

# **APPENDIX G**

## **Section 81**

Outfall 012, January 25, 2008

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



# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRA2504

Prepared by

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

**I. INTRODUCTION**

Task Order Title: Boeing SSFL NPDES  
 Contract Task Order: 1261.100D.00  
 Sample Delivery Group: IRA2504  
 Project Manager: B. Kelly  
 Matrix: Soil  
 QC Level: IV  
 No. of Samples: 2  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 012	IRA2504-01	30211-001, 8012806-01	Water	01/25/08 1345	180.1, 245.1, 200.8, 405.1, 624, 625, 1613
Trip Blank	IRA2504-02	N/A	Water	N/A	624

**II. Sample Management**

No anomalies were observed regarding sample management. The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was received below the temperature limit at Vista; however, the sample was not noted to have been frozen. The sample was received above the temperature limit at Weck; however, mercury is not considered volatile. According to the case narrative for this SDG, the sample was received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, custody seals were not required. Custody seals were intact upon arrival at Vista. No custody seals were present upon receipt at Weck. If necessary, the client ID was added to the sample result summary by the reviewer.

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### Data Qualifier Reference Table

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

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### Qualification Code Reference Table

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

**Qualification Code Reference Table Cont.**

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

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: March 1, 2008

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was 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. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: Total HpCDD was detected in the method blank above the EDL. The result in the sample was qualified as estimated, "J," as a portion of the reported total HpCDD was

considered to be method blank contamination. The method blank had no other target compound detects above the EDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Any EMPC value was qualified as an estimated nondetect, "UJ." Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks

Date Reviewed: March 7, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding times, 6 months for metals and 28 days for mercury, were met.
- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were  $\leq 5\%$ , and all masses of interest were calibrated to  $\leq 0.1$  amu and  $\leq 0.9$  amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration  $r^2$  values were  $\geq 0.995$  and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury.
- Blanks: There were no applicable detects in the method blanks or CCBs.
- Interference Check Samples: ICSA/B analyses were performed in association with the metals analyses. Zinc was recovered above the control limit at 135% in the ICSAB associated with the dissolved metals aliquot; therefore, zinc detected in the dissolved metals aliquot was qualified as an estimated detect, "J." All remaining recoveries were within the method-established control limits. All analytes were reported in the ICSA solution; however, the reviewer was not able to ascertain if the detection was indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for the 200.8 dissolved metals only. All recoveries and RPDs were within the laboratory-established control limits. Evaluation of the mercury method accuracy was based on LCS results.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. The bracketing CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

### C. EPA METHOD 625—Semivolatile Organic Compounds (SVOCs)

Reviewed By: L. Calvin

Date Reviewed: March 11, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted within seven days of collection and analyzed within 40 days of extraction.
- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.
- Calibration: Initial calibration average RRFs were  $\geq 0.05$  and %RSDs  $\leq 35\%$ . Continuing calibration RRFs were  $\geq 0.05$  and %Ds  $\leq 20\%$ , with the exception of the %D for n-nitrosodimethylamine. The nondetect sample result for n-nitrosodimethylamine was qualified as estimated, "UJ."
- Blanks: The method blank had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision was based on LSC/LSCD results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times.

- **Compound Identification:** Compound identification was verified. The laboratory analyzed for naphthalene and n-nitrosodimethylamine by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- **Compound Quantification and Reported Detection Limits:** Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.
- **Tentatively Identified Compounds:** TICs were not reported by the laboratory for this SDG.
- **System Performance:** Review of the raw data indicated no problems with system performance.

#### **D. EPA METHOD 624—Volatile Organic Compounds (VOCs)**

Reviewed By: L. Calvin

Date Reviewed: March 11, 2008

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 8260B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- **Holding Times:** Analytical holding times were met. The preserved water samples were analyzed within 14 days of collection.
- **GC/MS Tuning:** The BFB tunes met the method abundance criteria. Samples were analyzed within 12 hours of the BFB injection time.
- **Calibration:** Calibration criteria were met. For applicable target compounds, initial calibration average RRFs were  $\geq 0.05$  and %RSDs  $\leq 35\%$ . Continuing calibration RRFs were  $\geq 0.05$  and %Ds  $\leq 20\%$ .
- **Blanks:** The method blanks had no target compound detects above the MDL.
- **Blank Spikes and Laboratory Control Samples:** Recoveries were within laboratory-established QC limits.
- **Surrogate Recovery:** Recoveries were within laboratory-established QC limits.
- **Matrix Spike/Matrix Spike Duplicate:** MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy was based on LSC results.
- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

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

- Trip Blanks: Sample Trip Blank was the trip blank associated with site sample Outfall 012. The trip blank had no target compound detects above the MDL.
- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times.
- Compound Identification: Compound identification was verified. The laboratory analyzed for five volatile target compounds by EPA Method 624. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.
- System Performance: Review of the raw data indicated no problems with system performance.

## E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 7, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 180.1, 405.1, and 8015M*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The holding times, 48 hours for BOD and turbidity, were met.
- Calibration: Calibration criteria are not applicable to BOD. The turbidity check standard recoveries were acceptable.
- Blanks: There were no applicable detects in the method blanks.

- Blank Spikes and Laboratory Control Samples: The BOD recoveries and RPD were within the laboratory-established control limits. The LCS is not applicable to turbidity.
- Laboratory Duplicates: No laboratory duplicate analyses were performed for the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No BOD MS/MSD analyses were performed for the sample in this SDG. MS/MSD analyses are not applicable to turbidity.
- Sample Result Verification: The sample results were verified against the raw data. No transcription or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

**EPA Method 1613**

**Sample ID: IRA2504-01** *Outfall 012*

Client Data		Sample Data		Laboratory Data	
Name: Test America-Irvine, CA	Matrix: Aqueous	Matrix: 1.01 L	Lab Sample: 30211-001	Date Received: 29-Jan-08	
Project: IRA2504	Sample Size: 1.01 L		QC Batch No.: 9921	Date Extracted: 2-Feb-08	
Date Collected: 25-Jan-08			Date Analyzed DB-5: 7-Feb-08	Date Analyzed DB-225: NA	
Time Collected: 1345					
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	0.000000994			90.7 25 - 164
1,2,3,7,8-PeCDD	ND	0.000000796			81.3 25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000260			81.0 32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000259			77.0 28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000250			80.8 23 - 140
1,2,3,4,6,7,8-HpCDD	0.00000920			J	67.4 17 - 157
OCDD	0.000120				93.0 24 - 169
2,3,7,8-TCDF	ND	0.000000810			95.7 24 - 185
1,2,3,7,8-PeCDF	ND	0.000000809			82.8 21 - 178
2,3,4,7,8-PeCDF	ND	0.000000932			83.9 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000917			75.9 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.00000111			73.4 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000126			75.3 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000161			69.0 28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.00000667	0.00000667		75.2 26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000232			70.4 17 - 157
OCDF	0.0000147			J	89.8 35 - 197
<b>Totals</b>					
Total TCDD	ND	0.000000994			
Total PeCDD	ND	0.00000200			
Total HxCDD	ND	0.00000439			
Total HpCDD	0.0000238			B	
Total TCDF	ND	0.000000810			
Total PeCDF	ND	0.000000866			
Total HxCDF	0.00000197				
Total HpCDF	0.00000709		0.0000138		

**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 *Level IV* Approved By: William J. Luksemburg 08-Feb-2008 12:17

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron *	EPA 200.7	8A26039	0.020	0.050	ND	1	01/26/08	01/28/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
Reporting Units: ug/l									
Cadmium J/DNQ	EPA 200.8	8A29075	0.11	1.0	<b>0.49</b>	1	01/29/08	01/29/08	J
Copper	EPA 200.8	8A29075	0.75	2.0	<b>3.0</b>	1	01/29/08	01/29/08	
Lead	EPA 200.8	8A29075	0.30	1.0	<b>1.1</b>	1	01/29/08	01/29/08	
Selenium U	EPA 200.8	8A29075	0.30	2.0	ND	1	01/29/08	01/29/08	
Zinc	EPA 200.8	8A29075	2.5	20	<b>44</b>	1	01/29/08	01/29/08	

\* Analysis not validated

LEVEL IV

TestAmerica Irvine

Joseph Doak  
 Project Manager

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly	Project ID: Routine Outfall 012  Report Number: IRA2504	Sampled: 01/25/08 Received: 01/25/08
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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: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron *	EPA 200.7-Diss	8A25155	0.020	0.050	ND	1	01/25/08	01/26/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
Reporting Units: ug/l									
Cadmium J/DNR	EPA 200.8-Diss	8A25156	0.11	1.0	<b>0.33</b>	1	01/25/08	01/26/08	J
Copper ↓	EPA 200.8-Diss	8A25156	0.75	2.0	<b>1.9</b>	1	01/25/08	01/26/08	J
Lead U	EPA 200.8-Diss	8A25156	0.30	1.0	ND	1	01/25/08	01/26/08	
Selenium ↓	EPA 200.8-Diss	8A25156	0.30	2.0	ND	1	01/25/08	01/26/08	
Zinc J/I	EPA 200.8-Diss	8A25156	2.5	20	<b>21</b>	1	01/25/08	01/26/08	

\* Analysis not validated

LEVEL IV

TestAmerica Irvine

Joseph Doak  
Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
Received: 01/25/08

### 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: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved	U	EPA 245.1	W8A1053	0.050	0.20	ND	1	01/30/08	01/31/08
Mercury, Total	U	EPA 245.1	W8A1053	0.050	0.20	ND	1	01/30/08	01/31/08

LEVEL IV

TestAmerica Irvine

Joseph Doak  
Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08

Received: 01/25/08

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2504-01 (OUTFALL 012 - Water)									
Reporting Units: ug/l									
Naphthalene	EPA 625	8A27022	3.0	9.9	ND	0.99	01/27/08	01/30/08	
N-Nitrosodimethylamine	EPA 625	8A27022	2.5	20	ND	0.99	01/27/08	01/30/08	C
Surrogate: 2-Fluorophenol (30-120%)					77 %				
Surrogate: Phenol-d6 (35-120%)					83 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					64 %				
Surrogate: Nitrobenzene-d5 (45-120%)					87 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					86 %				
Surrogate: Terphenyl-d14 (50-125%)					95 %				

Level IV

TestAmerica Irvine

Joseph Doak  
Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
Received: 01/25/08

## 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: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	8A29023	0.40	2.0	ND	1	01/29/08	01/30/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8A29023	0.32	5.0	ND	1	01/29/08	01/30/08	
1,2,3-Trichloropropane	EPA 624	8A29023	0.40	10	ND	1	01/29/08	01/30/08	
Di-isopropyl Ether (DIPE)	EPA 624	8A29023	0.25	5.0	ND	1	01/29/08	01/30/08	
tert-Butanol (TBA)	EPA 624	8A29023	4.9	25	ND	1	01/29/08	01/30/08	
Surrogate: Dibromofluoromethane (80-120%)					88 %				
Surrogate: Toluene-d8 (80-120%)					94 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					85 %				

### Sample ID: IRA2504-02 (TRIP BLANK - Water)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	8A30025	0.40	2.0	ND	1	01/30/08	01/30/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8A30025	0.32	5.0	ND	1	01/30/08	01/30/08	
1,2,3-Trichloropropane	EPA 624	8A30025	0.40	10	ND	1	01/30/08	01/30/08	
Di-isopropyl Ether (DIPE)	EPA 624	8A30025	0.25	5.0	ND	1	01/30/08	01/30/08	
tert-Butanol (TBA)	EPA 624	8A30025	4.9	25	ND	1	01/30/08	01/30/08	
Surrogate: Dibromofluoromethane (80-120%)					109 %				
Surrogate: Toluene-d8 (80-120%)					100 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

Level IV

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	* EPA 1664A	8B04061	1.3	4.8	ND	1	02/04/08	02/04/08	
Ammonia-N (Distilled)	EPA 350.2	8A29110	0.30	0.50	0.56	1	01/29/08	01/29/08	
Biochemical Oxygen Demand	J/DNG EPA 405.1	8A25151	0.59	2.0	1.1	1	01/25/08	01/30/08	J
Chloride	* EPA 300.0	8A25053	0.25	0.50	28	1	01/25/08	01/25/08	
Fluoride	EPA 340.2	8A28117	0.014	0.10	0.33	1	01/28/08	01/28/08	
Nitrate-N	EPA 300.0	8A25053	0.060	0.11	0.67	1	01/25/08	01/25/08	
Nitrite-N	EPA 300.0	8A25053	0.090	0.15	ND	1	01/25/08	01/25/08	
Nitrate/Nitrite-N	EPA 300.0	8A25053	0.15	0.26	0.67	1	01/25/08	01/25/08	
Sulfate	EPA 300.0	8A25053	0.20	0.50	4.5	1	01/25/08	01/25/08	
Total Dissolved Solids	SM2540C	8A31077	10	10	90	1	01/31/08	01/31/08	
Total Suspended Solids	EPA 160.2	8A30131	10	10	ND	1	01/30/08	01/30/08	

**Sample ID: IRA2504-01 (OUTFALL 012 - Water)**

Reporting Units: ml/hr

Total Settleable Solids	* EPA 160.5	8A26035	0.10	0.10	ND	1	01/26/08	01/26/08	
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**Sample ID: IRA2504-01 (OUTFALL 012 - Water)**

Reporting Units: NTU

Turbidity	EPA 180.1	8A26036	0.040	1.0	18	1	01/26/08	01/26/08	
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**Sample ID: IRA2504-01 (OUTFALL 012 - Water)**

Reporting Units: ug/l

Perchlorate	* EPA 314.0	8A31079	1.5	4.0	ND	1	01/31/08	01/31/08	
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\* Analysis not validated

LEVEL IV

TestAmerica Irvine

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 Project Manager

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# **APPENDIX G**

## **Section 82**

Outfall 012, January 25, 2008

Test America Analytical Laboratory Report

## LABORATORY REPORT

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

Project: Routine Outfall 012

Sampled: 01/25/08  
Received: 01/25/08  
Revised: 02/27/08 16:02

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(s) of Custody, 2 pages, are included and are an integral part of this report.*

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

### CASE NARRATIVE

**SAMPLE RECEIPT:** Samples were received intact, at 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.

Please note for Perchlorate (E314.0) analysis (Batch# 8A31079) due to instrument issues a MS/SD could not be reported, only a Method Blank and LCS has been provided.

**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:** This report was revised to correct reported carbon range for EFH.

