/07	

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: IQA2794

Sampled: 01/28/07

Received: 01/29/07

## SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 006 (IQA2794-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	01/28/2007 10:10	01/29/2007 16:35	01/29/2007 20:30	01/29/2007 21:10

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: IQA2794

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A30083 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30083-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/30/2007 (7A30083-BS1)</b>											
Antimony	83.3	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	80.3	1.0	0.025	ug/l	80.0		100	85-115			
Copper	79.5	2.0	0.25	ug/l	80.0		99	85-115			
Lead	83.4	1.0	0.040	ug/l	80.0		104	85-115			
Thallium	81.8	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS1) Source: IQA2576-01</b>											
Antimony	84.0	2.0	0.050	ug/l	80.0	0.078	105	70-130			
Cadmium	79.9	1.0	0.025	ug/l	80.0	0.18	100	70-130			
Copper	84.5	2.0	0.25	ug/l	80.0	5.9	98	70-130			
Lead	87.8	1.0	0.040	ug/l	80.0	4.9	104	70-130			
Thallium	83.5	1.0	0.15	ug/l	80.0	ND	104	70-130			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS2) Source: IQA2794-01</b>											
Antimony	84.8	2.0	0.050	ug/l	80.0	0.85	105	70-130			
Cadmium	74.9	1.0	0.025	ug/l	80.0	0.038	94	70-130			
Copper	76.2	2.0	0.25	ug/l	80.0	0.49	95	70-130			
Lead	70.5	1.0	0.040	ug/l	80.0	0.19	88	70-130			
Thallium	70.7	1.0	0.15	ug/l	80.0	ND	88	70-130			
<b>Matrix Spike Dup Analyzed: 01/30/2007 (7A30083-MSD1) Source: IQA2576-01</b>											
Antimony	84.4	2.0	0.050	ug/l	80.0	0.078	105	70-130	1	20	
Cadmium	81.5	1.0	0.025	ug/l	80.0	0.18	102	70-130	2	20	
Copper	83.4	2.0	0.25	ug/l	80.0	5.9	97	70-130	1	20	
Lead	85.1	1.0	0.040	ug/l	80.0	4.9	100	70-130	3	20	
Thallium	81.2	1.0	0.15	ug/l	80.0	ND	102	70-130	3	20	

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 Project Manager

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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: 7A29136 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29136-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.050	ug/l							
Copper	ND	2.0	0.40	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/29/2007 (7A29136-BS1)</b>											
Antimony	83.0	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	84.1	1.0	0.050	ug/l	80.0		105	85-115			
Copper	83.1	2.0	0.40	ug/l	80.0		104	85-115			
Lead	81.1	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	81.5	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29136-MS1) Source: IQA2792-01</b>											
Antimony	84.9	2.0	0.050	ug/l	80.0	0.35	106	70-130			
Cadmium	80.0	1.0	0.050	ug/l	80.0	ND	100	70-130			
Copper	82.8	2.0	0.40	ug/l	80.0	2.7	100	70-130			
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130			
Thallium	80.7	1.0	0.15	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29136-MSD1) Source: IQA2792-01</b>											
Antimony	86.4	2.0	0.050	ug/l	80.0	0.35	108	70-130	2	20	
Cadmium	82.3	1.0	0.050	ug/l	80.0	ND	103	70-130	3	20	
Copper	83.5	2.0	0.40	ug/l	80.0	2.7	101	70-130	1	20	
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130	0	20	
Thallium	79.5	1.0	0.15	ug/l	80.0	ND	99	70-130	1	20	

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Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A29043 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29043-BLK1)</b>											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
<b>LCS Analyzed: 01/29/2007 (7A29043-BS1)</b>											
Chloride	4.87	0.50	0.15	mg/l	5.00		97	90-110			M-3
Sulfate	9.22	0.50	0.45	mg/l	10.0		92	90-110			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29043-MS1)</b>											
						<b>Source: IQA2737-01</b>					
Sulfate	10.7	0.50	0.45	mg/l	10.0	1.5	92	80-120			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29043-MSD1)</b>											
						<b>Source: IQA2737-01</b>					
Sulfate	10.8	0.50	0.45	mg/l	10.0	1.5	93	80-120	1	20	
<b>Batch: 7A30113 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30113-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/30/2007 (7A30113-BS1)</b>											
Total Suspended Solids	934	10	10	mg/l	1000		93	85-115			
<b>Duplicate Analyzed: 01/30/2007 (7A30113-DUP1)</b>											
						<b>Source: IQA2794-01</b>					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b>Batch: 7A31063 Extracted: 01/31/07</b>											
<b>Blank Analyzed: 01/31/2007 (7A31063-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							

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 Report Number: IQA2794

Sampled: 01/28/07  
 Received: 01/29/07

## 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: 7A31063 Extracted: 01/31/07</u></b>											
<b>LCS Analyzed: 01/31/2007 (7A31063-BS1)</b>											
Oil & Grease	20.6	5.0	0.94	mg/l	20.0		103	65-120			MNRI
<b>LCS Dup Analyzed: 01/31/2007 (7A31063-BSD1)</b>											
Oil & Grease	22.0	5.0	0.94	mg/l	20.0		110	65-120	7	20	
<b><u>Batch: 7B02041 Extracted: 02/02/07</u></b>											
<b>Blank Analyzed: 02/02/2007 (7B02041-BLK1)</b>											
Chloride	0.120	0.50	0.10	mg/l							J
<b>LCS Analyzed: 02/02/2007 (7B02041-BS1)</b>											
Chloride	4.70	0.50	0.10	mg/l	5.00		94	90-110			
<b>Matrix Spike Analyzed: 02/02/2007 (7B02041-MS1)</b>											
						<b>Source: IQA3160-01</b>					
Chloride	81.2	10	2.0	mg/l	50.0	37	88	80-120			
<b>Matrix Spike Dup Analyzed: 02/02/2007 (7B02041-MSD1)</b>											
						<b>Source: IQA3160-01</b>					
Chloride	82.1	10	2.0	mg/l	50.0	37	90	80-120	1	20	
<b><u>Batch: 7B02074 Extracted: 02/02/07</u></b>											
<b>Blank Analyzed: 02/02/2007 (7B02074-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/02/2007 (7B02074-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			

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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>Batch: 7B02074 Extracted: 02/02/07</b>											
<b>Duplicate Analyzed: 02/02/2007 (7B02074-DUP1)</b>						<b>Source: IQA2641-01</b>					
Total Dissolved Solids	1400	10	10	mg/l		1400			0	10	

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## METHOD BLANK/QC DATA

### Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: W7B0476 Extracted: 02/13/07</b>											
<b>Blank Analyzed: 02/14/2007 (W7B0476-BLK1)</b>											
Mercury, Total	ND	0.10	0.025	ug/l							
Mercury, Dissolved	ND	0.10	0.025	ug/l							
<b>LCS Analyzed: 02/14/2007 (W7B0476-BS1)</b>											
Mercury, Total	0.932	0.10	0.025	ug/l	1.00		93	85-115			
Mercury, Dissolved	0.932	0.10	0.025	ug/l	1.00		93	85-115			
<b>Matrix Spike Analyzed: 02/14/2007 (W7B0476-MS1)</b>											
						<b>Source: 7020846-47</b>					
Mercury, Dissolved	1.07	0.10	0.025	ug/l	1.00	ND	107	70-130			
Mercury, Total	1.07	0.10	0.025	ug/l	1.00	ND	107	70-130			
<b>Matrix Spike Analyzed: 02/14/2007 (W7B0476-MS2)</b>											
						<b>Source: 7020942-01</b>					
Mercury, Total	0.997	0.10	0.025	ug/l	1.00	ND	100	70-130			
Mercury, Dissolved	0.997	0.10	0.025	ug/l	1.00	ND	100	70-130			
<b>Matrix Spike Dup Analyzed: 02/14/2007 (W7B0476-MSD1)</b>											
						<b>Source: 7020846-47</b>					
Mercury, Dissolved	0.991	0.10	0.025	ug/l	1.00	ND	99	70-130	8	20	
Mercury, Total	0.991	0.10	0.025	ug/l	1.00	ND	99	70-130	8	20	
<b>Matrix Spike Dup Analyzed: 02/14/2007 (W7B0476-MSD2)</b>											
						<b>Source: 7020942-01</b>					
Mercury, Dissolved	0.970	0.10	0.025	ug/l	1.00	ND	97	70-130	3	20	
Mercury, Total	0.970	0.10	0.025	ug/l	1.00	ND	97	70-130	3	20	

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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
IQA2794-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.75	4.7	15
IQA2794-01	Antimony-200.8	Antimony	ug/l	0.85	2.0	6.00
IQA2794-01	Antimony-200.8, Diss	Antimony	ug/l	0.84	2.0	6.00
IQA2794-01	Cadmium-200.8	Cadmium	ug/l	0.038	1.0	4.00
IQA2794-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.0084	1.0	4.00
<b>IQA2794-01</b>	<b>Chloride - 300.0</b>	<b>Chloride</b>	<b>mg/l</b>	<b>210</b>	<b>10</b>	<b>150</b>
IQA2794-01	Copper-200.8	Copper	ug/l	0.49	2.0	14
IQA2794-01	Copper-200.8, Diss	Copper	ug/l	0.17	2.0	14
IQA2794-01	Lead-200.8	Lead	ug/l	0.19	1.0	5.20
IQA2794-01	Lead-200.8, Diss	Lead	ug/l	0.012	1.0	5.20
IQA2794-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.10	0.15	10.00
IQA2794-01	Sulfate-300.0	Sulfate	mg/l	30	0.50	250
IQA2794-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	780	10	850
IQA2794-01	Thallium-200.8	Thallium	ug/l	0.14	1.0	2.00
IQA2794-01	Thallium-200.8, Diss	Thallium	ug/l	0	1.0	2.00
<b>IQA2794-01RE1</b>	<b>Chloride - 300.0</b>	<b>Chloride</b>	<b>mg/l</b>	<b>200</b>	<b>25</b>	<b>150</b>

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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## 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.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

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**IQA2794 <Page 14 of 15>**

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## Certification Summary

### TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
SM2540C	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

#### Alta Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
 Samples: IQA2794-01

#### Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 245.1  
 Samples: IQA2794-01

### TestAmerica - Irvine, CA

Michele Chamberlin  
 Project Manager

**CHAIN OF CUSTODY FORM**

<b>Client Name/Address:</b> MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		<b>Project:</b> Boeing-SSFL NPDES <b>Routine Outfall 006</b> Stormwater at FSDF-2		<b>Project Manager:</b> Bronwyn Kelly <b>Phone Number:</b> (626) 568-6691 <b>Fax Number:</b> (626) 568-6515		<b>Sampler:</b> Daniela									
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl	Field readings: Temp = 51.6 pH = 8.41	Comments	
Outfall 006	W	1L Poly	1	1-28-07 10:10	HNO3	1A	X								
Outfall 006-Dup	W	1L Poly	1		HNO3	1B	X								
Outfall 006	W	1L Amber	2		None	2A, 2B		X							
Outfall 006	W	1L Amber	2		HCl	3A, 3B		X							
Outfall 006	W	Poly-500 ml	2		None	4A, 4B			X						
Outfall 006	W	Poly-500 ml	2		None	5A, 5B				X					
Outfall 006	W	Poly-1L	1	1-28-07 10:10	None	6						X	Filter w/in 24hr of receipt at lab		
Relinquished By	[Signature]		Date/Time: 1-29-07 1630		Received By		Date/Time: 1-29-07 1630		Turn around Time: (check) 5 Days		24 Hours				
Relinquished By	[Signature]		Date/Time: 1-29-07 1639		Received By		Date/Time: 1-29-07 1635		48 Hours		10 Days				
Relinquished By	[Signature]		Date/Time:		Received By		Date/Time:		72 Hours		Normal		[Check]		
										Perchlorate Only 72 Hours		Metals Only 72 Hours		Sample Integrity: (Check) Intact [Check]	

AE 1-29-07  
1810



February 08, 2007

**Alta Project I.D.: 28671**

Ms. Michele Chamberlin  
Test America-Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 31, 2007 under your Project Name "IQA2794". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.*



**Alta Analytical Laboratory, Inc.**

1104 Windfield Way  
El Dorado Hills, CA 95762  
(916) 933-1640  
FAX (916) 673-0106

**Section I: Sample Inventory Report**

**Date Received: 1/31/2007**

Alta Lab. ID

Client Sample ID

28671-001

IQA2794-01

## SECTION II

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	8819	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	2-Feb-07	Date Analyzed DB-5:	5-Feb-07		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000100		13C-2,3,7,8-TCDD	83.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000151		13C-1,2,3,7,8-PeCDD	84.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000201		13C-1,2,3,4,7,8-HxCDD	76.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000214		13C-1,2,3,6,7,8-HxCDD	73.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000201		13C-1,2,3,4,6,7,8-HpCDD	79.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000313		13C-OCDD	63.6	17 - 157	
OCDD	0.00000327			13C-2,3,7,8-TCDF	76.3	24 - 169	J
2,3,7,8-TCDF	ND	0.000000787		13C-1,2,3,7,8-PeCDF	84.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000922		13C-2,3,4,7,8-PeCDF	86.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000929		13C-1,2,3,4,7,8-HxCDF	75.6	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000127		13C-1,2,3,6,7,8-HxCDF	71.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000141		13C-2,3,4,6,7,8-HxCDF	79.1	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000100		13C-1,2,3,7,8,9-HxCDF	79.5	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000132		13C-1,2,3,4,6,7,8-HpCDF	80.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000751		13C-1,2,3,4,7,8,9-HpCDF	81.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000809		13C-OCDF	70.0	17 - 157	
OCDF	ND	0.00000275		<b>CRS</b> 37Cl-2,3,7,8-TCDD	99.8	35 - 197	
<b>Totals</b>				<b>Footnotes</b>			
Total TCDD	ND	0.00000100		a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000151		b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000205		c. Method detection limit.			
Total HpCDD	ND	0.00000313		d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000787					
Total PeCDF	ND	0.000000925					
Total HxCDF	ND	0.00000149					
Total HpCDF	ND	0.000000779					

Analyst: MAS

Approved By:

William J. Luksemburg 07-Feb-2007 14:17

OPR Results		EPA Method 1613					
Matrix	Aqueous	QC Batch No:	8819	Lab Sample:	0-OPR001		
Sample Size	1.00 L	Date Extracted	2-Feb-07	Date Analyzed DB-5:	5-Feb-07		
				Date Analyzed DB-225:	NA		
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	10.7	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	68.6	25 - 164	
1,2,3,7,8-PeCDD	50.0	52.1	35 - 71	13C-1,2,3,7,8-PeCDD	74.1	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	51.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	70.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.8	38 - 67	13C-1,2,3,6,7,8-HxCDD	69.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	54.2	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	80.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	52.5	35 - 70	13C-OCDD	71.2	17 - 157	
OCDD	100	108	78 - 144	13C-2,3,7,8-TCDF	66.6	24 - 169	
2,3,7,8-TCDF	10.0	10.4	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	76.5	24 - 185	
1,2,3,7,8-PeCDF	50.0	52.2	40 - 67	13C-2,3,4,7,8-PeCDF	75.9	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	74.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.9	36 - 67	13C-1,2,3,6,7,8-HxCDF	70.4	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	53.2	42 - 65	13C-2,3,4,6,7,8-HxCDF	73.2	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	53.2	35 - 78	13C-1,2,3,7,8,9-HxCDF	77.0	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	53.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	81.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.0	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	86.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.2	39 - 69	13C-OCDF	76.0	17 - 157	
OCDF	100	107	63 - 170	CRS 37Cl-2,3,7,8-TCDD	92.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 07-Feb-2007 14:17

Sample ID: IQA2794-01		EPA Method 1613			
Client Data		Sample Data		Laboratory Data	
Name	Test America-Irvine	Matrix	Aqueous	Lab Sample	28671-001
Project	IQA2794	Sample Size	1.04 L	QC Batch No.	8819
Date Collected:	28-Jan-07			Date Analyzed DB-S	6-Feb-07
Time Collected:	1010			Date Analyzed DB-225	NA
		DL <sup>a</sup>	EMPC <sup>b</sup>	%R	LCL-UCL <sup>d</sup> Qualifiers
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.000000947		83.2	25 - 164
1,2,3,7,8-PeCDD	ND	0.00000117		80.8	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000113		78.2	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000114		75.2	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000110		87.4	23 - 140
1,2,3,4,6,7,8-HpCDD	ND	0.00000145		76.1	17 - 157
OCDD	0.0000139			83.6	24 - 169
2,3,7,8-TCDF	ND	0.000000772	J,B	81.2	24 - 185
1,2,3,7,8-PeCDF	ND	0.000000931		81.6	21 - 178
2,3,4,7,8-PeCDF	ND	0.000000904		77.8	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000475		76.0	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000496		82.1	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000537		84.2	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000695		87.5	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.000000876		90.6	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.000000479		81.5	17 - 157
OCDF	ND	0.00000202		105	35 - 197
<b>Totals</b>					
Total TCDD	ND	0.000000947			
Total PeCDD	ND	0.00000226			
Total HxCDD	ND	0.00000112			
Total HpCDD	ND	0.00000350			
Total TCDF	ND	0.000000772			
Total PeCDF	ND	0.000000917			
Total HxCDF	ND	0.000000546			
Total HpCDF	ND	0.000000901			

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyst: MAS

Approved By:

William J. Luksemburg

07-Feb-2007 14:17

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit -- concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

# TestAmerica

ANALYTICAL TESTING CORPORATION

## SUBCONTRACT ORDER - PROJECT # IQA2794 28671

<p><b>SENDING LABORATORY:</b>                  TestAmerica - Irvine, CA                  17461 Derian Avenue, Suite 100                  Irvine, CA 92614                  Phone: (949) 261-1022                  Fax: (949) 260-3297                  Project Manager: Michele Chamberlin</p>	<p><b>RECEIVING LABORATORY:</b> 3.5°C                  Alta Analytical                  1104 Windfield Way                  El Dorado Hills, CA 95762                  Phone : (916) 933-1640                  Fax: (916) 673-0106</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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

Analysis	Expiration	Comments
Sample ID: IQA2794-01 Water	Sampled: 01/28/07 10:10	
1613-Dioxin-HR-Alta	02/04/07 10:10	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	02/25/07 10:10	Excel EDD email to pm, Include Std logs for Lvl IV

**Containers Supplied:**

- 1 L Amber (IQA2794-01C)
- 1 L Amber (IQA2794-01D)

**SAMPLE INTEGRITY:**

All containers intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree: <input type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received On Ice: <input type="checkbox"/> Yes <input type="checkbox"/> No
Custody Seals Present: <input type="checkbox"/> Yes <input type="checkbox"/> No	Samples Preserved Properly: <input type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received at (temp): _____

*Hampers* 1/30/07 *Bettina S. Benedict* 1/31/07 0850  
 Released By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Released By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 28671 TAT Standard

Samples Arrival:	Date/Time 1/31/07 0840	Initials: JBB	Location: WR-2
			Shelf/Rack: N/A
Logged In:	Date/Time 1/31/07 1110	Initials: JBB	Location: WR-2
			Shelf/Rack: C-3
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
		<input type="checkbox"/> Other	
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
		<input type="checkbox"/> None	
Temp °C	3.5°C	Time: 0848	Thermometer ID: IR-2

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk #	7985 9666 9898		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?			<input checked="" type="checkbox"/> None
Shipping Container	Alta	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:



### CERTIFICATE OF ANALYSIS

**Client:** TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine, CA 92614  
Attention: Michele Chamberlin

Phone: (949) 261-1022

Fax: (949) 260-3297

**Report Date:** 02/22/07 16:49

**Received Date:** 02/08/07 08:40

**Turn Around:** Normal

**Work Order #:** 7020847

**Client Project:** IQA2794

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

*The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.*

Dear Michele Chamberlin :

Enclosed are the results of analyses for samples received 02/08/07 08:40 with the Chain of Custody document. The samples were received in good condition, at 2.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager

Page 1 of 6





Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020847  
Project ID: IQA2794

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQA2794-01	client		7020847-01	Water	01/28/07 10:10



Weck Laboratories, Inc.  
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Industry, CA 91745  
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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020847  
Project ID: IQA2794

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

**IQA2794-01 7020847-01 (Water)**

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0476	02/13/07	02/14/07	jl
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0476	02/13/07	02/14/07	jl



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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020847  
Project ID: IQA2794

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

# QUALITY CONTROL SECTION



Weck Laboratories, Inc.  
 14859 E. Clark Ave.  
 Industry, CA 91745  
 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 7020847  
 Project ID: IQA2794

Date Received: 02/08/07 08:40  
 Date Reported: 02/22/07 16:49

**Metals by EPA 200 Series Methods - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch W7B0476 - EPA 245.1</b>										
<b>Blank (W7B0476-BLK1)</b>										
Analyzed: 02/14/07										
Mercury, Total	ND	0.10	ug/l							
Mercury, Dissolved	ND	0.10	ug/l							
<b>LCS (W7B0476-BS1)</b>										
Analyzed: 02/14/07										
Mercury, Total	0.932	0.10	ug/l	1.00		93.2	85-115			
Mercury, Dissolved	0.932	0.10	ug/l	1.00		93.2	85-115			
<b>Matrix Spike (W7B0476-MS1)</b>										
<b>Source: 7020846-47</b>										
Analyzed: 02/14/07										
Mercury, Total	1.07	0.10	ug/l	1.00	ND	107	70-130			
Mercury, Dissolved	1.07	0.10	ug/l	1.00	ND	107	70-130			
<b>Matrix Spike (W7B0476-MS2)</b>										
<b>Source: 7020942-01</b>										
Analyzed: 02/14/07										
Mercury, Total	0.997	0.10	ug/l	1.00	ND	99.7	70-130			
Mercury, Dissolved	0.997	0.10	ug/l	1.00	ND	99.7	70-130			
<b>Matrix Spike Dup (W7B0476-MSD1)</b>										
<b>Source: 7020846-47</b>										
Analyzed: 02/14/07										
Mercury, Total	0.991	0.10	ug/l	1.00	ND	99.1	70-130	7.67	20	
Mercury, Dissolved	0.991	0.10	ug/l	1.00	ND	99.1	70-130	7.67	20	
<b>Matrix Spike Dup (W7B0476-MSD2)</b>										
<b>Source: 7020942-01</b>										
Analyzed: 02/14/07										
Mercury, Total	0.970	0.10	ug/l	1.00	ND	97.0	70-130	2.75	20	
Mercury, Dissolved	0.970	0.10	ug/l	1.00	ND	97.0	70-130	2.75	20	



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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020847  
Project ID: IQA2794

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:49

### Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

# **APPENDIX G**

## **Section 5**

Outfall 009, January 28, 2007

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





# DATA VALIDATION REPORT

NPDES Monitoring Program  
Routine Outfall 009-Annual

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IQA2792

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IQA2792  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: February 25, 2007

The samples listed in Table 1 were 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 for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (TestAmerica-Irvine)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 009	IQA2792-01	28669-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to TestAmerica-Irvine, custody seals were not required. Custody seals were present on the coolers from TestAmerica to Alta; however, no sample container custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). 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%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 10/24/2006 on instrument VG-5. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were 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 QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 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. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-8819-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was reported at 0.00000327 $\mu\text{g/L}$  in the method blank. OCDD was reported in the site sample; however, the concentration in the site sample exceeded five times the concentration of the method blank and required no qualification. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-8819-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Sample ID: **QA2792-01** *Outfall 009* **EPA Method 1613**

**Client Data**  
 Name: Test America-Irvine  
 Project: IQA2792  
 Date Collected: 28-Jan-07  
 Time Collected: 0905

**Sample Data**  
 Matrix: Aqueous  
 Sample Size: 1.04 L

**Laboratory Data**  
 Lab Sample: 28669-001  
 QC Batch No.: 8819  
 Date Analyzed DB-5: 5-Feb-07  
 Date Received: 31-Jan-07  
 Date Extracted: 2-Feb-07  
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.000000957			IS 13C-2,3,7,8-TCDD	91.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000108			13C-1,2,3,7,8-PeCDD	88.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000133			13C-1,2,3,4,7,8-HxCDD	84.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000289			13C-1,2,3,6,7,8-HxCDD	81.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000133			13C-1,2,3,4,6,7,8-HpCDD	91.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000144			J	13C-OCDD	78.9	17 - 157	
OCDD	0.000172			B	13C-2,3,7,8-TCDF	86.3	24 - 169	
2,3,7,8-TCDF	ND	0.00000821			13C-1,2,3,7,8-PeCDF	88.1	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000904			13C-2,3,4,7,8-PeCDF	89.5	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000925			13C-1,2,3,4,7,8-HxCDF	85.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000684			13C-1,2,3,6,7,8-HxCDF	82.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000674			13C-2,3,4,6,7,8-HxCDF	87.1	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000762			13C-1,2,3,7,8,9-HxCDF	90.9	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000691			13C-1,2,3,4,6,7,8-HpCDF	94.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000446			J	13C-1,2,3,4,7,8,9-HpCDF	97.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000133			13C-OCDF	88.4	17 - 157	
OCDF	0.0000152			J	CRS 37Cl-2,3,7,8-TCDD	101	35 - 197	
<b>Totals</b>								
Total TCDD	ND	0.000000957						
Total PeCDD	ND	0.00000171						
Total HxCDD	ND	0.00000344						
Total HpCDD	0.0000326							
Total TCDF	ND	0.00000821						
Total PeCDF	0.00000632							
Total HxCDF	0.0000275		0.00000465					
Total HpCDF	0.0000113							

**Footnotes**  
 a. Sample specific estimated detection limit.  
 b. Estimated maximum possible concentration.  
 c. Method detection limit.  
 d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg

07-Feb-2007 14:08

*Level IV*

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4MT108  
 Task Order: 1261.001D.01  
 SDG No.: IQA2792

No. of Analyses: 1

Laboratory: Weck  
 Reviewer: P. Meeks  
 Analysis/Method: Mercury

Date: February 28, 2007
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 009

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQA2792

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQA2792  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: February 28, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Test America Laboratory ID	Weck Laboratory ID	Matrix	COC Method
Outfall 009	IQA2792-01	7020848-01	Water	245.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica and the subcontract laboratory, Weck, within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$  at  $2.4^{\circ}\text{C}$ . No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original and transfer COCs was signed and dated by the appropriate field and/or laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. Custody seals were not present upon receipt at Weck. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

As ICP-MS was not utilized for the analysis, the ICP-MS tune criteria are not applicable.

### 2.3 CALIBRATION

The mercury initial calibration  $r^2$  was  $\geq 0.995$ . The ICV and CCV results showed acceptable recoveries, 85-115% for mercury. No qualifications were required.

### 2.4 BLANKS

Mercury was not detected in any of the blanks associated with the site sample analysis. No qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

As neither ICP nor ICP-MS were utilized for the analysis, the interference check sample results are not applicable.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recovery was within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As ICP-MS was not utilized for the analysis, the ICP-MS internal standard results are not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## **2.12 FIELD QC SAMPLES**

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### **2.12.1 Field Blanks and Equipment Rinsates**

The sample in this SDG had no associated field QC samples. No qualifications were required.

### **2.12.2 Field Duplicates**

There were no field duplicate analyses performed in association with the site sample.

# TestAmerica

ANALYTICAL TESTING CORPORATION

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009  
 Report Number: IQA2792

Sampled: 01/28/07  
 Received: 01/29/07

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
<b>Sample ID: IQA2792-01 (Outfall 009 - Water) - cont.</b>										
<b>Reporting Units: ug/l</b>										
Mercury, Dissolved	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	U	
Mercury, Total	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	U	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 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.*

LEVEL IV

IQA2792 <Page 5 of 14>

# **APPENDIX G**

## **Section 6**

Outfall 009, January 28, 2007

Test America Analytical Laboratory Report

**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Routine Outfall 009

Sampled: 01/28/07  
Received: 01/29/07  
Revised: 02/24/07 13:59

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*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:** Enclosed are complete final results. The results for the EPA 1613 Dioxin's were added. Also, the report was revised to remove the results for Mercury analyzed by TestAmerica and to add those analyzed by Weck Laboratories.