#### LABORATORY ID

IRA2504-01  
IRA2504-02

#### CLIENT ID

OUTFALL 012  
TRIP BLANK

#### MATRIX

Water  
Water

Reviewed By:



**TestAmerica Irvine**

Joseph Doak  
Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08

Received: 01/25/08

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	8A30108	0.094	0.47	ND	0.943	01/30/08	01/31/08	
Surrogate: n-Octacosane (40-125%)					82 %				

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IRA2504 <Page 2 of 29>  
NPDES - 3085

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08

Received: 01/25/08

## VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015 Mod.	8A31005	25	100	ND	1	01/31/08	01/31/08	
Surrogate: 4-BFB (FID) (65-140%)					101 %				

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NPDES - 3086

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
Received: 01/25/08

## VOLATILE ORGANICS by GCMS SIM

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B-SIM	8A30014	1.0	2.0	ND	1	01/30/08	01/30/08	
Surrogate: Dibromofluoromethane (80-120%)					99 %				

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NPDES - 3087

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## 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: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
1,2-Dibromoethane (EDB)	EPA 624	8A29023	0.40	2.0	ND	1	01/29/08	01/30/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8A29023	0.32	5.0	ND	1	01/29/08	01/30/08	
1,2,3-Trichloropropane	EPA 624	8A29023	0.40	10	ND	1	01/29/08	01/30/08	
Di-isopropyl Ether (DIPE)	EPA 624	8A29023	0.25	5.0	ND	1	01/29/08	01/30/08	
tert-Butanol (TBA)	EPA 624	8A29023	4.9	25	ND	1	01/29/08	01/30/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					88 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					94 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					85 %				
<b>Sample ID: IRA2504-02 (TRIP BLANK - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,2-Dibromoethane (EDB)	EPA 624	8A30025	0.40	2.0	ND	1	01/30/08	01/30/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8A30025	0.32	5.0	ND	1	01/30/08	01/30/08	
1,2,3-Trichloropropane	EPA 624	8A30025	0.40	10	ND	1	01/30/08	01/30/08	
Di-isopropyl Ether (DIPE)	EPA 624	8A30025	0.25	5.0	ND	1	01/30/08	01/30/08	
tert-Butanol (TBA)	EPA 624	8A30025	4.9	25	ND	1	01/30/08	01/30/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					109 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					100 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					90 %				

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 Project Manager

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## 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: IRA2504-01 (OUTFALL 012 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Naphthalene	EPA 625	8A27022	3.0	9.9	ND	0.99	01/27/08	01/30/08	
N-Nitrosodimethylamine	EPA 625	8A27022	2.5	20	ND	0.99	01/27/08	01/30/08	C
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					77 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					83 %				
<i>Surrogate: 2,4,6-Tribromophenol (40-120%)</i>					64 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					87 %				
<i>Surrogate: 2-Fluorobiphenyl (50-120%)</i>					86 %				
<i>Surrogate: Terphenyl-d14 (50-125%)</i>					95 %				

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron	EPA 200.7	8A26039	0.020	0.050	ND	1	01/26/08	01/28/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8A29075	0.11	1.0	<b>0.49</b>	1	01/29/08	01/29/08	J
Copper	EPA 200.8	8A29075	0.75	2.0	<b>3.0</b>	1	01/29/08	01/29/08	
Lead	EPA 200.8	8A29075	0.30	1.0	<b>1.1</b>	1	01/29/08	01/29/08	
Selenium	EPA 200.8	8A29075	0.30	2.0	ND	1	01/29/08	01/29/08	
Zinc	EPA 200.8	8A29075	2.5	20	<b>44</b>	1	01/29/08	01/29/08	

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron	EPA 200.7-Diss	8A25155	0.020	0.050	ND	1	01/25/08	01/26/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
Reporting Units: ug/l									
<b>Cadmium</b>	EPA 200.8-Diss	8A25156	0.11	1.0	<b>0.33</b>	1	01/25/08	01/26/08	J
<b>Copper</b>	EPA 200.8-Diss	8A25156	0.75	2.0	<b>1.9</b>	1	01/25/08	01/26/08	J
Lead	EPA 200.8-Diss	8A25156	0.30	1.0	ND	1	01/25/08	01/26/08	
Selenium	EPA 200.8-Diss	8A25156	0.30	2.0	ND	1	01/25/08	01/26/08	
<b>Zinc</b>	EPA 200.8-Diss	8A25156	2.5	20	<b>21</b>	1	01/25/08	01/26/08	

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B04061	1.3	4.8	ND	1	02/04/08	02/04/08	
<b>Ammonia-N (Distilled)</b>	EPA 350.2	8A29110	0.30	0.50	<b>0.56</b>	1	01/29/08	01/29/08	
<b>Biochemical Oxygen Demand</b>	EPA 405.1	8A25151	0.59	2.0	<b>1.1</b>	1	01/25/08	01/30/08	J
<b>Chloride</b>	EPA 300.0	8A25053	0.25	0.50	<b>28</b>	1	01/25/08	01/25/08	
<b>Fluoride</b>	EPA 340.2	8A28117	0.014	0.10	<b>0.33</b>	1	01/28/08	01/28/08	
<b>Nitrate-N</b>	EPA 300.0	8A25053	0.060	0.11	<b>0.67</b>	1	01/25/08	01/25/08	
<b>Nitrite-N</b>	EPA 300.0	8A25053	0.090	0.15	ND	1	01/25/08	01/25/08	
<b>Nitrate/Nitrite-N</b>	EPA 300.0	8A25053	0.15	0.26	<b>0.67</b>	1	01/25/08	01/25/08	
<b>Sulfate</b>	EPA 300.0	8A25053	0.20	0.50	<b>4.5</b>	1	01/25/08	01/25/08	
<b>Total Dissolved Solids</b>	SM2540C	8A31077	10	10	<b>90</b>	1	01/31/08	01/31/08	
Total Suspended Solids	EPA 160.2	8A30131	10	10	ND	1	01/30/08	01/30/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
<b>Reporting Units: ml/hr</b>									
Total Settleable Solids	EPA 160.5	8A26035	0.10	0.10	ND	1	01/26/08	01/26/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
<b>Reporting Units: NTU</b>									
Turbidity	EPA 180.1	8A26036	0.040	1.0	<b>18</b>	1	01/26/08	01/26/08	
<b>Sample ID: IRA2504-01 (OUTFALL 012 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Perchlorate	EPA 314.0	8A31079	1.5	4.0	ND	1	01/31/08	01/31/08	

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08

Received: 01/25/08

## 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: IRA2504-01 (OUTFALL 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8A1053	0.050	0.20	ND	1	01/30/08	01/31/08	
Mercury, Total	EPA 245.1	W8A1053	0.050	0.20	ND	1	01/30/08	01/31/08	

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NPDES - 3093

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
Received: 01/25/08

## SHORT HOLD TIME DETAIL REPORT

	<b>Hold Time (in days)</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>	<b>Date/Time Extracted</b>	<b>Date/Time Analyzed</b>
<b>Sample ID: OUTFALL 012 (IRA2504-01) - Water</b>					
EPA 160.5	2	01/25/2008 13:45	01/25/2008 18:20	01/26/2008 13:00	01/26/2008 13:00
EPA 180.1	2	01/25/2008 13:45	01/25/2008 18:20	01/26/2008 16:00	01/26/2008 16:00
EPA 300.0	2	01/25/2008 13:45	01/25/2008 18:20	01/25/2008 20:00	01/25/2008 21:25
EPA 405.1	2	01/25/2008 13:45	01/25/2008 18:20	01/25/2008 20:58	01/30/2008 15:00

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**NPDES - 3094**

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METHOD BLANK/QC DATA

### EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A30108 Extracted: 01/30/08</b>											
<b>Blank Analyzed: 01/31/2008 (8A30108-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.10	mg/l							
Surrogate: n-Octacosane	0.159			mg/l	0.200		80	40-125			
<b>LCS Analyzed: 01/31/2008 (8A30108-BS1)</b>											
EFH (C13 - C40)	0.539	0.50	0.10	mg/l	0.750		72	40-115			MNR1
Surrogate: n-Octacosane	0.150			mg/l	0.200		75	40-125			
<b>LCS Dup Analyzed: 01/31/2008 (8A30108-BSD1)</b>											
EFH (C13 - C40)	0.505	0.50	0.10	mg/l	0.750		67	40-115	6	25	
Surrogate: n-Octacosane	0.145			mg/l	0.200		72	40-125			

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METHOD BLANK/QC DATA

### VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A31005 Extracted: 01/31/08</b>											
<b>Blank Analyzed: 01/31/2008 (8A31005-BLK1)</b>											
GRO (C4 - C12)	ND	100	25	ug/l							
Surrogate: 4-BFB (FID)	10.6			ug/l	10.0		106	65-140			
<b>LCS Analyzed: 01/31/2008 (8A31005-BS1)</b>											
GRO (C4 - C12)	875	100	25	ug/l	800		109	80-120			
Surrogate: 4-BFB (FID)	16.0			ug/l	10.0		160	65-140			ZX
<b>Matrix Spike Analyzed: 01/31/2008 (8A31005-MS1)</b>											
						<b>Source: IRA2348-21</b>					
GRO (C4 - C12)	237	100	25	ug/l	220	ND	108	65-140			
Surrogate: 4-BFB (FID)	11.9			ug/l	10.0		119	65-140			
<b>Matrix Spike Dup Analyzed: 01/31/2008 (8A31005-MSD1)</b>											
						<b>Source: IRA2348-21</b>					
GRO (C4 - C12)	244	100	25	ug/l	220	ND	111	65-140	3	20	
Surrogate: 4-BFB (FID)	12.0			ug/l	10.0		120	65-140			

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METHOD BLANK/QC DATA

### VOLATILE ORGANICS by GCMS SIM

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A30014 Extracted: 01/30/08</b>											
<b>Blank Analyzed: 01/30/2008 (8A30014-BLK1)</b>											
1,4-Dioxane	ND	2.0	1.0	ug/l							
Surrogate: Dibromofluoromethane	0.960			ug/l	1.00		96	80-120			
<b>LCS Analyzed: 01/30/2008 (8A30014-BS1)</b>											
1,4-Dioxane	8.70	2.0	1.0	ug/l	10.0		87	70-125			
Surrogate: Dibromofluoromethane	0.960			ug/l	1.00		96	80-120			
<b>Matrix Spike Analyzed: 01/30/2008 (8A30014-MS1) Source: IRA2845-01</b>											
1,4-Dioxane	10.4	2.0	1.0	ug/l	10.0	1.67	88	70-130			
Surrogate: Dibromofluoromethane	1.04			ug/l	1.00		104	80-120			
<b>Matrix Spike Dup Analyzed: 01/30/2008 (8A30014-MSD1) Source: IRA2845-01</b>											
1,4-Dioxane	10.7	2.0	1.0	ug/l	10.0	1.67	91	70-130	3	30	
Surrogate: Dibromofluoromethane	1.05			ug/l	1.00		105	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: 8A29023 Extracted: 01/29/08</b>											
<b>Blank Analyzed: 01/29/2008 (8A29023-BLK1)</b>											
1,2-Dibromoethane (EDB)	ND	2.0	0.40	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
1,2,3-Trichloropropane	ND	10	0.40	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
tert-Butanol (TBA)	ND	25	4.9	ug/l							
Surrogate: Dibromofluoromethane	21.2			ug/l	25.0		85	80-120			
Surrogate: Toluene-d8	23.2			ug/l	25.0		93	80-120			
Surrogate: 4-Bromofluorobenzene	21.2			ug/l	25.0		85	80-120			
<b>LCS Analyzed: 01/29/2008 (8A29023-BS1)</b>											
1,2-Dibromoethane (EDB)	27.1	2.0	0.40	ug/l	25.0		108	75-125			
Methyl-tert-butyl Ether (MTBE)	25.6	5.0	0.32	ug/l	25.0		102	60-135			
1,2,3-Trichloropropane	26.1	10	0.40	ug/l	25.0		104	60-130			
Di-isopropyl Ether (DIPE)	25.8	5.0	0.25	ug/l	25.0		103	60-135			
tert-Butanol (TBA)	145	25	4.9	ug/l	125		116	70-135			
Surrogate: Dibromofluoromethane	21.7			ug/l	25.0		87	80-120			
Surrogate: Toluene-d8	23.5			ug/l	25.0		94	80-120			
Surrogate: 4-Bromofluorobenzene	22.1			ug/l	25.0		88	80-120			
<b>Matrix Spike Analyzed: 01/29/2008 (8A29023-MS1)</b>					<b>Source: IRA2444-10</b>						
1,2-Dibromoethane (EDB)	25.8	2.0	0.40	ug/l	25.0	ND	103	70-130			
Methyl-tert-butyl Ether (MTBE)	25.5	5.0	0.32	ug/l	25.0	0.420	100	55-145			
1,2,3-Trichloropropane	26.1	10	0.40	ug/l	25.0	ND	104	55-135			
Di-isopropyl Ether (DIPE)	24.7	5.0	0.25	ug/l	25.0	ND	99	60-140			
tert-Butanol (TBA)	130	25	4.9	ug/l	125	ND	104	65-140			
Surrogate: Dibromofluoromethane	22.3			ug/l	25.0		89	80-120			
Surrogate: Toluene-d8	23.7			ug/l	25.0		95	80-120			
Surrogate: 4-Bromofluorobenzene	22.0			ug/l	25.0		88	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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A29023 Extracted: 01/29/08</b>											
<b>Matrix Spike Dup Analyzed: 01/29/2008 (8A29023-MSD1)</b>						<b>Source: IRA2444-10</b>					
1,2-Dibromoethane (EDB)	26.0	2.0	0.40	ug/l	25.0	ND	104	70-130	1	25	
Methyl-tert-butyl Ether (MTBE)	24.7	5.0	0.32	ug/l	25.0	0.420	97	55-145	3	25	
1,2,3-Trichloropropane	25.3	10	0.40	ug/l	25.0	ND	101	55-135	3	30	
Di-isopropyl Ether (DIPE)	24.0	5.0	0.25	ug/l	25.0	ND	96	60-140	3	25	
tert-Butanol (TBA)	132	25	4.9	ug/l	125	ND	106	65-140	2	25	
Surrogate: Dibromofluoromethane	21.4			ug/l	25.0		85	80-120			
Surrogate: Toluene-d8	23.5			ug/l	25.0		94	80-120			
Surrogate: 4-Bromofluorobenzene	22.0			ug/l	25.0		88	80-120			

### Batch: 8A30025 Extracted: 01/30/08

#### Blank Analyzed: 01/30/2008 (8A30025-BLK1)

1,2-Dibromoethane (EDB)	ND	2.0	0.40	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
1,2,3-Trichloropropane	ND	10	0.40	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
tert-Butanol (TBA)	ND	25	4.9	ug/l							
Surrogate: Dibromofluoromethane	26.2			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	22.5			ug/l	25.0		90	80-120			

#### LCS Analyzed: 01/30/2008 (8A30025-BS1)

1,2-Dibromoethane (EDB)	24.3	2.0	0.40	ug/l	25.0		97	75-125			
Methyl-tert-butyl Ether (MTBE)	26.0	5.0	0.32	ug/l	25.0		104	60-135			
1,2,3-Trichloropropane	25.2	10	0.40	ug/l	25.0		101	60-130			
Di-isopropyl Ether (DIPE)	29.9	5.0	0.25	ug/l	25.0		120	60-135			
tert-Butanol (TBA)	126	25	4.9	ug/l	125		101	70-135			
Surrogate: Dibromofluoromethane	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	25.1			ug/l	25.0		100	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: 8A30025 Extracted: 01/30/08</b>											
<b>Matrix Spike Analyzed: 01/30/2008 (8A30025-MS1)</b>						<b>Source: IRA2506-01</b>					
1,2-Dibromoethane (EDB)	27.2	2.0	0.40	ug/l	25.0	ND	109	70-130			
Methyl-tert-butyl Ether (MTBE)	29.1	5.0	0.32	ug/l	25.0	ND	116	55-145			
1,2,3-Trichloropropane	29.7	10	0.40	ug/l	25.0	ND	119	55-135			
Di-isopropyl Ether (DIPE)	33.1	5.0	0.25	ug/l	25.0	ND	132	60-140			
tert-Butanol (TBA)	140	25	4.9	ug/l	125	ND	112	65-140			
Surrogate: Dibromofluoromethane	26.9			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	24.7			ug/l	25.0		99	80-120			
<b>Matrix Spike Dup Analyzed: 01/30/2008 (8A30025-MSD1)</b>						<b>Source: IRA2506-01</b>					
1,2-Dibromoethane (EDB)	27.0	2.0	0.40	ug/l	25.0	ND	108	70-130	1	25	
Methyl-tert-butyl Ether (MTBE)	28.6	5.0	0.32	ug/l	25.0	ND	114	55-145	2	25	
1,2,3-Trichloropropane	29.0	10	0.40	ug/l	25.0	ND	116	55-135	2	30	
Di-isopropyl Ether (DIPE)	32.6	5.0	0.25	ug/l	25.0	ND	131	60-140	1	25	
tert-Butanol (TBA)	138	25	4.9	ug/l	125	ND	110	65-140	2	25	
Surrogate: Dibromofluoromethane	27.0			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	24.5			ug/l	25.0		98	80-120			

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A27022 Extracted: 01/27/08</b>											
<b>Blank Analyzed: 01/30/2008 (8A27022-BLK1)</b>											
Naphthalene	ND	10	3.0	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
Surrogate: 2-Fluorophenol	156			ug/l	200		78	30-120			
Surrogate: Phenol-d6	165			ug/l	200		83	35-120			
Surrogate: 2,4,6-Tribromophenol	137			ug/l	200		68	40-120			
Surrogate: Nitrobenzene-d5	81.1			ug/l	100		81	45-120			
Surrogate: 2-Fluorobiphenyl	82.2			ug/l	100		82	50-120			
Surrogate: Terphenyl-d14	90.5			ug/l	100		90	50-125			
<b>LCS Analyzed: 01/30/2008 (8A27022-BS1)</b>											
Naphthalene	83.9	10	3.0	ug/l	100		84	55-120			MNR1
N-Nitrosodimethylamine	97.3	20	2.5	ug/l	100		97	45-120			
Surrogate: 2-Fluorophenol	159			ug/l	200		80	30-120			
Surrogate: Phenol-d6	162			ug/l	200		81	35-120			
Surrogate: 2,4,6-Tribromophenol	154			ug/l	200		77	40-120			
Surrogate: Nitrobenzene-d5	82.2			ug/l	100		82	45-120			
Surrogate: 2-Fluorobiphenyl	85.7			ug/l	100		86	50-120			
Surrogate: Terphenyl-d14	109			ug/l	100		109	50-125			
<b>LCS Dup Analyzed: 01/30/2008 (8A27022-BSD1)</b>											
Naphthalene	90.1	10	3.0	ug/l	100		90	55-120	7	20	
N-Nitrosodimethylamine	104	20	2.5	ug/l	100		104	45-120	7	20	
Surrogate: 2-Fluorophenol	163			ug/l	200		81	30-120			
Surrogate: Phenol-d6	176			ug/l	200		88	35-120			
Surrogate: 2,4,6-Tribromophenol	152			ug/l	200		76	40-120			
Surrogate: Nitrobenzene-d5	88.3			ug/l	100		88	45-120			
Surrogate: 2-Fluorobiphenyl	85.1			ug/l	100		85	50-120			
Surrogate: Terphenyl-d14	98.7			ug/l	100		99	50-125			

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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8A26039 Extracted: 01/26/08</u></b>											
<b>Blank Analyzed: 01/28/2008 (8A26039-BLK1)</b>											
Boron	ND	0.050	0.020	mg/l							
<b>LCS Analyzed: 01/28/2008 (8A26039-BS1)</b>											
Boron	0.523	0.050	0.020	mg/l	0.500		105	85-115			
<b>Matrix Spike Analyzed: 01/28/2008 (8A26039-MS1)</b>											
						<b>Source: IRA2527-01</b>					
Boron	0.569	0.050	0.020	mg/l	0.500	0.0518	103	70-130			
<b>Matrix Spike Analyzed: 01/28/2008 (8A26039-MS2)</b>											
						<b>Source: IRA2510-03</b>					
Boron	0.641	0.050	0.020	mg/l	0.500	0.126	103	70-130			
<b>Matrix Spike Dup Analyzed: 01/28/2008 (8A26039-MSD1)</b>											
						<b>Source: IRA2527-01</b>					
Boron	0.559	0.050	0.020	mg/l	0.500	0.0518	101	70-130	2	20	
<b><u>Batch: 8A29075 Extracted: 01/29/08</u></b>											
<b>Blank Analyzed: 01/29/2008 (8A29075-BLK1)</b>											
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Selenium	ND	2.0	0.30	ug/l							
Zinc	ND	20	2.5	ug/l							
<b>LCS Analyzed: 01/29/2008 (8A29075-BS1)</b>											
Cadmium	82.4	1.0	0.11	ug/l	80.0		103	85-115			
Copper	82.6	2.0	0.75	ug/l	80.0		103	85-115			
Lead	82.4	1.0	0.30	ug/l	80.0		103	85-115			
Selenium	83.1	2.0	0.30	ug/l	80.0		104	85-115			
Zinc	83.2	20	2.5	ug/l	80.0		104	85-115			

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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A29075 Extracted: 01/29/08</b>											
<b>Matrix Spike Analyzed: 01/29/2008 (8A29075-MS1)</b>						<b>Source: IRA2504-01</b>					
Cadmium	78.1	1.0	0.11	ug/l	80.0	0.487	97	70-130			
Copper	82.6	2.0	0.75	ug/l	80.0	2.96	100	70-130			
Lead	78.7	1.0	0.30	ug/l	80.0	1.12	97	70-130			
Selenium	76.1	2.0	0.30	ug/l	80.0	ND	95	70-130			
Zinc	120	20	2.5	ug/l	80.0	43.5	96	70-130			
<b>Matrix Spike Dup Analyzed: 01/29/2008 (8A29075-MSD1)</b>						<b>Source: IRA2504-01</b>					
Cadmium	77.4	1.0	0.11	ug/l	80.0	0.487	96	70-130	1	20	
Copper	81.7	2.0	0.75	ug/l	80.0	2.96	98	70-130	1	20	
Lead	78.8	1.0	0.30	ug/l	80.0	1.12	97	70-130	0	20	
Selenium	75.2	2.0	0.30	ug/l	80.0	ND	94	70-130	1	20	
Zinc	118	20	2.5	ug/l	80.0	43.5	93	70-130	2	20	

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## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8A25155 Extracted: 01/25/08</u></b>											
<b>Blank Analyzed: 01/26/2008 (8A25155-BLK1)</b>											
Boron	ND	0.050	0.020	mg/l							
<b>LCS Analyzed: 01/26/2008 (8A25155-BS1)</b>											
Boron	1.01	0.050	0.020	mg/l	1.00		101	85-115			
<b>Matrix Spike Analyzed: 01/26/2008 (8A25155-MS1)</b>											
						<b>Source: IRA2496-01</b>					
Boron	1.08	0.050	0.020	mg/l	1.00	0.0541	102	70-130			
<b>Matrix Spike Dup Analyzed: 01/26/2008 (8A25155-MSD1)</b>											
						<b>Source: IRA2496-01</b>					
Boron	1.05	0.050	0.020	mg/l	1.00	0.0541	100	70-130	3	20	
<b><u>Batch: 8A25156 Extracted: 01/25/08</u></b>											
<b>Blank Analyzed: 01/26/2008 (8A25156-BLK1)</b>											
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Selenium	ND	2.0	0.30	ug/l							
Zinc	ND	20	2.5	ug/l							
<b>LCS Analyzed: 01/26/2008 (8A25156-BS1)</b>											
Cadmium	80.4	1.0	0.11	ug/l	80.0		101	85-115			
Copper	80.8	2.0	0.75	ug/l	80.0		101	85-115			
Lead	84.6	1.0	0.30	ug/l	80.0		106	85-115			
Selenium	84.8	2.0	0.30	ug/l	80.0		106	85-115			
Zinc	81.9	20	2.5	ug/l	80.0		102	85-115			

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## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8A25156 Extracted: 01/25/08</b>											
<b>Matrix Spike Analyzed: 01/26/2008 (8A25156-MS1)</b>						<b>Source: IRA2497-01</b>					
Cadmium	83.4	1.0	0.11	ug/l	80.0	ND	104	70-130			
Copper	85.3	2.0	0.75	ug/l	80.0	2.94	103	70-130			
Lead	84.7	1.0	0.30	ug/l	80.0	0.920	105	70-130			
Selenium	91.8	2.0	0.30	ug/l	80.0	ND	115	70-130			
Zinc	93.0	20	2.5	ug/l	80.0	8.40	106	70-130			
<b>Matrix Spike Dup Analyzed: 01/26/2008 (8A25156-MSD1)</b>						<b>Source: IRA2497-01</b>					
Cadmium	83.4	1.0	0.11	ug/l	80.0	ND	104	70-130	0	20	
Copper	83.7	2.0	0.75	ug/l	80.0	2.94	101	70-130	2	20	
Lead	86.0	1.0	0.30	ug/l	80.0	0.920	106	70-130	2	20	
Selenium	90.0	2.0	0.30	ug/l	80.0	ND	112	70-130	2	20	
Zinc	94.1	20	2.5	ug/l	80.0	8.40	107	70-130	1	20	

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Joseph Doak  
 Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## 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: 8A25053 Extracted: 01/25/08</b>											
<b>Blank Analyzed: 01/25/2008 (8A25053-BLK1)</b>											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
<b>LCS Analyzed: 01/25/2008 (8A25053-BS1)</b>											
Chloride	4.93	0.50	0.25	mg/l	5.00		99	90-110			
Nitrate-N	1.18	0.11	0.060	mg/l	1.13		105	90-110			
Nitrite-N	1.53	0.15	0.090	mg/l	1.52		101	90-110			
Sulfate	10.2	0.50	0.20	mg/l	10.0		102	90-110			
<b>Matrix Spike Analyzed: 01/25/2008 (8A25053-MS1) Source: IRA2375-01</b>											
Chloride	9.73	0.50	0.25	mg/l	5.00	4.99	95	80-120			
Nitrate-N	4.04	0.11	0.060	mg/l	1.13	2.87	104	80-120			
Nitrite-N	1.53	0.15	0.090	mg/l	1.52	ND	100	80-120			
Sulfate	25.6	0.50	0.20	mg/l	10.0	15.9	96	80-120			
<b>Matrix Spike Analyzed: 01/25/2008 (8A25053-MS2) Source: IRA2478-01</b>											
Chloride	12.3	0.50	0.25	mg/l	5.00	7.60	95	80-120			
Nitrate-N	3.39	0.11	0.060	mg/l	1.13	2.15	110	80-120			
Nitrite-N	1.58	0.15	0.090	mg/l	1.52	ND	104	80-120			
Sulfate	19.9	0.50	0.20	mg/l	10.0	9.44	104	80-120			
<b>Matrix Spike Dup Analyzed: 01/25/2008 (8A25053-MSD1) Source: IRA2375-01</b>											
Chloride	9.76	0.50	0.25	mg/l	5.00	4.99	95	80-120	0	20	
Nitrate-N	4.05	0.11	0.060	mg/l	1.13	2.87	104	80-120	0	20	
Nitrite-N	1.53	0.15	0.090	mg/l	1.52	ND	100	80-120	0	20	
Sulfate	25.7	0.50	0.20	mg/l	10.0	15.9	98	80-120	1	20	

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8A25151 Extracted: 01/25/08</u></b>											
<b>Blank Analyzed: 01/30/2008 (8A25151-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 01/30/2008 (8A25151-BS1)</b>											
Biochemical Oxygen Demand	196	100	30	mg/l	198		99	85-115			
<b>LCS Dup Analyzed: 01/30/2008 (8A25151-BSD1)</b>											
Biochemical Oxygen Demand	198	100	30	mg/l	198		100	85-115	2	20	
<b><u>Batch: 8A26036 Extracted: 01/26/08</u></b>											
<b>Blank Analyzed: 01/26/2008 (8A26036-BLK1)</b>											
Turbidity	0.0900	1.0	0.040	NTU							J
<b>Duplicate Analyzed: 01/26/2008 (8A26036-DUP1)</b>											
Turbidity	1.82	1.0	0.040	NTU		Source: IRA2525-03 1.88			3	20	
<b><u>Batch: 8A28117 Extracted: 01/28/08</u></b>											
<b>Blank Analyzed: 01/28/2008 (8A28117-BLK1)</b>											
Fluoride	0.0329	0.10	0.014	mg/l							J
<b>LCS Analyzed: 01/28/2008 (8A28117-BS1)</b>											
Fluoride	1.07	0.10	0.014	mg/l	1.00		107	90-110			
<b>Matrix Spike Analyzed: 01/28/2008 (8A28117-MS1)</b>											
Fluoride	2.31	0.10	0.014	mg/l	2.00	Source: IRA2355-01 0.299	100	80-120			