**LABORATORY ID**  
IQA2792-01

**CLIENT ID**  
Outfall 009

**MATRIX**  
Water

Reviewed By:



**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2792-01 (Outfall 009 - Water)</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	7A30083	0.050	2.0	<b>0.37</b>	1	01/30/07	01/30/07	J
Cadmium	EPA 200.8	7A30083	0.025	1.0	<b>0.040</b>	1	01/30/07	01/30/07	J
Copper	EPA 200.8	7A30083	0.25	2.0	<b>2.5</b>	1	01/30/07	01/30/07	
Lead	EPA 200.8	7A30083	0.040	1.0	<b>0.59</b>	1	01/30/07	01/30/07	J
Thallium	EPA 200.8	7A30083	0.15	1.0	ND	1	01/30/07	01/30/07	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2792-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
<b>Antimony</b>	EPA 200.8-Diss	7A29136	0.050	2.0	<b>0.35</b>	1	01/29/07	01/29/07	J
Cadmium	EPA 200.8-Diss	7A29136	0.050	1.0	ND	1	01/29/07	01/29/07	
<b>Copper</b>	EPA 200.8-Diss	7A29136	0.40	2.0	<b>2.7</b>	1	01/29/07	01/29/07	
<b>Lead</b>	EPA 200.8-Diss	7A29136	0.10	1.0	<b>0.12</b>	1	01/29/07	01/29/07	J
Thallium	EPA 200.8-Diss	7A29136	0.15	1.0	ND	1	01/29/07	01/29/07	

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2792-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: mg/l									
Chloride	EPA 300.0	7A29043	0.15	0.50	<b>24</b>	1	01/29/07	01/29/07	
Nitrate/Nitrite-N	EPA 300.0	7A29043	0.080	0.15	<b>1.4</b>	1	01/29/07	01/29/07	
Oil & Grease	EPA 413.1	7A31063	0.89	4.7	<b>1.1</b>	1	01/31/07	01/31/07	J
Sulfate	EPA 300.0	7A29043	0.90	1.0	<b>79</b>	2	01/29/07	01/29/07	
Total Dissolved Solids	SM2540C	7B02074	10	10	<b>260</b>	1	02/02/07	02/02/07	
Total Suspended Solids	EPA 160.2	7A30113	10	10	ND	1	01/30/07	01/30/07	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2792-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	
Mercury, Total	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

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**IQA2792 <Page 5 of 14>**

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 009 (IQA2792-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	01/28/2007 09:05	01/29/2007 16:35	01/29/2007 20:30	01/29/2007 20:38

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009  
 Report Number: IQA2792

Sampled: 01/28/07  
 Received: 01/29/07

## 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: 7A30083 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30083-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/30/2007 (7A30083-BS1)</b>											
Antimony	83.3	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	80.3	1.0	0.025	ug/l	80.0		100	85-115			
Copper	79.5	2.0	0.25	ug/l	80.0		99	85-115			
Lead	83.4	1.0	0.040	ug/l	80.0		104	85-115			
Thallium	81.8	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS1) Source: IQA2576-01</b>											
Antimony	84.0	2.0	0.050	ug/l	80.0	0.078	105	70-130			
Cadmium	79.9	1.0	0.025	ug/l	80.0	0.18	100	70-130			
Copper	84.5	2.0	0.25	ug/l	80.0	5.9	98	70-130			
Lead	87.8	1.0	0.040	ug/l	80.0	4.9	104	70-130			
Thallium	83.5	1.0	0.15	ug/l	80.0	ND	104	70-130			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS2) Source: IQA2794-01</b>											
Antimony	84.8	2.0	0.050	ug/l	80.0	0.85	105	70-130			
Cadmium	74.9	1.0	0.025	ug/l	80.0	0.038	94	70-130			
Copper	76.2	2.0	0.25	ug/l	80.0	0.49	95	70-130			
Lead	70.5	1.0	0.040	ug/l	80.0	0.19	88	70-130			
Thallium	70.7	1.0	0.15	ug/l	80.0	ND	88	70-130			
<b>Matrix Spike Dup Analyzed: 01/30/2007 (7A30083-MSD1) Source: IQA2576-01</b>											
Antimony	84.4	2.0	0.050	ug/l	80.0	0.078	105	70-130	1	20	
Cadmium	81.5	1.0	0.025	ug/l	80.0	0.18	102	70-130	2	20	
Copper	83.4	2.0	0.25	ug/l	80.0	5.9	97	70-130	1	20	
Lead	85.1	1.0	0.040	ug/l	80.0	4.9	100	70-130	3	20	
Thallium	81.2	1.0	0.15	ug/l	80.0	ND	102	70-130	3	20	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009  
 Report Number: IQA2792

Sampled: 01/28/07  
 Received: 01/29/07

## 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: 7A29136 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29136-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.050	ug/l							
Copper	ND	2.0	0.40	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/29/2007 (7A29136-BS1)</b>											
Antimony	83.0	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	84.1	1.0	0.050	ug/l	80.0		105	85-115			
Copper	83.1	2.0	0.40	ug/l	80.0		104	85-115			
Lead	81.1	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	81.5	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29136-MS1) Source: IQA2792-01</b>											
Antimony	84.9	2.0	0.050	ug/l	80.0	0.35	106	70-130			
Cadmium	80.0	1.0	0.050	ug/l	80.0	ND	100	70-130			
Copper	82.8	2.0	0.40	ug/l	80.0	2.7	100	70-130			
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130			
Thallium	80.7	1.0	0.15	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29136-MSD1) Source: IQA2792-01</b>											
Antimony	86.4	2.0	0.050	ug/l	80.0	0.35	108	70-130	2	20	
Cadmium	82.3	1.0	0.050	ug/l	80.0	ND	103	70-130	3	20	
Copper	83.5	2.0	0.40	ug/l	80.0	2.7	101	70-130	1	20	
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130	0	20	
Thallium	79.5	1.0	0.15	ug/l	80.0	ND	99	70-130	1	20	

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009  
 Report Number: IQA2792

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A29043 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29043-BLK1)</b>											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
<b>LCS Analyzed: 01/29/2007 (7A29043-BS1)</b>											
Chloride	4.87	0.50	0.15	mg/l	5.00		97	90-110			M-3
Sulfate	9.22	0.50	0.45	mg/l	10.0		92	90-110			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29043-MS1)</b>											
					<b>Source: IQA2737-01</b>						
Sulfate	10.7	0.50	0.45	mg/l	10.0	1.5	92	80-120			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29043-MSD1)</b>											
					<b>Source: IQA2737-01</b>						
Sulfate	10.8	0.50	0.45	mg/l	10.0	1.5	93	80-120	1	20	
<b>Batch: 7A30113 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30113-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/30/2007 (7A30113-BS1)</b>											
Total Suspended Solids	934	10	10	mg/l	1000		93	85-115			
<b>Duplicate Analyzed: 01/30/2007 (7A30113-DUP1)</b>											
					<b>Source: IQA2794-01</b>						
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b>Batch: 7A31063 Extracted: 01/31/07</b>											
<b>Blank Analyzed: 01/31/2007 (7A31063-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009  
 Report Number: IQA2792

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A31063 Extracted: 01/31/07</b>											
<b>LCS Analyzed: 01/31/2007 (7A31063-BS1)</b>											
Oil & Grease	20.6	5.0	0.94	mg/l	20.0		103	65-120			MNRI
<b>LCS Dup Analyzed: 01/31/2007 (7A31063-BSD1)</b>											
Oil & Grease	22.0	5.0	0.94	mg/l	20.0		110	65-120	7	20	
<b>Batch: 7B02074 Extracted: 02/02/07</b>											
<b>Blank Analyzed: 02/02/2007 (7B02074-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/02/2007 (7B02074-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 02/02/2007 (7B02074-DUP1)</b>											
Total Dissolved Solids	1400	10	10	mg/l		Source: IQA2641-01			0	10	

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009  
 Report Number: IQA2792

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: W7B0508 Extracted: 02/13/07</b>											
<b>Blank Analyzed: 02/14/2007 (W7B0508-BLK1)</b>											
Mercury, Total	ND	0.050	0.025	ug/l							
Mercury, Dissolved	ND	0.050	0.025	ug/l							
<b>LCS Analyzed: 02/14/2007 (W7B0508-BS1)</b>											
Mercury, Total	0.968	0.050	0.025	ug/l	1.00		97	85-115			
Mercury, Dissolved	0.968	0.050	0.025	ug/l	1.00		97	85-115			
<b>Matrix Spike Analyzed: 02/14/2007 (W7B0508-MS1)</b>											
						<b>Source: 7020943-01</b>					
Mercury, Dissolved	0.982	0.050	0.025	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.982	0.050	0.025	ug/l	1.00	ND	98	70-130			
<b>Matrix Spike Dup Analyzed: 02/14/2007 (W7B0508-MSD1)</b>											
						<b>Source: 7020943-01</b>					
Mercury, Dissolved	0.993	0.050	0.025	ug/l	1.00	ND	99	70-130	1	20	
Mercury, Total	0.993	0.050	0.025	ug/l	1.00	ND	99	70-130	1	20	

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 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## 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
IQA2792-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.10	4.7	15
IQA2792-01	Antimony-200.8	Antimony	ug/l	0.37	2.0	6.00
IQA2792-01	Antimony-200.8, Diss	Antimony	ug/l	0.35	2.0	6.00
IQA2792-01	Cadmium-200.8	Cadmium	ug/l	0.040	1.0	4.00
IQA2792-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.027	1.0	4.00
IQA2792-01	Chloride - 300.0	Chloride	mg/l	24	0.50	150
IQA2792-01	Copper-200.8	Copper	ug/l	2.50	2.0	14
IQA2792-01	Copper-200.8, Diss	Copper	ug/l	2.70	2.0	14
IQA2792-01	Lead-200.8	Lead	ug/l	0.59	1.0	5.20
IQA2792-01	Lead-200.8, Diss	Lead	ug/l	0.12	1.0	5.20
IQA2792-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.40	0.15	10.00
IQA2792-01	Sulfate-300.0	Sulfate	mg/l	79	1.0	250
IQA2792-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	260	10	850
IQA2792-01	Thallium-200.8	Thallium	ug/l	0	1.0	2.00
IQA2792-01	Thallium-200.8, Diss	Thallium	ug/l	0	1.0	2.00

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## 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.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

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IQA2792 <Page 13 of 14>

NPDES - 153

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQA2792

Sampled: 01/28/07

Received: 01/29/07

## Certification Summary

### TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
SM2540C	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

#### Alta Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
 Samples: IQA2792-01

#### Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 245.1  
 Samples: IQA2792-01

### TestAmerica - Irvine, CA

Michele Chamberlin  
 Project Manager

**Del Mar Analytical** Version 04/28/08 **CHAIN OF CUSTODY FORM**

Client Name/Address: <b>MWH-Pasadena</b> 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: <b>Boeing-SSFL NPDES Routine Outfall 009</b> Stormwater at WS-13		ANALYSIS REQUIRED						Field readings: Temp = 50 pH = 7.73
Project Manager: <b>Bronwyn Kelly</b> Sampler: <b>Rick BAÑAGA</b>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl	Comments
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #				
Outfall 009	W	Poly-1L	1	1-28-07 09:05	HNO3	1A	X			
Outfall 009-Dup	W	Poly-1L	1		HNO3	1B	X			
Outfall 009	W	Amber-1L	2		None	2A, 2B	X			
Outfall 009	W	Amber-1L	2		HCl	3A, 3B	X			
Outfall 009	W	Poly-500 ml	2		None	4A, 4B		X		
Outfall 009	W	Poly-500 ml	2		None	5A, 5B		X		
Outfall 009	W	Poly-1L	1	1-28-07 09:01	None	6			X	Filter w/in 24hr of receipt at lab
Relinquished By				Date/Time						Turn around Time: (check) 24 Hours _____ 5 Days _____
<i>[Signature]</i>				1-29-07					1030	
Relinquished By				Date/Time						48 Hours _____ 10 Days _____
<i>[Signature]</i>				1-29-07					1655	
Relinquished By				Date/Time						72 Hours _____ Normal <input checked="" type="checkbox"/>
<i>[Signature]</i>				1-29-07					1655	Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____
Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>										2.4

VB  
VM  
17:50



February 08, 2007

**Alta Project I.D.: 28669**

Ms. Michele Chamberlin  
Test America-Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 31, 2007 under your Project Name "IQA2792". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.*



**Alta Analytical Laboratory, Inc.**

1104 Windfield Way  
El Dorado Hills, CA 95762

(916) 933-1640  
FAX (916) 673-0106

Project 28669

Page 1 of 240

**Section I: Sample Inventory Report**

**Date Received: 1/31/2007**

Alta Lab. ID

Client Sample ID

28669-001

IQA2792-01

## SECTION II

Method Blank		EPA Method 1613					
Matrix	Aqueous	QC Batch No.:	8819	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	2-Feb-07	Date Analyzed DB-5:	5-Feb-07		
				Date Analyzed DB-225:	N/A		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000100		13C-2,3,7,8-TCDD	83.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000151		13C-1,2,3,7,8-PeCDD	84.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000201		13C-1,2,3,4,7,8-HxCDD	76.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000214		13C-1,2,3,6,7,8-HxCDD	73.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000201		13C-1,2,3,4,6,7,8-HpCDD	79.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000313		13C-OCDD	63.6	17 - 157	
OCDD	0.00000327		J	13C-2,3,7,8-TCDF	76.3	24 - 169	
2,3,7,8-TCDF	ND	0.000000787		13C-1,2,3,7,8-PeCDF	84.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000922		13C-2,3,4,7,8-PeCDF	86.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000929		13C-1,2,3,4,7,8-HxCDF	75.6	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000127		13C-1,2,3,6,7,8-HxCDF	71.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000141		13C-2,3,4,6,7,8-HxCDF	79.1	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000100		13C-1,2,3,7,8,9-HxCDF	79.5	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000132		13C-1,2,3,4,6,7,8-HpCDF	80.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000751		13C-1,2,3,4,7,8,9-HpCDF	81.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000809		13C-OCDF	70.0	17 - 157	
OCDF	ND	0.00000275		<b>CRS</b> 37Cl-2,3,7,8-TCDD	99.8	35 - 197	
<b>Totals</b>				<b>Footnotes</b>			
Total TCDD	ND	0.00000100		a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000151		b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000205		c. Method detection limit.			
Total HpCDD	ND	0.00000313		d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000787					
Total PeCDF	ND	0.000000925					
Total HxCDF	ND	0.00000149					
Total HpCDF	ND	0.000000779					

Analyst: MAS

Approved By:

William J. Luksemburg

07-Feb-2007 14:08

OPR Results		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	8819	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	2-Feb-07	Date Analyzed DB-5:	5-Feb-07		
				Date Analyzed DB-225:	N/A		
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	10.7	6.7 - 15.8	13C-2,3,7,8-TCDD	68.6	25 - 164	IS
1,2,3,7,8-PeCDD	50.0	52.1	35 - 71	13C-1,2,3,7,8-PeCDD	74.1	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	51.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	70.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.8	38 - 67	13C-1,2,3,6,7,8-HxCDD	69.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	54.2	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	80.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	52.5	35 - 70	13C-OCDD	71.2	17 - 157	
OCDD	100	108	78 - 144	13C-2,3,7,8-TCDF	66.6	24 - 169	
2,3,7,8-TCDF	10.0	10.4	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	76.5	24 - 185	
1,2,3,7,8-PeCDF	50.0	52.2	40 - 67	13C-2,3,4,7,8-PeCDF	75.9	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	74.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.9	36 - 67	13C-1,2,3,6,7,8-HxCDF	70.4	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	53.2	42 - 65	13C-2,3,4,6,7,8-HxCDF	73.2	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	53.2	35 - 78	13C-1,2,3,7,8,9-HxCDF	77.0	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	53.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	81.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.0	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	86.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.2	39 - 69	13C-OCDF	76.0	17 - 157	
OCDF	100	107	63 - 170	CRS 37Cl-2,3,7,8-TCDD	92.2	35 - 197	

Analyst: MAS

Approved By:

William J. Luksemburg 07-Feb-2007 14:08

**Sample ID: IQA2792-01**

**EPA Method 1613**

Client Data		Sample Data		Laboratory Data	
Name	Test America-Irvine	Matrix	Aqueous	Lab Sample	28669-001
Project	IQA2792	Sample Size	1.04 L	QC Batch No.	8819
Date Collected	28-Jan-07			Date Analyzed DJH-S	5-Feb-07
Time Collected	0905			Date Analyzed DB-225	NA
		DL <sup>a</sup>	EMPC <sup>b</sup>	%R	LCL-UCL <sup>d</sup>
Analyte	Conc. (ug/L)				Qualifiers
2,3,7,8-TCDD	ND	0.000000957		91.0	25 - 164
1,2,3,7,8-PeCDD	ND	0.00000108		88.4	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000133		84.9	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000289		81.6	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000133		91.1	23 - 140
1,2,3,4,6,7,8-HpCDD	0.0000144		J	78.9	17 - 157
OCDD	0.000172		B	86.3	24 - 169
2,3,7,8-TCDF	ND	0.000000821		88.1	24 - 185
1,2,3,7,8-PeCDF	ND	0.000000904		89.5	21 - 178
2,3,4,7,8-PeCDF	ND	0.000000925		85.8	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000684		82.1	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000674		87.1	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000762		90.9	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000691		94.2	28 - 143
1,2,3,4,6,7,8-HpCDF	0.00000446		J	97.4	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000133		88.4	17 - 157
OCDF	0.0000152		J	101	35 - 197
<b>Totals</b>					
Total TCDD	ND	0.000000957			
Total PeCDD	ND	0.00000171			
Total HxCDD	ND	0.00000344			
Total HpCDD	0.0000326				
Total TCDF	ND	0.000000821			
Total PeCDF	0.000000632				
Total HxCDF	0.00000275		0.000000465		
Total HpCDF	0.0000113				

**CRS** 37CI-2,3,7,8-TCDD

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg 07-Feb-2007 14:08

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

# TestAmerica

ANALYTICAL TESTING CORPORATION

## SUBCONTRACT ORDER - PROJECT # IQA2792

28669

<p><b>SENDING LABORATORY:</b>                  TestAmerica - Irvine, CA                  17461 Derian Avenue, Suite 100                  Irvine, CA 92614                  Phone: (949) 261-1022                  Fax: (949) 260-3297                  Project Manager: Michele Chamberlin</p>	<p><b>RECEIVING LABORATORY:</b> 3.5°C                  Alta Analytical                  1104 Windfield Way                  El Dorado Hills, CA 95762                  Phone: (916) 933-1640                  Fax: (916) 673-0106</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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

Analysis	Expiration	Comments
Sample ID: IQA2792-01 Water	Sampled: 01/28/07 09:05	
1613-Dioxin-HR-Alta	02/04/07 09:05	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	02/25/07 09:05	Excel EDD email to pm, Include Std logs for Lvl IV
<b>Containers Supplied:</b>		
1 L Amber (IQA2792-01C)		
1 L Amber (IQA2792-01D)		

SAMPLE INTEGRITY:					
All containers intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received On Ice:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Custody Seals Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Samples Preserved Properly:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received at (temp):	_____

Released By: Va Bank Date: 1/30/07 Time: \_\_\_\_\_ Received By: Bethnaid Benedict Date: 1/31/07 Time: 0851

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### SAMPLE LOG-IN CHECKLIST

Alta Project #: 28669 TAT Standard

Samples Arrival:	Date/Time 1/31/07 0840	Initials: UBB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 1/31/07 1056	Initials: UBB	Location: WR-2 Shelf/Rack: C-3
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
		<input type="checkbox"/> None	
Temp °C	3.5°C	Time: 0848	Thermometer ID: IR-2

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	✓		
Trk # 7985 9666 9898	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	COC	Sample Container	None
Shipping Container	Alta	Client	Retain
	Return		Dispose

Comments:



### CERTIFICATE OF ANALYSIS

**Client:** TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine, CA 92614  
Attention: Michele Chamberlin

**Report Date:** 02/22/07 16:48  
**Received Date:** 02/08/07 08:40  
**Turn Around:** Normal

Phone: (949) 261-1022  
Fax: (949) 260-3297

**Work Order #:** 7020848  
**Client Project:** IQA2792

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

*The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.*

Dear Michele Chamberlin :

Enclosed are the results of analyses for samples received 02/08/07 08:40 with the Chain of Custody document. The samples were received in good condition, at 2.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat  
Project Manager

Page 1 of 6





Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020848  
Project ID: IQA2792

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQA2792-01	client		7020848-01	Water	01/28/07 09:05



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020848  
Project ID: IQA2792

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

**IQA2792-01 7020848-01 (Water)**

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0508	02/13/07	02/14/07	jl
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0508	02/13/07	02/14/07	jl



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020848  
Project ID: IQA2792

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

# QUALITY CONTROL SECTION



Weck Laboratories, Inc.  
 14859 E. Clark Ave.  
 Industry, CA 91745  
 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 7020848  
 Project ID: IQA2792

Date Received: 02/08/07 08:40  
 Date Reported: 02/22/07 16:48

**Metals by EPA 200 Series Methods - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-----------------

**Batch W7B0508 - EPA 245.1**

**Blank (W7B0508-BLK1)**

Analyzed: 02/14/07

Mercury, Total	ND	0.050	ug/l							
Mercury, Dissolved	ND	0.050	ug/l							

**LCS (W7B0508-BS1)**

Analyzed: 02/14/07

Mercury, Total	0.968	0.050	ug/l	1.00		96.8	85-115			
Mercury, Dissolved	0.968	0.050	ug/l	1.00		96.8	85-115			

**Matrix Spike (W7B0508-MS1)**

Source: 7020943-01

Analyzed: 02/14/07

Mercury, Total	0.982	0.050	ug/l	1.00	ND	98.2	70-130			
Mercury, Dissolved	0.982	0.050	ug/l	1.00	ND	98.2	70-130			

**Matrix Spike Dup (W7B0508-MSD1)**

Source: 7020943-01

Analyzed: 02/14/07

Mercury, Total	0.993	0.050	ug/l	1.00	ND	99.3	70-130	1.11	20	
Mercury, Dissolved	0.993	0.050	ug/l	1.00	ND	99.3	70-130	1.11	20	



Weck Laboratories, Inc.  
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Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020848  
Project ID: IQA2792

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

### Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

# **APPENDIX G**

## **Section 7**

Outfall 010, January 28, 2007

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





# DATA VALIDATION REPORT

## NPDES Monitoring Program Routine Outfall 010-Annual

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IQA2795

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IQA2795  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: February 25, 2007

The samples listed in Table 1 were 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 for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (TestAmerica-Irvine)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 010	IQA2795-01	28672-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to TestAmerica-Irvine, custody seals were not required. Custody seals were present on the coolers from TestAmerica to Alta; however, no sample container custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). 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%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 10/24/2006 on instrument VG-5. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were 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 QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 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. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-8819-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was reported at  $0.00000327\mu\text{g/L}$  in the method blank. OCDD was reported in the site sample; however, the concentration in the site sample exceeded five times the concentration of the method blank and required no qualification. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-8819-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Sample ID: **IQA2795-01** *Outfall 010* **EPA Method 1613**

**Client Data**  
 Name: Test America-Irvine  
 Project: IQA2795  
 Date Collected: 28-Jan-07  
 Time Collected: 0935

**Sample Data**  
 Matrix: Aqueous  
 Sample Size: 1.04 L

**Laboratory Data**  
 Lab Sample: 28672-001  
 QC Batch No.: 8819  
 Date Analyzed DB-5: 6-Feb-07  
 Date Received: 31-Jan-07  
 Date Extracted: 2-Feb-07  
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000818			IS 13C-2,3,7,8-TCDD	74.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00001162			13C-1,2,3,7,8-PeCDD	70.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000248			13C-1,2,3,4,7,8-HxCDD	66.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000270			13C-1,2,3,6,7,8-HxCDD	63.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000251			13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000865			J	13C-OCDD	61.8	17 - 157	
OCDD	0.0000920			B	13C-2,3,7,8-TCDF	76.0	24 - 169	
2,3,7,8-TCDF	ND	0.00000771			13C-1,2,3,7,8-PeCDF	71.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000995			13C-2,3,4,7,8-PeCDF	72.8	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000950			13C-1,2,3,4,7,8-HxCDF	66.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000664			13C-1,2,3,6,7,8-HxCDF	63.6	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000675			13C-2,3,4,6,7,8-HxCDF	69.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000717			13C-1,2,3,7,8,9-HxCDF	70.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000988			13C-1,2,3,4,6,7,8-HpCDF	73.3	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000198			J	13C-1,2,3,4,7,8,9-HpCDF	76.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000752			13C-OCDF	67.2	17 - 157	
OCDF	0.00000831			J	CRS 37Cl-2,3,7,8-TCDD	114	35 - 197	

**Totals**

Total TCDD	ND	0.00000116		
Total PeCDD	ND	0.00000162		
Total HxCDD	ND	0.00000434		
Total HpCDD	0.0000200			
Total TCDF	ND	0.00000771		
Total PeCDF	ND	0.00000973		
Total HxCDF	ND	0.00000752		
Total HpCDF	0.00000198		0.00000551	

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyst: MAS  
 Approved By: William J. Luksemburg 07-Feb-2007 14:17

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

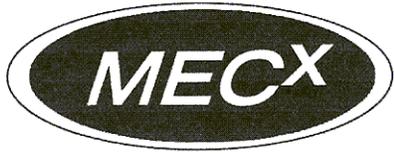
Package ID: B4MT111  
 Task Order: 1261.001D.01  
 SDG No.: IQA2795

No. of Analyses: 1

Laboratory: Weck  
 Reviewer: P. Meeks  
 Analysis/Method: Mercury

Date: February 28, 2007
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
<b>1. Case Narrative Deficiencies</b>	_____
<b>2. Out of Scope Analyses</b>	_____
<b>3. Analyses Not Conducted</b>	_____
<b>4. Missing Hardcopy Deliverables</b>	_____
<b>5. Incorrect Hardcopy Deliverables</b>	_____
<b>6. Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 010

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQA2795

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQA2795  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: February 28, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Weck Laboratory ID	Matrix	COC Method
Outfall 010	IQA2795-01	7020849-01	Water	245.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica and the subcontract laboratory, Weck, within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$  at  $2.4^{\circ}\text{C}$ . No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original and transfer COCs was signed and dated by the appropriate field and/or laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. Custody seals were not present upon receipt at Weck. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

As ICP-MS was not utilized for the analysis, the ICP-MS tune criteria are not applicable.

### 2.3 CALIBRATION

The mercury initial calibration  $r^2$  was  $\geq 0.995$ . The ICV and CCV results showed acceptable recoveries, 85-115% for mercury. No qualifications were required.

### 2.4 BLANKS

Mercury was not detected in any of the blanks associated with the site sample analysis. No qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

As neither ICP nor ICP-MS were utilized for the analysis, the interference check sample results are not applicable.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recovery was within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As ICP-MS was not utilized for the analysis, the ICP-MS internal standard results are not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.12 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010  
 Report Number: IQA2795

Sampled: 01/28/07  
 Received: 01/29/07

### Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Res Qual	Qual Code
<b>Sample ID: IQA2795-01 (Outfall 010 - Water) - cont.</b>										
<b>Reporting Units: ug/l</b>										
Mercury, Dissolved	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	U	
Mercury, Total	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	U	

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 Michele Chamberlin  
 Project Manager

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LEVEL IV

IQA2795 <Page 5 of 14>

# **APPENDIX G**

## **Section 8**

Outfall 010, January 28, 2007

Test America Analytical Laboratory Report

**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Routine Outfall 010

Sampled: 01/28/07  
Received: 01/29/07  
Revised: 02/24/07 14:18

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*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:** Enclosed are complete final results. The results for the EPA 1613 Dioxin's were added. Also, the report was revised to remove the results for Mercury analyzed by TestAmerica and to add those analyzed by Weck Laboratories.