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8A28117 Extracted: 01/28/08</u></b>											
<b>Matrix Spike Dup Analyzed: 01/28/2008 (8A28117-MSD1)</b>						<b>Source: IRA2355-01</b>					
Fluoride	2.41	0.10	0.014	mg/l	2.00	0.299	106	80-120	5	20	
<b><u>Batch: 8A29110 Extracted: 01/29/08</u></b>											
<b>Blank Analyzed: 01/29/2008 (8A29110-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 01/29/2008 (8A29110-BS1)</b>											
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0		101	80-115			
<b>Matrix Spike Analyzed: 01/29/2008 (8A29110-MS1)</b>						<b>Source: IRA2355-01</b>					
Ammonia-N (Distilled)	10.4	0.50	0.30	mg/l	10.0	ND	104	70-120			
<b>Matrix Spike Dup Analyzed: 01/29/2008 (8A29110-MSD1)</b>						<b>Source: IRA2355-01</b>					
Ammonia-N (Distilled)	10.6	0.50	0.30	mg/l	10.0	ND	106	70-120	3	15	
<b><u>Batch: 8A30131 Extracted: 01/30/08</u></b>											
<b>Blank Analyzed: 01/30/2008 (8A30131-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/30/2008 (8A30131-BS1)</b>											
Total Suspended Solids	953	10	10	mg/l	1000		95	85-115			
<b>Duplicate Analyzed: 01/30/2008 (8A30131-DUP1)</b>						<b>Source: IRA2772-01</b>					
Total Suspended Solids	3120	10	10	mg/l		3060			2	10	

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 8A31077 Extracted: 01/31/08</u></b>											
<b>Blank Analyzed: 01/31/2008 (8A31077-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/31/2008 (8A31077-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 01/31/2008 (8A31077-DUP1)</b>											
Total Dissolved Solids	ND	10	10	mg/l		Source: IRA2619-03 ND				10	
<b><u>Batch: 8A31079 Extracted: 01/31/08</u></b>											
<b>Blank Analyzed: 01/31/2008 (8A31079-BLK1)</b>											
Perchlorate	ND	4.0	1.5	ug/l							
<b>LCS Analyzed: 01/31/2008 (8A31079-BS1)</b>											
Perchlorate	52.0	4.0	1.5	ug/l	50.0		104	85-115			NI
<b><u>Batch: 8B04061 Extracted: 02/04/08</u></b>											
<b>Blank Analyzed: 02/04/2008 (8B04061-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	1.40	5.0	1.4	mg/l							J
<b>LCS Analyzed: 02/04/2008 (8B04061-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	19.5	5.0	1.4	mg/l	20.2		97	78-114			MNRI
<b>LCS Dup Analyzed: 02/04/2008 (8B04061-BSD1)</b>											
Hexane Extractable Material (Oil & Grease)	18.2	5.0	1.4	mg/l	20.2		90	78-114	7	11	

TestAmerica Irvine

Joseph Doak  
 Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
 Received: 01/25/08

## 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: W8A1053 Extracted: 01/30/08</b>											
<b>Blank Analyzed: 01/31/2008 (W8A1053-BLK1)</b>											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 01/31/2008 (W8A1053-BS1)</b>											
Mercury, Dissolved	0.930	0.20	0.050	ug/l	1.00		93	85-115			
Mercury, Total	0.930	0.20	0.050	ug/l	1.00		93	85-115			
<b>Matrix Spike Analyzed: 01/31/2008 (W8A1053-MS1) Source: 8012822-01</b>											
Mercury, Dissolved	1.38	0.20	0.050	ug/l	1.00	0.431	95	70-130			
Mercury, Total	1.38	0.20	0.050	ug/l	1.00	0.431	95	70-130			
<b>Matrix Spike Analyzed: 01/31/2008 (W8A1053-MS2) Source: 8012822-02</b>											
Mercury, Dissolved	1.37	0.20	0.050	ug/l	1.00	0.426	94	70-130			
Mercury, Total	1.37	0.20	0.050	ug/l	1.00	0.426	94	70-130			
<b>Matrix Spike Dup Analyzed: 01/31/2008 (W8A1053-MSD1) Source: 8012822-01</b>											
Mercury, Dissolved	1.35	0.20	0.050	ug/l	1.00	0.431	92	70-130	2	20	
Mercury, Total	1.35	0.20	0.050	ug/l	1.00	0.431	92	70-130	2	20	
<b>Matrix Spike Dup Analyzed: 01/31/2008 (W8A1053-MSD2) Source: 8012822-02</b>											
Mercury, Dissolved	1.40	0.20	0.050	ug/l	1.00	0.426	97	70-130	2	20	
Mercury, Total	1.40	0.20	0.050	ug/l	1.00	0.426	97	70-130	2	20	

TestAmerica Irvine

Joseph Doak  
 Project Manager

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
Received: 01/25/08

## DATA QUALIFIERS AND DEFINITIONS

- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- N1** See case narrative.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

## ADDITIONAL COMMENTS

**For GRO (C4-C12):**

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

**For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :**

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

**TestAmerica Irvine**

Joseph Doak  
Project Manager

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**IRA2504 <Page 28 of 29>**  
**NPDES - 3111**

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

Project ID: Routine Outfall 012

Report Number: IRA2504

Sampled: 01/25/08  
Received: 01/25/08

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 1664A	Water		
EPA 180.1	Water	X	X
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 340.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B-SIM	Water		
SM2540C	Water	X	

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

### Subcontracted Laboratories

#### Vista 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: IRA2504-01

#### Weck Laboratories, Inc

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

Method Performed: EPA 245.1  
Samples: IRA2504-01

### TestAmerica Irvine

Joseph Doak  
Project Manager

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IRA 2504

# CHAIN OF CUSTODY FORM

IRA 2504

Test America Version 12/20/07

Client Name/Address		Project		ANALYSIS REQUIRED										Field readings											
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Boeing-SSFL NPDES Routine Outfall 012 Alpha Test Stand		Oil & Grease (1664-HEM)	8015 - gas	8015 - diesel/jet fuel	TRPH = Total Rec. Petroleum Hydrocarbons (8015)	1,4-Dioxane (8260B)	BOD <sub>5</sub> (20 degrees C)	625 (Naphthalene + NDMA analyses)	Ammoria-N (350.2)	Cl <sup>-</sup> , SO <sub>4</sub> <sup>2-</sup> , NO <sub>3</sub> +NO <sub>2</sub> -N, Perchlorate	Nitrate-N, Nitrite-N	Temp = 47.3											
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Sampling Date/Time	8015 - gas	8015 - diesel/jet fuel	TRPH = Total Rec. Petroleum Hydrocarbons (8015)	1,4-Dioxane (8260B)	BOD <sub>5</sub> (20 degrees C)	625 (Naphthalene + NDMA analyses)	Ammoria-N (350.2)	Cl <sup>-</sup> , SO <sub>4</sub> <sup>2-</sup> , NO <sub>3</sub> +NO <sub>2</sub> -N, Perchlorate	Nitrate-N, Nitrite-N	Temp = 47.3	pH = 7.4	Time of readings =	Comments		
Outfall 012	W	1L Amber	1	HCl	1A	1-25-08 1345	X																		
Outfall 012 Dup	W	1L Amber	1	HCl	1B		X																		
Outfall 012	W	VOAs	1	HCl	2A		X																		
Outfall 012 Dup	W	VOAs	2	HCl	2B, 2C		X																		
Outfall 012	W	1L Amber	1	None	3A						X														
Outfall 012 Dup	W	1L Amber	1	None	3B						X														
Outfall 012	W	1L Amber	1	HCl	4A							X													
Outfall 012 Dup	W	1L Amber	1	HCl	4B							X													
Outfall 012	W	VOAs	1	HCl	5A								X												
Outfall 012 Dup	W	VOAs	2	HCl	5B, 5C								X												
Outfall 012	W	1L Poly	1	None	6									X											
Outfall 012 Dup	W	1L Amber	1	None	7A											X									
Outfall 012 Dup	W	1L Amber	1	None	7B											X									
Outfall 012	W	500 ml Poly	1	H <sub>2</sub> SO <sub>4</sub>	8												X								
Outfall 012 Dup	W	500 ml Poly	2	None	9A, 9B													X							
Outfall 012 Dup	W	500 ml Poly	1	None	10														X						
Relinquished By		Date/Time:		Received By		Date/Time:		8015 - gas		Date/Time:		Turn around Time: (check)		24 Hours		48 Hours		72 Hours		Sample Integrity: (check)		Intact		On Ice:	
Ben		1-25-08 1510		Jubian THI		1/25/08 1510						5 Days				10 Days				Normal		X		4:4/2.4	
Jubian THI		1/25/08 1820		Jubian THI		1/25/08 1820																			
Jubian THI		1/25/08 1820		Jubian THI		1/25/08 1820																			

TR  
1725104  
1945

**CHAIN OF CUSTODY FORM**

Test America Version 12/20/07

Client Name/Address: <b>MWH-Arcadia</b> 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES <b>Routine Outfall 012</b> Alpha Test Stand		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		ANALYSIS REQUIRED		Comments				
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly Sampler: <i>M. H. S. H. J.</i> <i>B. Ross, R.</i>		Turbidity, TDS, TSS		Setttable Solids		624 (EDB, 1,2,3-TCP, MTBE, DIFE, TBA)			Total Recoverable Metals, Cd, Se, Zn, B, Cu, Pb, Hg		TCDD (and all congeners)	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #						
Outfall 012	W	500 ml Poly	2	1-25-08 1345	None	11A, 11B	X					
Outfall 012	W	1L Poly	1	↓	None	12	X					
Outfall 012	W	VOAs	1			HCl	13A					
Outfall 012 Dup	W	VOAs	2		HCl	13B, 13C	X					
Outfall 012	W	1L Poly	2		HNO <sub>3</sub>	14A, 14B						
Outfall 012	W	1L Poly	1		None	15						
Outfall 012	W	1L Amber	2	1-25-08 1345	None	16A, 16B						
Trip Blanks	W	VOAs	3		HCl	17A, 17B, 17C	X					Filter w/in 24hrs of receipt at lab
Relinquished By	Date/Time	Received By	Date/Time	Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____		Sample Integrity: (check) Intact <input checked="" type="checkbox"/> On Ice: _____						
<i>Jan. Bann</i>	1-25-08 1510	<i>Bronwyn Kelly</i>	1-25-08 1510	Received By: <i>Bronwyn Kelly</i> Date/Time: 1/25/08 1510		Received By: <i>Jan. Bann</i> Date/Time: 1/25/08 1510						
<i>Bronwyn Kelly</i>	1-25-08 1820	<i>Jan. Bann</i>	1-25-08 1820	Received By: <i>Jan. Bann</i> Date/Time: 1/25/08 1820		Received By: <i>Bronwyn Kelly</i> Date/Time: 1/25/08 1820						

February 09, 2008

**Vista Project I.D.: 30211**

Mr. Joseph Doak  
Test America-Irvine, CA  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on January 29, 2008 under your Project Name "IRA2504". 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, Vista's current certifications, and copies of the raw data (if requested).

Vista 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 Vista as part of your analytical support team.

Sincerely,



Martha M. Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC 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 Vista Analytical Laboratory.*



**Section I: Sample Inventory Report**

**Date Received: 1/29/2008**

Vista Lab. ID

Client Sample ID

30211-001

IRA2504-01

## SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	9921	Lab Sample:	0-MB001	Date Analyzed DB-5:	6-Feb-08	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	2-Feb-08						
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	0.00000165			<b>IS</b> 13C-2,3,7,8-TCDD	73.6	25 - 164		
1,2,3,7,8-PeCDD	ND	0.00000120			13C-1,2,3,7,8-PeCDD	76.1	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000316			13C-1,2,3,4,7,8-HxCDD	74.4	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000300			13C-1,2,3,6,7,8-HxCDD	73.5	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000295			13C-1,2,3,4,6,7,8-HpCDD	77.2	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000197			13C-OCDD	65.9	17 - 157		
OCDD	ND	0.00000682			13C-2,3,7,8-TCDF	72.7	24 - 169		
2,3,7,8-TCDF	ND	0.000000988			13C-1,2,3,7,8-PeCDF	80.3	24 - 185		
1,2,3,7,8-PeCDF	ND	0.00000123			13C-2,3,4,7,8-PeCDF	66.6	21 - 178		
2,3,4,7,8-PeCDF	ND	0.00000151			13C-1,2,3,4,7,8-HxCDF	95.5	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000596			13C-1,2,3,6,7,8-HxCDF	77.3	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000816			13C-2,3,4,6,7,8-HxCDF	67.6	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000976			13C-1,2,3,7,8,9-HxCDF	76.1	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.00000111			13C-1,2,3,4,6,7,8-HpCDF	72.0	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.00000146			13C-1,2,3,4,7,8,9-HpCDF	75.2	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.00000154			13C-OCDF	71.7	17 - 157		
OCDF	ND	0.00000455			<b>CRS</b> 37Cl-2,3,7,8-TCDD	77.0	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.00000165			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000209			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000304			c. Method detection limit.				
Total HpCDD	0.00000138				d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000988							
Total PeCDF	ND	0.00000136							
Total HxCDF	ND	0.000000843							
Total HpCDF	ND	0.00000150							

Analyst: MAS

Approved By: William J. Luksemburg 08-Feb-2008 12:17

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	9921	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	2-Feb-08	Date Analyzed DB-5:	6-Feb-08	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	11.2	6.7 - 15.8	<b>IS</b> 13C-2,3,7,8-TCDD	77.8	25 - 164	
1,2,3,7,8-PeCDD	50.0	55.0	35 - 71	13C-1,2,3,7,8-PeCDD	74.8	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	54.7	35 - 82	13C-1,2,3,4,7,8-HxCDD	74.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	54.1	38 - 67	13C-1,2,3,6,7,8-HxCDD	75.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	54.8	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	54.0	35 - 70	13C-OCDD	71.4	17 - 157	
OCDD	100	113	78 - 144	13C-2,3,7,8-TCDF	77.3	24 - 169	
2,3,7,8-TCDF	10.0	10.7	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	73.3	24 - 185	
1,2,3,7,8-PeCDF	50.0	55.0	40 - 67	13C-2,3,4,7,8-PeCDF	66.3	21 - 178	
2,3,4,7,8-PeCDF	50.0	55.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	90.2	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	54.4	36 - 67	13C-1,2,3,6,7,8-HxCDF	73.1	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	56.0	42 - 65	13C-2,3,4,6,7,8-HxCDF	69.8	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	56.1	35 - 78	13C-1,2,3,7,8,9-HxCDF	74.7	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	55.4	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	71.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	55.5	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	77.2	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	55.7	39 - 69	13C-OCDF	72.9	17 - 157	
OCDF	100	106	63 - 170	<b>CRS</b> 37Cl-2,3,7,8-TCDD	86.5	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 08-Feb-2008 12:17