**LABORATORY ID**  
IQA2795-01

**CLIENT ID**  
Outfall 010

**MATRIX**  
Water

Reviewed By:



**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2795-01 (Outfall 010 - Water)</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	7A30083	0.050	2.0	<b>2.0</b>	1	01/30/07	01/30/07	
Cadmium	EPA 200.8	7A30083	0.025	1.0	<b>0.061</b>	1	01/30/07	01/30/07	J
Copper	EPA 200.8	7A30083	0.25	2.0	<b>3.7</b>	1	01/30/07	01/30/07	
Lead	EPA 200.8	7A30083	0.040	1.0	<b>0.91</b>	1	01/30/07	01/30/07	J
Thallium	EPA 200.8	7A30083	0.15	1.0	ND	1	01/30/07	01/30/07	

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 Michele Chamberlin  
 Project Manager

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2795-01 (Outfall 010 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Antimony	EPA 200.8-Diss	7A29136	0.050	2.0	<b>2.0</b>	1	01/29/07	01/29/07	
Cadmium	EPA 200.8-Diss	7A29136	0.050	1.0	ND	1	01/29/07	01/29/07	
<b>Copper</b>	EPA 200.8-Diss	7A29136	0.40	2.0	<b>1.9</b>	1	01/29/07	01/29/07	J
Lead	EPA 200.8-Diss	7A29136	0.10	1.0	ND	1	01/29/07	01/29/07	
Thallium	EPA 200.8-Diss	7A29136	0.15	1.0	ND	1	01/29/07	01/29/07	

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 Project Manager

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2795-01 (Outfall 010 - Water) - cont.</b>									
Reporting Units: mg/l									
Chloride	EPA 300.0	7A29043	0.75	2.5	<b>93</b>	5	01/29/07	01/30/07	
Nitrate/Nitrite-N	EPA 300.0	7A29043	0.080	0.15	<b>0.95</b>	1	01/29/07	01/29/07	
Oil & Grease	EPA 413.1	7A31063	0.89	4.7	ND	1	01/31/07	01/31/07	
Sulfate	EPA 300.0	7A29043	0.45	0.50	<b>27</b>	1	01/29/07	01/29/07	
Total Dissolved Solids	SM2540C	7B02074	10	10	<b>480</b>	1	02/02/07	02/02/07	
Total Suspended Solids	EPA 160.2	7A30113	10	10	<b>31</b>	1	01/30/07	01/30/07	

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IQA2795 <Page 4 of 14>

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQA2795-01 (Outfall 010 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	
Mercury, Total	EPA 245.1	W7B0508	0.050	0.20	ND	1	02/13/07	02/14/07	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 010 (IQA2795-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	01/28/2007 09:35	01/29/2007 16:35	01/29/2007 20:30	01/29/2007 21:26

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A30083 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30083-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/30/2007 (7A30083-BS1)</b>											
Antimony	83.3	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	80.3	1.0	0.025	ug/l	80.0		100	85-115			
Copper	79.5	2.0	0.25	ug/l	80.0		99	85-115			
Lead	83.4	1.0	0.040	ug/l	80.0		104	85-115			
Thallium	81.8	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS1) Source: IQA2576-01</b>											
Antimony	84.0	2.0	0.050	ug/l	80.0	0.078	105	70-130			
Cadmium	79.9	1.0	0.025	ug/l	80.0	0.18	100	70-130			
Copper	84.5	2.0	0.25	ug/l	80.0	5.9	98	70-130			
Lead	87.8	1.0	0.040	ug/l	80.0	4.9	104	70-130			
Thallium	83.5	1.0	0.15	ug/l	80.0	ND	104	70-130			
<b>Matrix Spike Analyzed: 01/30/2007 (7A30083-MS2) Source: IQA2794-01</b>											
Antimony	84.8	2.0	0.050	ug/l	80.0	0.85	105	70-130			
Cadmium	74.9	1.0	0.025	ug/l	80.0	0.038	94	70-130			
Copper	76.2	2.0	0.25	ug/l	80.0	0.49	95	70-130			
Lead	70.5	1.0	0.040	ug/l	80.0	0.19	88	70-130			
Thallium	70.7	1.0	0.15	ug/l	80.0	ND	88	70-130			
<b>Matrix Spike Dup Analyzed: 01/30/2007 (7A30083-MSD1) Source: IQA2576-01</b>											
Antimony	84.4	2.0	0.050	ug/l	80.0	0.078	105	70-130	1	20	
Cadmium	81.5	1.0	0.025	ug/l	80.0	0.18	102	70-130	2	20	
Copper	83.4	2.0	0.25	ug/l	80.0	5.9	97	70-130	1	20	
Lead	85.1	1.0	0.040	ug/l	80.0	4.9	100	70-130	3	20	
Thallium	81.2	1.0	0.15	ug/l	80.0	ND	102	70-130	3	20	

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Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## 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: 7A29136 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29136-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.050	ug/l							
Copper	ND	2.0	0.40	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 01/29/2007 (7A29136-BS1)</b>											
Antimony	83.0	2.0	0.050	ug/l	80.0		104	85-115			
Cadmium	84.1	1.0	0.050	ug/l	80.0		105	85-115			
Copper	83.1	2.0	0.40	ug/l	80.0		104	85-115			
Lead	81.1	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	81.5	1.0	0.15	ug/l	80.0		102	85-115			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29136-MS1) Source: IQA2792-01</b>											
Antimony	84.9	2.0	0.050	ug/l	80.0	0.35	106	70-130			
Cadmium	80.0	1.0	0.050	ug/l	80.0	ND	100	70-130			
Copper	82.8	2.0	0.40	ug/l	80.0	2.7	100	70-130			
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130			
Thallium	80.7	1.0	0.15	ug/l	80.0	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29136-MSD1) Source: IQA2792-01</b>											
Antimony	86.4	2.0	0.050	ug/l	80.0	0.35	108	70-130	2	20	
Cadmium	82.3	1.0	0.050	ug/l	80.0	ND	103	70-130	3	20	
Copper	83.5	2.0	0.40	ug/l	80.0	2.7	101	70-130	1	20	
Lead	76.9	1.0	0.10	ug/l	80.0	0.12	96	70-130	0	20	
Thallium	79.5	1.0	0.15	ug/l	80.0	ND	99	70-130	1	20	

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Project ID: Routine Outfall 010  
 Report Number: IQA2795

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7A29043 Extracted: 01/29/07</b>											
<b>Blank Analyzed: 01/29/2007 (7A29043-BLK1)</b>											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
<b>LCS Analyzed: 01/29/2007 (7A29043-BS1)</b>											
Chloride	4.87	0.50	0.15	mg/l	5.00		97	90-110			M-3
Sulfate	9.22	0.50	0.45	mg/l	10.0		92	90-110			
<b>Matrix Spike Analyzed: 01/29/2007 (7A29043-MS1)</b>											
Sulfate	10.7	0.50	0.45	mg/l	10.0	1.5	92	80-120			
<b>Matrix Spike Dup Analyzed: 01/29/2007 (7A29043-MSD1)</b>											
Sulfate	10.8	0.50	0.45	mg/l	10.0	1.5	93	80-120	1	20	
<b>Batch: 7A30113 Extracted: 01/30/07</b>											
<b>Blank Analyzed: 01/30/2007 (7A30113-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/30/2007 (7A30113-BS1)</b>											
Total Suspended Solids	934	10	10	mg/l	1000		93	85-115			
<b>Duplicate Analyzed: 01/30/2007 (7A30113-DUP1)</b>											
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b>Batch: 7A31063 Extracted: 01/31/07</b>											
<b>Blank Analyzed: 01/31/2007 (7A31063-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							

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Project ID: Routine Outfall 010  
 Report Number: IQA2795

Sampled: 01/28/07  
 Received: 01/29/07

## 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: 7A31063 Extracted: 01/31/07</u></b>											
<b>LCS Analyzed: 01/31/2007 (7A31063-BS1)</b>											
Oil & Grease	20.6	5.0	0.94	mg/l	20.0		103	65-120			MNRI
<b>LCS Dup Analyzed: 01/31/2007 (7A31063-BSD1)</b>											
Oil & Grease	22.0	5.0	0.94	mg/l	20.0		110	65-120	7	20	
<b><u>Batch: 7B02074 Extracted: 02/02/07</u></b>											
<b>Blank Analyzed: 02/02/2007 (7B02074-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/02/2007 (7B02074-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 02/02/2007 (7B02074-DUP1)</b>											
Total Dissolved Solids	1400	10	10	mg/l		Source: IQA2641-01	1400		0	10	

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Project ID: Routine Outfall 010  
 Report Number: IQA2795

Sampled: 01/28/07  
 Received: 01/29/07

## METHOD BLANK/QC DATA

### Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: W7B0508 Extracted: 02/13/07</b>											
<b>Blank Analyzed: 02/14/2007 (W7B0508-BLK1)</b>											
Mercury, Total	ND	0.050	0.025	ug/l							
Mercury, Dissolved	ND	0.050	0.025	ug/l							
<b>LCS Analyzed: 02/14/2007 (W7B0508-BS1)</b>											
Mercury, Total	0.968	0.050	0.025	ug/l	1.00		97	85-115			
Mercury, Dissolved	0.968	0.050	0.025	ug/l	1.00		97	85-115			
<b>Matrix Spike Analyzed: 02/14/2007 (W7B0508-MS1)</b>											
						<b>Source: 7020943-01</b>					
Mercury, Dissolved	0.982	0.050	0.025	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.982	0.050	0.025	ug/l	1.00	ND	98	70-130			
<b>Matrix Spike Dup Analyzed: 02/14/2007 (W7B0508-MSD1)</b>											
						<b>Source: 7020943-01</b>					
Mercury, Dissolved	0.993	0.050	0.025	ug/l	1.00	ND	99	70-130	1	20	
Mercury, Total	0.993	0.050	0.025	ug/l	1.00	ND	99	70-130	1	20	

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Sampled: 01/28/07

Received: 01/29/07

## 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
IQA2795-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.85	4.7	15
IQA2795-01	Antimony-200.8	Antimony	ug/l	2.00	2.0	6.00
IQA2795-01	Antimony-200.8, Diss	Antimony	ug/l	2.00	2.0	6.00
IQA2795-01	Cadmium-200.8	Cadmium	ug/l	0.061	1.0	4.00
IQA2795-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.021	1.0	4.00
IQA2795-01	Chloride - 300.0	Chloride	mg/l	93	2.5	150
IQA2795-01	Copper-200.8	Copper	ug/l	3.70	2.0	14
IQA2795-01	Copper-200.8, Diss	Copper	ug/l	1.90	2.0	14
IQA2795-01	Lead-200.8	Lead	ug/l	0.91	1.0	5.20
IQA2795-01	Lead-200.8, Diss	Lead	ug/l	0.018	1.0	5.20
IQA2795-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.95	0.15	10.00
IQA2795-01	Sulfate-300.0	Sulfate	mg/l	27	0.50	250
IQA2795-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	480	10	850
IQA2795-01	Thallium-200.8	Thallium	ug/l	0.012	1.0	2.00
IQA2795-01	Thallium-200.8, Diss	Thallium	ug/l	0	1.0	2.00

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 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  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## 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.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**TestAmerica - Irvine, CA**  
Michele Chamberlin  
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.*

**IQA2795 <Page 13 of 14>**

**NPDES - 203**

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 010

Report Number: IQA2795

Sampled: 01/28/07

Received: 01/29/07

## Certification Summary

### TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
SM2540C	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

#### Alta Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
 Samples: IQA2795-01

#### Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 245.1  
 Samples: IQA2795-01

### TestAmerica - Irvine, CA

Michele Chamberlin  
 Project Manager

# Del Mar Analytical CHAIN OF CUSTODY FORM

Version 04/28/06

Client Name/Address: <b>MWH-Pasadena</b> 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing-SSFL NPDES <b>Routine Outfall 010</b> Stormwater at Building 203		ANALYSIS REQUIRED		Field readings: Temp = 50 pH = 8.10	
Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl		Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl	
Sampler: <b>BANAGA</b>		Fax Number: (626) 568-6515		TCDD (and all congeners)		TDS, TSS	
				Oil & Grease (EPA 413.1)			
				Cl-, SO4, NO3+NO2-N			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Comments
Outfall 010	W	Poly-1L	1	1-28-07 09:35	HNO3	1A	
Outfall 010-Dup	W	Poly-1L	1	1-28-07 09:35	HNO3	1B	
Outfall 010	W	Amber-1L	2		None	2A, 2B	
Outfall 010	W	Amber-1L	2	1-28-07 09:35	HCl	3A, 3B	
Outfall 010	W	Poly-500 ml	2		None	4A, 4B	
Outfall 010	W	Poly-500 ml	2	1-28-07 09:35	None	5A, 5B	
Outfall 010	W	Poly-1L	1		None	6	
Relinquished By: <i>[Signature]</i>		Date/Time: 1-29-07 1635		Received By: <i>[Signature]</i>		Date/Time: 1-29-07 1635	
Relinquished By: <i>[Signature]</i>		Date/Time: 1-29-07 1635		Received By: <i>[Signature]</i>		Date/Time: 1-29-07 1635	
Relinquished By: <i>[Signature]</i>		Date/Time: 1-29-07 1635		Received By: <i>[Signature]</i>		Date/Time: 1-29-07 1635	
				Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____		Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____	
				Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>		MC 1/21/07	

HE 1-29-07  
1810



February 08, 2007

**Alta Project I.D.: 28672**

Ms. Michele Chamberlin  
Test America-Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 31, 2007 under your Project Name "IQA2795". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.*



**Alta Analytical Laboratory, Inc.**

1104 Windfield Way  
El Dorado Hills, CA 95762

(916) 933-1640  
FAX (916) 673-0106

**Section I: Sample Inventory Report**

**Date Received: 1/31/2007**

Alta Lab. ID

Client Sample ID

28672-001

IQA2795-01

## SECTION II

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	8819	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	2-Feb-07	Date Analyzed DB-5:	5-Feb-07		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000100		13C-2,3,7,8-TCDD	83.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000151		13C-1,2,3,7,8-PeCDD	84.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000201		13C-1,2,3,4,7,8-HxCDD	76.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000214		13C-1,2,3,6,7,8-HxCDD	73.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000201		13C-1,2,3,4,6,7,8-HpCDD	79.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000313		13C-OCDD	63.6	17 - 157	
OCDD	0.00000327			13C-2,3,7,8-TCDF	76.3	24 - 169	J
2,3,7,8-TCDF	ND	0.000000787		13C-1,2,3,7,8-PeCDF	84.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000922		13C-2,3,4,7,8-PeCDF	86.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000929		13C-1,2,3,4,7,8-HxCDF	75.6	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000127		13C-1,2,3,6,7,8-HxCDF	71.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000141		13C-2,3,4,6,7,8-HxCDF	79.1	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000100		13C-1,2,3,7,8,9-HxCDF	79.5	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000132		13C-1,2,3,4,6,7,8-HpCDF	80.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000751		13C-1,2,3,4,7,8,9-HpCDF	81.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000809		13C-OCDF	70.0	17 - 157	
OCDF	ND	0.00000275		<b>CRS</b> 37Cl-2,3,7,8-TCDD	99.8	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000100					
Total PeCDD	ND	0.00000151					
Total HxCDD	ND	0.00000205					
Total HpCDD	ND	0.00000313					
Total TCDF	ND	0.000000787					
Total PeCDF	ND	0.000000925					
Total HxCDF	ND	0.00000149					
Total HpCDF	ND	0.000000779					
<b>Footnotes</b>							
a. Sample specific estimated detection limit.							
b. Estimated maximum possible concentration.							
c. Method detection limit.							
d. Lower control limit - upper control limit.							

Analyte: MAS

Approved By: William J. Luksemburg 07-Feb-2007 14:17

OPR Results		EPA Method 1613					
Matrix:	Aqueous	QC Batch No:	8819	Lab Sample	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	2-Feb-07	Date Analyzed DB-5:	5-Feb-07		
				Date Analyzed DB-225:	NA		
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	10.7	6.7 - 15.8	13C-2,3,7,8-TCDD	68.6	25 - 164	
1,2,3,7,8-PeCDD	50.0	52.1	35 - 71	13C-1,2,3,7,8-PeCDD	74.1	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	51.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	70.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.8	38 - 67	13C-1,2,3,6,7,8-HxCDD	69.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	54.2	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	80.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	52.5	35 - 70	13C-OCDD	71.2	17 - 157	
OCDD	100	108	78 - 144	13C-2,3,7,8-TCDF	66.6	24 - 169	
2,3,7,8-TCDF	10.0	10.4	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	76.5	24 - 185	
1,2,3,7,8-PeCDF	50.0	52.2	40 - 67	13C-2,3,4,7,8-PeCDF	75.9	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	74.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.9	36 - 67	13C-1,2,3,6,7,8-HxCDF	70.4	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	53.2	42 - 65	13C-2,3,4,6,7,8-HxCDF	73.2	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	53.2	35 - 78	13C-1,2,3,7,8,9-HxCDF	77.0	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	53.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	81.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.0	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	86.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.2	39 - 69	13C-OCDF	76.0	17 - 157	
OCDF	100	107	63 - 170	CRS 37Cl-2,3,7,8-TCDD	92.2	35 - 197	

Analyst: MAS

Approved By:

William J. Luksemburg 07-Feb-2007 14:17

Sample ID: IQA2795-01		EPA Method 1613						
Client Data		Sample Data		Laboratory Data				
Name	Test America-Irvine	Matrix	Aqueous	Lab Sample	28672-001	Date Received	31-Jan-07	
Project	IQA2795	Sample Size	1.04 L	QC Batch No.	8819	Date Extracted	2-Feb-07	
Date Collected	28-Jan-07			Date Analyzed DB-5	6-Feb-07	Date Analyzed DB-225	NA	
Time Collected	0935							
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.000000818			13C-2,3,7,8-TCDD	74.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000162			13C-1,2,3,7,8-PeCDD	70.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000248			13C-1,2,3,4,7,8-HxCDD	66.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000270			13C-1,2,3,6,7,8-HxCDD	63.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000251		J	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000865				13C-OCDD	61.8	17 - 157	
OCDD	0.0000920			B	13C-2,3,7,8-TCDF	76.0	24 - 169	
2,3,7,8-TCDF	ND	0.000000771			13C-1,2,3,7,8-PeCDF	71.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000995			13C-2,3,4,7,8-PeCDF	72.8	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000950			13C-1,2,3,4,7,8-HxCDF	66.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000664			13C-1,2,3,6,7,8-HxCDF	63.6	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000675			13C-2,3,4,6,7,8-HxCDF	69.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000717			13C-1,2,3,7,8,9-HxCDF	70.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000988			13C-1,2,3,4,6,7,8-HpCDF	73.3	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000198			J	13C-1,2,3,4,7,8,9-HpCDF	76.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000752			13C-OCDF	67.2	17 - 157	
OCDF	0.00000831			J	CRS 37Cl-2,3,7,8-TCDD	114	35 - 197	
<b>Totals</b>								
Total TCDD	ND	0.00000116						
Total PeCDD	ND	0.00000162						
Total HxCDD	ND	0.00000434						
Total HpCDD	0.0000200							
Total TCDF	ND	0.000000771						
Total PeCDF	ND	0.000000973						
Total HxCDF	ND	0.000000752						
Total HpCDF	0.00000198		0.00000551					

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyst: MAS

Approved By:

William J. Luksemburg 07-Feb-2007 14:17

**APPENDIX**

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

## SUBCONTRACT ORDER - PROJECT # IQA2795 28672

**SENDING LABORATORY:**  
 TestAmerica - Irvine, CA  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614  
 Phone: (949) 261-1022  
 Fax: (949) 260-3297  
 Project Manager: Michele Chamberlin

**RECEIVING LABORATORY:** 3.5°C  
 Alta Analytical  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 Phone : (916) 933-1640  
 Fax: (916) 673-0106

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

Analysis	Expiration	Comments
Sample ID: IQA2795-01 Water	Sampled: 01/28/07 09:35	
1613-Dioxin-HR-Alta	02/04/07 09:35	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	02/25/07 09:35	Excel EDD email to pm, Include Std logs for Lvl IV

**Containers Supplied:**  
 1 L Amber (IQA2795-01C)  
 1 L Amber (IQA2795-01D)

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No      Sample labels/COC agree:  Yes  No      Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No      Samples Preserved Properly:  Yes  No      Samples Received at (temp): \_\_\_\_\_

Released By: *Handwritten Signature*      Date: 1/30/07      Time: \_\_\_\_\_      Received By: *Bettina C. Benedict*      Date: 1/31/07      Time: 0849

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 28672 TAT Standard

Samples Arrival:	Date/Time 1/31/07 0840		Initials: JBSB		Location: <u>WR-2</u>	
	Shelf/Rack: <u>N/A</u>					
Logged In:	Date/Time 1/31/07 1114		Initials: JBSB		Location: <u>WR-2</u>	
	Shelf/Rack: <u>C-3</u>					
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None		
Temp °C	3.5°C		Time:	0848		Thermometer ID: IR-2

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # <u>7985 9666 9898</u>	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?				✓
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?				✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?				None
Shipping Container	Alta <input checked="" type="checkbox"/> Client	Retain	<input checked="" type="checkbox"/> Return	Dispose

Comments:



### CERTIFICATE OF ANALYSIS

**Client:** TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine, CA 92614  
Attention: Michele Chamberlin

Phone: (949) 261-1022

Fax: (949) 260-3297

**Report Date:** 02/22/07 16:48

**Received Date:** 02/08/07 08:40

**Turn Around:** Normal

**Work Order #:** 7020849

**Client Project:** IQA2795

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

*The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.*

Dear Michele Chamberlin :

Enclosed are the results of analyses for samples received 02/08/07 08:40 with the Chain of Custody document. The samples were received in good condition, at 2.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Malignat

Project Manager

Page 1 of 6





Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020849  
Project ID: IQA2795

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQA2795-01	client		7020849-01	Water	01/28/07 09:35



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020849  
Project ID: IQA2795

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

**IQA2795-01 7020849-01 (Water)**

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0508	02/13/07	02/14/07	jl
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B0508	02/13/07	02/14/07	jl



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020849  
Project ID: IQA2795

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

# QUALITY CONTROL SECTION



Weck Laboratories, Inc.  
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TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 7020849  
 Project ID: IQA2795

Date Received: 02/08/07 08:40  
 Date Reported: 02/22/07 16:48

**Metals by EPA 200 Series Methods - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-----------------

**Batch W7B0508 - EPA 245.1**

**Blank (W7B0508-BLK1)**

Analyzed: 02/14/07

Mercury, Total	ND	0.050	ug/l							
Mercury, Dissolved	ND	0.050	ug/l							

**LCS (W7B0508-BS1)**

Analyzed: 02/14/07

Mercury, Total	0.968	0.050	ug/l	1.00		96.8	85-115			
Mercury, Dissolved	0.968	0.050	ug/l	1.00		96.8	85-115			

**Matrix Spike (W7B0508-MS1)**

Source: 7020943-01

Analyzed: 02/14/07

Mercury, Total	0.982	0.050	ug/l	1.00	ND	98.2	70-130			
Mercury, Dissolved	0.982	0.050	ug/l	1.00	ND	98.2	70-130			

**Matrix Spike Dup (W7B0508-MSD1)**

Source: 7020943-01

Analyzed: 02/14/07

Mercury, Total	0.993	0.050	ug/l	1.00	ND	99.3	70-130	1.11	20	
Mercury, Dissolved	0.993	0.050	ug/l	1.00	ND	99.3	70-130	1.11	20	



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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7020849  
Project ID: IQA2795

Date Received: 02/08/07 08:40  
Date Reported: 02/22/07 16:48

### Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

## **APPENDIX G**

### **Section 9**

Outfall 003, February 19, 2007

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





# DATA VALIDATION REPORT

## NPDES Monitoring Program Annual Outfall 003

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IQB2022

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.100D.00  
Sample Delivery Group: IQB2022  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: April 9, 2007

The samples listed in Table 1 were 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 for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (TestAmerica-Irvine)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IQB2022-01	28722-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to TestAmerica-Irvine, custody seals were not required. Custody seals were present on the coolers from TestAmerica to Alta; however, no sample container custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). 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%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 10/24/2006 on instrument VG-5. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were 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 QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 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. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-8883-MB001) was extracted and analyzed with the sample in this SDG. Target compounds 1,2,3,4,6,7,8-HpCDD, OCDD, and total HpCDD were reported in the method blank at concentrations below the laboratory lower calibration level. 1,2,3,4,6,7,8-HpCDD and OCDD were reported in the site sample at concentrations less than five times the concentration of the method blank; therefore, the detects for HpCDD and OCDD were qualified as estimated nondetects, "UJ," at the levels of contamination in the site sample. As a portion of total HpCDD included the result for 1,2,3,4,6,7,8-HpCDD, the result for total HpCDD was qualified as estimated, "J," due to the method blank contamination. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-8883-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. No qualifications were required.



**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4MT114  
 Task Order: 1261.001D.01  
 SDG No.: IQB2022

No. of Analyses: 1

Laboratory: Weck  
 Reviewer: P. Meeks  
 Analysis/Method: Metals

Date: April 4, 2007
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
<b>1. Case Narrative Deficiencies</b>	_____
<b>2. Out of Scope Analyses</b>	_____
<b>3. Analyses Not Conducted</b>	_____
<b>4. Missing Hardcopy Deliverables</b>	_____
<b>5. Incorrect Hardcopy Deliverables</b>	_____
<b>6. Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 003

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQB2022

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQB2022  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 4, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Method 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Weck Laboratory ID	Matrix	COC Method
Outfall 003	IQA2022-01	7022246-01	Water	245.1, total and dissolved

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica and the subcontract laboratory, Weck within the temperature limits of 4°C ±2°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original and transfer COCs were signed and dated by the appropriate field and/or laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. Custody seals were not present upon receipt at Weck. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

As ICP-MS was not utilized for the analysis, the ICP-MS tune criteria are not applicable.

### 2.3 CALIBRATION

The mercury initial calibration  $r^2$  was  $\geq 0.995$ . The ICV and CCV results showed acceptable recoveries, 85-115% for mercury. No qualifications were required.

### 2.4 BLANKS

Mercury was not detected in any of the blanks associated with the site sample analysis. No qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

As neither ICP nor ICP-MS were utilized for the analysis, the interference check sample results are not applicable.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As ICP-MS was not utilized for the analysis, the ICP-MS internal standard results are not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## **2.12 FIELD QC SAMPLES**

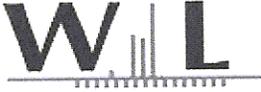
Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### **2.12.1 Field Blanks and Equipment Rinsates**

The sample in this SDG had no associated field QC samples. No qualifications were required.

### **2.12.2 Field Duplicates**

There were no field duplicate analyses performed in association with the site sample.



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 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 7022246  
 Project ID: IQB2022

Date Received: 02/21/07 12:30  
 Date Reported: 03/02/07 19:24

Outfall 003  
 IQB2022-01 7022246-01 (Water)

**Metals by EPA 200 Series Methods**

Analyte	Res Qual	Regl Code	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	U		ND	0.050	ug/l	0.20	1	EPA 245.1	W7B1095	02/27/07	03/02/07	jl
Mercury, Total	U		ND	0.050	ug/l	0.20	1	EPA 245.1	W7B1095	02/27/07	03/02/07	jl

LEVEL IV

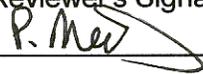
**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4MT117  
 Task Order: 1261.100100  
 SDG No.: IQB2022

No. of Analyses: 1

Laboratory: TestAmerica  
 Reviewer: P. Meeks  
 Analysis/Method: Metals

Date: April 24, 2007  
 Reviewer's Signature  


<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	  
2. <b>Out of Scope Analyses</b>	  
3. <b>Analyses Not Conducted</b>	  
4. <b>Missing Hardcopy Deliverables</b>	  
5. <b>Incorrect Hardcopy Deliverables</b>	  
6. <b>Deviations from Analysis Protocol, e.g.,</b>	Qualifications applied for method blank contamination.
Holding Times	 
GC/MS Tune/Inst. Performance	 
Calibration	 
Method blanks	 
Surrogates	 
Matrix Spike/Dup LCS	 
Field QC	 
Internal Standard Performance	 
Compound Identification	 
Quantitation	 
System Performance	 
<b>COMMENTS<sup>b</sup></b>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Annual Outfall 003

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQB2022

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.100D.00  
Sample Delivery Group: IQB2022  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 24, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Method 200.7*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Matrix	COC Method
Outfall 003	IQA2022-01	Water	200.7

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica within the temperature limits of 4°C ±2°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original COC was signed and dated by the appropriate field and laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 6 months for ICP metals. No qualifications were required.

### 2.2 ICP-MS TUNING

As the ICP-MS analytes were not validated, the ICP-MS tune criteria were not assessed.

### 2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP metals. The laboratory analyzed reporting limit check standards in association with the sample in this SDG. Selenium was recovered above 130% in the 10 ppb reporting limit check standard; however, selenium was not detected in the site sample. All other recoveries were considered to be acceptable. No qualifications were required.

## 2.4 BLANKS

Boron was detected in method blank 7B21063-BLK1 at 0.0216 mg/L; therefore, boron detected in the sample was qualified as an estimated nondetect, "UJ." Although the ICP-MS metals were not validated, the reviewer noted that cadmium was detected in method blank 7B21137-BLK1 at 0.135 µg/L; therefore, cadmium detected in the sample was qualified as an estimated nondetect, "UJ." Silver was detected in a bracketing CCB; however, silver was not detected in the site sample. There were no other detects of sufficient concentration to qualify the site sample. No further qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed in association with the ICP analyses of the site sample. The ICSA and ICSAB results were acceptable with recoveries within the control limits of 80-120%. Selenium was reported in the ISCA at -11.4 µg/L and silver was detected at 6.7 µg/L; however, no interferents were present in the site sample at concentrations requiring qualification. No qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

MS/MSD analyses were performed in association with the ICP analytes of the sample in this SDG. All recoveries were within the laboratory-established control limits of 75-125% and all RPDs were ≤20%. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As the ICP-MS analytes were not validated, the ICP-MS internal standard results were not assessed.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.12 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.

# TestAmerica

ANALYTICAL TESTING CORPORATION

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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07  
Received: 02/19/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Re Qual	Qual Code
Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.										
Reporting Units: ug/l										
Aluminum	EPA 200.7	7B21063	40	50	550	1	02/21/07	02/21/07		
Antimony	EPA 200.8	7B21137	0.050	2.0	0.73	1	02/21/07	02/21/07	*	J
Arsenic	EPA 200.7	7B21063	7.0	10	ND	1	02/21/07	02/21/07	U	
Beryllium	EPA 200.7	7B21063	0.90	2.0	ND	1	02/21/07	02/21/07	U	
Cadmium	EPA 200.8	7B21137	0.025	1.0	0.057	1	02/21/07	02/21/07	U	B, J
Chromium	EPA 200.7	7B21063	2.0	5.0	7.7	1	02/21/07	02/21/07		B
Copper	EPA 200.8	7B21137	0.25	2.0	2.6	1	02/21/07	02/21/07	*	B
Lead	EPA 200.8	7B21137	0.040	1.0	0.60	1	02/21/07	02/21/07	*	J
Nickel	EPA 200.7	7B21063	2.0	10	ND	1	02/21/07	02/21/07	U	
Selenium	EPA 200.7	7B21063	8.0	10	ND	1	02/21/07	02/21/07	U	
Silver	EPA 200.7	7B21063	3.0	10	ND	1	02/21/07	02/21/07	U	
Thallium	EPA 200.8	7B21137	0.15	1.0	ND	1	02/21/07	02/21/07	*	
Vanadium	EPA 200.7	7B21063	3.0	10	44	1	02/21/07	02/21/07		
Zinc	EPA 200.7	7B21063	15	20	ND	1	02/21/07	02/21/07	U	

\* Analysis not validated

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

LEVEL IV

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.

IQB2022 <Page 10 of 43>

# TestAmerica

ANALYTICAL TESTING CORPORATION

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	7B21063	0.020	0.050	0.065	1	02/21/07	02/21/07	WJ-B
Iron	EPA 200.7	7B21063	0.015	0.040	0.62	1	02/21/07	02/21/07	B

\* Analysis not validated

LEVEL IV

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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IQB2022 <Page 9 of 43>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4RA11  
 Task Order: 1261.001D.01 100D.00  
 SDG No.: IQB2022

No. of Analyses: 1

Laboratory: Eberline  
 Reviewer: P. Meeks  
 Analysis/Method: Radionuclides

Date: <u>April 5, 2007</u>
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	Qualification applied for detector efficiency.
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	_____
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Annual Outfall 003

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUP: IQB2022

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.100D.00  
Sample Delivery Group: IQB2022  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Radionuclides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 5, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *EPA Prescribed Procedures for Measurements of Radioactivity in Drinking Water, Methods 900.0, 903.1, 904.0, 905.0, and 906.0*, and validation procedures outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Eberline)	Matrix	COC Method
Outfall 003	IQB2022-01	8657-001	Water	900.0, 903.1, 904.0, 905.0, 906.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica within the temperature limits of  $4\pm 2^{\circ}\text{C}$ . No temperature information was provided by Eberline, the subcontract laboratory; however, as it is not necessary to chill radiological samples, no qualifications were required. The sample was noted to have been received intact, in good condition, with cooler and sample container custody seals intact.

According to the Los Angeles Regional Water Quality Control Board's (LARWQCB) guidance letter dated 01/12/05, samples collected for tritium analysis should be submitted in glass containers to avoid potential loss of tritium by sorption onto the plastic container. The tritium sample for Outfall 009 was received unpreserved in a glass container.