Sample ID: IRA2504-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA		Matrix:	Aqueous	Lab Sample:	30211-001	Date Received:	29-Jan-08
Project:	IRA2504		Sample Size:	1.01 L	QC Batch No.:	9921	Date Extracted:	2-Feb-08
Date Collected:	25-Jan-08				Date Analyzed DB-5:	7-Feb-08	Date Analyzed DB-225:	NA
Time Collected:	1345							
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	0.000000994			<b>IS</b> 13C-2,3,7,8-TCDD	90.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000796			13C-1,2,3,7,8-PeCDD	81.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000260			13C-1,2,3,4,7,8-HxCDD	81.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000259			13C-1,2,3,6,7,8-HxCDD	77.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000250			13C-1,2,3,4,6,7,8-HpCDD	80.8	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000920			J	13C-OCDD	67.4	17 - 157	
OCDD	0.000120				13C-2,3,7,8-TCDF	93.0	24 - 169	
2,3,7,8-TCDF	ND	0.000000810			13C-1,2,3,7,8-PeCDF	95.7	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000809			13C-2,3,4,7,8-PeCDF	82.8	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000932			13C-1,2,3,4,7,8-HxCDF	83.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000917			13C-1,2,3,6,7,8-HxCDF	75.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000111			13C-2,3,4,6,7,8-HxCDF	73.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000126			13C-1,2,3,7,8,9-HxCDF	75.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000161			13C-1,2,3,4,6,7,8-HpCDF	69.0	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND		0.00000667		13C-1,2,3,4,7,8,9-HpCDF	75.2	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000232			13C-OCDF	70.4	17 - 157	
OCDF	0.0000147			J	<b>CRS</b> 37Cl-2,3,7,8-TCDD	89.8	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000994			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000200			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000439			c. Method detection limit.			
Total HpCDD	0.0000238			B	d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000810						
Total PeCDF	ND	0.000000866						
Total HxCDF	0.00000197							
Total HpCDF	0.00000709		0.0000138					

Analyst: MAS

Approved By: William J. Luksemburg 08-Feb-2008 12:17

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The amount detected is above the High Calibration Limit.</b>
<b>P</b>	<b>The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.</b>
<b>H</b>	<b>The signal-to-noise ratio is greater than 10:1.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Low Calibration Limit.</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>DL</b>	<b>Sample-specific estimated detection limit</b>
<b>MDL</b>	<b>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.</b>
<b>EMPC</b>	<b>Estimated Maximum Possible Concentration</b>
<b>NA</b>	<b>Not applicable</b>
<b>RL</b>	<b>Reporting Limit – concentrations that correspond to low calibration point</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

**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

TestAmerica Irvine

IRA2504

30211 1.8°C

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Vista Analytical Laboratory- SUB  
1104 Windfield Way  
El Dorado Hills, CA 95762  
Phone : (916) 673-1520  
Fax: (916) 673-0106  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2504-01	Water			Sampled: 01/25/08 13:45 ph=7.4, temp=47.3
1613-Dioxin-HR-Alta	ug/l	02/05/08	02/01/08 13:45	J flags, 17 congeners, no TEQ, ug/L, sub=Vista Boeing
Level 4 Data Package - Out	N/A	02/05/08	02/22/08 13:45	
Containers Supplied:				
1 L Amber (Y)	1 L Amber (Z)			

Juan Aguilar 1/28/08 17:00  
Released By Date/Time

FedEx 1/28/08 17:00  
Received By Date/Time  
Pattina Benedict 1/29/08 1508  
Received By Date/Time

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

SAMPLE LOG-IN CHECKLIST



Vista Project #: 30211 TAT unspecified

Samples Arrival:	Date/Time 1/29/08 0905	Initials: YB/B	Location: WR-2
			Shelf/Rack: N/A
Logged In:	Date/Time 1/29/08 1508	Initials: YB/B	Location: WR-2
			Shelf/Rack: C 2
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	1.8°C	Time: 0911	Thermometer ID: IR-1

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill	Trk # 7904 34539950	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	COC	Sample Container	<input checked="" type="checkbox"/> None
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine

IRA2504

8012806

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Weck Laboratories, Inc-SUB  
14859 E. Clark Avenue  
City of Industry, CA 91745  
Phone :(626) 336-2139  
Fax: (626) 336-2634  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C      Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2504-01	Water		Sampled: 01/25/08 13:45	ph=7.4, temp=47.3
Level 4 + EDD-OUT	N/A	02/05/08	02/22/08 13:45	Excel EDD email to pm, Include Std logs for Lvl IV
Level 4 Data Package - Weck	N/A	02/05/08	02/22/08 13:45	Boeing, permit, J flags
Mercury - 245.1, Diss -OUT	mg/l	02/05/08	02/22/08 13:45	Out to Weck Level 4 Boeing, permit, J flags
Mercury - 245.1-OUT	mg/l	02/05/08	02/22/08 13:45	Out to Weck Level 4 Boeing, permit, J flags
<i>Containers Supplied:</i>				
125 mL Poly w/HNO3    125 mL Poly (AF) (AE)				

*Joseph Doak* 01/28/08 0700      *Ernie Green* TAI 01/28/08 0700  
 Released By      Date/Time      Received By      Date/Time  
*Ernie Green* TAI 01/28/08 0700      *[Signature]* 01/28/08  
 Released By      Date/Time      Received By      Date/Time



### CERTIFICATE OF ANALYSIS

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

**Report Date:** 02/04/08 10:42  
**Received Date:** 01/28/08 08:45  
**Turn Around:** 6 days

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

**Work Order #:** 8012806  
**Client Project:** IRA2504

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 Joseph Doak :

Enclosed are the results of analyses for samples received 01/28/08 08:45 with the Chain of Custody document. The samples were received in good condition. The samples were received at 7.9 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Kim G Tu

Project Manager





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: 8012806  
Project ID: IRA2504

Date Received: 01/28/08 08:45  
Date Reported: 02/04/08 10:42

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRA2504-01	Client		8012806-01	Water	01/25/08 13:45



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: 8012806  
Project ID: IRA2504

Date Received: 01/28/08 08:45  
Date Reported: 02/04/08 10:42

**IRA2504-01 8012806-01 (Water)**

Date Sampled: 01/25/08 13:45

**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	W8A1053	01/30/08	01/31/08	jlp
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8A1053	01/30/08	01/31/08	jlp



Weck Laboratories, Inc.  
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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: 8012806  
Project ID: IRA2504

Date Received: 01/28/08 08:45  
Date Reported: 02/04/08 10:42

# 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: 8012806  
 Project ID: IRA2504

Date Received: 01/28/08 08:45  
 Date Reported: 02/04/08 10:42

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

%REC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch W8A1053 - EPA 245.1</b>										
<b>Blank (W8A1053-BLK1)</b>										
				Analyzed: 01/31/08						
Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.20	ug/l							
<b>LCS (W8A1053-BS1)</b>										
				Analyzed: 01/31/08						
Mercury, Dissolved	0.930	0.20	ug/l	1.00		93	85-115			
Mercury, Total	0.930	0.20	ug/l	1.00		93	85-115			
<b>Matrix Spike (W8A1053-MS1)</b>										
				Source: 8012822-01			Analyzed: 01/31/08			
Mercury, Dissolved	1.38	0.20	ug/l	1.00	0.431	95	70-130			
Mercury, Total	1.38	0.20	ug/l	1.00	0.431	95	70-130			
<b>Matrix Spike (W8A1053-MS2)</b>										
				Source: 8012822-02			Analyzed: 01/31/08			
Mercury, Dissolved	1.37	0.20	ug/l	1.00	0.426	94	70-130			
Mercury, Total	1.37	0.20	ug/l	1.00	0.426	94	70-130			
<b>Matrix Spike Dup (W8A1053-MSD1)</b>										
				Source: 8012822-01			Analyzed: 01/31/08			
Mercury, Dissolved	1.35	0.20	ug/l	1.00	0.431	92	70-130	2	20	
Mercury, Total	1.35	0.20	ug/l	1.00	0.431	92	70-130	2	20	
<b>Matrix Spike Dup (W8A1053-MSD2)</b>										
				Source: 8012822-02			Analyzed: 01/31/08			
Mercury, Dissolved	1.40	0.20	ug/l	1.00	0.426	97	70-130	2	20	
Mercury, Total	1.40	0.20	ug/l	1.00	0.426	97	70-130	2	20	



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: 8012806  
Project ID: IRA2504

Date Received: 01/28/08 08:45  
Date Reported: 02/04/08 10:42

### 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 83**

Outfall 012, February 25, 2008

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



# DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB2473

Prepared by

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

**I. INTRODUCTION**

Task Order Title: Boeing SSFL NPDES  
 Contract Task Order: 1261.100D.00  
 Sample Delivery Group: IRB2473  
 Project Manager: B. Kelly  
 Matrix: Water  
 QC Level: IV  
 No. of Samples: 1  
 No. of Reanalyses/Dilutions: 0  
 Laboratory: TestAmerica-Irvine

**Table 1. Sample Identification**

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 012	IRB2473-01	30313-001, 8022636-01	Water	02/25/08 1030	180.1, 200.7, 200.8, 245.1, 405.1, 624, 1613, SM2340-B
Trip Blank	IRB2473-02	N/A	Water	02/25/08	624

**II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-Irvine and Weck within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . The samples were received marginally below the temperature limit at Vista; however, the sample was not noted to be damaged or frozen. According to the case narrative for this SDG, the sample was received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine and Weck, custody seals were not required. Custody seals were intact upon arrival at Vista. If necessary, the client ID was added to the sample result summary by the reviewer.

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### Data Qualifier Reference Table

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

---

### Qualification Code Reference Table

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

**Qualification Code Reference Table Cont.**

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

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### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight

Date Reviewed: April 8, 2008

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was 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. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had no target compound detects above the EDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Any EMPC value was qualified as an estimated nondetect, "UJ." Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks

Date Reviewed: April 1, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 200.8 and 245.1*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: The analytical holding times, 6 months for metals and 28 days for mercury, were met.
- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were  $\leq 5\%$ , and all masses of interest were calibrated to  $\leq 0.1$  amu and  $\leq 0.9$  amu at 10% peak height.
- Calibration: Calibration criteria were met. Mercury initial calibration  $r^2$  values were  $\geq 0.995$  and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS

metals and 85-115% for mercury. All CRI/CRA and check standard recoveries were within the control limits of 70-130%.

- Blanks: Zinc and cadmium were detected in the total metals method blank and selenium was detected in the dissolved metals method blank at 6.39, 0.133, and 0.565 µg/L; therefore, total zinc and cadmium and dissolved selenium were qualified as estimated nondetects, "UJ." There were no other applicable detects in the method blanks or CCBs.
- Interference Check Samples: ICSA/B analyses were performed in association with all analyses except the dissolved ICP-MS analyses. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solutions. No 6010 analytes required qualification as the concentrations of the interferents were not significant. For the 6020 analytes, the reviewer was not able to ascertain if the detections were indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for both 6010 fractions and the total 6020 fraction. MS/MSD recoveries are not accesses when the native analytes concentration is  $\geq 4x$  the spike. All recoveries and RPDs were within the laboratory-established control limits.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. The bracketing CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

The reviewer noted that antimony and magnesium were detected at a slightly higher concentration in the dissolved metals sample fraction. The difference between the total and dissolved results was within the sensitivity limits of the analytical instrument and, therefore, the reviewer considered the total and dissolved results to be equivalent. Arsenic was detected slightly above the MDL in the dissolved fraction and was not detected in the total fraction. The reviewer considered this to be within the sensitivity variability of the instrument. Cadmium and zinc were originally detected at higher concentrations in the total metals fraction but were subsequently qualified as estimated nondetects due to

method blank contamination.

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

### C. EPA METHOD 624—Volatile Organic Compounds (VOCs)

Reviewed By: L. Calvin

Date Reviewed: April 3, 2008

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 8260B*, and the *National Functional Guidelines for Organic Data Review (2/94)*.

- Holding Times: Analytical holding times were met. The preserved water samples were analyzed within 14 days of collection, and the unpreserved aliquots were analyzed within seven days of collection.
- GC/MS Tuning: The BFB tunes met the method abundance criteria. Samples were analyzed within 12 hours of the BFB injection time.
- Calibration: For applicable target compounds, initial calibration average RRFs were  $\geq 0.05$ , with the exception of the average RRF for acrolein. Nondetect results for acrolein were rejected, "R," in both samples. Initial calibration %RSDs were  $\leq 35\%$ . Continuing calibration RRFs were  $\geq 0.05$  and %Ds  $\leq 20\%$ , with the exception of the RRF for acrolein and the %D for 2-chloroethyl vinyl ether. Nondetect results for acrolein were rejected, "R," in both samples. The nondetect result for 2-chloroethyl vinyl ether was qualified as estimated, "UJ," in site sample Outfall 012. Sample Trip Blanks was identified as field QC and required no qualification for the %D outlier.
- Blanks: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits. The reviewer noted that acrolein and acrylonitrile were not included in the LCSs.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the site sample in this SDG. Evaluation of method accuracy was based on the LCS results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Trip Blanks: Sample Trip Blanks was the trip blank associated with site sample Outfall 012. Methylene chloride was detected in the trip blank above the reporting limit at 2.7 µg/L. The sample detect was qualified as an estimated nondetect, "UJ," at the level of contamination in sample Outfall 012. The trip blank had no target other compound detects above the MDL.
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times.
- Compound Identification: Compound identification was verified. The laboratory analyzed for volatile target compounds by EPA Method 624. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any results reported between the MDL and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.
- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

System Performance: Review of the raw data indicated no problems with system performance.

#### **D. VARIOUS EPA METHODS—General Minerals**

Reviewed By: P. Meeks  
Date Reviewed: April 3, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 120.1, 180.1 and 405.1*, and the *National Functional Guidelines for Inorganic Data Review (2/94)*.

- Holding Times: Analytical holding times, 24 hours for conductivity and 48 hours for BOD, were met.
- Calibration: Check standard recoveries for turbidity were acceptable. Calibration is not applicable to BOD.
- Blanks: Turbidity was detected in the method blank but not at a concentration sufficient to qualify the site sample. Method blanks and CCBs had no other detects.
- Blank Spikes and Laboratory Control Samples: BOD recoveries and RPDs were within laboratory-established QC limits. The LCS is not applicable to turbidity.
- Laboratory Duplicates: No laboratory duplicate analyses were performed for the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG.
- Sample Result Verification: Review is not applicable at a Level V validation. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the reporting limit.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

**EPA Method 1613**

**Sample ID:** IRB2473-01

**Client Data**

**Sample Data**

**Laboratory Data**

**Footnotes**

**Client Data:** Test America-Irvine, CA  
 Name: IRB2473  
 Project: 25-Feb-08  
 Date Collected: 1030  
 Time Collected:

**Sample Data:** Matrix: Aqueous  
 Sample Size: 1.03 L

**Laboratory Data:** Lab Sample: 30313-001  
 QC Batch No.: 9999  
 Date Analyzed DB-5: 11-Mar-08  
 Date Received: 27-Feb-08  
 Date Extracted: 10-Mar-08  
 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	0.00000722			IS 13C-2,3,7,8-TCDD	79.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000136			13C-1,2,3,7,8-PeCDD	67.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000233			13C-1,2,3,4,7,8-HxCDD	66.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000239			13C-1,2,3,6,7,8-HxCDD	72.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000467			13C-1,2,3,4,6,7,8-HpCDD	71.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000338				13C-OCDD	63.5	17 - 157	
OCDD	0.000253				13C-2,3,7,8-TCDF	83.6	24 - 169	
2,3,7,8-TCDF	ND	0.00000683			13C-1,2,3,7,8-PeCDF	68.8	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000127			13C-2,3,4,7,8-PeCDF	68.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000139			13C-1,2,3,4,7,8-HxCDF	64.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000140	0.000000999		13C-1,2,3,6,7,8-HxCDF	69.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000140			13C-2,3,4,6,7,8-HxCDF	67.8	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000140			13C-1,2,3,7,8,9-HxCDF	69.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000728			13C-1,2,3,4,6,7,8-HpCDF	64.7	28 - 143	
1,2,3,4,6,7,8,9-HpCDF	0.0000248				13C-1,2,3,4,7,8,9-HpCDF	69.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000183			13C-OCDF	62.9	17 - 157	
OCDF	0.0000274			J	CRS 37Cl-2,3,7,8-TCDD	94.1	35 - 197	

**Totals**

Total TCDD ND 0.00000134

Total PeCDD ND 0.00000216

Total HxCDD 0.00000807

Total HpCDD 0.0000749

Total TCDF ND 0.00000119

Total PeCDF 0.00000145

Total HxCDF 0.0000108

Total HpCDF 0.0000381

0.0000130

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

Analyst: M.A.S. Approved By: Martha M. Maier 14-Mar-2008 13:34

*Lower IV*

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO <sub>3</sub>	SM2340B	[CALC]	N/A	0.33	23	1	02/27/08	02/29/08	
Boron	EPA 200.7	8B27069	0.020	0.050	ND	1	02/27/08	02/29/08	
Calcium	EPA 200.7	8B27069	0.050	0.10	7.6	1	02/27/08	02/29/08	
Magnesium	EPA 200.7	8B27069	0.012	0.020	0.96	1	02/27/08	02/29/08	

LEVEL 10

TestAmerica Irvine

Joseph Doak  
Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	8B28067	0.40	4.0	0.65	2	02/28/08	02/29/08	RL1, J
Arsenic	EPA 200.7	8B27069	7.0	10	ND	1	02/27/08	02/29/08	
Beryllium	EPA 200.7	8B27069	0.90	2.0	ND	1	02/27/08	02/29/08	
Cadmium	EPA 200.8	8B28067	0.22	2.0	0.47	2	02/28/08	02/29/08	B, RL1, J
Chromium	EPA 200.7	8B27069	2.0	5.0	ND	1	02/27/08	02/29/08	
Copper	EPA 200.8	8B28067	1.5	4.0	2.0	2	02/28/08	02/29/08	RL1, J
Lead	EPA 200.8	8B28067	0.60	2.0	ND	2	02/28/08	02/29/08	RL1
Nickel	EPA 200.7	8B27069	2.0	10	ND	1	02/27/08	02/29/08	
Selenium	EPA 200.8	8B28067	0.60	4.0	ND	2	02/28/08	02/29/08	RL1
Silver	EPA 200.8	8B28067	0.60	2.0	ND	2	02/28/08	02/29/08	RL1
Thallium	EPA 200.8	8B28067	0.40	2.0	ND	2	02/28/08	02/29/08	RL1
Zinc	EPA 200.8	8B28067	5.0	40	37	2	02/28/08	02/29/08	B, RL1, J

TestAmerica Irvine

Joseph Doak  
 Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron	EPA 200.7-Diss	8B25122	0.020	0.050	ND	1	02/25/08	02/26/08	
Calcium	EPA 200.7-Diss	8B25122	0.050	0.10	7.5	1	02/25/08	02/26/08	MHA
Magnesium	EPA 200.7-Diss	8B25122	0.012	0.020	1.0	1	02/25/08	02/26/08	
Hardness (as CaCO3)	SM2340B	8B25122	1.0	1.0	23	1	02/25/08	02/26/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak  
 Project Manager

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

Project ID: Annual Outfall 012  
Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>										
Reporting Units: ug/l										
Antimony	J/DNQ	EPA 200.8-Diss	8B26090	0.20	2.0	0.76	1	02/26/08	02/28/08	J
Arsenic	↓	EPA 200.7-Diss	8B25122	7.0	10	7.6	1	02/25/08	02/26/08	J
Beryllium	U	EPA 200.7-Diss	8B25122	0.90	2.0	ND	1	02/25/08	02/26/08	
Cadmium	J/DNQ	EPA 200.8-Diss	8B26090	0.11	1.0	0.40	1	02/26/08	02/28/08	J
Chromium	U	EPA 200.7-Diss	8B25122	2.0	5.0	ND	1	02/25/08	02/26/08	
Copper	J/DNQ	EPA 200.8-Diss	8B26090	0.75	2.0	1.5	1	02/26/08	02/28/08	J
Lead	U	EPA 200.8-Diss	8B26090	0.30	1.0	ND	1	02/26/08	02/28/08	
Nickel	↓	EPA 200.7-Diss	8B25122	2.0	10	ND	1	02/25/08	02/26/08	
Selenium	UJ/B	EPA 200.8-Diss	8B26090	0.30	2.0	0.48	1	02/26/08	02/28/08	J
Silver	U	EPA 200.8-Diss	8B26090	0.30	1.0	ND	1	02/26/08	02/28/08	
Thallium	↓	EPA 200.8-Diss	8B26090	0.20	1.0	ND	1	02/26/08	02/28/08	
Zinc		EPA 200.8-Diss	8B26090	2.5	20	30	1	02/26/08	02/28/08	

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

### 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: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Mercury, Dissolved U	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	
Mercury, Total U	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	

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Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 012  
Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2473-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
1,1,1-Trichloroethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
1,2,3-Trichloropropane	EPA 624	8B28024	0.40	1.0	ND	1	02/28/08	02/29/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B28024	0.24	0.50	ND	1	02/28/08	02/29/08	
1,2-Dibromoethane (EDB)	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
1,1,2-Trichloroethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Di-isopropyl Ether (DIPE)	EPA 624	8B28024	0.25	0.50	ND	1	02/28/08	02/29/08	
1,1-Dichloroethane	EPA 624	8B28024	0.27	0.50	ND	1	02/28/08	02/29/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
1,1-Dichloroethene	EPA 624	8B28024	0.42	0.50	ND	1	02/28/08	02/29/08	
tert-Butanol (TBA)	EPA 624	8B28024	4.9	10	ND	1	02/28/08	02/29/08	
1,2-Dichloroethane	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
1,2-Dichlorobenzene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
1,2-Dichloropropane	EPA 624	8B28024	0.35	0.50	ND	1	02/28/08	02/29/08	
1,3-Dichlorobenzene	EPA 624	8B28024	0.35	0.50	ND	1	02/28/08	02/29/08	
1,4-Dichlorobenzene	EPA 624	8B28024	0.37	0.50	ND	1	02/28/08	02/29/08	
Benzene	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Bromodichloromethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Bromoform	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
Bromomethane	EPA 624	8B28024	0.42	1.0	ND	1	02/28/08	02/29/08	
Carbon tetrachloride	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Chlorobenzene	EPA 624	8B28024	0.36	0.50	ND	1	02/28/08	02/29/08	
Chloroethane	EPA 624	8B28024	0.40	1.0	ND	1	02/28/08	02/29/08	
Chloroform	EPA 624	8B28024	0.33	0.50	ND	1	02/28/08	02/29/08	
Chloromethane	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
cis-1,3-Dichloropropene	EPA 624	8B28024	0.22	0.50	ND	1	02/28/08	02/29/08	
Dibromochloromethane	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Ethylbenzene	EPA 624	8B28024	0.25	0.50	ND	1	02/28/08	02/29/08	
<b>Methylene chloride</b>	EPA 624	8B28024	0.95	1.0	2.7	1	02/28/08	02/29/08	
Tetrachloroethene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
Toluene	EPA 624	8B28024	0.36	0.50	ND	1	02/28/08	02/29/08	
trans-1,2-Dichloroethene	EPA 624	8B28024	0.27	0.50	ND	1	02/28/08	02/29/08	
trans-1,3-Dichloropropene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
Trichloroethene	EPA 624	8B28024	0.26	0.50	ND	1	02/28/08	02/29/08	
Trichlorofluoromethane	EPA 624	8B28024	0.34	0.50	ND	1	02/28/08	02/29/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B28024	0.50	5.0	ND	1	02/28/08	02/29/08	
Vinyl chloride	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Xylenes, Total	EPA 624	8B28024	0.90	1.5	ND	1	02/28/08	02/29/08	
Surrogate: Dibromofluoromethane (80-120%)					98 %				
Surrogate: Toluene-d8 (80-120%)					89 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					82 %				

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: IRB2473-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Acrolein	R/R EPA 624	8B26001	4.0	5.0	ND	1	02/26/08	02/26/08	
Acrylonitrile	u EPA 624	8B26001	0.70	2.0	ND	1	02/26/08	02/26/08	
2-Chloroethyl vinyl ether	u/c EPA 624	8B26001	1.8	5.0	ND	1	02/26/08	02/26/08	
Surrogate: Dibromofluoromethane (80-120%)					99 %				
Surrogate: Toluene-d8 (80-120%)					100 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					89 %				
<b>Sample ID: IRB2473-02 (Trip Blanks - Water)</b>									
Reporting Units: ug/l									
Acrolein	R/R EPA 624	8B26001	4.0	5.0	ND	1	02/26/08	02/26/08	
Acrylonitrile	u EPA 624	8B26001	0.70	2.0	ND	1	02/26/08	02/26/08	
2-Chloroethyl vinyl ether	u EPA 624	8B26001	1.8	5.0	ND	1	02/26/08	02/26/08	
Surrogate: Dibromofluoromethane (80-120%)					95 %				
Surrogate: Toluene-d8 (80-120%)					99 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	* EPA 1664A	8C04046	1.3	4.8	1.9	1	03/04/08	03/04/08	J
Ammonia-N (Distilled)	↓ EPA 350.2	8B26101	0.30	0.50	ND	1	02/26/08	02/26/08	
Biochemical Oxygen Demand	EPA 405.1	8B27072	0.59	2.0	4.1	1	02/27/08	03/03/08	
Chloride	* EPA 300.0	8B25043	1.2	2.5	35	5	02/25/08	02/25/08	
Total Cyanide	EPA 335.2	8B26098	0.0022	0.0050	ND	1	02/26/08	02/26/08	
Fluoride	EPA 340.2	8B27094	0.014	0.10	0.28	1	02/27/08	02/27/08	
Nitrate-N	EPA 300.0	8B25043	0.060	0.11	0.79	1	02/25/08	02/25/08	
Nitrite-N	EPA 300.0	8B25043	0.090	0.15	ND	1	02/25/08	02/25/08	
Nitrate/Nitrite-N	EPA 300.0	8B25043	0.15	0.26	0.79	1	02/25/08	02/25/08	
Sulfate	EPA 300.0	8B25043	0.20	0.50	9.0	1	02/25/08	02/25/08	
Total Dissolved Solids	SM2540C	8B27129	10	10	150	1	02/27/08	02/27/08	
Total Suspended Solids	EPA 160.2	8B28123	10	10	ND	1	02/28/08	02/28/08	

\*Analysis not validated

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012  
Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B26063	0.040	1.0	5.9	1	02/26/08	02/26/08	

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# **APPENDIX G**

## **Section 84**

Outfall 012, February 25, 2008

Test America Analytical Laboratory Report

## LABORATORY REPORT

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

Project: Annual Outfall 012

Sampled: 02/25/08  
Received: 02/25/08  
Issued: 03/17/08 16:55

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(s) of Custody, 2 pages, are included and are an integral part of this report.*

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

## SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
IRB2473-01	Outfall 012	Water
IRB2473-02	Trip Blanks	Water

Reviewed By:



**TestAmerica Irvine**

Joseph Doak  
Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water)</b>									
Reporting Units: mg/l									
<b>DRO (C13-C22)</b>	EPA 8015B	8B27068	0.029	0.11	<b>0.061</b>	1.08	02/27/08	02/27/08	J
<i>Surrogate: n-Octacosane (40-125%)</i>					88 %				

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**NPDES - 3158**

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015B	8B29036	0.030	0.050	ND	1	02/29/08	02/29/08	
Surrogate: 4-BFB (FID) (65-140%)					91 %				

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NPDES - 3159

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## VOLATILE ORGANICS by GCMS SIM

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B-SIM	8B27016	1.0	2.0	ND	1	02/27/08	02/27/08	
Surrogate: Dibromofluoromethane (80-120%)					89 %				