According to the LARWQCB guidance letter dated 01/12/05, unfiltered samples should not be preserved and filtered aliquots should be preserved after filtration. All aliquots were received at Eberline unfiltered and unpreserved and were neither preserved nor filtered after receipt. No qualifications were required.

#### 2.1.2 Chain of Custody

The original COC was signed and dated by field and laboratory personnel. The transfer COC was signed by personnel from both laboratories. Eberline did not list the MWH ID on the sample result summary form; therefore, the reviewer edited the Form I to reflect this ID. No qualifications were required.

#### 2.1.3 Holding Times

The tritium sample was analyzed within 180 days of collection. Aliquots for gross alpha and gross beta, radium-226, radium-228, and strontium-90 were prepared within the five-day analytical holding time for unpreserved samples. No qualifications were necessary.

### 2.2 CALIBRATION

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

### Gross Alpha and Gross Beta

The initial calibration included with the data was performed in February 2003. The gross alpha detector efficiency was less than 20%; therefore, the gross alpha result was qualified as an estimated nondetect, "UJ." The gross beta detector efficiencies were above 20% and no further qualifications were required.

### Tritium

No calibration standards were analyzed for this method. According to the laboratory, the sample was spiked for efficiency determination; therefore, no calibration was necessary. The detector efficiency for the sample was at least 20% and was considered acceptable. The internal spike efficiency to default efficiency ratios was near 1, indicating that quenching did not occur.

### Strontium-90

The initial calibrations were performed in June 1995. The strontium chemical yield was at least 70% and was considered acceptable. The strontium continuing calibration results were within the laboratory control limits. No qualifications were necessary.

### Radium

The radium-226 cell efficiencies were determined in September 2006. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 calibration utilized actinium-228 and was verified in February 2001. The radium-228 tracer, yttrium oxalate yields were greater than 70%. No qualifications were necessary.

## **2.3 BLANKS**

No measurable activities were detected in the method blanks; therefore, no qualifications were necessary.

## **2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES**

Aqueous blank spikes were analyzed in association with the sample in this SDG. The blank spike results were within the laboratory-established control limits. No qualifications were necessary.

## **2.5 LABORATORY DUPLICATES**

The laboratory performed duplicate analyses on Outfall 003 for all analytes. All RPDs were within the laboratory-established control limits. No qualifications were necessary.

## 2.6 MATRIX SPIKES

The laboratory performed matrix spike analyses on Outfall 003 for gross alpha, gross beta, tritium, and radium 226. The recoveries were within the laboratory-established control limits. No qualifications were necessary.

## 2.7 SAMPLE RESULT VERIFICATION

An EPA Level IV review was performed for the sample in this data package. Sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. No qualifications were necessary.

## 2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample.

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate samples in this SDG.

Eberline Services

ANALYSIS RESULTS

SDG <u>8657</u>	Client <u>TA IRVINE</u>
Work Order <u>R702122-01</u>	Contract <u>PROJECT# IQB2022</u>
Received Date <u>02/21/07</u>	Matrix <u>WATER</u>

Client	Lab							Rev	Qual
Sample ID	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Qual	Code
<u>Outfall 603</u> IQB2022-01	8657-001	02/19/07	03/08/07	GrossAlpha	-0.192 ± 0.44	pCi/L	0.698	UJ	R
			03/08/07	Gross Beta	24.3 ± 1.1	pCi/L	1.04		
			03/12/07	Ra-228	0.051 ± 0.15	pCi/L	0.413	U	
			03/01/07	H-3	-113 ± 92	pCi/L	159	U	
			03/06/07	Ra-226	-0.200 ± 0.41	pCi/L	0.878	U	
			03/02/07	Sr-90	-0.064 ± 0.30	pCi/L	0.738	U	

LEVEL IV

Certified by <u></u>
Report Date <u>03/23/07</u>
Page 1

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4WC97  
 Task Order: 1261.100D.00  
 SDG No.: IQB2022

No. of Analyses: 1

Laboratory: TestAmerica  
 Reviewer: P. Meeks  
 Analysis/Method: General Minerals

Date: <u>April 25, 2007</u>
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Annual Outfall 003

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IQB2022

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQB2022  
Project Manager: P. Costa  
Matrix: Water  
Analysis: General Minerals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 25, 2007

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods 160.2 and 335.2*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 003	IQB2022-01	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . No preservation problems were noted by the laboratory and no qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The TSS analysis was performed within the analytical holding time of seven days from collection and the cyanide analysis was performed within the analytical holding time of 14 days from collection. No qualifications were required.

### 2.2 CALIBRATION

The cyanide initial calibration  $r^2$  result was  $\geq 0.995$  and the ICV and CCV results were within the control limits of 90-110%. No qualifications were required.

### 2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No qualifications were required.

## 2.5 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of method accuracy was based on the LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form I were verified against the raw data. No qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Res Qual	Qual Code
Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	7B23104	2.2	5.0	ND	1	02/23/07	02/23/07	U	
Perchlorate	EPA 314.0	7B27143	0.80	4.0	ND	1	02/27/07	02/28/07	*	

\* Analysis not validated

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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IQB2022 <Page 14 of 43>

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.										
Reporting Units: mg/l										
Chloride	EPA 300.0	7B20044	0.15	0.50	0.73	1	02/20/07	02/20/07	*	
Fluoride	EPA 300.0	7B20044	0.15	0.50	0.27	1	02/20/07	02/20/07		J
Hardness (as CaCO3)	SM2340B	7B21063	1.0	1.0	9.8	1	02/21/07	02/21/07		
Nitrate/Nitrite-N	EPA 300.0	7B20044	0.080	0.15	0.26	1	02/20/07	02/20/07		
Oil & Grease	EPA 413.1	7B28085	0.89	4.7	ND	1	02/28/07	02/28/07		
Sulfate	EPA 300.0	7B20044	0.45	0.50	7.2	1	02/20/07	02/20/07		
Total Dissolved Solids	SM2540C	7B23078	10	10	120	1	02/23/07	02/23/07	*	
Total Suspended Solids	EPA 160.2	7B21150	10	10	13	1	02/21/07	02/22/07		

\* Analysis not validated

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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.

IQB2022 <Page 13 of 43>

## **APPENDIX G**

### **Section 10**

Outfall 003, February 19, 2007

Test America Analytical Laboratory Report

**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Annual Outfall 003

Sampled: 02/19/07  
Received: 02/19/07  
Issued: 04/03/07 19:15

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*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 3°C, on ice and with chain of custody documentation.

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

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

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

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

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

**ADDITIONAL INFORMATION:** Enclosed are complete final results. The results for the Radiochemistry analysis were added.

**LABORATORY ID**

IQB2022-01  
IQB2022-02

**CLIENT ID**

Outfall 003  
Trip Blank

**MATRIX**

Water  
Water

Reviewed By:



**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07

Received: 02/19/07

## 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: IQB2022-01 (Outfall 003 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	7B21011	0.28	1.0	ND	1	02/21/07	02/21/07	
Bromodichloromethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Bromoform	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Bromomethane	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
Carbon tetrachloride	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
Chlorobenzene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
Chloroethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Chloroform	EPA 624	7B21011	0.33	2.0	ND	1	02/21/07	02/21/07	
Chloromethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Dibromochloromethane	EPA 624	7B21011	0.28	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichlorobenzene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
1,3-Dichlorobenzene	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
1,4-Dichlorobenzene	EPA 624	7B21011	0.37	2.0	ND	1	02/21/07	02/21/07	
1,1-Dichloroethane	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloroethane	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
1,1-Dichloroethene	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
trans-1,2-Dichloroethene	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloropropane	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
cis-1,3-Dichloropropene	EPA 624	7B21011	0.22	2.0	ND	1	02/21/07	02/21/07	
trans-1,3-Dichloropropene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Ethylbenzene	EPA 624	7B21011	0.25	2.0	ND	1	02/21/07	02/21/07	
Methylene chloride	EPA 624	7B21011	0.95	5.0	ND	1	02/21/07	02/21/07	
1,1,2,2-Tetrachloroethane	EPA 624	7B21011	0.24	2.0	ND	1	02/21/07	02/21/07	
Tetrachloroethene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Toluene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
1,1,1-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
1,1,2-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Trichloroethene	EPA 624	7B21011	0.26	2.0	ND	1	02/21/07	02/21/07	
Trichlorofluoromethane	EPA 624	7B21011	0.34	5.0	ND	1	02/21/07	02/21/07	
Vinyl chloride	EPA 624	7B21011	0.30	0.50	ND	1	02/21/07	02/21/07	
Xylenes, Total	EPA 624	7B21011	0.90	4.0	ND	1	02/21/07	02/21/07	
Trichlorotrifluoroethane (Freon 113)	EPA 624	7B21011	1.5	5.0	ND	1	02/21/07	02/21/07	

Surrogate: Dibromofluoromethane (80-120%)

90 %

Surrogate: Toluene-d8 (80-120%)

99 %

Surrogate: 4-Bromofluorobenzene (80-120%)

98 %

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07

Received: 02/19/07

## 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: IQB2022-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	7B21011	0.28	1.0	ND	1	02/21/07	02/21/07	
Bromodichloromethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Bromoform	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Bromomethane	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
Carbon tetrachloride	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
Chlorobenzene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
Chloroethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Chloroform	EPA 624	7B21011	0.33	2.0	ND	1	02/21/07	02/21/07	
Chloromethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Dibromochloromethane	EPA 624	7B21011	0.28	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichlorobenzene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
1,3-Dichlorobenzene	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
1,4-Dichlorobenzene	EPA 624	7B21011	0.37	2.0	ND	1	02/21/07	02/21/07	
1,1-Dichloroethane	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloroethane	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
1,1-Dichloroethene	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
trans-1,2-Dichloroethene	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloropropane	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
cis-1,3-Dichloropropene	EPA 624	7B21011	0.22	2.0	ND	1	02/21/07	02/21/07	
trans-1,3-Dichloropropene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Ethylbenzene	EPA 624	7B21011	0.25	2.0	ND	1	02/21/07	02/21/07	
Methylene chloride	EPA 624	7B21011	0.95	5.0	ND	1	02/21/07	02/21/07	
1,1,2,2-Tetrachloroethane	EPA 624	7B21011	0.24	2.0	ND	1	02/21/07	02/21/07	
Tetrachloroethene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Toluene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
1,1,1-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
1,1,2-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Trichloroethene	EPA 624	7B21011	0.26	2.0	ND	1	02/21/07	02/21/07	
Trichlorofluoromethane	EPA 624	7B21011	0.34	5.0	ND	1	02/21/07	02/21/07	
Vinyl chloride	EPA 624	7B21011	0.30	0.50	ND	1	02/21/07	02/21/07	
Xylenes, Total	EPA 624	7B21011	0.90	4.0	ND	1	02/21/07	02/21/07	
Trichlorotrifluoroethane (Freon 113)	EPA 624	7B21011	1.5	5.0	ND	1	02/21/07	02/21/07	

Surrogate: Dibromofluoromethane (80-120%)

95 %

Surrogate: Toluene-d8 (80-120%)

100 %

Surrogate: 4-Bromofluorobenzene (80-120%)

97 %

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07

Received: 02/19/07

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acrolein	EPA 624	7B21011	4.6	50	ND	1	02/21/07	02/21/07	
Acrylonitrile	EPA 624	7B21011	0.70	50	ND	1	02/21/07	02/21/07	
2-Chloroethyl vinyl ether	EPA 624	7B21011	1.8	5.0	ND	1	02/21/07	02/21/07	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					90 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					99 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					98 %				
<b>Sample ID: IQB2022-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acrolein	EPA 624	7B21011	4.6	50	ND	1	02/21/07	02/21/07	
Acrylonitrile	EPA 624	7B21011	0.70	50	ND	1	02/21/07	02/21/07	
2-Chloroethyl vinyl ether	EPA 624	7B21011	1.8	5.0	ND	1	02/21/07	02/21/07	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					95 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					100 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					97 %				

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## 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: IQB2022-01 (Outfall 003 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Acenaphthylene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Aniline	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
Anthracene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Benzidine	EPA 625	7B21110	8.0	19	ND	0.943	02/21/07	02/25/07	L
Benzoic acid	EPA 625	7B21110	8.0	19	ND	0.943	02/21/07	02/25/07	
Benzo(a)anthracene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Benzo(b)fluoranthene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Benzo(k)fluoranthene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Benzo(g,h,i)perylene	EPA 625	7B21110	2.8	9.4	ND	0.943	02/21/07	02/25/07	L
Benzo(a)pyrene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Benzyl alcohol	EPA 625	7B21110	2.4	19	ND	0.943	02/21/07	02/25/07	
Bis(2-chloroethoxy)methane	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Bis(2-chloroethyl)ether	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
Bis(2-chloroisopropyl)ether	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
Bis(2-ethylhexyl)phthalate	EPA 625	7B21110	3.8	47	ND	0.943	02/21/07	02/25/07	
4-Bromophenyl phenyl ether	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
Butyl benzyl phthalate	EPA 625	7B21110	3.8	19	ND	0.943	02/21/07	02/25/07	
4-Chloroaniline	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
2-Chloronaphthalene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
4-Chloro-3-methylphenol	EPA 625	7B21110	1.9	19	ND	0.943	02/21/07	02/25/07	
2-Chlorophenol	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
4-Chlorophenyl phenyl ether	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Chrysene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Dibenz(a,h)anthracene	EPA 625	7B21110	2.8	19	ND	0.943	02/21/07	02/25/07	
Dibenzofuran	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Di-n-butyl phthalate	EPA 625	7B21110	1.9	19	ND	0.943	02/21/07	02/25/07	
1,3-Dichlorobenzene	EPA 625	7B21110	2.8	9.4	ND	0.943	02/21/07	02/25/07	
1,4-Dichlorobenzene	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
1,2-Dichlorobenzene	EPA 625	7B21110	2.8	9.4	ND	0.943	02/21/07	02/25/07	
3,3-Dichlorobenzidine	EPA 625	7B21110	2.8	19	ND	0.943	02/21/07	02/25/07	
2,4-Dichlorophenol	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Diethyl phthalate	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
2,4-Dimethylphenol	EPA 625	7B21110	3.3	19	ND	0.943	02/21/07	02/25/07	
Dimethyl phthalate	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
4,6-Dinitro-2-methylphenol	EPA 625	7B21110	3.8	19	ND	0.943	02/21/07	02/25/07	
2,4-Dinitrophenol	EPA 625	7B21110	4.2	19	ND	0.943	02/21/07	02/25/07	
2,4-Dinitrotoluene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
2,6-Dinitrotoluene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Di-n-octyl phthalate	EPA 625	7B21110	1.9	19	ND	0.943	02/21/07	02/25/07	
Fluoranthene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	

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 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07

Received: 02/19/07

## 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: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Fluorene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Hexachlorobenzene	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
Hexachlorobutadiene	EPA 625	7B21110	3.3	9.4	ND	0.943	02/21/07	02/25/07	
Hexachlorocyclopentadiene	EPA 625	7B21110	4.7	19	ND	0.943	02/21/07	02/25/07	
Hexachloroethane	EPA 625	7B21110	2.8	9.4	ND	0.943	02/21/07	02/25/07	
Indeno(1,2,3-cd)pyrene	EPA 625	7B21110	2.8	19	ND	0.943	02/21/07	02/25/07	
Isophorone	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
2-Methylnaphthalene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
2-Methylphenol	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
4-Methylphenol	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Naphthalene	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
2-Nitroaniline	EPA 625	7B21110	1.9	19	ND	0.943	02/21/07	02/25/07	
3-Nitroaniline	EPA 625	7B21110	1.9	19	ND	0.943	02/21/07	02/25/07	
4-Nitroaniline	EPA 625	7B21110	2.4	19	ND	0.943	02/21/07	02/25/07	
Nitrobenzene	EPA 625	7B21110	2.4	19	ND	0.943	02/21/07	02/25/07	
2-Nitrophenol	EPA 625	7B21110	3.3	9.4	ND	0.943	02/21/07	02/25/07	
4-Nitrophenol	EPA 625	7B21110	5.2	19	ND	0.943	02/21/07	02/25/07	
N-Nitrosodiphenylamine	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
N-Nitroso-di-n-propylamine	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
Pentachlorophenol	EPA 625	7B21110	3.3	19	ND	0.943	02/21/07	02/25/07	
Phenanthrene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Phenol	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
Pyrene	EPA 625	7B21110	1.9	9.4	ND	0.943	02/21/07	02/25/07	
1,2,4-Trichlorobenzene	EPA 625	7B21110	2.4	9.4	ND	0.943	02/21/07	02/25/07	
2,4,5-Trichlorophenol	EPA 625	7B21110	2.8	19	ND	0.943	02/21/07	02/25/07	
2,4,6-Trichlorophenol	EPA 625	7B21110	2.8	19	ND	0.943	02/21/07	02/25/07	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	7B21110	1.9	19	ND	0.943	02/21/07	02/25/07	
N-Nitrosodimethylamine	EPA 625	7B21110	2.4	19	ND	0.943	02/21/07	02/25/07	
Surrogate: 2-Fluorophenol (30-120%)					64 %				
Surrogate: Phenol-d6 (35-120%)					69 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					79 %				
Surrogate: Nitrobenzene-d5 (40-120%)					71 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					79 %				
Surrogate: Terphenyl-d14 (45-120%)					86 %				

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 Project Manager

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 300 North Lake Avenue, Suite 1200  
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07

Received: 02/19/07

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aldrin	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	C-7
alpha-BHC	EPA 608	7B22132	0.021	0.11	ND	1.06	02/22/07	02/25/07	
beta-BHC	EPA 608	7B22132	0.043	0.11	ND	1.06	02/22/07	02/25/07	
delta-BHC	EPA 608	7B22132	0.021	0.21	ND	1.06	02/22/07	02/25/07	
gamma-BHC (Lindane)	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
Chlordane	EPA 608	7B22132	0.21	1.1	ND	1.06	02/22/07	02/25/07	
4,4'-DDD	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
4,4'-DDE	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
4,4'-DDT	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	C-7
Dieldrin	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
Endosulfan I	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
Endosulfan II	EPA 608	7B22132	0.043	0.11	ND	1.06	02/22/07	02/25/07	
Endosulfan sulfate	EPA 608	7B22132	0.053	0.21	ND	1.06	02/22/07	02/25/07	
Endrin	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
Endrin aldehyde	EPA 608	7B22132	0.053	0.11	ND	1.06	02/22/07	02/25/07	
Endrin ketone	EPA 608	7B22132	0.043	0.11	ND	1.06	02/22/07	02/25/07	
Heptachlor	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
Heptachlor epoxide	EPA 608	7B22132	0.032	0.11	ND	1.06	02/22/07	02/25/07	
Methoxychlor	EPA 608	7B22132	0.043	0.11	ND	1.06	02/22/07	02/25/07	C-7
Toxaphene	EPA 608	7B22132	1.6	5.3	ND	1.06	02/22/07	02/25/07	
Surrogate: Tetrachloro-m-xylene (35-115%)					55 %				
Surrogate: Decachlorobiphenyl (45-120%)					74 %				

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## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aroclor 1016	EPA 608	7B22132	0.37	1.1	ND	1.06	02/22/07	02/23/07	
Aroclor 1221	EPA 608	7B22132	0.11	1.1	ND	1.06	02/22/07	02/23/07	
Aroclor 1232	EPA 608	7B22132	0.27	1.1	ND	1.06	02/22/07	02/23/07	
Aroclor 1242	EPA 608	7B22132	0.27	1.1	ND	1.06	02/22/07	02/23/07	
Aroclor 1248	EPA 608	7B22132	0.27	1.1	ND	1.06	02/22/07	02/23/07	
Aroclor 1254	EPA 608	7B22132	0.27	1.1	ND	1.06	02/22/07	02/23/07	
Aroclor 1260	EPA 608	7B22132	0.32	1.1	ND	1.06	02/22/07	02/23/07	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					88 %				

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## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
Reporting Units: mg/l									
<b>Boron</b>	EPA 200.7	7B21063	0.020	0.050	<b>0.065</b>	1	02/21/07	02/21/07	B
<b>Iron</b>	EPA 200.7	7B21063	0.015	0.040	<b>0.62</b>	1	02/21/07	02/21/07	

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## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
<b>Aluminum</b>	EPA 200.7	7B21063	40	50	<b>550</b>	1	02/21/07	02/21/07	
<b>Antimony</b>	EPA 200.8	7B21137	0.050	2.0	<b>0.73</b>	1	02/21/07	02/21/07	J
Arsenic	EPA 200.7	7B21063	7.0	10	ND	1	02/21/07	02/21/07	
Beryllium	EPA 200.7	7B21063	0.90	2.0	ND	1	02/21/07	02/21/07	
<b>Cadmium</b>	EPA 200.8	7B21137	0.025	1.0	<b>0.057</b>	1	02/21/07	02/21/07	B, J
<b>Chromium</b>	EPA 200.7	7B21063	2.0	5.0	<b>7.7</b>	1	02/21/07	02/21/07	
<b>Copper</b>	EPA 200.8	7B21137	0.25	2.0	<b>2.6</b>	1	02/21/07	02/21/07	B
<b>Lead</b>	EPA 200.8	7B21137	0.040	1.0	<b>0.60</b>	1	02/21/07	02/21/07	J
Nickel	EPA 200.7	7B21063	2.0	10	ND	1	02/21/07	02/21/07	
Selenium	EPA 200.7	7B21063	8.0	10	ND	1	02/21/07	02/21/07	
Silver	EPA 200.7	7B21063	3.0	10	ND	1	02/21/07	02/21/07	
Thallium	EPA 200.8	7B21137	0.15	1.0	ND	1	02/21/07	02/21/07	
<b>Vanadium</b>	EPA 200.7	7B21063	3.0	10	<b>44</b>	1	02/21/07	02/21/07	
Zinc	EPA 200.7	7B21063	15	20	ND	1	02/21/07	02/21/07	

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 Project Manager

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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07

Received: 02/19/07

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Aluminum	EPA 200.7-Diss	7B22143	0.040	0.050	ND	1	02/22/07	02/23/07	
Arsenic	EPA 200.7-Diss	7B22143	0.0070	0.010	ND	1	02/22/07	02/23/07	
Beryllium	EPA 200.7-Diss	7B22143	0.00090	0.0020	ND	1	02/22/07	02/23/07	
<b>Boron</b>	EPA 200.7-Diss	7B22143	0.020	0.050	<b>0.062</b>	1	02/22/07	02/23/07	B
<b>Chromium</b>	EPA 200.7-Diss	7B22143	0.0020	0.0050	<b>0.0046</b>	1	02/22/07	02/23/07	J
<b>Iron</b>	EPA 200.7-Diss	7B22143	0.015	0.040	<b>0.027</b>	1	02/22/07	02/23/07	J
Nickel	EPA 200.7-Diss	7B22143	0.0020	0.010	ND	1	02/22/07	02/23/07	
Selenium	EPA 200.7-Diss	7B22143	0.0080	0.010	ND	1	02/22/07	02/23/07	
<b>Hardness (as CaCO3)</b>	SM2340B	7B22143	1.0	1.0	<b>6.3</b>	1	02/22/07	02/23/07	
Silver	EPA 200.7-Diss	7B22143	0.0060	0.010	ND	1	02/22/07	02/23/07	
<b>Vanadium</b>	EPA 200.7-Diss	7B22143	0.0030	0.010	<b>0.037</b>	1	02/22/07	02/23/07	
<b>Zinc</b>	EPA 200.7-Diss	7B22143	0.0040	0.020	<b>0.0043</b>	1	02/22/07	02/23/07	J

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## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
<b>Antimony</b>	EPA 200.8-Diss	7B23073	0.050	2.0	<b>0.69</b>	1	02/23/07	02/23/07	J
Cadmium	EPA 200.8-Diss	7B23073	0.050	1.0	ND	1	02/23/07	02/23/07	
<b>Copper</b>	EPA 200.8-Diss	7B23073	0.40	2.0	<b>1.1</b>	1	02/23/07	02/23/07	J
Lead	EPA 200.8-Diss	7B23073	0.10	1.0	ND	1	02/23/07	02/23/07	
Thallium	EPA 200.8-Diss	7B23073	0.15	1.0	ND	1	02/23/07	02/23/07	

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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: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
Reporting Units: mg/l									
Chloride	EPA 300.0	7B20044	0.15	0.50	<b>0.73</b>	1	02/20/07	02/20/07	
Fluoride	EPA 300.0	7B20044	0.15	0.50	<b>0.27</b>	1	02/20/07	02/20/07	J
Hardness (as CaCO <sub>3</sub> )	SM2340B	7B21063	1.0	1.0	<b>9.8</b>	1	02/21/07	02/21/07	
Nitrate/Nitrite-N	EPA 300.0	7B20044	0.080	0.15	<b>0.26</b>	1	02/20/07	02/20/07	
Oil & Grease	EPA 413.1	7B28085	0.89	4.7	ND	1	02/28/07	02/28/07	
Sulfate	EPA 300.0	7B20044	0.45	0.50	<b>7.2</b>	1	02/20/07	02/20/07	
Total Dissolved Solids	SM2540C	7B23078	10	10	<b>120</b>	1	02/23/07	02/23/07	
Total Suspended Solids	EPA 160.2	7B21150	10	10	<b>13</b>	1	02/21/07	02/22/07	

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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: IQB2022-01 (Outfall 003 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Total Cyanide	EPA 335.2	7B23104	2.2	5.0	ND	1	02/23/07	02/23/07	
Perchlorate	EPA 314.0	7B27143	0.80	4.0	ND	1	02/27/07	02/28/07	

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Received: 02/19/07

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 003 (IQB2022-01) - Water</b>					
EPA 300.0	2	02/19/2007 12:00	02/19/2007 18:55	02/20/2007 15:00	02/20/2007 15:31
EPA 624	3	02/19/2007 12:00	02/19/2007 18:55	02/21/2007 00:00	02/21/2007 13:11
<b>Sample ID: Trip Blank (IQB2022-02) - Water</b>					
EPA 624	3	02/19/2007 12:00	02/19/2007 18:55	02/21/2007 00:00	02/21/2007 10:08

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Sampled: 02/19/07

Received: 02/19/07

## 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: 7B21011 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/21/2007 (7B21011-BLK1)</b>											
Benzene	ND	1.0	0.28	ug/l							
Bromodichloromethane	ND	2.0	0.30	ug/l							
Bromoform	ND	5.0	0.40	ug/l							
Bromomethane	ND	5.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	2.0	0.36	ug/l							
Chloroethane	ND	5.0	0.40	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloromethane	ND	5.0	0.40	ug/l							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l							
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l							
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	ND	5.0	0.95	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	0.50	0.30	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.5	ug/l							
Surrogate: Dibromofluoromethane	22.2			ug/l	25.0		89	80-120			
Surrogate: Toluene-d8	25.0			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	24.3			ug/l	25.0		97	80-120			

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21011 Extracted: 02/21/07</b>											
<b>LCS Analyzed: 02/21/2007 (7B21011-BS1)</b>											
Benzene	24.4	1.0	0.28	ug/l	25.0		98	70-120			
Bromodichloromethane	24.9	2.0	0.30	ug/l	25.0		100	70-135			
Bromoform	22.8	5.0	0.40	ug/l	25.0		91	55-130			
Bromomethane	25.5	5.0	0.42	ug/l	25.0		102	65-140			
Carbon tetrachloride	23.3	0.50	0.28	ug/l	25.0		93	65-140			
Chlorobenzene	24.8	2.0	0.36	ug/l	25.0		99	75-120			
Chloroethane	21.6	5.0	0.40	ug/l	25.0		86	60-140			
Chloroform	23.5	2.0	0.33	ug/l	25.0		94	70-130			
Chloromethane	30.5	5.0	0.40	ug/l	25.0		122	50-140			
Dibromochloromethane	26.8	2.0	0.28	ug/l	25.0		107	70-140			
1,2-Dichlorobenzene	25.3	2.0	0.32	ug/l	25.0		101	75-120			
1,3-Dichlorobenzene	25.3	2.0	0.35	ug/l	25.0		101	75-120			
1,4-Dichlorobenzene	24.8	2.0	0.37	ug/l	25.0		99	75-120			
1,1-Dichloroethane	23.5	2.0	0.27	ug/l	25.0		94	70-125			
1,2-Dichloroethane	25.0	0.50	0.28	ug/l	25.0		100	60-140			
1,1-Dichloroethene	23.3	5.0	0.42	ug/l	25.0		93	70-125			
trans-1,2-Dichloroethene	24.4	2.0	0.27	ug/l	25.0		98	70-125			
1,2-Dichloropropane	25.6	2.0	0.35	ug/l	25.0		102	70-125			
cis-1,3-Dichloropropene	24.1	2.0	0.22	ug/l	25.0		96	75-125			
trans-1,3-Dichloropropene	24.7	2.0	0.32	ug/l	25.0		99	70-125			
Ethylbenzene	25.8	2.0	0.25	ug/l	25.0		103	75-125			
Methylene chloride	21.4	5.0	0.95	ug/l	25.0		86	55-130			
1,1,2,2-Tetrachloroethane	27.4	2.0	0.24	ug/l	25.0		110	55-130			
Tetrachloroethene	22.4	2.0	0.32	ug/l	25.0		90	70-125			
Toluene	25.4	2.0	0.36	ug/l	25.0		102	70-120			
1,1,1-Trichloroethane	23.1	2.0	0.30	ug/l	25.0		92	65-135			
1,1,2-Trichloroethane	26.5	2.0	0.30	ug/l	25.0		106	70-125			
Trichloroethene	24.6	2.0	0.26	ug/l	25.0		98	70-125			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	65-145			
Vinyl chloride	26.6	0.50	0.30	ug/l	25.0		106	55-135			
Surrogate: Dibromofluoromethane	25.0			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21011 Extracted: 02/21/07</b>											
<b>Matrix Spike Analyzed: 02/21/2007 (7B21011-MS1)</b>						<b>Source: IQB2021-01</b>					
Benzene	33.0	1.0	0.28	ug/l	25.0	ND	132	65-125			MI
Bromodichloromethane	34.1	2.0	0.30	ug/l	25.0	ND	136	70-135			MI
Bromoform	28.1	5.0	0.40	ug/l	25.0	ND	112	55-135			
Bromomethane	38.2	5.0	0.42	ug/l	25.0	ND	153	55-145			MI
Carbon tetrachloride	34.0	0.50	0.28	ug/l	25.0	ND	136	65-140			
Chlorobenzene	33.2	2.0	0.36	ug/l	25.0	ND	133	75-125			MI
Chloroethane	32.6	5.0	0.40	ug/l	25.0	ND	130	55-140			
Chloroform	33.4	2.0	0.33	ug/l	25.0	ND	134	65-135			
Chloromethane	43.7	5.0	0.40	ug/l	25.0	ND	175	45-145			MI
Dibromochloromethane	35.3	2.0	0.28	ug/l	25.0	ND	141	65-140			MI
1,2-Dichlorobenzene	32.8	2.0	0.32	ug/l	25.0	ND	131	75-125			MI
1,3-Dichlorobenzene	33.2	2.0	0.35	ug/l	25.0	ND	133	75-125			MI
1,4-Dichlorobenzene	32.2	2.0	0.37	ug/l	25.0	ND	129	75-125			MI
1,1-Dichloroethane	33.3	2.0	0.27	ug/l	25.0	ND	133	65-130			MI
1,2-Dichloroethane	32.9	0.50	0.28	ug/l	25.0	ND	132	60-140			
1,1-Dichloroethene	31.0	5.0	0.42	ug/l	25.0	ND	124	60-130			
trans-1,2-Dichloroethene	33.8	2.0	0.27	ug/l	25.0	ND	135	65-130			MI
1,2-Dichloropropane	34.0	2.0	0.35	ug/l	25.0	ND	136	65-130			MI
cis-1,3-Dichloropropene	31.4	2.0	0.22	ug/l	25.0	ND	126	70-130			
trans-1,3-Dichloropropene	31.2	2.0	0.32	ug/l	25.0	ND	125	65-135			
Ethylbenzene	34.9	2.0	0.25	ug/l	25.0	ND	140	65-130			MI
Methylene chloride	30.2	5.0	0.95	ug/l	25.0	ND	121	50-135			
1,1,2,2-Tetrachloroethane	31.6	2.0	0.24	ug/l	25.0	ND	126	55-135			
Tetrachloroethene	30.2	2.0	0.32	ug/l	25.0	ND	121	65-130			
Toluene	34.1	2.0	0.36	ug/l	25.0	ND	136	70-125			MI
1,1,1-Trichloroethane	33.9	2.0	0.30	ug/l	25.0	ND	136	65-140			
1,1,2-Trichloroethane	32.8	2.0	0.30	ug/l	25.0	ND	131	65-130			MI
Trichloroethene	33.6	2.0	0.26	ug/l	25.0	ND	134	65-125			MI
Trichlorofluoromethane	34.6	5.0	0.34	ug/l	25.0	ND	138	60-145			
Vinyl chloride	40.4	0.50	0.30	ug/l	25.0	ND	162	45-140			MI
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	27.1			ug/l	25.0		108	80-120			

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21011 Extracted: 02/21/07</b>											
<b>Matrix Spike Dup Analyzed: 02/21/2007 (7B21011-MSD1)</b>						<b>Source: IQB2021-01</b>					
Benzene	28.9	1.0	0.28	ug/l	25.0	ND	116	65-125	13	20	
Bromodichloromethane	29.9	2.0	0.30	ug/l	25.0	ND	120	70-135	13	20	
Bromoform	25.6	5.0	0.40	ug/l	25.0	ND	102	55-135	9	25	
Bromomethane	33.5	5.0	0.42	ug/l	25.0	ND	134	55-145	13	25	
Carbon tetrachloride	29.7	0.50	0.28	ug/l	25.0	ND	119	65-140	14	25	
Chlorobenzene	29.5	2.0	0.36	ug/l	25.0	ND	118	75-125	12	20	
Chloroethane	28.8	5.0	0.40	ug/l	25.0	ND	115	55-140	12	25	
Chloroform	29.4	2.0	0.33	ug/l	25.0	ND	118	65-135	13	20	
Chloromethane	39.2	5.0	0.40	ug/l	25.0	ND	157	45-145	11	25	MI
Dibromochloromethane	31.8	2.0	0.28	ug/l	25.0	ND	127	65-140	10	25	
1,2-Dichlorobenzene	30.5	2.0	0.32	ug/l	25.0	ND	122	75-125	7	20	
1,3-Dichlorobenzene	30.1	2.0	0.35	ug/l	25.0	ND	120	75-125	10	20	
1,4-Dichlorobenzene	29.4	2.0	0.37	ug/l	25.0	ND	118	75-125	9	20	
1,1-Dichloroethane	29.5	2.0	0.27	ug/l	25.0	ND	118	65-130	12	20	
1,2-Dichloroethane	29.3	0.50	0.28	ug/l	25.0	ND	117	60-140	12	20	
1,1-Dichloroethene	28.0	5.0	0.42	ug/l	25.0	ND	112	60-130	10	20	
trans-1,2-Dichloroethene	29.8	2.0	0.27	ug/l	25.0	ND	119	65-130	13	20	
1,2-Dichloropropane	30.2	2.0	0.35	ug/l	25.0	ND	121	65-130	12	20	
cis-1,3-Dichloropropene	27.7	2.0	0.22	ug/l	25.0	ND	111	70-130	13	20	
trans-1,3-Dichloropropene	27.8	2.0	0.32	ug/l	25.0	ND	111	65-135	12	25	
Ethylbenzene	30.7	2.0	0.25	ug/l	25.0	ND	123	65-130	13	20	
Methylene chloride	26.6	5.0	0.95	ug/l	25.0	ND	106	50-135	13	20	
1,1,2,2-Tetrachloroethane	30.7	2.0	0.24	ug/l	25.0	ND	123	55-135	3	30	
Tetrachloroethene	26.6	2.0	0.32	ug/l	25.0	ND	106	65-130	13	20	
Toluene	29.8	2.0	0.36	ug/l	25.0	ND	119	70-125	13	20	
1,1,1-Trichloroethane	30.0	2.0	0.30	ug/l	25.0	ND	120	65-140	12	20	
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0	ND	118	65-130	11	25	
Trichloroethene	29.1	2.0	0.26	ug/l	25.0	ND	116	65-125	14	20	
Trichlorofluoromethane	30.4	5.0	0.34	ug/l	25.0	ND	122	60-145	13	25	
Vinyl chloride	35.3	0.50	0.30	ug/l	25.0	ND	141	45-140	13	30	MI
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	25.1			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			

TestAmerica - Irvine, CA  
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MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

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Report Number: IQB2022

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21011 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/21/2007 (7B21011-BLK1)</b>											
Acrolein	ND	50	4.6	ug/l							
Acrylonitrile	ND	50	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	22.2			ug/l	25.0		89	80-120			
Surrogate: Toluene-d8	25.0			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	24.3			ug/l	25.0		97	80-120			
<b>LCS Analyzed: 02/21/2007 (7B21011-BS1)</b>											
2-Chloroethyl vinyl ether	24.0	5.0	1.8	ug/l	25.0		96	25-170			
Surrogate: Dibromofluoromethane	25.0			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			
<b>Matrix Spike Analyzed: 02/21/2007 (7B21011-MS1) Source: IQB2021-01</b>											
2-Chloroethyl vinyl ether	27.2	5.0	1.8	ug/l	25.0	ND	109	25-170			
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	27.1			ug/l	25.0		108	80-120			
<b>Matrix Spike Dup Analyzed: 02/21/2007 (7B21011-MSD1) Source: IQB2021-01</b>											
2-Chloroethyl vinyl ether	24.8	5.0	1.8	ug/l	25.0	ND	99	25-170	9	25	
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	25.1			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	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	Limit	RPD RPD	Limit	Data Qualifiers
<b>Batch: 7B21110 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B21110-BLK1)</b>											
Acenaphthene	ND	10	2.0	ug/l							
Acenaphthylene	ND	10	2.0	ug/l							
Aniline	ND	10	2.5	ug/l							
Anthracene	ND	10	2.0	ug/l							
Benzidine	ND	20	8.5	ug/l							
Benzoic acid	ND	20	8.5	ug/l							
Benzo(a)anthracene	ND	10	2.0	ug/l							
Benzo(b)fluoranthene	ND	10	2.0	ug/l							
Benzo(k)fluoranthene	ND	10	2.0	ug/l							
Benzo(g,h,i)perylene	ND	10	3.0	ug/l							
Benzo(a)pyrene	ND	10	2.0	ug/l							
Benzyl alcohol	ND	20	2.5	ug/l							
Bis(2-chloroethoxy)methane	ND	10	2.0	ug/l							
Bis(2-chloroethyl)ether	ND	10	2.5	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	2.5	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	4.0	ug/l							
4-Bromophenyl phenyl ether	ND	10	2.5	ug/l							
Butyl benzyl phthalate	ND	20	4.0	ug/l							
4-Chloroaniline	ND	10	2.0	ug/l							
2-Chloronaphthalene	ND	10	2.0	ug/l							
4-Chloro-3-methylphenol	ND	20	2.0	ug/l							
2-Chlorophenol	ND	10	2.0	ug/l							
4-Chlorophenyl phenyl ether	ND	10	2.0	ug/l							
Chrysene	ND	10	2.0	ug/l							
Dibenz(a,h)anthracene	ND	20	3.0	ug/l							
Dibenzofuran	ND	10	2.0	ug/l							
Di-n-butyl phthalate	ND	20	2.0	ug/l							
1,3-Dichlorobenzene	ND	10	3.0	ug/l							
1,4-Dichlorobenzene	ND	10	2.5	ug/l							
1,2-Dichlorobenzene	ND	10	3.0	ug/l							
3,3-Dichlorobenzidine	ND	20	3.0	ug/l							
2,4-Dichlorophenol	ND	10	2.0	ug/l							
Diethyl phthalate	ND	10	2.0	ug/l							
2,4-Dimethylphenol	ND	20	3.5	ug/l							
Dimethyl phthalate	ND	10	2.0	ug/l							

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Project ID: Annual Outfall 003  
 Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## 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	RPD Limit	Data Qualifiers
<b>Batch: 7B21110 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B21110-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	4.0	ug/l							
2,4-Dinitrophenol	ND	20	4.5	ug/l							
2,4-Dinitrotoluene	ND	10	2.0	ug/l							
2,6-Dinitrotoluene	ND	10	2.0	ug/l							
Di-n-octyl phthalate	ND	20	2.0	ug/l							
Fluoranthene	ND	10	2.0	ug/l							
Fluorene	ND	10	2.0	ug/l							
Hexachlorobenzene	ND	10	2.5	ug/l							
Hexachlorobutadiene	ND	10	3.5	ug/l							
Hexachlorocyclopentadiene	ND	20	5.0	ug/l							
Hexachloroethane	ND	10	3.0	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	3.0	ug/l							
Isophorone	ND	10	2.0	ug/l							
2-Methylnaphthalene	ND	10	2.0	ug/l							
2-Methylphenol	ND	10	2.0	ug/l							
4-Methylphenol	ND	10	2.0	ug/l							
Naphthalene	ND	10	2.5	ug/l							
2-Nitroaniline	ND	20	2.0	ug/l							
3-Nitroaniline	ND	20	2.0	ug/l							
4-Nitroaniline	ND	20	2.5	ug/l							
Nitrobenzene	ND	20	2.5	ug/l							
2-Nitrophenol	ND	10	3.5	ug/l							
4-Nitrophenol	ND	20	5.5	ug/l							
N-Nitrosodiphenylamine	ND	10	2.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	2.5	ug/l							
Pentachlorophenol	ND	20	3.5	ug/l							
Phenanthrene	ND	10	2.0	ug/l							
Phenol	ND	10	2.0	ug/l							
Pyrene	ND	10	2.0	ug/l							
1,2,4-Trichlorobenzene	ND	10	2.5	ug/l							
2,4,5-Trichlorophenol	ND	20	3.0	ug/l							
2,4,6-Trichlorophenol	ND	20	3.0	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	2.0	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
Surrogate: 2-Fluorophenol	148			ug/l	200		74			30-120	

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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: 7B21110 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B21110-BLK1)</b>											
Surrogate: Phenol-d6	156			ug/l	200		78	35-120			
Surrogate: 2,4,6-Tribromophenol	202			ug/l	200		101	40-120			
Surrogate: Nitrobenzene-d5	83.6			ug/l	100		84	40-120			
Surrogate: 2-Fluorobiphenyl	85.9			ug/l	100		86	45-120			
Surrogate: Terphenyl-d14	97.3			ug/l	100		97	45-120			
<b>LCS Analyzed: 02/23/2007 (7B21110-BS1)</b>											
Acenaphthene	80.7	10	2.0	ug/l	100		81	55-120			MNRI
Acenaphthylene	87.1	10	2.0	ug/l	100		87	60-120			
Aniline	73.3	10	2.5	ug/l	100		73	40-120			
Anthracene	86.7	10	2.0	ug/l	100		87	60-120			
Benzidine	153	20	8.5	ug/l	100		153	25-160			
Benzoic acid	72.2	20	8.5	ug/l	100		72	25-120			
Benzo(a)anthracene	87.0	10	2.0	ug/l	100		87	60-120			
Benzo(b)fluoranthene	110	10	2.0	ug/l	100		110	55-125			
Benzo(k)fluoranthene	108	10	2.0	ug/l	100		108	50-125			
Benzo(g,h,i)perylene	119	10	3.0	ug/l	100		119	45-130			
Benzo(a)pyrene	114	10	2.0	ug/l	100		114	55-125			
Benzyl alcohol	72.7	20	2.5	ug/l	100		73	50-120			
Bis(2-chloroethoxy)methane	82.7	10	2.0	ug/l	100		83	55-120			
Bis(2-chloroethyl)ether	67.1	10	2.5	ug/l	100		67	50-120			
Bis(2-chloroisopropyl)ether	68.0	10	2.5	ug/l	100		68	45-120			
Bis(2-ethylhexyl)phthalate	83.3	50	4.0	ug/l	100		83	60-125			
4-Bromophenyl phenyl ether	83.0	10	2.5	ug/l	100		83	55-120			
Butyl benzyl phthalate	82.3	20	4.0	ug/l	100		82	50-125			
4-Chloroaniline	79.5	10	2.0	ug/l	100		80	50-120			
2-Chloronaphthalene	81.7	10	2.0	ug/l	100		82	55-120			
4-Chloro-3-methylphenol	79.8	20	2.0	ug/l	100		80	55-120			
2-Chlorophenol	67.5	10	2.0	ug/l	100		68	45-120			
4-Chlorophenyl phenyl ether	82.3	10	2.0	ug/l	100		82	60-120			
Chrysene	90.2	10	2.0	ug/l	100		90	60-120			
Dibenz(a,h)anthracene	122	20	3.0	ug/l	100		122	50-135			
Dibenzofuran	84.0	10	2.0	ug/l	100		84	60-120			
Di-n-butyl phthalate	84.1	20	2.0	ug/l	100		84	55-125			
1,3-Dichlorobenzene	50.4	10	3.0	ug/l	100		50	35-120			
1,4-Dichlorobenzene	51.4	10	2.5	ug/l	100		51	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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21110 Extracted: 02/21/07</b>											
<b>LCS Analyzed: 02/23/2007 (7B21110-BS1)</b>											
1,2-Dichlorobenzene	54.4	10	3.0	ug/l	100	54	40-120				MNR1
3,3-Dichlorobenzidine	74.5	20	3.0	ug/l	100	74	50-135				
2,4-Dichlorophenol	79.7	10	2.0	ug/l	100	80	50-120				
Diethyl phthalate	79.1	10	2.0	ug/l	100	79	50-120				
2,4-Dimethylphenol	70.9	20	3.5	ug/l	100	71	35-120				
Dimethyl phthalate	79.5	10	2.0	ug/l	100	80	25-120				
4,6-Dinitro-2-methylphenol	91.6	20	4.0	ug/l	100	92	40-120				
2,4-Dinitrophenol	102	20	4.5	ug/l	100	102	35-120				
2,4-Dinitrotoluene	83.6	10	2.0	ug/l	100	84	60-120				
2,6-Dinitrotoluene	80.2	10	2.0	ug/l	100	80	60-120				
Di-n-octyl phthalate	81.9	20	2.0	ug/l	100	82	60-130				
Fluoranthene	88.6	10	2.0	ug/l	100	89	55-120				
Fluorene	86.1	10	2.0	ug/l	100	86	60-120				
Hexachlorobenzene	84.2	10	2.5	ug/l	100	84	55-120				
Hexachlorobutadiene	60.9	10	3.5	ug/l	100	61	40-120				
Hexachlorocyclopentadiene	66.6	20	5.0	ug/l	100	67	20-120				
Hexachloroethane	47.0	10	3.0	ug/l	100	47	35-120				
Indeno(1,2,3-cd)pyrene	113	20	3.0	ug/l	100	113	45-135				
Isophorone	67.8	10	2.0	ug/l	100	68	50-120				
2-Methylnaphthalene	72.7	10	2.0	ug/l	100	73	50-120				
2-Methylphenol	69.6	10	2.0	ug/l	100	70	50-120				
4-Methylphenol	72.7	10	2.0	ug/l	100	73	45-120				
Naphthalene	68.9	10	2.5	ug/l	100	69	50-120				
2-Nitroaniline	90.3	20	2.0	ug/l	100	90	60-120				
3-Nitroaniline	85.3	20	2.0	ug/l	100	85	55-120				
4-Nitroaniline	88.8	20	2.5	ug/l	100	89	50-125				
Nitrobenzene	70.0	20	2.5	ug/l	100	70	50-120				
2-Nitrophenol	77.1	10	3.5	ug/l	100	77	45-120				
4-Nitrophenol	88.4	20	5.5	ug/l	100	88	40-120				
N-Nitrosodiphenylamine	79.2	10	2.0	ug/l	100	79	55-120				
N-Nitroso-di-n-propylamine	68.1	10	2.5	ug/l	100	68	45-120				
Pentachlorophenol	104	20	3.5	ug/l	100	104	45-125				
Phenanthrene	87.3	10	2.0	ug/l	100	87	60-120				
Phenol	69.0	10	2.0	ug/l	100	69	45-120				
Pyrene	92.1	10	2.0	ug/l	100	92	50-125				

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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	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21110 Extracted: 02/21/07</b>											
<b>LCS Analyzed: 02/23/2007 (7B21110-BS1)</b>											
1,2,4-Trichlorobenzene	63.4	10	2.5	ug/l	100	63	45-120				MNRI
2,4,5-Trichlorophenol	84.8	20	3.0	ug/l	100	85	50-120				
2,4,6-Trichlorophenol	86.2	20	3.0	ug/l	100	86	50-120				
1,2-Diphenylhydrazine/Azobenzene	76.2	20	2.0	ug/l	100	76	55-120				
N-Nitrosodimethylamine	63.3	20	2.5	ug/l	100	63	40-120				
Surrogate: 2-Fluorophenol	123			ug/l	200	62	30-120				
Surrogate: Phenol-d6	134			ug/l	200	67	35-120				
Surrogate: 2,4,6-Tribromophenol	185			ug/l	200	92	40-120				
Surrogate: Nitrobenzene-d5	72.0			ug/l	100	72	40-120				
Surrogate: 2-Fluorobiphenyl	81.3			ug/l	100	81	45-120				
Surrogate: Terphenyl-d14	89.0			ug/l	100	89	45-120				
<b>LCS Dup Analyzed: 02/23/2007 (7B21110-BSD1)</b>											
Acenaphthene	93.8	10	2.0	ug/l	100	94	55-120	15	20		
Acenaphthylene	104	10	2.0	ug/l	100	104	60-120	18	20		
Aniline	77.9	10	2.5	ug/l	100	78	40-120	6	30		
Anthracene	97.5	10	2.0	ug/l	100	98	60-120	12	20		
Benzidine	178	20	8.5	ug/l	100	178	25-160	15	35		L
Benzoic acid	75.5	20	8.5	ug/l	100	76	25-120	4	30		
Benzo(a)anthracene	95.3	10	2.0	ug/l	100	95	60-120	9	20		
Benzo(b)fluoranthene	119	10	2.0	ug/l	100	119	55-125	8	25		
Benzo(k)fluoranthene	118	10	2.0	ug/l	100	118	50-125	9	20		
Benzo(g,h,i)perylene	133	10	3.0	ug/l	100	133	45-130	11	25		L
Benzo(a)pyrene	125	10	2.0	ug/l	100	125	55-125	9	25		
Benzyl alcohol	84.3	20	2.5	ug/l	100	84	50-120	15	20		
Bis(2-chloroethoxy)methane	98.7	10	2.0	ug/l	100	99	55-120	18	20		
Bis(2-chloroethyl)ether	80.5	10	2.5	ug/l	100	80	50-120	18	20		
Bis(2-chloroisopropyl)ether	80.3	10	2.5	ug/l	100	80	45-120	17	20		
Bis(2-ethylhexyl)phthalate	89.2	50	4.0	ug/l	100	89	60-125	7	20		
4-Bromophenyl phenyl ether	95.3	10	2.5	ug/l	100	95	55-120	14	25		
Butyl benzyl phthalate	89.2	20	4.0	ug/l	100	89	50-125	8	20		
4-Chloroaniline	92.5	10	2.0	ug/l	100	92	50-120	15	25		
2-Chloronaphthalene	97.1	10	2.0	ug/l	100	97	55-120	17	20		
4-Chloro-3-methylphenol	88.8	20	2.0	ug/l	100	89	55-120	11	25		
2-Chlorophenol	80.6	10	2.0	ug/l	100	81	45-120	18	25		
4-Chlorophenyl phenyl ether	92.5	10	2.0	ug/l	100	92	60-120	12	20		

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### 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: 7B21110 Extracted: 02/21/07</b>											
<b>LCS Dup Analyzed: 02/23/2007 (7B21110-BSD1)</b>											
Chrysene	98.6	10	2.0	ug/l	100	99	60-120	9	20		
Dibenz(a,h)anthracene	134	20	3.0	ug/l	100	134	50-135	9	25		
Dibenzofuran	96.1	10	2.0	ug/l	100	96	60-120	13	20		
Di-n-butyl phthalate	87.9	20	2.0	ug/l	100	88	55-125	4	20		
1,3-Dichlorobenzene	60.3	10	3.0	ug/l	100	60	35-120	18	25		
1,4-Dichlorobenzene	62.2	10	2.5	ug/l	100	62	35-120	19	25		
1,2-Dichlorobenzene	64.9	10	3.0	ug/l	100	65	40-120	18	25		
3,3-Dichlorobenzidine	97.3	20	3.0	ug/l	100	97	50-135	27	25		R-7
2,4-Dichlorophenol	97.1	10	2.0	ug/l	100	97	50-120	20	20		
Diethyl phthalate	85.8	10	2.0	ug/l	100	86	50-120	8	30		
2,4-Dimethylphenol	78.8	20	3.5	ug/l	100	79	35-120	11	25		
Dimethyl phthalate	87.3	10	2.0	ug/l	100	87	25-120	9	30		
4,6-Dinitro-2-methylphenol	97.4	20	4.0	ug/l	100	97	40-120	6	25		
2,4-Dinitrophenol	106	20	4.5	ug/l	100	106	35-120	4	25		
2,4-Dinitrotoluene	86.5	10	2.0	ug/l	100	86	60-120	3	20		
2,6-Dinitrotoluene	87.5	10	2.0	ug/l	100	88	60-120	9	20		
Di-n-octyl phthalate	90.9	20	2.0	ug/l	100	91	60-130	10	20		
Fluoranthene	98.3	10	2.0	ug/l	100	98	55-120	10	20		
Fluorene	96.0	10	2.0	ug/l	100	96	60-120	11	20		
Hexachlorobenzene	97.3	10	2.5	ug/l	100	97	55-120	14	20		
Hexachlorobutadiene	78.5	10	3.5	ug/l	100	78	40-120	25	25		
Hexachlorocyclopentadiene	85.6	20	5.0	ug/l	100	86	20-120	25	30		
Hexachloroethane	56.8	10	3.0	ug/l	100	57	35-120	19	25		
Indeno(1,2,3-cd)pyrene	123	20	3.0	ug/l	100	123	45-135	8	25		
Isophorone	78.1	10	2.0	ug/l	100	78	50-120	14	20		
2-Methylnaphthalene	86.3	10	2.0	ug/l	100	86	50-120	17	20		
2-Methylphenol	82.6	10	2.0	ug/l	100	83	50-120	17	20		
4-Methylphenol	80.4	10	2.0	ug/l	100	80	45-120	10	20		
Naphthalene	84.6	10	2.5	ug/l	100	85	50-120	20	20		
2-Nitroaniline	103	20	2.0	ug/l	100	103	60-120	13	20		
3-Nitroaniline	93.8	20	2.0	ug/l	100	94	55-120	9	25		
4-Nitroaniline	92.2	20	2.5	ug/l	100	92	50-125	4	20		
Nitrobenzene	85.5	20	2.5	ug/l	100	86	50-120	20	25		
2-Nitrophenol	97.1	10	3.5	ug/l	100	97	45-120	23	25		
4-Nitrophenol	90.3	20	5.5	ug/l	100	90	40-120	2	30		

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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: 7B21110 Extracted: 02/21/07</b>											
<b>LCS Dup Analyzed: 02/23/2007 (7B21110-BSD1)</b>											
N-Nitrosodiphenylamine	91.8	10	2.0	ug/l	100	92	55-120	15	20		
N-Nitroso-di-n-propylamine	75.3	10	2.5	ug/l	100	75	45-120	10	20		
Pentachlorophenol	111	20	3.5	ug/l	100	111	45-125	7	25		
Phenanthrene	98.1	10	2.0	ug/l	100	98	60-120	12	20		
Phenol	79.9	10	2.0	ug/l	100	80	45-120	15	25		
Pyrene	96.9	10	2.0	ug/l	100	97	50-125	5	25		
1,2,4-Trichlorobenzene	80.8	10	2.5	ug/l	100	81	45-120	24	20		R-7
2,4,5-Trichlorophenol	98.3	20	3.0	ug/l	100	98	50-120	15	30		
2,4,6-Trichlorophenol	100	20	3.0	ug/l	100	100	50-120	15	30		
1,2-Diphenylhydrazine/Azobenzene	91.0	20	2.0	ug/l	100	91	55-120	18	25		
N-Nitrosodimethylamine	76.9	20	2.5	ug/l	100	77	40-120	19	20		
Surrogate: 2-Fluorophenol	150			ug/l	200	75	30-120				
Surrogate: Phenol-d6	153			ug/l	200	76	35-120				
Surrogate: 2,4,6-Tribromophenol	205			ug/l	200	102	40-120				
Surrogate: Nitrobenzene-d5	88.3			ug/l	100	88	40-120				
Surrogate: 2-Fluorobiphenyl	95.7			ug/l	100	96	45-120				
Surrogate: Terphenyl-d14	93.3			ug/l	100	93	45-120				

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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: 7B22132 Extracted: 02/22/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B22132-BLK1)</b>											
Aldrin	ND	0.10	0.030	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
beta-BHC	ND	0.10	0.040	ug/l							
delta-BHC	ND	0.20	0.020	ug/l							
gamma-BHC (Lindane)	ND	0.10	0.030	ug/l							
Chlordane	ND	1.0	0.20	ug/l							
4,4'-DDD	ND	0.10	0.030	ug/l							
4,4'-DDE	ND	0.10	0.030	ug/l							
4,4'-DDT	ND	0.10	0.030	ug/l							
Dieldrin	ND	0.10	0.030	ug/l							
Endosulfan I	ND	0.10	0.030	ug/l							
Endosulfan II	ND	0.10	0.040	ug/l							
Endosulfan sulfate	ND	0.20	0.050	ug/l							
Endrin	ND	0.10	0.030	ug/l							
Endrin aldehyde	ND	0.10	0.050	ug/l							
Endrin ketone	ND	0.10	0.040	ug/l							
Heptachlor	ND	0.10	0.030	ug/l							
Heptachlor epoxide	ND	0.10	0.030	ug/l							
Methoxychlor	ND	0.10	0.040	ug/l							
Toxaphene	ND	5.0	1.5	ug/l							
Surrogate: Tetrachloro-m-xylene	0.389			ug/l	0.500		78	35-115			
Surrogate: Decachlorobiphenyl	0.428			ug/l	0.500		86	45-120			
<b>LCS Analyzed: 02/23/2007 (7B22132-BS1)</b>											<b>MNRI</b>
Aldrin	0.361	0.10	0.030	ug/l	0.500		72	35-120			
alpha-BHC	0.403	0.10	0.020	ug/l	0.500		81	45-120			
beta-BHC	0.410	0.10	0.040	ug/l	0.500		82	50-120			
delta-BHC	0.408	0.20	0.020	ug/l	0.500		82	50-120			
gamma-BHC (Lindane)	0.396	0.10	0.030	ug/l	0.500		79	40-120			
4,4'-DDD	0.403	0.10	0.030	ug/l	0.500		81	55-120			
4,4'-DDE	0.384	0.10	0.030	ug/l	0.500		77	50-120			
4,4'-DDT	0.427	0.10	0.030	ug/l	0.500		85	55-120			
Dieldrin	0.376	0.10	0.030	ug/l	0.500		75	50-120			
Endosulfan I	0.402	0.10	0.030	ug/l	0.500		80	50-120			
Endosulfan II	0.422	0.10	0.040	ug/l	0.500		84	55-120			
Endosulfan sulfate	0.420	0.20	0.050	ug/l	0.500		84	60-120			