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NPDES - 3160

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
1,2,3-Trichloropropane	EPA 624	8B28024	0.40	1.0	ND	1	02/28/08	02/29/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B28024	0.24	0.50	ND	1	02/28/08	02/29/08	
1,2-Dibromoethane (EDB)	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
1,1,2-Trichloroethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Di-isopropyl Ether (DIPE)	EPA 624	8B28024	0.25	0.50	ND	1	02/28/08	02/29/08	
1,1-Dichloroethane	EPA 624	8B28024	0.27	0.50	ND	1	02/28/08	02/29/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
1,1-Dichloroethene	EPA 624	8B28024	0.42	0.50	ND	1	02/28/08	02/29/08	
tert-Butanol (TBA)	EPA 624	8B28024	4.9	10	ND	1	02/28/08	02/29/08	
1,2-Dichloroethane	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
1,2-Dichlorobenzene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
1,2-Dichloropropane	EPA 624	8B28024	0.35	0.50	ND	1	02/28/08	02/29/08	
1,3-Dichlorobenzene	EPA 624	8B28024	0.35	0.50	ND	1	02/28/08	02/29/08	
1,4-Dichlorobenzene	EPA 624	8B28024	0.37	0.50	ND	1	02/28/08	02/29/08	
Benzene	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Bromodichloromethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Bromoform	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
Bromomethane	EPA 624	8B28024	0.42	1.0	ND	1	02/28/08	02/29/08	
Carbon tetrachloride	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Chlorobenzene	EPA 624	8B28024	0.36	0.50	ND	1	02/28/08	02/29/08	
Chloroethane	EPA 624	8B28024	0.40	1.0	ND	1	02/28/08	02/29/08	
Chloroform	EPA 624	8B28024	0.33	0.50	ND	1	02/28/08	02/29/08	
Chloromethane	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
cis-1,3-Dichloropropene	EPA 624	8B28024	0.22	0.50	ND	1	02/28/08	02/29/08	
Dibromochloromethane	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Ethylbenzene	EPA 624	8B28024	0.25	0.50	ND	1	02/28/08	02/29/08	
<b>Methylene chloride</b>	EPA 624	8B28024	0.95	1.0	<b>2.6</b>	1	02/28/08	02/29/08	
Tetrachloroethene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
Toluene	EPA 624	8B28024	0.36	0.50	ND	1	02/28/08	02/29/08	
trans-1,2-Dichloroethene	EPA 624	8B28024	0.27	0.50	ND	1	02/28/08	02/29/08	
trans-1,3-Dichloropropene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
<b>Trichloroethene</b>	EPA 624	8B28024	0.26	0.50	<b>1.4</b>	1	02/28/08	02/29/08	
Trichlorofluoromethane	EPA 624	8B28024	0.34	0.50	ND	1	02/28/08	02/29/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B28024	0.50	5.0	ND	1	02/28/08	02/29/08	
Vinyl chloride	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Xylenes, Total	EPA 624	8B28024	0.90	1.5	ND	1	02/28/08	02/29/08	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>103 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>101 %</i>				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>86 %</i>				

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: IRB2473-02 (Trip Blanks - Water)</b>									
<b>Reporting Units: ug/l</b>									
1,1,1-Trichloroethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
1,2,3-Trichloropropane	EPA 624	8B28024	0.40	1.0	ND	1	02/28/08	02/29/08	
1,1,2,2-Tetrachloroethane	EPA 624	8B28024	0.24	0.50	ND	1	02/28/08	02/29/08	
1,2-Dibromoethane (EDB)	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
1,1,2-Trichloroethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Di-isopropyl Ether (DIPE)	EPA 624	8B28024	0.25	0.50	ND	1	02/28/08	02/29/08	
1,1-Dichloroethane	EPA 624	8B28024	0.27	0.50	ND	1	02/28/08	02/29/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
1,1-Dichloroethene	EPA 624	8B28024	0.42	0.50	ND	1	02/28/08	02/29/08	
tert-Butanol (TBA)	EPA 624	8B28024	4.9	10	ND	1	02/28/08	02/29/08	
1,2-Dichloroethane	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
1,2-Dichlorobenzene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
1,2-Dichloropropane	EPA 624	8B28024	0.35	0.50	ND	1	02/28/08	02/29/08	
1,3-Dichlorobenzene	EPA 624	8B28024	0.35	0.50	ND	1	02/28/08	02/29/08	
1,4-Dichlorobenzene	EPA 624	8B28024	0.37	0.50	ND	1	02/28/08	02/29/08	
Benzene	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Bromodichloromethane	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Bromoform	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
Bromomethane	EPA 624	8B28024	0.42	1.0	ND	1	02/28/08	02/29/08	
Carbon tetrachloride	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Chlorobenzene	EPA 624	8B28024	0.36	0.50	ND	1	02/28/08	02/29/08	
Chloroethane	EPA 624	8B28024	0.40	1.0	ND	1	02/28/08	02/29/08	
Chloroform	EPA 624	8B28024	0.33	0.50	ND	1	02/28/08	02/29/08	
Chloromethane	EPA 624	8B28024	0.40	0.50	ND	1	02/28/08	02/29/08	
cis-1,3-Dichloropropene	EPA 624	8B28024	0.22	0.50	ND	1	02/28/08	02/29/08	
Dibromochloromethane	EPA 624	8B28024	0.28	0.50	ND	1	02/28/08	02/29/08	
Ethylbenzene	EPA 624	8B28024	0.25	0.50	ND	1	02/28/08	02/29/08	
<b>Methylene chloride</b>	EPA 624	8B28024	0.95	1.0	<b>2.7</b>	1	02/28/08	02/29/08	
Tetrachloroethene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
Toluene	EPA 624	8B28024	0.36	0.50	ND	1	02/28/08	02/29/08	
trans-1,2-Dichloroethene	EPA 624	8B28024	0.27	0.50	ND	1	02/28/08	02/29/08	
trans-1,3-Dichloropropene	EPA 624	8B28024	0.32	0.50	ND	1	02/28/08	02/29/08	
Trichloroethene	EPA 624	8B28024	0.26	0.50	ND	1	02/28/08	02/29/08	
Trichlorofluoromethane	EPA 624	8B28024	0.34	0.50	ND	1	02/28/08	02/29/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B28024	0.50	5.0	ND	1	02/28/08	02/29/08	
Vinyl chloride	EPA 624	8B28024	0.30	0.50	ND	1	02/28/08	02/29/08	
Xylenes, Total	EPA 624	8B28024	0.90	1.5	ND	1	02/28/08	02/29/08	
Surrogate: Dibromofluoromethane (80-120%)					98 %				
Surrogate: Toluene-d8 (80-120%)					89 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					82 %				

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: IRB2473-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B26001	4.0	5.0	ND	1	02/26/08	02/26/08	
Acrylonitrile	EPA 624	8B26001	0.70	2.0	ND	1	02/26/08	02/26/08	
2-Chloroethyl vinyl ether	EPA 624	8B26001	1.8	5.0	ND	1	02/26/08	02/26/08	
Surrogate: Dibromofluoromethane (80-120%)					99 %				
Surrogate: Toluene-d8 (80-120%)					100 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					89 %				
<b>Sample ID: IRB2473-02 (Trip Blanks - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	8B26001	4.0	5.0	ND	1	02/26/08	02/26/08	
Acrylonitrile	EPA 624	8B26001	0.70	2.0	ND	1	02/26/08	02/26/08	
2-Chloroethyl vinyl ether	EPA 624	8B26001	1.8	5.0	ND	1	02/26/08	02/26/08	
Surrogate: Dibromofluoromethane (80-120%)					95 %				
Surrogate: Toluene-d8 (80-120%)					99 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: IRB2473-01 (Outfall 012 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Acenaphthylene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Aniline	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
Anthracene	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
Benzidine	EPA 625	8B26045	8.1	19	ND	0.952	02/26/08	02/29/08	L6
Benzoic acid	EPA 625	8B26045	9.5	19	ND	0.952	02/26/08	02/29/08	
Benzo(a)anthracene	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
Benzo(b)fluoranthene	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
Benzo(k)fluoranthene	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
Benzo(g,h,i)perylene	EPA 625	8B26045	3.8	9.5	ND	0.952	02/26/08	02/29/08	
Benzo(a)pyrene	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
Benzyl alcohol	EPA 625	8B26045	2.4	19	ND	0.952	02/26/08	02/29/08	
Bis(2-chloroethoxy)methane	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Bis(2-chloroethyl)ether	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Bis(2-chloroisopropyl)ether	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
Bis(2-ethylhexyl)phthalate	EPA 625	8B26045	3.8	48	ND	0.952	02/26/08	02/29/08	
4-Bromophenyl phenyl ether	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Butyl benzyl phthalate	EPA 625	8B26045	3.8	19	ND	0.952	02/26/08	02/29/08	
4-Chloroaniline	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
2-Chloronaphthalene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
4-Chloro-3-methylphenol	EPA 625	8B26045	2.4	19	ND	0.952	02/26/08	02/29/08	
2-Chlorophenol	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
4-Chlorophenyl phenyl ether	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
Chrysene	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
Dibenz(a,h)anthracene	EPA 625	8B26045	2.9	19	ND	0.952	02/26/08	02/29/08	
Dibenzofuran	EPA 625	8B26045	3.8	9.5	ND	0.952	02/26/08	02/29/08	
Di-n-butyl phthalate	EPA 625	8B26045	2.9	19	ND	0.952	02/26/08	02/29/08	
1,3-Dichlorobenzene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
1,4-Dichlorobenzene	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
1,2-Dichlorobenzene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
3,3-Dichlorobenzidine	EPA 625	8B26045	2.9	19	ND	0.952	02/26/08	02/29/08	
2,4-Dichlorophenol	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
Diethyl phthalate	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
2,4-Dimethylphenol	EPA 625	8B26045	3.3	19	ND	0.952	02/26/08	02/29/08	
Dimethyl phthalate	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
4,6-Dinitro-2-methylphenol	EPA 625	8B26045	3.8	19	ND	0.952	02/26/08	02/29/08	
2,4-Dinitrophenol	EPA 625	8B26045	7.6	19	ND	0.952	02/26/08	02/29/08	
2,4-Dinitrotoluene	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
2,6-Dinitrotoluene	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
Di-n-octyl phthalate	EPA 625	8B26045	3.3	19	ND	0.952	02/26/08	02/29/08	
Fluoranthene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Fluorene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Hexachlorobenzene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Hexachlorobutadiene	EPA 625	8B26045	3.8	9.5	ND	0.952	02/26/08	02/29/08	
Hexachlorocyclopentadiene	EPA 625	8B26045	4.8	19	ND	0.952	02/26/08	02/29/08	
Hexachloroethane	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
Indeno(1,2,3-cd)pyrene	EPA 625	8B26045	3.3	19	ND	0.952	02/26/08	02/29/08	
Isophorone	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
2-Methylnaphthalene	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
2-Methylphenol	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
4-Methylphenol	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
Naphthalene	EPA 625	8B26045	2.9	9.5	ND	0.952	02/26/08	02/29/08	
2-Nitroaniline	EPA 625	8B26045	1.9	19	ND	0.952	02/26/08	02/29/08	
3-Nitroaniline	EPA 625	8B26045	2.9	19	ND	0.952	02/26/08	02/29/08	
4-Nitroaniline	EPA 625	8B26045	3.8	19	ND	0.952	02/26/08	02/29/08	
Nitrobenzene	EPA 625	8B26045	2.4	19	ND	0.952	02/26/08	02/29/08	
2-Nitrophenol	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
4-Nitrophenol	EPA 625	8B26045	5.2	19	ND	0.952	02/26/08	02/29/08	
N-Nitrosodiphenylamine	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
N-Nitroso-di-n-propylamine	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
Pentachlorophenol	EPA 625	8B26045	3.3	19	ND	0.952	02/26/08	02/29/08	
Phenanthrene	EPA 625	8B26045	3.3	9.5	ND	0.952	02/26/08	02/29/08	
Phenol	EPA 625	8B26045	1.9	9.5	ND	0.952	02/26/08	02/29/08	
Pyrene	EPA 625	8B26045	3.8	9.5	ND	0.952	02/26/08	02/29/08	
1,2,4-Trichlorobenzene	EPA 625	8B26045	2.4	9.5	ND	0.952	02/26/08	02/29/08	
2,4,5-Trichlorophenol	EPA 625	8B26045	2.9	19	ND	0.952	02/26/08	02/29/08	
2,4,6-Trichlorophenol	EPA 625	8B26045	4.3	19	ND	0.952	02/26/08	02/29/08	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	8B26045	2.4	19	ND	0.952	02/26/08	02/29/08	
N-Nitrosodimethylamine	EPA 625	8B26045	2.4	19	ND	0.952	02/26/08	02/29/08	
Surrogate: 2-Fluorophenol (30-120%)					65 %				
Surrogate: Phenol-d6 (35-120%)					72 %				
Surrogate: 2,4,6-Tribromophenol (40-120%)					92 %				
Surrogate: Nitrobenzene-d5 (45-120%)					74 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					72 %				
Surrogate: Terphenyl-d14 (50-125%)					77 %				

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Aldrin	EPA 608	8B26041	0.0014	0.0047	ND	0.943	02/26/08	02/28/08	
alpha-BHC	EPA 608	8B26041	0.0024	0.0047	ND	0.943	02/26/08	02/28/08	
beta-BHC	EPA 608	8B26041	0.0038	0.0094	ND	0.943	02/26/08	02/28/08	
delta-BHC	EPA 608	8B26041	0.0033	0.0047	ND	0.943	02/26/08	02/28/08	
gamma-BHC (Lindane)	EPA 608	8B26041	0.0028	0.0094	ND	0.943	02/26/08	02/28/08	
Chlordane	EPA 608	8B26041	0.028	0.094	ND	0.943	02/26/08	02/28/08	
4,4'-DDD	EPA 608	8B26041	0.0019	0.0047	ND	0.943	02/26/08	02/28/08	
4,4'-DDE	EPA 608	8B26041	0.0028	0.0047	ND	0.943	02/26/08	02/28/08	
4,4'-DDT	EPA 608	8B26041	0.0038	0.0094	ND	0.943	02/26/08	02/28/08	
Dieldrin	EPA 608	8B26041	0.0019	0.0047	ND	0.943	02/26/08	02/28/08	
Endosulfan I	EPA 608	8B26041	0.0019	0.0047	ND	0.943	02/26/08	02/28/08	
Endosulfan II	EPA 608	8B26041	0.0028	0.0047	ND	0.943	02/26/08	02/28/08	
Endosulfan sulfate	EPA 608	8B26041	0.0028	0.0094	ND	0.943	02/26/08	02/28/08	
Endrin	EPA 608	8B26041	0.0019	0.0047	ND	0.943	02/26/08	02/28/08	
Endrin aldehyde	EPA 608	8B26041	0.0019	0.0094	ND	0.943	02/26/08	02/28/08	
Endrin ketone	EPA 608	8B26041	0.0028	0.0094	ND	0.943	02/26/08	02/28/08	
Heptachlor	EPA 608	8B26041	0.0028	0.0094	ND	0.943	02/26/08	02/28/08	
Heptachlor epoxide	EPA 608	8B26041	0.0024	0.0047	ND	0.943	02/26/08	02/28/08	
Methoxychlor	EPA 608	8B26041	0.0033	0.0047	ND	0.943	02/26/08	02/28/08	
Toxaphene	EPA 608	8B26041	0.066	0.094	ND	0.943	02/26/08	02/28/08	
Surrogate: Decachlorobiphenyl (45-120%)					80 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					82 %				