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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: 7B22132 Extracted: 02/22/07</b>											
<b>LCS Analyzed: 02/23/2007 (7B22132-BS1)</b>											
Endrin	0.392	0.10	0.030	ug/l	0.500		78	55-120			MNR1
Endrin aldehyde	0.421	0.10	0.050	ug/l	0.500		84	55-120			
Endrin ketone	0.407	0.10	0.040	ug/l	0.500		81	55-120			
Heptachlor	0.391	0.10	0.030	ug/l	0.500		78	40-115			
Heptachlor epoxide	0.406	0.10	0.030	ug/l	0.500		81	50-120			
Methoxychlor	0.415	0.10	0.040	ug/l	0.500		83	55-120			
Surrogate: Tetrachloro-m-xylene	0.372			ug/l	0.500		74	35-115			
Surrogate: Decachlorobiphenyl	0.389			ug/l	0.500		78	45-120			
<b>LCS Dup Analyzed: 02/23/2007 (7B22132-BSD1)</b>											
Aldrin	0.339	0.10	0.030	ug/l	0.500		68	35-120	6	30	
alpha-BHC	0.376	0.10	0.020	ug/l	0.500		75	45-120	7	30	
beta-BHC	0.397	0.10	0.040	ug/l	0.500		79	50-120	3	30	
delta-BHC	0.393	0.20	0.020	ug/l	0.500		79	50-120	4	30	
gamma-BHC (Lindane)	0.377	0.10	0.030	ug/l	0.500		75	40-120	5	30	
4,4'-DDD	0.413	0.10	0.030	ug/l	0.500		83	55-120	2	30	
4,4'-DDE	0.383	0.10	0.030	ug/l	0.500		77	50-120	0	30	
4,4'-DDT	0.419	0.10	0.030	ug/l	0.500		84	55-120	2	30	
Dieldrin	0.369	0.10	0.030	ug/l	0.500		74	50-120	2	30	
Endosulfan I	0.391	0.10	0.030	ug/l	0.500		78	50-120	3	30	
Endosulfan II	0.409	0.10	0.040	ug/l	0.500		82	55-120	3	30	
Endosulfan sulfate	0.411	0.20	0.050	ug/l	0.500		82	60-120	2	30	
Endrin	0.377	0.10	0.030	ug/l	0.500		75	55-120	4	30	
Endrin aldehyde	0.410	0.10	0.050	ug/l	0.500		82	55-120	3	30	
Endrin ketone	0.403	0.10	0.040	ug/l	0.500		81	55-120	1	30	
Heptachlor	0.365	0.10	0.030	ug/l	0.500		73	40-115	7	30	
Heptachlor epoxide	0.384	0.10	0.030	ug/l	0.500		77	50-120	6	30	
Methoxychlor	0.406	0.10	0.040	ug/l	0.500		81	55-120	2	30	
Surrogate: Tetrachloro-m-xylene	0.345			ug/l	0.500		69	35-115			
Surrogate: Decachlorobiphenyl	0.392			ug/l	0.500		78	45-120			

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## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B22132 Extracted: 02/22/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B22132-BLK1)</b>											
Aroclor 1016	ND	1.0	0.35	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.30	ug/l							
Surrogate: Decachlorobiphenyl	0.531			ug/l	0.500		106	45-120			
<b>LCS Analyzed: 02/23/2007 (7B22132-BS2)</b>											
Aroclor 1016	3.53	1.0	0.35	ug/l	4.00		88	45-115			MNRI
Aroclor 1260	3.73	1.0	0.30	ug/l	4.00		93	55-115			
Surrogate: Decachlorobiphenyl	0.494			ug/l	0.500		99	45-120			
<b>LCS Dup Analyzed: 02/23/2007 (7B22132-BSD2)</b>											
Aroclor 1016	3.11	1.0	0.35	ug/l	4.00		78	45-115	13	30	
Aroclor 1260	3.49	1.0	0.30	ug/l	4.00		87	55-115	7	25	
Surrogate: Decachlorobiphenyl	0.485			ug/l	0.500		97	45-120			

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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21063 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/21/2007 (7B21063-BLK1)</b>											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	0.0216	0.050	0.020	mg/l							J
Calcium	0.0543	0.10	0.050	mg/l							J
Chromium	ND	5.0	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.0080	mg/l							
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Silver	ND	10	3.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	15	ug/l							
<b>LCS Analyzed: 02/21/2007 (7B21063-BS1)</b>											
Aluminum	510	50	40	ug/l	500		102	85-115			
Arsenic	506	10	7.0	ug/l	500		101	85-115			
Beryllium	518	2.0	0.90	ug/l	500		104	85-115			
Boron	0.535	0.050	0.020	mg/l	0.500		107	85-115			
Calcium	2.64	0.10	0.050	mg/l	2.50		106	85-115			
Chromium	511	5.0	2.0	ug/l	500		102	85-115			
Iron	0.524	0.040	0.015	mg/l	0.500		105	85-115			
Magnesium	2.60	0.020	0.0080	mg/l	2.50		104	85-115			
Nickel	530	10	2.0	ug/l	500		106	85-115			
Selenium	511	10	8.0	ug/l	500		102	85-115			
Silver	262	10	3.0	ug/l	250		105	85-115			
Vanadium	519	10	3.0	ug/l	500		104	85-115			
Zinc	502	20	15	ug/l	500		100	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: 7B21063 Extracted: 02/21/07</b>											
<b>Matrix Spike Analyzed: 02/21/2007 (7B21063-MS1)</b>						<b>Source: IQB2022-01</b>					
Aluminum	1110	50	40	ug/l	500	550	112	70-130			
Arsenic	543	10	7.0	ug/l	500	ND	109	70-130			
Beryllium	524	2.0	0.90	ug/l	500	ND	105	70-130			
Boron	0.593	0.050	0.020	mg/l	0.500	0.065	106	70-130			
Calcium	5.66	0.10	0.050	mg/l	2.50	3.2	98	70-130			
Chromium	524	5.0	2.0	ug/l	500	7.7	103	70-130			
Iron	1.12	0.040	0.015	mg/l	0.500	0.62	100	70-130			
Magnesium	3.07	0.020	0.0080	mg/l	2.50	0.44	105	70-130			
Nickel	535	10	2.0	ug/l	500	ND	107	70-130			
Selenium	526	10	8.0	ug/l	500	ND	105	70-130			
Silver	271	10	3.0	ug/l	250	ND	108	70-130			
Vanadium	574	10	3.0	ug/l	500	44	106	70-130			
Zinc	533	20	15	ug/l	500	ND	107	70-130			
<b>Matrix Spike Dup Analyzed: 02/21/2007 (7B21063-MSD1)</b>						<b>Source: IQB2022-01</b>					
Aluminum	1120	50	40	ug/l	500	550	114	70-130	1	20	
Arsenic	525	10	7.0	ug/l	500	ND	105	70-130	3	20	
Beryllium	525	2.0	0.90	ug/l	500	ND	105	70-130	0	20	
Boron	0.588	0.050	0.020	mg/l	0.500	0.065	105	70-130	1	20	
Calcium	5.65	0.10	0.050	mg/l	2.50	3.2	98	70-130	0	20	
Chromium	515	5.0	2.0	ug/l	500	7.7	101	70-130	2	20	
Iron	1.10	0.040	0.015	mg/l	0.500	0.62	96	70-130	2	20	
Magnesium	2.98	0.020	0.0080	mg/l	2.50	0.44	102	70-130	3	20	
Nickel	525	10	2.0	ug/l	500	ND	105	70-130	2	20	
Selenium	526	10	8.0	ug/l	500	ND	105	70-130	0	20	
Silver	263	10	3.0	ug/l	250	ND	105	70-130	3	20	
Vanadium	567	10	3.0	ug/l	500	44	105	70-130	1	20	
Zinc	517	20	15	ug/l	500	ND	103	70-130	3	20	

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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21137 Extracted: 02/21/07</b>											
<b>Blank Analyzed: 02/21/2007 (7B21137-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	0.135	1.0	0.025	ug/l							J
Copper	0.337	2.0	0.25	ug/l							J
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 02/21/2007 (7B21137-BS1)</b>											
Antimony	78.5	2.0	0.050	ug/l	80.0		98	85-115			
Cadmium	79.6	1.0	0.025	ug/l	80.0		100	85-115			
Copper	79.6	2.0	0.25	ug/l	80.0		100	85-115			
Lead	75.3	1.0	0.040	ug/l	80.0		94	85-115			
Thallium	76.0	1.0	0.15	ug/l	80.0		95	85-115			
<b>Matrix Spike Analyzed: 02/21/2007 (7B21137-MS1) Source: IQB2021-01</b>											
Antimony	80.9	2.0	0.050	ug/l	80.0	0.49	101	70-130			
Cadmium	79.8	1.0	0.025	ug/l	80.0	0.056	100	70-130			
Copper	81.8	2.0	0.25	ug/l	80.0	3.7	98	70-130			
Lead	76.5	1.0	0.040	ug/l	80.0	1.7	94	70-130			
Thallium	77.2	1.0	0.15	ug/l	80.0	ND	96	70-130			
<b>Matrix Spike Analyzed: 02/21/2007 (7B21137-MS2) Source: IQB2054-04</b>											
Antimony	82.8	2.0	0.050	ug/l	80.0	0.15	103	70-130			
Cadmium	77.1	1.0	0.025	ug/l	80.0	ND	96	70-130			
Copper	75.0	2.0	0.25	ug/l	80.0	2.8	90	70-130			
Lead	72.2	1.0	0.040	ug/l	80.0	0.13	90	70-130			
Thallium	72.9	1.0	0.15	ug/l	80.0	ND	91	70-130			
<b>Matrix Spike Dup Analyzed: 02/21/2007 (7B21137-MSD1) Source: IQB2021-01</b>											
Antimony	79.9	2.0	0.050	ug/l	80.0	0.49	99	70-130	1	20	
Cadmium	78.8	1.0	0.025	ug/l	80.0	0.056	98	70-130	1	20	
Copper	81.5	2.0	0.25	ug/l	80.0	3.7	97	70-130	0	20	
Lead	76.5	1.0	0.040	ug/l	80.0	1.7	94	70-130	0	20	
Thallium	76.6	1.0	0.15	ug/l	80.0	ND	96	70-130	1	20	

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 Michele Chamberlin  
 Project Manager

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003  
 Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## 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: 7B22143 Extracted: 02/22/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B22143-BLK1)</b>											
Aluminum	ND	0.050	0.040	mg/l							
Arsenic	ND	0.010	0.0070	mg/l							
Beryllium	ND	0.0020	0.00090	mg/l							
Boron	0.0243	0.050	0.020	mg/l							J
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	0.0050	0.0020	mg/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.0080	mg/l							
Nickel	ND	0.010	0.0020	mg/l							
Selenium	ND	0.010	0.0080	mg/l							
Silver	ND	0.010	0.0060	mg/l							
Hardness (as CaCO3)	ND	1.0	1.0	mg/l							
Vanadium	ND	0.010	0.0030	mg/l							
Zinc	ND	0.020	0.0040	mg/l							
<b>LCS Analyzed: 02/23/2007 (7B22143-BS1)</b>											
Aluminum	0.446	0.050	0.040	mg/l	0.500		89	85-115			
Arsenic	0.508	0.010	0.0070	mg/l	0.500		102	85-115			
Beryllium	0.511	0.0020	0.00090	mg/l	0.500		102	85-115			
Boron	0.500	0.050	0.020	mg/l	0.500		100	85-115			
Calcium	2.48	0.10	0.050	mg/l	2.50		99	85-115			
Chromium	0.500	0.0050	0.0020	mg/l	0.500		100	85-115			
Iron	0.507	0.040	0.015	mg/l	0.500		101	85-115			
Magnesium	2.50	0.020	0.0080	mg/l	2.50		100	85-115			
Nickel	0.503	0.010	0.0020	mg/l	0.500		101	85-115			
Selenium	0.494	0.010	0.0080	mg/l	0.500		99	85-115			
Silver	0.252	0.010	0.0060	mg/l	0.250		101	85-115			
Vanadium	0.506	0.010	0.0030	mg/l	0.500		101	85-115			
Zinc	0.485	0.020	0.0040	mg/l	0.500		97	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: 7B22143 Extracted: 02/22/07</b>											
<b>Matrix Spike Analyzed: 02/23/2007 (7B22143-MS1)</b>						<b>Source: IQB2022-01</b>					
Aluminum	0.483	0.050	0.040	mg/l	0.500	ND	97	70-130			
Arsenic	0.479	0.010	0.0070	mg/l	0.500	ND	96	70-130			
Beryllium	0.482	0.0020	0.00090	mg/l	0.500	ND	96	70-130			
Boron	0.535	0.050	0.020	mg/l	0.500	0.062	95	70-130			
Calcium	4.45	0.10	0.050	mg/l	2.50	2.1	94	70-130			
Chromium	0.470	0.0050	0.0020	mg/l	0.500	0.0046	93	70-130			
Iron	0.498	0.040	0.015	mg/l	0.500	0.027	94	70-130			
Magnesium	2.60	0.020	0.0080	mg/l	2.50	0.26	94	70-130			
Nickel	0.471	0.010	0.0020	mg/l	0.500	ND	94	70-130			
Selenium	0.462	0.010	0.0080	mg/l	0.500	ND	92	70-130			
Silver	0.247	0.010	0.0060	mg/l	0.250	ND	99	70-130			
Vanadium	0.509	0.010	0.0030	mg/l	0.500	0.037	94	70-130			
Zinc	0.473	0.020	0.0040	mg/l	0.500	0.0043	94	70-130			
<b>Matrix Spike Dup Analyzed: 02/23/2007 (7B22143-MSD1)</b>						<b>Source: IQB2022-01</b>					
Aluminum	0.480	0.050	0.040	mg/l	0.500	ND	96	70-130	1	20	
Arsenic	0.486	0.010	0.0070	mg/l	0.500	ND	97	70-130	1	20	
Beryllium	0.490	0.0020	0.00090	mg/l	0.500	ND	98	70-130	2	20	
Boron	0.530	0.050	0.020	mg/l	0.500	0.062	94	70-130	1	20	
Calcium	4.49	0.10	0.050	mg/l	2.50	2.1	96	70-130	1	20	
Chromium	0.475	0.0050	0.0020	mg/l	0.500	0.0046	94	70-130	1	20	
Iron	0.505	0.040	0.015	mg/l	0.500	0.027	96	70-130	1	20	
Magnesium	2.62	0.020	0.0080	mg/l	2.50	0.26	94	70-130	1	20	
Nickel	0.474	0.010	0.0020	mg/l	0.500	ND	95	70-130	1	20	
Selenium	0.470	0.010	0.0080	mg/l	0.500	ND	94	70-130	2	20	
Silver	0.247	0.010	0.0060	mg/l	0.250	ND	99	70-130	0	20	
Vanadium	0.513	0.010	0.0030	mg/l	0.500	0.037	95	70-130	1	20	
Zinc	0.474	0.020	0.0040	mg/l	0.500	0.0043	94	70-130	0	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: 7B23073 Extracted: 02/23/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B23073-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.050	ug/l							
Copper	ND	2.0	0.40	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
<b>LCS Analyzed: 02/23/2007 (7B23073-BS1)</b>											
Antimony	84.3	2.0	0.050	ug/l	80.0		105	85-115			
Cadmium	81.9	1.0	0.050	ug/l	80.0		102	85-115			
Copper	80.6	2.0	0.40	ug/l	80.0		101	85-115			
Lead	81.0	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	82.2	1.0	0.15	ug/l	80.0		103	85-115			
<b>Matrix Spike Analyzed: 02/23/2007 (7B23073-MS1) Source: IQB2024-01</b>											
Antimony	94.4	2.0	0.050	ug/l	80.0	1.7	116	70-130			
Cadmium	85.0	1.0	0.050	ug/l	80.0	ND	106	70-130			
Copper	82.7	2.0	0.40	ug/l	80.0	0.80	102	70-130			
Lead	73.9	1.0	0.10	ug/l	80.0	ND	92	70-130			
Thallium	77.9	1.0	0.15	ug/l	80.0	ND	97	70-130			
<b>Matrix Spike Dup Analyzed: 02/23/2007 (7B23073-MSD1) Source: IQB2024-01</b>											
Antimony	94.9	2.0	0.050	ug/l	80.0	1.7	116	70-130	1	20	
Cadmium	85.0	1.0	0.050	ug/l	80.0	ND	106	70-130	0	20	
Copper	83.2	2.0	0.40	ug/l	80.0	0.80	103	70-130	1	20	
Lead	75.0	1.0	0.10	ug/l	80.0	ND	94	70-130	1	20	
Thallium	79.0	1.0	0.15	ug/l	80.0	ND	99	70-130	1	20	

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Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B20044 Extracted: 02/20/07</b>											
<b>Blank Analyzed: 02/20/2007 (7B20044-BLK1)</b>											
Chloride	ND	0.50	0.15	mg/l							
Fluoride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
<b>LCS Analyzed: 02/20/2007 (7B20044-BS1)</b>											
Chloride	4.96	0.50	0.15	mg/l	5.00		99	90-110			
Fluoride	4.90	0.50	0.15	mg/l	5.00		98	90-110			
Sulfate	10.2	0.50	0.45	mg/l	10.0		102	90-110			
<b>Matrix Spike Analyzed: 02/20/2007 (7B20044-MS1) Source: IQB2022-01</b>											
Chloride	5.66	0.50	0.15	mg/l	5.00	0.73	99	80-120			
Fluoride	5.12	0.50	0.15	mg/l	5.00	0.27	97	80-120			
Sulfate	17.2	0.50	0.45	mg/l	10.0	7.2	100	80-120			
<b>Matrix Spike Dup Analyzed: 02/20/2007 (7B20044-MSD1) Source: IQB2022-01</b>											
Chloride	5.58	0.50	0.15	mg/l	5.00	0.73	97	80-120	1	20	
Fluoride	5.15	0.50	0.15	mg/l	5.00	0.27	98	80-120	1	20	
Sulfate	17.0	0.50	0.45	mg/l	10.0	7.2	98	80-120	1	20	

**Batch: 7B21063 Extracted: 02/21/07**

**Blank Analyzed: 02/21/2007 (7B21063-BLK1)**

Hardness (as CaCO3) ND 1.0 1.0 mg/l

**Batch: 7B21150 Extracted: 02/21/07**

**Blank Analyzed: 02/22/2007 (7B21150-BLK1)**

Total Suspended Solids ND 10 10 mg/l

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Sampled: 02/19/07

Received: 02/19/07

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 7B21150 Extracted: 02/21/07</b>											
<b>LCS Analyzed: 02/22/2007 (7B21150-BS1)</b>											
Total Suspended Solids	955	10	10	mg/l	1000		96	85-115			
<b>Duplicate Analyzed: 02/22/2007 (7B21150-DUP1)</b>											
Total Suspended Solids	29.0	10	10	mg/l		Source: IQB2024-01	28		4	10	
<b>Batch: 7B23078 Extracted: 02/23/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B23078-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/23/2007 (7B23078-BS1)</b>											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 02/23/2007 (7B23078-DUP1)</b>											
Total Dissolved Solids	307	10	10	mg/l		Source: IQB2134-01	300		2	10	
<b>Batch: 7B23104 Extracted: 02/23/07</b>											
<b>Blank Analyzed: 02/23/2007 (7B23104-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							
<b>LCS Analyzed: 02/23/2007 (7B23104-BS1)</b>											
Total Cyanide	198	5.0	2.2	ug/l	200		99	90-110			
<b>Matrix Spike Analyzed: 02/23/2007 (7B23104-MS1)</b>											
Total Cyanide	442	10	4.4	ug/l	200	Source: IQB2444-01	220	111	70-115		

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Sampled: 02/19/07  
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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: 7B23104 Extracted: 02/23/07</b>											
<b>Matrix Spike Dup Analyzed: 02/23/2007 (7B23104-MSD1)</b>						<b>Source: IQB2444-01</b>					
Total Cyanide	431	10	4.4	ug/l	200	220	106	70-115	3	15	
<b>Batch: 7B27143 Extracted: 02/27/07</b>											
<b>Blank Analyzed: 02/28/2007 (7B27143-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 02/28/2007 (7B27143-BS1)</b>											
Perchlorate	45.6	4.0	0.80	ug/l	50.0		91	85-115			
<b>Matrix Spike Analyzed: 02/28/2007 (7B27143-MS1)</b>						<b>Source: IQB2091-01</b>					
Perchlorate	47.8	4.0	0.80	ug/l	50.0	ND	96	80-120			
<b>Matrix Spike Dup Analyzed: 02/28/2007 (7B27143-MSD1)</b>						<b>Source: IQB2091-01</b>					
Perchlorate	45.8	4.0	0.80	ug/l	50.0	ND	92	80-120	4	20	
<b>Batch: 7B28085 Extracted: 02/28/07</b>											
<b>Blank Analyzed: 02/28/2007 (7B28085-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 02/28/2007 (7B28085-BS1)</b>											
Oil & Grease	18.8	5.0	0.94	mg/l	20.0		94	65-120			MNRI
<b>LCS Dup Analyzed: 02/28/2007 (7B28085-BSD1)</b>											
Oil & Grease	19.3	5.0	0.94	mg/l	20.0		96	65-120	3	20	

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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
IQB2022-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.66	4.7	15
IQB2022-01	Antimony-200.8	Antimony	ug/l	0.73	2.0	6.00
IQB2022-01	Antimony-200.8, Diss	Antimony	ug/l	0.69	2.0	6.00
IQB2022-01	Boron-200.7	Boron	mg/l	0.065	0.050	1.00
IQB2022-01	Boron-200.7, Diss	Boron	mg/l	0.062	0.050	1.00
IQB2022-01	Cadmium-200.8	Cadmium	ug/l	0.057	1.0	4.00
IQB2022-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.014	1.0	4.00
IQB2022-01	Chloride - 300.0	Chloride	mg/l	0.73	0.50	150
IQB2022-01	Copper-200.8	Copper	ug/l	2.60	2.0	14
IQB2022-01	Copper-200.8, Diss	Copper	ug/l	1.10	2.0	14
IQB2022-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.26	0.15	10.00
IQB2022-01	Perchlorate 314.0-DEFAULT	Perchlorate	ug/l	0	4.0	6.00
IQB2022-01	Sulfate-300.0	Sulfate	mg/l	7.20	0.50	250
IQB2022-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	120	10	850
IQB2022-01	Thallium-200.8	Thallium	ug/l	0.100	1.0	2.00
IQB2022-01	Thallium-200.8, Diss	Thallium	ug/l	0.028	1.0	2.00

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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## DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- C-7** Calibration Verification recovery was below the method control limit due to matrix interference carried over from analytical samples. The matrix interference was confirmed by reanalysis with the same result.
- 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.
- L** Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-7** LFB/LFBD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

## ADDITIONAL COMMENTS

**For 1,2-Diphenylhydrazine:**

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.

**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

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**IQB2022 <Page 41 of 43>**

**NPDES - 306**

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Report Number: IQB2022

Sampled: 02/19/07  
 Received: 02/19/07

## Certification Summary

### TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	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 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM2340B	Water	X	X
SM2540C	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

#### Alta Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
 Samples: IQB2022-01

#### Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr  
 Samples: IQB2022-01

#### Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gross Alpha  
 Samples: IQB2022-01

Analysis Performed: Gross Beta  
 Samples: IQB2022-01

### TestAmerica - Irvine, CA

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## Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Analysis Performed: Mercury - 245.1

Samples: IQB2022-01

Analysis Performed: Mercury - 245.1, Diss

Samples: IQB2022-01

**TestAmerica - Irvine, CA**

Michele Chamberlin

Project Manager

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**IQB2022 <Page 43 of 43>**

**NPDES - 308**





March 01, 2007

**Alta Project I.D.: 28722**

Ms. Michele Chamberlin  
Test America-Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on February 21, 2007 under your Project Name "IQB2022". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of ALTA.*



**Alta Analytical Laboratory, Inc.**

1104 Windfield Way  
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(916) 933-1640  
FAX (916) 673-0106

**Section I: Sample Inventory Report**

**Date Received: 2/21/2007**

Alta Lab. ID

Client Sample ID

28722-001

IQB2022-01

## SECTION II

**EPA Method 1613**

<b>Method Blank</b>					
Matrix:	Aqueous	QC Batch No.:	8883	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	23-Feb-07	Date Analyzed DB-5:	26-Feb-07
				Date Analyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000105		91.5	25 - 164
1,2,3,7,8-PeCDD	ND	0.000000997		92.8	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000193		88.5	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000213		87.1	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000197		94.2	23 - 140
1,2,3,4,6,7,8-HpCDD	0.00000272		J	73.0	17 - 157
OCDD	0.0000173		J	88.4	24 - 169
2,3,7,8-TCDF	ND	0.000000896		105	24 - 185
1,2,3,7,8-PeCDF	ND	0.000000819		97.6	21 - 178
2,3,4,7,8-PeCDF	ND	0.00000133		93.2	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000566		87.4	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000620		86.2	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000687		100	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000895		92.1	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.00000194		99.5	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000198		79.9	17 - 157
OCDF	ND	0.00000732		93.0	35 - 197
<b>Totals</b>					
Total TCDD	ND	0.00000105			
Total PeCDD	ND	0.00000228			
Total HxCDD	ND	0.00000201			
Total HpCDD	0.00000272		0.00000545		
Total TCDF	ND	0.000000896			
Total PeCDF	ND	0.00000129			
Total HxCDF	ND	0.000000685			
Total HpCDF	ND	0.00000342			
<b>Footnotes</b>					
a. Sample specific estimated detection limit.					
b. Estimated maximum possible concentration.					
c. Method detection limit.					
d. Lower control limit - upper control limit.					

Analyst:

Approved By:

William J. Luksemburg 01-Mar-2007 13:17

OPR Results		EPA Method 1613					
Matrix	Aqueous	QC Batch No.	8885	Lab Sample	0-OPR001		
Sample Size	1.00 L	Date Extracted	23-Feb-07	Date Analyzed DB-5	26-Feb-07		
				Date Analyzed DB-225	NA		
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	10.1	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	76.9	25 - 164	
1,2,3,7,8-PeCDD	50.0	53.4	35 - 71	13C-1,2,3,7,8-PeCDD	73.9	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	53.0	35 - 82	13C-1,2,3,4,7,8-HxCDD	81.7	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	54.4	38 - 67	13C-1,2,3,6,7,8-HxCDD	78.5	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	53.2	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	85.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	54.6	35 - 70	13C-OCDD	72.3	17 - 157	
OCDD	100	108	78 - 144	13C-2,3,7,8-TCDF	75.0	24 - 169	
2,3,7,8-TCDF	10.0	10.4	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	84.8	24 - 185	
1,2,3,7,8-PeCDF	50.0	53.7	40 - 67	13C-2,3,4,7,8-PeCDF	79.5	21 - 178	
2,3,4,7,8-PeCDF	50.0	55.9	34 - 80	13C-1,2,3,4,7,8-HxCDF	91.7	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	53.3	36 - 67	13C-1,2,3,6,7,8-HxCDF	83.3	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	54.6	42 - 65	13C-2,3,4,6,7,8-HxCDF	80.0	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	54.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	96.0	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	57.1	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	89.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	53.0	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	90.3	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	55.6	39 - 69	13C-OCDF	83.0	17 - 157	
OCDF	100	106	63 - 170	CRS 37Cl-2,3,7,8-TCDD	78.5	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 01-Mar-2007 13:17

Sample ID: IQB2022-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine	Matrix:	Aqueous	Lab Sample:	28722-001		
Project:	IQB2022	Sample Size:	1.03 L	QC Batch No.:	8883		
Date Collected:	19-Feb-07			Date Analyzed DB-5:	26-Feb-07		
Time Collected:	1200			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000150		IS 13C-2,3,7,8-TCDD	72.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000197		13C-1,2,3,7,8-PeCDD	69.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000288		13C-1,2,3,4,7,8-HxCDD	62.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000291		13C-1,2,3,6,7,8-HxCDD	62.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000280		13C-1,2,3,4,6,7,8-HpCDD	66.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000836		J,B	13C-OCDD	53.3	17 - 157	
OCDD	0.0000824		B	13C-2,3,7,8-TCDF	69.2	24 - 169	
2,3,7,8-TCDF	ND	0.00000102		13C-1,2,3,7,8-PeCDF	73.6	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000181		13C-2,3,4,7,8-PeCDF	72.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000180		13C-1,2,3,4,7,8-HxCDF	63.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000129		13C-1,2,3,6,7,8-HxCDF	59.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000131		13C-2,3,4,6,7,8-HxCDF	62.6	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000152		13C-1,2,3,7,8,9-HxCDF	67.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000111		13C-1,2,3,4,6,7,8-HpCDF	65.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000280		13C-1,2,3,4,7,8,9-HpCDF	69.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000163		13C-OCDF	58.7	17 - 157	
OCDF	ND	0.00000731		CRS 37CI-2,3,7,8-TCDD	86.4	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000150					
Total PeCDD	ND	0.00000197					
Total HxCDD	ND	0.00000497					
Total HpCDD	0.0000252		B				
Total TCDF	ND	0.00000102					
Total PeCDF	ND	0.00000181					
Total HxCDF	ND	0.00000522					
Total HpCDF	ND	0.00000436					

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyt: MAS

Approved By:

William J. Luksemburg

01-Mar-2007 13:17

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

# TestAmerica

ANALYTICAL TESTING CORPORATION

28722  
2.4°C

## SUBCONTRACT ORDER - PROJECT # IQB2022

SENDING LABORATORY:	RECEIVING LABORATORY:
TestAmerica - Irvine, CA 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 260-3297 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106  Project Location: California

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

Analysis	Expiration	Comments
Sample ID: IQB2022-01 Water	Sampled: 02/19/07 12:00	
1613-Dioxin-HR-Alta	02/26/07 12:00	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level: 4 + EDD-OUT	03/19/07 12:00	Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied: 1 L Amber (IQB2022-01E)		

SAMPLE INTEGRITY:			
All containers intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Custody Seals Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Preserved Property: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received at (temp): <u>2.4°C</u>	

Released By: Elaine Date: 2/20/07 Time: \_\_\_\_\_ Received By: Bettina A. Benedict Date: 2/21/07 Time: 0859

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 28722 TAT Standard

Samples Arrival:	Date/Time 2/21/07 0849	Initials: UBB	Location: WR-2
			Shelf/Rack: N/A
Logged In:	Date/Time 2/21/07 1307	Initials: UBB	Location: WR-2
			Shelf/Rack: B-5
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal
		<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
		<input type="checkbox"/> None	
Temp °C	2.4°C	Time:	0858
		Thermometer ID:	IR-1

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 7929 3681 2799	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?				✓
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	COC	Sample Container	None	
Shipping Container	Alta	Client	Retain	Return
				Dispose

Comments:

# LABORATORY REPORT



*"dedicated to providing quality aquatic toxicity testing"*

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

**Date:** February 25, 2007  
**Client:** Test America – Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Michele Chamberlin

**Laboratory No.:** A-07022004-001  
**Sample ID.:** IQB2022-01

**Sample Control:** The sample was received by ATL in a chilled state, within the recommended hold time and with the chain of custody record attached.

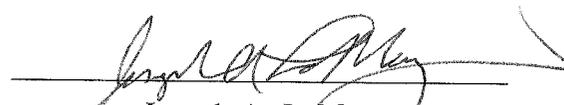
Date Sampled: 02/19/07  
Date Received: 02/20/07  
Temp. Received: 2°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 02/20/07 to 02/24/07

**Sample Analysis:** The following analyses were performed on your sample:  
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IQB2022-01	100% Survival (TUa = 0.0)

**Quality Control:** Reviewed and approved by:

  
Joseph A. LeMay  
Laboratory Director

**FATHEAD MINNOW PERCENT SURVIVAL TEST**  
**EPA Method 2000.0**



Lab No.: A-07022004-001  
 Client/ID: TestAmerica IQB2022-01

Start Date: 02/20/2007

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 13 (1-14) days.  
 Regulations: NPDES.  
 Test solution volume: 250 ml.  
 Feeding: prior to renewal at 48 hrs.  
 Number of replicates: 2.  
 Dilution water: Moderately hard reconstituted water.  
 Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: Percent Survival at 96 hrs.  
 Test chamber: 600 ml beakers.  
 Temperature: 20 +/- 1°C.  
 Number of fish per chamber: 10.  
 QA/QC Batch No.: RT-070206.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.9	8.8	7.8	0	0	R 1400
	100%	19.6	10.2	9.3	0	0	
24 Hr	Control	19.6	7.7	7.1	0	0	R 1200
	100%	19.7	7.9	8.1	0	0	
48 Hr	Control	19.7	7.0	7.3	0	0	R 1400
	100%	19.8	7.5	7.5	0	0	
Renewal	Control	20.5	8.8	7.8	0	0	R 1400
	100%	20.2	10.6	9.3	0	0	
72 Hr	Control	19.2	8.3	7.4	0	0	R 1200
	100%	19.2	8.1	7.7	0	0	
96 Hr	Control	19.2	8.1	7.4	0	0	R 1300
	100%	19.2	7.9	7.6	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 9.3; Conductivity: 200 umho; Temp: 2°C;  
 DO: 10.2 mg/l; Alkalinity: 86 mg/l; Hardness: 10 mg/l; NH<sub>3</sub>-N: 0.4 mg/l.  
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No.  
 Control: Alkalinity: 60 mg/l; Hardness: 91 mg/l; Conductivity: 325 umho.  
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No.  
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.  
 Dissolved Oxygen (DO) readings in mg/l O<sub>2</sub>.

**RESULTS**

Percent Survival In: Control: <u>100</u> %    100% Sample: <u>100</u> %
-------------------------------------------------------------------------

## SUBCONTRACT ORDER - PROJECT # IQB2022

### SENDING LABORATORY:

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

### RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB  
4350 Transport Street, Unit 107  
Ventura, CA 93003  
Phone : (805) 650-0546  
Fax: (805) 650-0756  
  
Project Location: California

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

Analysis	Expiration	Comments
Sample ID: IQB2022-01 Water Bioassay-Acute 96hr	Sampled: 02/19/07 12:00 02/21/07 00:00	FH minnow, EPA/821-R02-012, Sub to AqTox Labs
<b>Containers Supplied:</b> 1 gal Poly (IQB2022-01A)		

### SAMPLE INTEGRITY:

All containers intact:  Yes  No  
Custody Seals Present:  Yes  No  
Sample labels/COC agree:  Yes  No  
Samples Preserved Properly:  Yes  No  
Samples Received On Ice:  Yes  No  
Samples Received at (temp): 2°C

Released By: [Signature] Date: 02/20/07 Time: 0730  
Received By: [Signature] Date: 02/20/07 Time: 0730  
Released By: [Signature] Date: 02/20/07 Time: 1248  
Received By: [Signature] Date: 2-20-07 Time: 12:48

**FATHEAD MINNOW ACUTE  
Method 2000.0  
Reference Toxicant - SDS**



QA/QC Batch No.: RT-070206

**TEST SUMMARY**

Species: *Pimephales promelas*.

Age: 11 days old.

Regulations: NPDES.

Test chamber volume: 250 ml.

Feeding: Prior to renewal at 48 hrs.

Temperature: 20 +/- 1°C.

Number of replicates: 2.

Dilution water: MHSF.

Source: In-lab culture.

Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012.

Endpoints: LC50 at 96 hrs.

Test chamber: 600 ml glass beakers.

Aeration: None.

Number of organisms per chamber: 10.

Photoperiod: 16/8 hrs light/dark.

**TEST DATA**

Date/Time:	INITIAL			24 Hr					48 Hr				
	<u>2-6-07 1400</u>			<u>2-7-07 1200</u>					<u>2-8-07 1300</u>				
	<u>Ru</u>			<u>Ru</u>					<u>Ru</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>20.6</u>	<u>8.8</u>	<u>8.1</u>	<u>20.0</u>	<u>7.9</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>20.1</u>	<u>6.8</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>20.6</u>	<u>8.8</u>	<u>8.1</u>	<u>20.0</u>	<u>7.9</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>20.6</u>	<u>8.9</u>	<u>8.1</u>	<u>19.9</u>	<u>7.8</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.1</u>	<u>7.3</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>20.6</u>	<u>8.9</u>	<u>8.0</u>	<u>19.9</u>	<u>6.8</u>	<u>7.2</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.0</u>	<u>7.3</u>	<u>1</u>	<u>1</u>
8.0 mg/l	<u>20.6</u>	<u>8.9</u>	<u>8.0</u>	<u>20.0</u>	<u>5.7</u>	<u>7.1</u>	<u>10</u>	<u>10</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

Date/Time:	RENEWAL			72 Hr					96 Hr				
	<u>2-8-07 1300</u>			<u>2-9-07 1200</u>					<u>2-10-07 1300</u>				
	<u>Ru</u>			<u>Ru</u>					<u>Ru</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>20.5</u>	<u>9.0</u>	<u>7.8</u>	<u>20.1</u>	<u>7.0</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.4</u>	<u>5.7</u>	<u>7.3</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>20.5</u>	<u>9.0</u>	<u>7.8</u>	<u>20.1</u>	<u>6.9</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.4</u>	<u>6.6</u>	<u>7.3</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>20.5</u>	<u>9.1</u>	<u>7.8</u>	<u>20.0</u>	<u>7.1</u>	<u>7.3</u>	<u>0</u>	<u>0</u>	<u>20.4</u>	<u>6.7</u>	<u>7.2</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>20.5</u>	<u>9.1</u>	<u>7.8</u>	<u>20.1</u>	<u>6.7</u>	<u>7.3</u>	<u>0</u>	<u>0</u>	<u>20.4</u>	<u>6.3</u>	<u>7.2</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

Comments:

Control: Alkalinity: 61 mg/l; Hardness: 91 mg/l; Conductivity: 360 umho.

SDS: Alkalinity: 61 mg/l; Hardness: 91 mg/l; Conductivity: 350 umho.

**Acute Fish Test-96 Hr Survival**

Start Date: 06 Feb-07 14:00 Test ID: RT-070206f Sample ID: REF-Ref Toxicant  
 End Date: 10 Feb-07 13:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate  
 Sample Date: 06 Feb-07 00:00 Protocol: ACUTE-EPA-821-R-02-012 Test Species: PP-Pimephales promelas

Comments:

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	0.9000	0.9000
8	0.0000	0.0000

Conc-mg/L	Transform: Arcsin Square Root							Number Resp	Total Number
	Mean	N-Mean	Mean	Min	Max	CV%	N		
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
4	0.9000	0.9000	1.2490	1.2490	1.2490	0.000	2	2	20
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

**Auxiliary Tests**

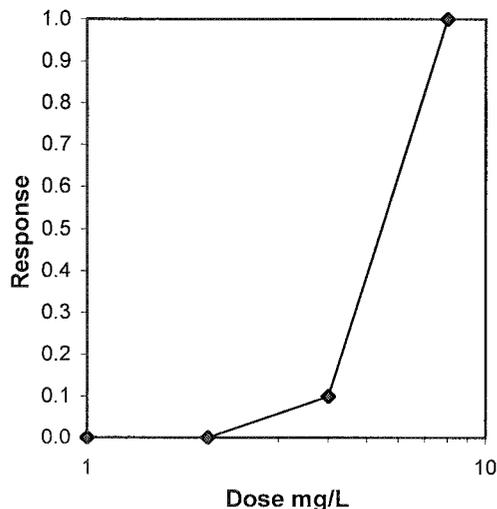
Normality of the data set cannot be confirmed

Equality of variance cannot be confirmed

Statistic      Critical      Skew      Kurt

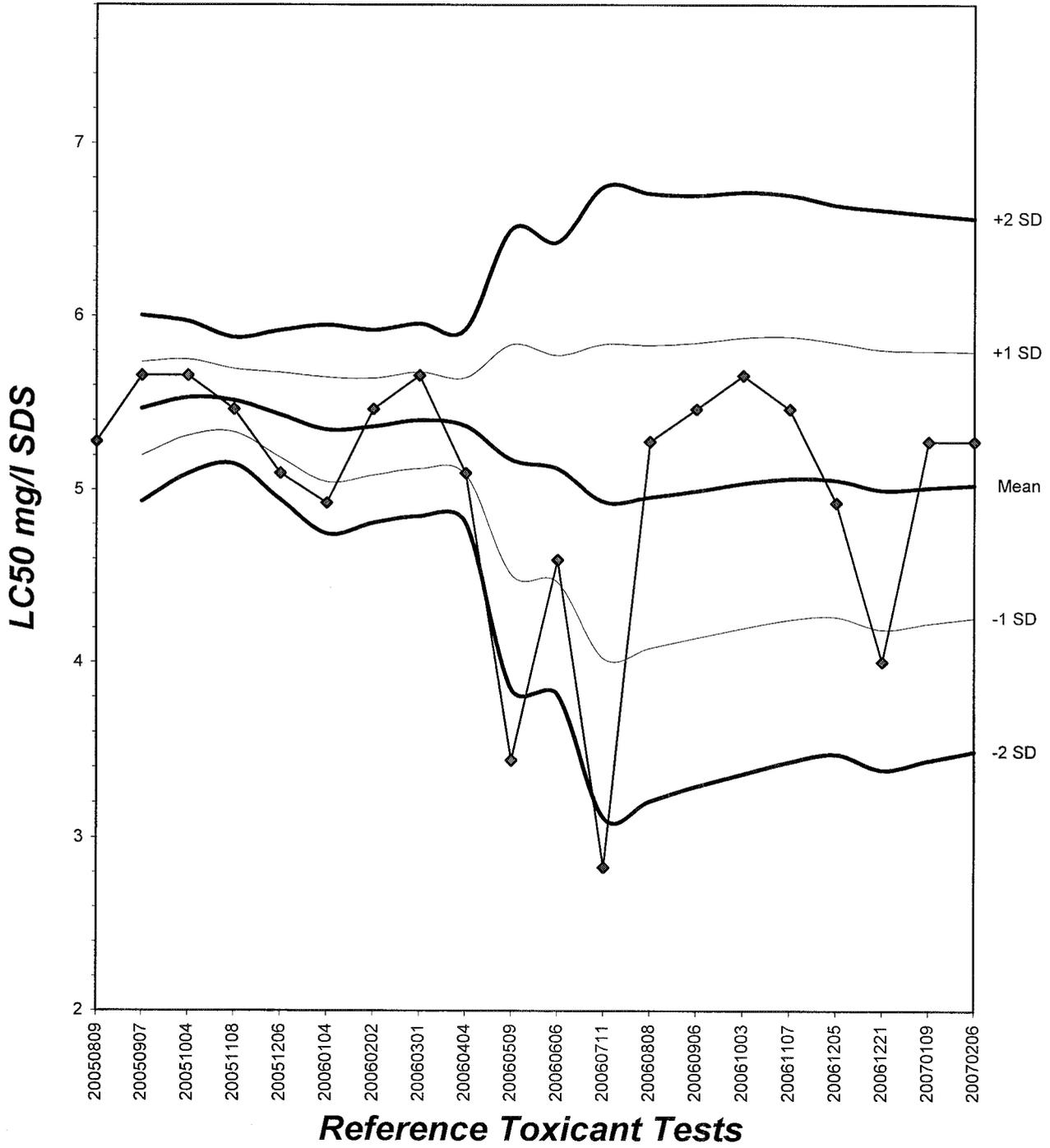
**Trimmed Spearman-Kärber**

Trim Level	EC50	95% CL	
0.0%	5.2780	4.8093	5.7924
5.0%	5.3968	4.8053	6.0611
10.0%	5.4432	5.1395	5.7648
20.0%	5.4432	5.1395	5.7648
Auto-0.0%	5.2780	4.8093	5.7924



# Fathead Minnow Acute Laboratory Control Chart

CV% = 15.3



# TEST ORGANISM LOG



## FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT-070206

SOURCE: In-Lab Culture

DATE HATCHED: 1-26-07

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATE USED IN LAB: 2/6/7

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit

250 ml test solution volume = 0.016 gm mean fish weight limit

### ACCLIMATION WATER QUALITY:

Temp.: 20.6 °C

pH: 8.0

Ammonia: <0.1 mg/l NH<sub>3</sub>-N

DO: 7.8 mg/l

Alkalinity: 61 mg/l

Hardness: 91 mg/l

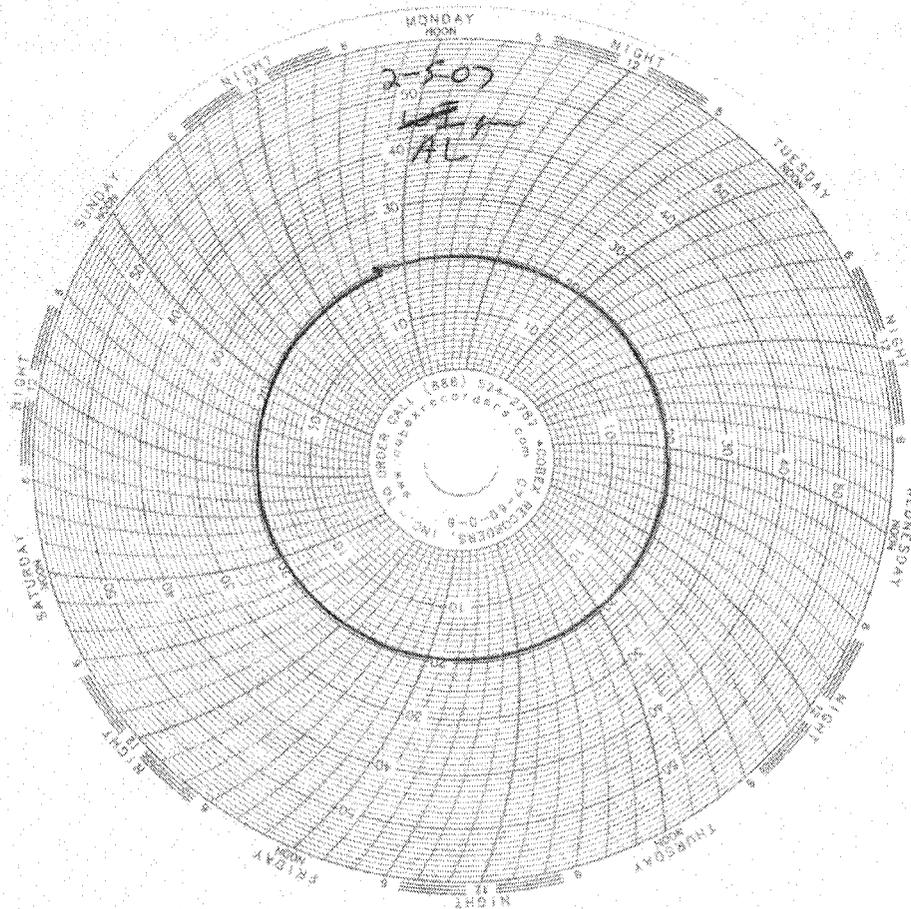
READINGS RECORDED BY:  DATE: 2-7-7

# Laboratory Temperature Chart

**QA/QC Batch No: RT-070206**

**Date Tested: 02/06/07 to 02/10/07**

**Acceptable Range: 20 $\pm$ 1 $^{\circ}$ C**





March 23, 2007

Ms. Michele Chamberlin  
Test America, Inc.  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Reference: Test America Project No. IQB2022  
Eberline Services NELAP Cert #01120CA (exp. 01/31/08)  
Eberline Services Report R702122-8657

Dear Ms. Chamberlin:

Enclosed are results from the analyses of one water sample received at Eberline Services on February 21, 2007. The sample was analyzed according to the accompanying Test America Subcontract Order Form. The requested analyses were gross alpha/gross beta (EPA900.0), tritium (H-3, EPA906.0), and strontium-90 (Sr-90, EPA905.0), Ra-226 (EPA903.1), and Ra-228 (EPA904.0). The samples were not filtered prior to analysis; all analyses, except tritium, were prepared for analysis within 5 days of collection. Quality control samples consisted of LCS's, blank analyses, duplicate analyses, and matrix spikes (excluding Sr-90 and Ra-228). All QC sample results were within the limits defined in Eberline Services Quality Control Procedures Manual. Analyses that involve the yielding of an analytical tracer or carrier, such as Sr-90 and Ra-228, do not require matrix spike analyses to be performed. A level IV data package will follow within one week.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv

Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice

Analytical Services  
2030 Wright Avenue  
P.O. Box 4040  
Richmond, California 94804-0040  
(510) 235-2633 Fax (510) 235-0438  
Toll Free (800) 841-5487  
www.eberlineservices.com  
NPDES - 329

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8657</u>	Client <u>TA IRVINE</u>
Work Order <u>R702122-01</u>	Contract <u>PROJECT# IQB2022</u>
Received Date <u>02/21/07</u>	Matrix <u>WATER</u>

Client	Lab						
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IQB2022-01	8657-001	02/19/07	03/08/07	GrossAlpha	-0.192 ± 0.44	pCi/L	0.698
			03/08/07	Gross Beta	24.3 ± 1.1	pCi/L	1.04
			03/12/07	Ra-228	0.051 ± 0.15	pCi/L	0.413
			03/01/07	H-3	-113 ± 92	pCi/L	159
			03/06/07	Ra-226	-0.200 ± 0.41	pCi/L	0.878
			03/02/07	Sr-90	-0.064 ± 0.30	pCi/L	0.738

Certified by _____
Report Date <u>03/23/07</u>
Page 1

# Eberline Services

## QC RESULTS

SDG <u>8657</u>	Client <u>TA IRVINE</u>
Work Order <u>R702122-01</u>	Contract <u>PROJECT# IQB2022</u>
Received Date <u>02/21/07</u>	Matrix <u>WATER</u>

Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8657-002	GrossAlpha	8.17 ± 0.65	pCi/Smpl	10.1	0.318	81% recovery
		Gross Beta	9.76 ± 0.37	pCi/Smpl	9.60	0.277	102% recovery
		Ra-228	9.35 ± 0.51	pCi/Smpl	8.84	0.85	106% recovery
		H-3	210 ± 14	pCi/Smpl	211	16.3	100% recovery
		Ra-226	5.19 ± 0.24	pCi/Smpl	5.02	0.087	103% recovery
		Sr-90	9.80 ± 0.54	pCi/Smpl	9.61	0.277	102% recovery

<u>BLANK</u>							
	8657-003	GrossAlpha	-0.364 ± 0.15	pCi/Smpl	NA	0.348	<MDA
		Gross Beta	-0.091 ± 0.15	pCi/Smpl	NA	0.269	<MDA
		Ra-228	-0.372 ± 0.28	pCi/Smpl	NA	0.771	<MDA
		H-3	-4.70 ± 9.6	pCi/Smpl	NA	16.4	<MDA
		Ra-226	0.007 ± 0.040	pCi/Smpl	NA	0.077	<MDA
		Sr-90	0.038 ± 0.15	pCi/Smpl	NA	0.344	<MDA

<u>DUPLICATES</u>				<u>ORIGINALS</u>			
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	RPD (Tot) Eval
8657-004	GrossAlpha	-0.302 ± 0.53	0.882	8657-001	-0.192 ± 0.44	0.698	- 0 satis.
	Gross Beta	27.3 ± 1.3	1.47		24.3 ± 1.1	1.04	12 44 satis.
	Ra-228	-0.024 ± 0.21	0.426		0.051 ± 0.15	0.413	- 0 satis.
	H-3	-69.3 ± 95	162		-113 ± 92	159	- 0 satis.
	Ra-226	-0.021 ± 0.38	0.756		-0.200 ± 0.41	0.878	- 0 satis.
	Sr-90	-0.104 ± 0.28	0.723		-0.064 ± 0.30	0.738	- 0 satis.

<u>SPIKED SAMPLE</u>				<u>ORIGINAL SAMPLE</u>				
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	Added	%Recv
8657-005	GrossAlpha	77.4 ± 6.8	1.9	8657-001	-0.192 ± 0.44	0.698	70.8	110
	Gross Beta	95.0 ± 4.0	2.0		24.3 ± 1.1	1.04	70.4	100
	H-3	15600 ± 300	168		-113 ± 92	159	16500	95
	Ra-226	105 ± 4.4	0.863		-0.200 ± 0.41	0.878	112	94

Certified by \_\_\_\_\_

Report Date 03/23/07

Page 2

## SUBCONTRACT ORDER - PROJECT # IQB2022

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

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

9657

Project Location: California

Standard TAT is requested unless specific due date is requested => Due Date: 3wk TAT Initials: MC

Analysis	Expiration	Comments
Sample ID: IQB2022-01 Water	Sampled: 02/19/07 12:00	
EDD + Level 4	03/19/07 12:00	
Gross Alpha-O	08/18/07 12:00	EPA 900.0, DONT FILTER, 5 day HT!, sub to Eberline
Gross Beta-O	08/18/07 12:00	EPA 900.0, DONT FILTER, 5 day HT!, sub to Eberline
Radium, Combined-O	02/19/08 12:00	EPA 903.1&904.0, DONT FILTER,5 day HT sub=Eberline
Strontium 90-O	02/19/08 12:00	EPA 905.0, DONT FILTER, 5 day HT, sub=Eberline
Tritium-O	02/19/08 12:00	EPA 906.0

- Containers Supplied:**
- 2.5 gal Poly (IQB2022-01S)
  - 40 ml Amber Voa Vial (IQB2022-01T)
  - 40 ml Amber Voa Vial (IQB2022-01U)
  - 40 ml Amber Voa Vial (IQB2022-01V)

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No  
 Sample labels/COC agree:  Yes  No  
 Samples Received On Ice::  Yes  No  
 Custody Seals Present:  Yes  No  
 Samples Preserved Properly:  Yes  No  
 Samples Received at (temp): \_\_\_\_\_

Released By: Eberline R Date: 2/20/07 Time: \_\_\_\_\_ Received By: [Signature] Date: 02/21/07 Time: 9:00

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



# RICHMOND, CA LABORATORY

## SAMPLE RECEIPT CHECKLIST

JK 2/21/07

Client: POST AMERICA City IRVINE State CA

Date/Time received 02/21/07 9:00 CoC No. 10B2022

Container I.D. No. 16 CHEST Requested TAT (Days) 21 P.O. Received Yes [ ] No [ ]

### INSPECTION

- 1. Custody seals on shipping container intact? Yes [] No [ ] N/A [ ]
- 2. Custody seals on shipping container dated & signed? Yes [] No [ ] N/A [ ]
- 3. Custody seals on sample containers intact? Yes [ ] No [ ] N/A []
- 4. Custody seals on sample containers dated & signed? Yes [ ] No [ ] N/A []
- 5. Packing material is: Wet [ ] Dry []
- 6. Number of samples in shipping container: 1 Sample Matrix W
- 7. Number of containers per sample: 4 (Or see CoC \_\_\_\_\_)
- 8. Samples are in correct container Yes [] No [ ]
- 9. Paperwork agrees with samples? Yes [] No [ ]
- 10. Samples have: Tape [ ] Hazard labels [ ] Rad labels [ ] Appropriate sample labels []
- 11. Samples are: In good condition [] Leaking [ ] Broken Container [ ] Missing [ ]
- 12. Samples are: Preserved [ ] Not preserved [] pH \_\_\_\_\_ Preservative \_\_\_\_\_
- 13. Describe any anomalies:  
\_\_\_\_\_  
\_\_\_\_\_
- 14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date \_\_\_\_\_
- 15. Inspected by JK Date 02/21/07 Time: 10:15

Customer Sample No.	cpm	mR/hr	Wide	Customer Sample No.	cpm	mR/hr	Wide

Ion Chamber Ser. No. \_\_\_\_\_ Calibration date \_\_\_\_\_  
 Alpha Meter Ser. No. \_\_\_\_\_ Calibration date \_\_\_\_\_  
 Beta/Gamma Meter Ser. No. \_\_\_\_\_ Calibration date \_\_\_\_\_



### CERTIFICATE OF ANALYSIS

**Client:** TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine, CA 92614  
Attention: Michele Chamberlin

**Report Date:** 03/02/07 19:24  
**Received Date:** 02/21/07 12:30  
**Turn Around:** Normal

Phone: (949) 261-1022  
Fax: (949) 260-3297

**Work Order #:** 7022246  
**Client Project:** IQB2022

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

*The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.*

Dear Michele Chamberlin :

Enclosed are the results of analyses for samples received 02/21/07 12:30 with the Chain of Custody document. The samples were received in good condition, at 5.5 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat  
Project Manager

Page 1 of 7





Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7022246  
Project ID: IQB2022

Date Received: 02/21/07 12:30  
Date Reported: 03/02/07 19:24

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQB2022-01	client		7022246-01	Water	02/19/07 12:00



Weck Laboratories, Inc.  
14859 E. Clark Ave.  
Industry, CA 91745  
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7022246  
Project ID: IQB2022

Date Received: 02/21/07 12:30  
Date Reported: 03/02/07 19:24

**IQB2022-01 7022246-01 (Water)**

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B1095	02/27/07	03/02/07	jl
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B1095	02/27/07	03/02/07	jl



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Irvine CA, 92614

Report ID: 7022246  
Project ID: IQB2022

Date Received: 02/21/07 12:30  
Date Reported: 03/02/07 19:24

# QUALITY CONTROL SECTION



Weck Laboratories, Inc.  
 14859 E. Clark Ave.  
 Industry, CA 91745  
 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine  
 17461 Derian Ave, Suite 100  
 Irvine CA, 92614

Report ID: 7022246  
 Project ID: IQB2022

Date Received: 02/21/07 12:30  
 Date Reported: 03/02/07 19:24

### Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch W7B1095 - EPA 245.1</b>										
<b>Blank (W7B1095-BLK1)</b> Analyzed: 03/02/07										
Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.20	ug/l							
<b>Blank (W7B1095-BLK2)</b> Analyzed: 03/02/07										
Mercury, Total	ND	0.20	ug/l							
Mercury, Dissolved	ND	0.20	ug/l							
<b>LCS (W7B1095-BS1)</b> Analyzed: 03/02/07										
Mercury, Total	0.870	0.20	ug/l	1.00		87.0	85-115			
Mercury, Dissolved	0.870	0.20	ug/l	1.00		87.0	85-115			
<b>LCS (W7B1095-BS2)</b> Analyzed: 03/02/07										
Mercury, Total	0.893	0.20	ug/l	1.00		89.3	85-115			
Mercury, Dissolved	0.893	0.20	ug/l	1.00		89.3	85-115			
<b>Matrix Spike (W7B1095-MS1)</b> Source: 7022133-02 Analyzed: 03/02/07										
Mercury, Total	0.895	0.20	ug/l	1.00	ND	89.5	70-130			
Mercury, Dissolved	0.895	0.20	ug/l	1.00	ND	89.5	70-130			
<b>Matrix Spike (W7B1095-MS2)</b> Source: 7022201-04 Analyzed: 03/02/07										
Mercury, Total	0.884	0.20	ug/l	1.00	0.030	85.4	70-130			
Mercury, Dissolved	0.884	0.20	ug/l	1.00	0.033	85.1	70-130			
<b>Matrix Spike (W7B1095-MS3)</b> Source: 7022201-07 Analyzed: 03/02/07										
Mercury, Total	0.884	0.20	ug/l	1.00	0.033	85.1	70-130			
Mercury, Dissolved	0.884	0.20	ug/l	1.00	0.026	85.8	70-130			
<b>Matrix Spike Dup (W7B1095-MSD1)</b> Source: 7022133-02 Analyzed: 03/02/07										
Mercury, Total	0.861	0.20	ug/l	1.00	ND	86.1	70-130	3.87	20	
Mercury, Dissolved	0.861	0.20	ug/l	1.00	ND	86.1	70-130	3.87	20	



Weck Laboratories, Inc.  
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TestAmerica, Inc. - Irvine  
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 Irvine CA, 92614

Report ID: 7022246  
 Project ID: IQB2022

Date Received: 02/21/07 12:30  
 Date Reported: 03/02/07 19:24

**Metals by EPA 200 Series Methods - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-----------------

**Batch W7B1095 - EPA 245.1**

**Matrix Spike Dup (W7B1095-MSD2)**

Source: 7022201-04

Analyzed: 03/02/07

Mercury, Dissolved	0.890	0.20	ug/l	1.00	0.033	85.7	70-130	0.676	20	
Mercury, Total	0.890	0.20	ug/l	1.00	0.030	86.0	70-130	0.676	20	

**Matrix Spike Dup (W7B1095-MSD3)**

Source: 7022201-07

Analyzed: 03/02/07

Mercury, Total	0.935	0.20	ug/l	1.00	0.033	90.2	70-130	5.61	20	
Mercury, Dissolved	0.935	0.20	ug/l	1.00	0.026	90.9	70-130	5.61	20	



Weck Laboratories, Inc.  
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TestAmerica, Inc. - Irvine  
17461 Derian Ave, Suite 100  
Irvine CA, 92614

Report ID: 7022246  
Project ID: IQB2022

Date Received: 02/21/07 12:30  
Date Reported: 03/02/07 19:24

### Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

## **APPENDIX G**

### **Section 11**

Outfall 006, February 19, 2007

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

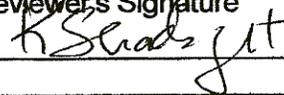
**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID B4DF123  
 Task Order 1261.001D.0 100P.00  
 SDG No. IQB2023

No. of Analyses 1

Laboratory Alta  
 Reviewer K. Shadowlight  
 Analysis/Method Dioxin/Furan by 1613

Date: April 9, 2007  
 Reviewer's Signature  


<b>ACTION ITEMS<sup>a</sup></b>	
<b>Case Narrative</b>	
<b>Deficiencies</b>	
<b>2. Out of Scope Analyses</b>	
<b>3. Analyses Not Conducted</b>	
<b>4. Missing Hardcopy Deliverables</b>	
<b>5. Incorrect Hardcopy Deliverables</b>	
<b>6. Deviations from Analysis Protocol, e.g.,</b>	Qualifications were assigned for the following:
Holding Times	* Method blank contamination
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
<b>COMMENTS<sup>b</sup></b>	
<p><sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.</p> <p><sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.</p>	



# DATA VALIDATION REPORT

## NPDES Monitoring Program Annual Outfall 006

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IQB2023

Prepared by  
MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.1001.00  
Sample Delivery Group: IQB2023  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: April 9, 2007

The samples listed in Table 1 were 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 for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (TestAmerica-Irvine)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 006	IQB2023-01	28725-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to TestAmerica-Irvine, custody seals were not required. Custody seals were present on the coolers from TestAmerica to Alta; however, no sample container custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). 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%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 10/24/2006 on instrument VG-5. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were 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 QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 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. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-8883-MB001) was extracted and analyzed with the sample in this SDG. Target compounds 1,2,3,4,6,7,8-HpCDD, OCDD, and total HpCDD were reported in the method blank at concentrations below the laboratory lower calibration level. The aforementioned target compounds were reported in the site sample at concentrations less than five times the concentration of the method blank; therefore, the detects for 1,2,3,4,6,7,8-HpCDD, OCDD, and total HpCDD were qualified as estimated nondetects, "UJ," at the levels of contamination in the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-8883-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. No qualifications were required.

Sample ID: **IQB2023-01 Outfall 006** EPA Method 1613

**Client Data**  
 Name: Test America-Irvine  
 Project: IQB2023  
 Date Collected: 19-Feb-07  
 Time Collected: 1115

**Sample Data**  
 Matrix: Aqueous  
 Sample Size: 1.04 L

**Laboratory Data**  
 Lab Sample: 28725-001  
 QC Batch No.: 8883  
 Date Analyzed DB-5: 26-Feb-07

Date Received: 21-Feb-07  
 Date Extracted: 23-Feb-07  
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDF	ND	0.00000137			IS 13C-2,3,7,8-TCDF	65.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000129			13C-1,2,3,7,8-PeCDD	60.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000249			13C-1,2,3,4,7,8-HxCDD	59.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000276			13C-1,2,3,6,7,8-HxCDD	55.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000255			13C-1,2,3,4,6,7,8-HpCDD	56.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000422			JB	13C-OCDD	49.2	17 - 157	
OCDD	0.0000430			JB	13C-2,3,7,8-TCDF	61.1	24 - 169	
2,3,7,8-TCDF	ND	0.00000119			13C-1,2,3,7,8-PeCDF	61.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000195			13C-2,3,4,7,8-PeCDF	61.7	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000184			13C-1,2,3,4,7,8-HxCDF	58.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000915			13C-1,2,3,6,7,8-HxCDF	53.7	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000932			13C-2,3,4,6,7,8-HxCDF	56.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000105			13C-1,2,3,7,8,9-HxCDF	61.5	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000127			13C-1,2,3,4,6,7,8-HpCDF	58.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000203			13C-1,2,3,4,7,8,9-HpCDF	60.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000870			13C-OCDF	53.4	17 - 157	
OCDF	ND	0.00000633			CRS 37Cl-2,3,7,8-TCDD	85.0	35 - 197	

**Totals**

Total TCDD	ND	0.00000137		
Total PeCDD	ND	0.00000129		
Total HxCDD	ND	0.00000431		
Total HpCDD	0.00000422		0.00000968	B
Total TCDF	ND	0.00000119		
Total PeCDF	ND	0.00000189		
Total HxCDF	ND	0.00000103		
Total HpCDF	ND	0.00000211		

**Footnotes**

a. Sample specific estimated detection limit.  
 b. Estimated maximum possible concentration.  
 c. Method detection limit.  
 d. Lower control limit - upper control limit.

few Qual Code  
 u →  
 u5 →  
 u5 →  
 u →  
 u →  
 u5 →  
 u →

Analyst: MAS  
 Approved By: William J. Luksemburg 01-Mar-2007 13:20

Level IV

Project 28718

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4MT115  
 Task Order: 1261.001D.01  
 SDG No.: IQB2023

No. of Analyses: 1

Laboratory: Weck  
 Reviewer: P. Meeks  
 Analysis/Method: Metals

Date: April 4, 2007
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 006

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQB2023

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQB2023  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 4, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Method 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Weck Laboratory ID	Matrix	COC Method
Outfall 006	IQA2023-01	7022247-01	Water	245.1, total and dissolved

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica and the subcontract laboratory, Weck within the temperature limits of 4°C ±2°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original and transfer COCs were signed and dated by the appropriate field and/or laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. Custody seals were not present upon receipt at Weck. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

As ICP-MS was not utilized for the analysis, the ICP-MS tune criteria are not applicable.

### 2.3 CALIBRATION

The mercury initial calibration  $r^2$  was  $\geq 0.995$ . The ICV and CCV results showed acceptable recoveries, 85-115% for mercury. No qualifications were required.

### 2.4 BLANKS

Mercury was not detected in any of the blanks associated with the site sample analysis. No qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

As neither ICP nor ICP-MS were utilized for the analysis, the interference check sample results are not applicable.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As ICP-MS was not utilized for the analysis, the ICP-MS internal standard results are not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.12 FIELD QC SAMPLES

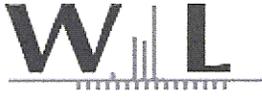
Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



Weck Laboratories, Inc.  
 14859 E. Clark Ave.  
 Industry, CA 91745  
 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614	Report ID: 7022247 Project ID: IQB2023	Date Received: 02/22/07 12:30 Date Reported: 03/02/07 19:24
-------------------------------------------------------------------------------	-------------------------------------------	----------------------------------------------------------------

Outfall 006  
 IQB2023-01 7022247-01 (Water)

**Metals by EPA 200 Series Methods**

Analyte	Res Qual Code	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Data Qualifiers
Mercury, Dissolved	U	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B1095	02/27/07	03/02/07	jl
Mercury, Total	U	ND	0.050	ug/l	0.20	1	EPA 245.1	W7B1095	02/27/07	03/02/07	jl

LEVEL IV





# DATA VALIDATION REPORT

NPDES Sampling  
Annual Outfall 006

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IQB2023

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.100D.00  
Sample Delivery Group: IQB2023  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 24, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Method 200.7*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	TestAmerica Laboratory ID	Matrix	COC Method
Outfall 006	IQA2023-01	Water	200.7

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica within the temperature limits of 4°C ±2°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The original COC was signed and dated by the appropriate field and laboratory personnel and accounted for the sample and analyses presented in this SDG. As the sample was transported directly from the field to TestAmerica, custody seals were not necessary. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the date of analysis recorded in the raw data documented that the sample analyses were performed within the specified holding time of 6 months for ICP metals. No qualifications were required.

### 2.2 ICP-MS TUNING

As the ICP-MS analytes were not validated, the ICP-MS tune criteria were not assessed.

### 2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP metals. The laboratory analyzed reporting limit check standards in association with the sample in this SDG. Selenium was recovered above 130% in the 10 ppb reporting limit check standard; however, selenium was not detected in the site sample. All other recoveries were considered to be acceptable. No qualifications were required.

## 2.4 BLANKS

Boron was detected in method blank 7B21063-BLK1 at 0.0216 mg/L; therefore, boron detected in the sample was qualified as an estimated nondetect, "UJ." Although the ICP-MS metals were not validated, the reviewer noted that cadmium was detected in method blank 7B21137-BLK1 at 0.135 µg/L; therefore, cadmium detected in the sample was qualified as an estimated nondetect, "UJ." Silver was detected in a bracketing CCB; however, silver was not detected in the site sample. There were no other detects of sufficient concentration to qualify the site sample. No further qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed in association with the ICP analyses of the site sample. The ICSA and ICSAB results were acceptable with recoveries within the control limits of 80-120%. Selenium was reported in the ISCA at -11.4 µg/L and silver was detected at 6.7 µg/L; however, no interferents were present in the site sample at concentrations requiring qualification. No qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on the LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

As the ICP-MS analytes were not validated, the ICP-MS internal standard results were not assessed.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified and the sample results reported on the Form I were verified against the raw data. No transcription errors or calculation errors were noted. Vanadium was detected between the MDL and the reporting limit; therefore, vanadium was qualified as estimated and denoted with "DNQ" in accordance with the NPDES permit. No further qualifications were required.

## 2.12 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.

# TestAmerica

ANALYTICAL TESTING CORPORATION

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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IQB2023

Sampled: 02/19/07  
Received: 02/19/07

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQB2023-01 (Outfall 006 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	7B21063	0.020	0.050	<u>0.020</u>	1	02/21/07	02/21/07	W J, B
Iron	EPA 200.7	7B21063	0.015	0.040	<u>0.86</u>	1	02/21/07	02/21/07	B

Handwritten notes in the Data Qualifiers column:  
 A box with 'Rev @val' and 'anal code' written inside.  
 An arrow points from the box to the 'W J, B' and 'B' entries in the table.

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

LEVEL IV

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.

IQB2023 <Page 9 of 43>

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IQB2023

Sampled: 02/19/07  
 Received: 02/19/07

### METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	Qual Code
Sample ID: IQB2023-01 (Outfall 006 - Water) - cont.										
Reporting Units: ug/l										
Aluminum	EPA 200.7	7B21063	40	50	870	1	02/21/07	02/21/07	RW Qual	
Antimony	EPA 200.8	7B21137	0.050	2.0	0.65	1	02/21/07	02/21/07	* J	
Arsenic	EPA 200.7	7B21063	7.0	10	10	1	02/21/07	02/21/07		
Beryllium	EPA 200.7	7B21063	0.90	2.0	ND	1	02/21/07	02/21/07	U	
Cadmium	EPA 200.8	7B21137	0.025	1.0	0.10	1	02/21/07	02/21/07	U J, B	B
Chromium	EPA 200.7	7B21063	2.0	5.0	ND	1	02/21/07	02/21/07	U	
Copper	EPA 200.8	7B21137	0.25	2.0	3.5	1	02/21/07	02/21/07	* U	
Lead	EPA 200.8	7B21137	0.040	1.0	1.0	1	02/21/07	02/21/07	* U	
Nickel	EPA 200.7	7B21063	2.0	10	ND	1	02/21/07	02/21/07	U	
Selenium	EPA 200.7	7B21063	8.0	10	ND	1	02/21/07	02/21/07	↓	
Silver	EPA 200.7	7B21063	3.0	10	ND	1	02/21/07	02/21/07		
Thallium	EPA 200.8	7B21137	0.15	1.0	ND	1	02/21/07	02/21/07	* U	
Vanadium	EPA 200.7	7B21063	3.0	10	4.0	1	02/21/07	02/21/07	U J	DNQ
Zinc	EPA 200.7	7B21063	15	20	ND	1	02/21/07	02/21/07	U	

\* Analysis not validated

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

LEVEL 10

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.

IQB2023 <Page 10 of 43>



# DATA VALIDATION REPORT

NPDES Sampling  
Annual Outfall 006

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUP: IQB2023

Prepared by

MEC<sup>X</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.1001.00  
Sample Delivery Group: IQB2023  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Radionuclides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 1  
Reviewer: P. Meeks  
Date of Review: April 6, 2007

The samples listed in Table 1 were validated based on the guidelines outlined in the *EPA Prescribed Procedures for Measurements of Radioactivity in Drinking Water, Method 900.0, 901.1, 903.1, and 904.0*, and validation procedures outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Eberline)	Matrix	COC Method
Outfall 006	IQB2023-01	8658-001	Water	900.0
Outfall 006 RE1	IQB2023-01	8658-001	Water	900.0, 901.1, 903.1, 904.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at TestAmerica within the temperature limits of  $4\pm 2^{\circ}\text{C}$ . No temperature information was provided by Eberline, the subcontract laboratory; however, as it is not necessary to chill radiological samples, no qualifications were required. The sample was noted to have been received intact, in good condition, with cooler and sample container custody seals intact.

According to the LARWQCB guidance letter dated 01/12/05, unfiltered samples should not be preserved and filtered aliquots should be preserved after filtration. All aliquots were received at Eberline unfiltered and unpreserved and were neither preserved nor filtered after receipt. No qualifications were required.

#### 2.1.2 Chain of Custody

The original COC was signed and dated by field and laboratory personnel. The transfer COC was signed by personnel from both laboratories. After the initial analyses were complete, MWH personnel requested that gross beta be reanalyzed and that radium-226, radium-228 and gamma spectroscopy analyses be performed. To differentiate between the original gross alpha and beta analysis and the subsequent analyses, the client ID for the reanalyses was appended with "RE1." Eberline did not list the MWH ID on the Form I; therefore, the reviewer edited the Form Is to reflect this ID. No qualifications were required.

#### 2.1.3 Holding Times

For Outfall 006, the aliquots for gross alpha and gross beta were prepared within the five-day analytical holding time for unpreserved samples. For Outfall 006 RE1, the gross beta, radium-226, radium-228, and the gamma spectroscopy analyses were performed beyond the five-day analytical holding time; therefore, all retained results for Outfall 006 RE1 were qualified as estimated, "UJ," for nondetects and, "J," for detects. No further qualifications were necessary.

### 2.2 CALIBRATION

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

### Gross Alpha and Gross Beta

The initial calibration included with the data was performed in February 2003. The gross alpha detector efficiency was less than 20%; therefore, the gross alpha result was qualified as an estimated nondetect, "UJ." The remaining detector efficiencies were above 20% and no further qualifications were required.

### Radium

The radium-226 cell efficiencies were determined in September 2006. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 calibration utilized actinium-228 and was verified in February 2001. The radium-228 tracer, yttrium oxalate yields were greater than 70%. No qualifications were necessary.

### Gamma Spectroscopy

The gamma spectroscopy geometry-specific, detector efficiencies were determined in September 1999. All analytes were determined at the maximum photopeak energy.

## **2.3 BLANKS**

No measurable activities were detected in the method blanks; therefore, no qualifications were necessary.

## **2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES**

Aqueous blank spikes were analyzed in association with the sample in this SDG. The blank spike results were within the laboratory-established control limits. No qualifications were necessary.

## **2.5 LABORATORY DUPLICATES**

Laboratory duplicate analyses were performed on Outfall 006 RE1 for gross beta, radium-226, radium-228 and the gamma spectroscopy analytes. All RPDs were within the laboratory established control limits and no qualifications were necessary.

## 2.6 MATRIX SPIKES

Matrix spike analyses were performed on Outfall 006 RE1 for radium-226. The recovery was within the laboratory-established control limits and no qualifications were necessary.

## 2.7 SAMPLE RESULT VERIFICATION

An EPA Level IV review was performed for the sample in this data package. Sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. As the gross beta reanalysis yielded a result similar to the original analysis, the reviewer rejected the gross beta reanalysis result, Outfall 006 RE1, in favor of the original result, Outfall 006. No further qualifications were necessary.

## 2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample.

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate samples in this SDG.

Eberline Services

ANALYSIS RESULTS

*Outfall 006*

SDG <u>8658</u>	Client <u>TA IRVINE</u>
Work Order <u>R702123-01</u>	Contract <u>PROJECT# IQB2023</u>
Received Date <u>02/21/07</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results + 2σ	Units	MDA	<i>Rev Qual</i>	<i>Qual Code</i>
<u>Sample ID</u>	<u>Sample ID</u>								
IQB2023-01	8658-001	02/19/07	03/08/07	GrossAlpha	-0.901 ± 1.5	pCi/L	2.5	<i>UJ</i>	<i>R</i>
			03/08/07	Gross Beta	63.8 ± 2.8	pCi/L	2.2		
			04/17/07	Ra-228	0.053 ± 0.19	pCi/L	0.52	<i>J</i>	
			04/16/07	K-40 (G)	U	pCi/L	168	<i>UJ</i>	
			04/16/07	Cs-137 (G)	U	pCi/L	8.51		
			04/16/07	Tl-208 (G)	U	pCi/L	9.24		
			04/16/07	Pb-210 (G)	U	pCi/L	1950		
			04/16/07	Bi-212 (G)	U	pCi/L	62.4		
			04/16/07	Pb-212 (G)	U	pCi/L	14.2		
			04/16/07	Bi-214 (G)	U	pCi/L	17.9		
			04/16/07	Pb-214 (G)	U	pCi/L	16.4		
			04/16/07	Ra-226 (G)	U	pCi/L	144		
			04/16/07	Ac-228 (G)	U	pCi/L	37.6		
			04/16/07	Th-234 (G)	U	pCi/L	258		
			04/16/07	U-235 (G)	U	pCi/L	52.1		
			04/16/07	U-238 (G)	U	pCi/L	1070		
			04/17/07	Ra-226	0.240 ± 0.49	pCi/L	0.85	<i>J</i>	

LEVEL IV

Certified by <u><i>[Signature]</i></u>
Report Date <u>04/18/07</u>
Page 1

Eberline Services

ANALYSIS RESULTS

outfall 806 RE

SDG <u>8658</u>	Client <u>TA IRVINE</u>
Work Order <u>R704053-01</u>	Contract <u>PROJECT# IQB2023</u>
Received Date <u>04/10/07</u>	Matrix <u>WATER</u>

Client	Lab							
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results + 2σ</u>	<u>Units</u>	<u>MDA</u>	
IQB2023-01	8658-001	02/19/07	04/12/07	Gross Beta	66.2 ± 3.8	pCi/L	2.47	Ret / Qual Qual / Cook R / D

LEVEL IV

Certified by <u>Mel Mann</u>
Report Date <u>04/13/07</u>
Page 1

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4WC98  
 Task Order: 1261.100D.00  
 SDG No.: IQB2023

No. of Analyses: 1

Laboratory: TestAmerica  
 Reviewer: P. Meeks  
 Analysis/Method: General Minerals

Date: April 25, 2007
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
<b>1. Case Narrative Deficiencies</b>	_____
<b>2. Out of Scope Analyses</b>	_____
<b>3. Analyses Not Conducted</b>	_____
<b>4. Missing Hardcopy Deliverables</b>	_____
<b>5. Incorrect Hardcopy Deliverables</b>	_____
<b>6. Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Annual Outfall 006

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IQB2023

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IQB2023  
Project Manager: P. Costa  
Matrix: Water  
Analysis: General Minerals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 25, 2007

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods 160.2 and 335.2*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 006	IQB2023-01	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . No preservation problems were noted by the laboratory and no qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The TSS analysis was performed within the analytical holding time of seven days from collection and the cyanide analysis was performed within the analytical holding time of 14 days from collection. No qualifications were required.

### 2.2 CALIBRATION

The cyanide initial calibration  $r^2$  result was  $\geq 0.995$  and the ICV and CCV results were within the control limits of 90-110%. No qualifications were required.

### 2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No qualifications were required.

## 2.5 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of method accuracy was based on the LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form I were verified against the raw data. No qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

# TestAmerica

ANALYTICAL TESTING CORPORATION

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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 006 Report Number: IQB2023	Sampled: 02/19/07 Received: 02/19/07
------------------------------------------------------------------------------------------------------------	----------------------------------------------------------	-----------------------------------------

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Res Qual	Qual Code
Sample ID: IQB2023-01 (Outfall 006 - Water) - cont.										
Reporting Units: mg/l										
Chloride	EPA 300.0	7B20044	1.5	5.0	130	10	02/20/07	02/20/07	*	
Fluoride	EPA 300.0	7B20044	0.15	0.50	0.46	1	02/20/07	02/20/07		J
Hardness (as CaCO3)	SM2340B	7B21063	1.0	1.0	210	1	02/21/07	02/21/07		
Nitrate/Nitrite-N	EPA 300.0	7B20044	0.080	0.15	0.45	1	02/20/07	02/20/07		
Oil & Grease	EPA 413.1	7B28085	0.92	4.9	ND	1	02/28/07	02/28/07		
Sulfate	EPA 300.0	7B20044	0.45	0.50	23	1	02/20/07	02/20/07	*	
Total Dissolved Solids	SM2540C	7B23078	10	10	550	1	02/23/07	02/23/07	*	
Total Suspended Solids	EPA 160.2	7B21150	10	10	16	1	02/21/07	02/22/07		

\* Analysis not validated

LEVEL IV

TestAmerica - Irvine, CA  
Michele Chamberlin  
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.

IQB2023 <Page 13 of 43>

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 006 Report Number: IQB2023	Sampled: 02/19/07 Received: 02/19/07
------------------------------------------------------------------------------------------------------------	----------------------------------------------------------	-----------------------------------------

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IQB2023-01 (Outfall 006 - Water) - cont.										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	7B23104	2.2	5.0	ND	1	02/23/07	02/23/07	U	
Perchlorate	EPA 314.0	7B27143	0.80	4.0	ND	1	02/27/07	02/28/07	*	

\* Analysis not validated

TestAmerica - Irvine, CA  
Michele Chamberlin  
Project Manager

LEVEL IV

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.

IQB2023 <Page 14 of 43>

# **APPENDIX G**

## **Section 12**

Outfall 006, February 19, 2007

Test America Analytical Laboratory Report

## LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Annual Outfall 006

Sampled: 02/19/07  
Received: 02/19/07  
Issued: 04/03/07 19:20

NELAP #01108CA California ELAP#1197 CSDLAC #10256

*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 3°C, on ice and with chain of custody documentation.

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

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

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

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

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

**ADDITIONAL INFORMATION:** Enclosed are complete final results.

#### LABORATORY ID

IQB2023-01  
IQB2023-02

#### CLIENT ID

Outfall 006  
Trip Blank

#### MATRIX

Water  
Water

Reviewed By:



**TestAmerica - Irvine, CA**  
Michele Chamberlin  
Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IQB2023

Sampled: 02/19/07

Received: 02/19/07

## 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: IQB2023-01 (Outfall 006 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	7B21011	0.28	1.0	ND	1	02/21/07	02/21/07	
Bromodichloromethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Bromoform	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Bromomethane	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
Carbon tetrachloride	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
Chlorobenzene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
Chloroethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Chloroform	EPA 624	7B21011	0.33	2.0	ND	1	02/21/07	02/21/07	
Chloromethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Dibromochloromethane	EPA 624	7B21011	0.28	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichlorobenzene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
1,3-Dichlorobenzene	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
1,4-Dichlorobenzene	EPA 624	7B21011	0.37	2.0	ND	1	02/21/07	02/21/07	
1,1-Dichloroethane	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloroethane	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
1,1-Dichloroethene	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
trans-1,2-Dichloroethene	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloropropane	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
cis-1,3-Dichloropropene	EPA 624	7B21011	0.22	2.0	ND	1	02/21/07	02/21/07	
trans-1,3-Dichloropropene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Ethylbenzene	EPA 624	7B21011	0.25	2.0	ND	1	02/21/07	02/21/07	
Methylene chloride	EPA 624	7B21011	0.95	5.0	ND	1	02/21/07	02/21/07	
1,1,2,2-Tetrachloroethane	EPA 624	7B21011	0.24	2.0	ND	1	02/21/07	02/21/07	
Tetrachloroethene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Toluene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
1,1,1-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
1,1,2-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Trichloroethene	EPA 624	7B21011	0.26	2.0	ND	1	02/21/07	02/21/07	
Trichlorofluoromethane	EPA 624	7B21011	0.34	5.0	ND	1	02/21/07	02/21/07	
Vinyl chloride	EPA 624	7B21011	0.30	0.50	ND	1	02/21/07	02/21/07	
Xylenes, Total	EPA 624	7B21011	0.90	4.0	ND	1	02/21/07	02/21/07	
Trichlorotrifluoroethane (Freon 113)	EPA 624	7B21011	1.5	5.0	ND	1	02/21/07	02/21/07	

Surrogate: Dibromofluoromethane (80-120%)

104 %

Surrogate: Toluene-d8 (80-120%)

100 %

Surrogate: 4-Bromofluorobenzene (80-120%)

98 %

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IQB2023

Sampled: 02/19/07

Received: 02/19/07

## 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: IQB2023-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	7B21011	0.28	1.0	ND	1	02/21/07	02/21/07	
Bromodichloromethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Bromoform	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Bromomethane	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
Carbon tetrachloride	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
Chlorobenzene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
Chloroethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Chloroform	EPA 624	7B21011	0.33	2.0	ND	1	02/21/07	02/21/07	
Chloromethane	EPA 624	7B21011	0.40	5.0	ND	1	02/21/07	02/21/07	
Dibromochloromethane	EPA 624	7B21011	0.28	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichlorobenzene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
1,3-Dichlorobenzene	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
1,4-Dichlorobenzene	EPA 624	7B21011	0.37	2.0	ND	1	02/21/07	02/21/07	
1,1-Dichloroethane	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloroethane	EPA 624	7B21011	0.28	0.50	ND	1	02/21/07	02/21/07	
1,1-Dichloroethene	EPA 624	7B21011	0.42	5.0	ND	1	02/21/07	02/21/07	
trans-1,2-Dichloroethene	EPA 624	7B21011	0.27	2.0	ND	1	02/21/07	02/21/07	
1,2-Dichloropropane	EPA 624	7B21011	0.35	2.0	ND	1	02/21/07	02/21/07	
cis-1,3-Dichloropropene	EPA 624	7B21011	0.22	2.0	ND	1	02/21/07	02/21/07	
trans-1,3-Dichloropropene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Ethylbenzene	EPA 624	7B21011	0.25	2.0	ND	1	02/21/07	02/21/07	
Methylene chloride	EPA 624	7B21011	0.95	5.0	ND	1	02/21/07	02/21/07	
1,1,2,2-Tetrachloroethane	EPA 624	7B21011	0.24	2.0	ND	1	02/21/07	02/21/07	
Tetrachloroethene	EPA 624	7B21011	0.32	2.0	ND	1	02/21/07	02/21/07	
Toluene	EPA 624	7B21011	0.36	2.0	ND	1	02/21/07	02/21/07	
1,1,1-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
1,1,2-Trichloroethane	EPA 624	7B21011	0.30	2.0	ND	1	02/21/07	02/21/07	
Trichloroethene	EPA 624	7B21011	0.26	2.0	ND	1	02/21/07	02/21/07	
Trichlorofluoromethane	EPA 624	7B21011	0.34	5.0	ND	1	02/21/07	02/21/07	
Vinyl chloride	EPA 624	7B21011	0.30	0.50	ND	1	02/21/07	02/21/07	
Xylenes, Total	EPA 624	7B21011	0.90	4.0	ND	1	02/21/07	02/21/07	
Trichlorotrifluoroethane (Freon 113)	EPA 624	7B21011	1.5	5.0	ND	1	02/21/07	02/21/07	

Surrogate: Dibromofluoromethane (80-120%)

97 %

Surrogate: Toluene-d8 (80-120%)

100 %

Surrogate: 4-Bromofluorobenzene (80-120%)

97 %

**TestAmerica - Irvine, CA**  
 Michele Chamberlin  
 Project Manager

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 006

Report Number: IQB2023

Sampled: 02/19/07

Received: 02/19/07

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IQB2023-01 (Outfall 006 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acrolein	EPA 624	7B21011	4.6	50	ND	1	02/21/07	02/21/07	
Acrylonitrile	EPA 624	7B21011	0.70	50	ND	1	02/21/07	02/21/07	
2-Chloroethyl vinyl ether	EPA 624	7B21011	1.8	5.0	ND	1	02/21/07	02/21/07	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					104 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					100 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					98 %				
<b>Sample ID: IQB2023-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acrolein	EPA 624	7B21011	4.6	50	ND	1	02/21/07	02/21/07	
Acrylonitrile	EPA 624	7B21011	0.70	50	ND	1	02/21/07	02/21/07	
2-Chloroethyl vinyl ether	EPA 624	7B21011	1.8	5.0	ND	1	02/21/07	02/21/07	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					97 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					100 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					97 %				

TestAmerica - Irvine, CA  
 Michele Chamberlin  
 Project Manager

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