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	8B26041	0.42	0.47	ND	0.943	02/26/08	02/27/08	
Aroclor 1221	EPA 608	8B26041	0.24	0.47	ND	0.943	02/26/08	02/27/08	
Aroclor 1232	EPA 608	8B26041	0.24	0.47	ND	0.943	02/26/08	02/27/08	
Aroclor 1242	EPA 608	8B26041	0.24	0.47	ND	0.943	02/26/08	02/27/08	
Aroclor 1248	EPA 608	8B26041	0.24	0.47	ND	0.943	02/26/08	02/27/08	
Aroclor 1254	EPA 608	8B26041	0.24	0.47	ND	0.943	02/26/08	02/27/08	
Aroclor 1260	EPA 608	8B26041	0.28	0.47	ND	0.943	02/26/08	02/27/08	
Surrogate: Decachlorobiphenyl (45-120%)					92 %				

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 Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	23	1	02/27/08	02/29/08	
Boron	EPA 200.7	8B27069	0.020	0.050	ND	1	02/27/08	02/29/08	
Calcium	EPA 200.7	8B27069	0.050	0.10	7.6	1	02/27/08	02/29/08	
Magnesium	EPA 200.7	8B27069	0.012	0.020	0.96	1	02/27/08	02/29/08	

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Antimony</b>	EPA 200.8	8B28067	0.40	4.0	<b>0.65</b>	2	02/28/08	02/29/08	RL1, J
Arsenic	EPA 200.7	8B27069	7.0	10	ND	1	02/27/08	02/29/08	
Beryllium	EPA 200.7	8B27069	0.90	2.0	ND	1	02/27/08	02/29/08	
<b>Cadmium</b>	EPA 200.8	8B28067	0.22	2.0	<b>0.47</b>	2	02/28/08	02/29/08	B, RL1, J
Chromium	EPA 200.7	8B27069	2.0	5.0	ND	1	02/27/08	02/29/08	
<b>Copper</b>	EPA 200.8	8B28067	1.5	4.0	<b>2.0</b>	2	02/28/08	02/29/08	RL1, J
Lead	EPA 200.8	8B28067	0.60	2.0	ND	2	02/28/08	02/29/08	RL1
Nickel	EPA 200.7	8B27069	2.0	10	ND	1	02/27/08	02/29/08	
Selenium	EPA 200.8	8B28067	0.60	4.0	ND	2	02/28/08	02/29/08	RL1
Silver	EPA 200.8	8B28067	0.60	2.0	ND	2	02/28/08	02/29/08	RL1
Thallium	EPA 200.8	8B28067	0.40	2.0	ND	2	02/28/08	02/29/08	RL1
<b>Zinc</b>	EPA 200.8	8B28067	5.0	40	<b>37</b>	2	02/28/08	02/29/08	B, RL1, J

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 Arcadia, CA 91007  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Boron	EPA 200.7-Diss	8B25122	0.020	0.050	ND	1	02/25/08	02/26/08	
Calcium	EPA 200.7-Diss	8B25122	0.050	0.10	<b>7.5</b>	1	02/25/08	02/26/08	MHA
Magnesium	EPA 200.7-Diss	8B25122	0.012	0.020	<b>1.0</b>	1	02/25/08	02/26/08	
Hardness (as CaCO3)	SM2340B	8B25122	1.0	1.0	<b>23</b>	1	02/25/08	02/26/08	

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Sampled: 02/25/08  
 Received: 02/25/08

## DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
<b>Antimony</b>	EPA 200.8-Diss	8B26090	0.20	2.0	<b>0.76</b>	1	02/26/08	02/28/08	J
<b>Arsenic</b>	EPA 200.7-Diss	8B25122	7.0	10	<b>7.6</b>	1	02/25/08	02/26/08	J
Beryllium	EPA 200.7-Diss	8B25122	0.90	2.0	ND	1	02/25/08	02/26/08	
<b>Cadmium</b>	EPA 200.8-Diss	8B26090	0.11	1.0	<b>0.40</b>	1	02/26/08	02/28/08	J
Chromium	EPA 200.7-Diss	8B25122	2.0	5.0	ND	1	02/25/08	02/26/08	
<b>Copper</b>	EPA 200.8-Diss	8B26090	0.75	2.0	<b>1.5</b>	1	02/26/08	02/28/08	J
Lead	EPA 200.8-Diss	8B26090	0.30	1.0	ND	1	02/26/08	02/28/08	
Nickel	EPA 200.7-Diss	8B25122	2.0	10	ND	1	02/25/08	02/26/08	
<b>Selenium</b>	EPA 200.8-Diss	8B26090	0.30	2.0	<b>0.48</b>	1	02/26/08	02/28/08	J
Silver	EPA 200.8-Diss	8B26090	0.30	1.0	ND	1	02/26/08	02/28/08	
Thallium	EPA 200.8-Diss	8B26090	0.20	1.0	ND	1	02/26/08	02/28/08	
<b>Zinc</b>	EPA 200.8-Diss	8B26090	2.5	20	<b>30</b>	1	02/26/08	02/28/08	

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Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8C04046	1.3	4.8	<b>1.9</b>	1	03/04/08	03/04/08	J
Ammonia-N (Distilled)	EPA 350.2	8B26101	0.30	0.50	ND	1	02/26/08	02/26/08	
Biochemical Oxygen Demand	EPA 405.1	8B27072	0.59	2.0	<b>4.1</b>	1	02/27/08	03/03/08	
Chloride	EPA 300.0	8B25043	1.2	2.5	<b>35</b>	5	02/25/08	02/25/08	
Total Cyanide	EPA 335.2	8B26098	0.0022	0.0050	ND	1	02/26/08	02/26/08	
Fluoride	EPA 340.2	8B27094	0.014	0.10	<b>0.28</b>	1	02/27/08	02/27/08	
Nitrate-N	EPA 300.0	8B25043	0.060	0.11	<b>0.79</b>	1	02/25/08	02/25/08	
Nitrite-N	EPA 300.0	8B25043	0.090	0.15	ND	1	02/25/08	02/25/08	
Nitrate/Nitrite-N	EPA 300.0	8B25043	0.15	0.26	<b>0.79</b>	1	02/25/08	02/25/08	
Sulfate	EPA 300.0	8B25043	0.20	0.50	<b>9.0</b>	1	02/25/08	02/25/08	
Total Dissolved Solids	SM2540C	8B27129	10	10	<b>150</b>	1	02/27/08	02/27/08	
Total Suspended Solids	EPA 160.2	8B28123	10	10	ND	1	02/28/08	02/28/08	

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Sampled: 02/25/08

Received: 02/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8B26062	0.10	0.10	ND	1	02/26/08	02/26/08	

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**NPDES - 3173**

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B26063	0.040	1.0	5.9	1	02/26/08	02/26/08	

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**NPDES - 3174**

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	8B29056	1.5	4.0	ND	1	02/29/08	02/29/08	

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**NPDES - 3175**

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08

Received: 02/25/08

## 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: IRB2473-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	
Mercury, Total	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	

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NPDES - 3176

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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 012 (IRB2473-01) - Water</b>					
EPA 160.5	2	02/25/2008 10:30	02/25/2008 17:30	02/26/2008 11:05	02/26/2008 11:05
EPA 180.1	2	02/25/2008 10:30	02/25/2008 17:30	02/26/2008 09:55	02/26/2008 09:55
EPA 300.0	2	02/25/2008 10:30	02/25/2008 17:30	02/25/2008 19:00	02/25/2008 20:42
EPA 405.1	2	02/25/2008 10:30	02/25/2008 17:30	02/27/2008 08:00	03/03/2008 13:30
EPA 624	3	02/25/2008 10:30	02/25/2008 17:30	02/26/2008 00:00	02/26/2008 12:50
Filtration	1	02/25/2008 10:30	02/25/2008 17:30	02/25/2008 21:00	02/25/2008 21:00
<b>Sample ID: Trip Blanks (IRB2473-02) - Water</b>					
EPA 624	3	02/25/2008 15:10	02/25/2008 17:30	02/26/2008 00:00	02/26/2008 09:47

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NPDES - 3177

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## METHOD BLANK/QC DATA

### EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B27068 Extracted: 02/27/08</b>											
<b>Blank Analyzed: 02/27/2008 (8B27068-BLK1)</b>											
DRO (C13-C22)	ND	0.10	0.027	mg/l							
Surrogate: n-Octacosane	0.154			mg/l	0.200		77	40-125			
<b>LCS Analyzed: 02/27/2008 (8B27068-BS1)</b>											
EFH (C13 - C40)	0.483	0.10	0.027	mg/l	0.750		64	40-115			MNR1
Surrogate: n-Octacosane	0.139			mg/l	0.200		70	40-125			
<b>LCS Dup Analyzed: 02/27/2008 (8B27068-BSD1)</b>											
EFH (C13 - C40)	0.530	0.10	0.027	mg/l	0.750		71	40-115	9	25	
Surrogate: n-Octacosane	0.148			mg/l	0.200		74	40-125			

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Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## METHOD BLANK/QC DATA

### VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B29036 Extracted: 02/29/08</b>											
<b>Blank Analyzed: 02/29/2008 (8B29036-BLK1)</b>											
GRO (C4 - C12)	ND	0.050	0.030	mg/l							
Surrogate: 4-BFB (FID)	0.00962			mg/l	0.0100		96	65-140			
<b>LCS Analyzed: 02/29/2008 (8B29036-BS1)</b>											
GRO (C4 - C12)	0.756	0.050	0.030	mg/l	0.800		95	80-120			
Surrogate: 4-BFB (FID)	0.0157			mg/l	0.0100		157	65-140			ZX
<b>Matrix Spike Analyzed: 02/29/2008 (8B29036-MS1)</b>											
						<b>Source: IRB2582-01</b>					
GRO (C4 - C12)	0.259	0.050	0.030	mg/l	0.220	0.0489	96	65-140			
Surrogate: 4-BFB (FID)	0.0111			mg/l	0.0100		111	65-140			
<b>Matrix Spike Dup Analyzed: 02/29/2008 (8B29036-MSD1)</b>											
						<b>Source: IRB2582-01</b>					
GRO (C4 - C12)	0.257	0.050	0.030	mg/l	0.220	0.0489	95	65-140	1	20	
Surrogate: 4-BFB (FID)	0.0101			mg/l	0.0100		101	65-140			

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## METHOD BLANK/QC DATA

### VOLATILE ORGANICS by GCMS SIM

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B27016 Extracted: 02/27/08</b>											
<b>Blank Analyzed: 02/27/2008 (8B27016-BLK1)</b>											
1,4-Dioxane	ND	2.0	1.0	ug/l							
Surrogate: Dibromofluoromethane	1.04			ug/l	1.00		104	80-120			
<b>LCS Analyzed: 02/27/2008 (8B27016-BS1)</b>											
1,4-Dioxane	8.15	2.0	1.0	ug/l	10.0		82	70-125			
Surrogate: Dibromofluoromethane	1.06			ug/l	1.00		106	80-120			
<b>Matrix Spike Analyzed: 02/27/2008 (8B27016-MS1) Source: IRB1997-01</b>											
1,4-Dioxane	8.11	2.0	1.0	ug/l	10.0	ND	81	70-130			
Surrogate: Dibromofluoromethane	1.01			ug/l	1.00		101	80-120			
<b>Matrix Spike Dup Analyzed: 02/27/2008 (8B27016-MSD1) Source: IRB1997-01</b>											
1,4-Dioxane	8.43	2.0	1.0	ug/l	10.0	ND	84	70-130	4	30	
Surrogate: Dibromofluoromethane	0.910			ug/l	1.00		91	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	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B28024 Extracted: 02/28/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B28024-BLK1)</b>											
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,2,3-Trichloropropane	ND	1.0	0.40	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	0.24	ug/l							
1,2-Dibromoethane (EDB)	ND	0.50	0.40	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
Di-isopropyl Ether (DIPE)	ND	0.50	0.25	ug/l							
1,1-Dichloroethane	ND	0.50	0.27	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	0.50	0.32	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	ug/l							
tert-Butanol (TBA)	ND	10	4.9	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
Chloromethane	ND	0.50	0.40	ug/l							
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l							
Dibromochloromethane	ND	0.50	0.28	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	ND	1.0	0.95	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.27	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							

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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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B28024 Extracted: 02/28/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B28024-BLK1)</b>											
Vinyl chloride	ND	0.50	0.30	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: Dibromofluoromethane	23.6			ug/l	25.0		94	80-120			
Surrogate: Toluene-d8	25.1			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	21.6			ug/l	25.0		86	80-120			
<b>LCS Analyzed: 02/28/2008 (8B28024-BS1)</b>											
1,1,1-Trichloroethane	24.3	0.50	0.30	ug/l	25.0		97	65-135			
1,2,3-Trichloropropane	23.3	1.0	0.40	ug/l	25.0		93	60-130			
1,1,2,2-Tetrachloroethane	21.4	0.50	0.24	ug/l	25.0		86	55-130			
1,2-Dibromoethane (EDB)	23.8	0.50	0.40	ug/l	25.0		95	75-125			
1,1,2-Trichloroethane	24.0	0.50	0.30	ug/l	25.0		96	70-125			
Di-isopropyl Ether (DIPE)	26.8	0.50	0.25	ug/l	25.0		107	60-135			
1,1-Dichloroethane	21.7	0.50	0.27	ug/l	25.0		87	70-125			
Methyl-tert-butyl Ether (MTBE)	27.2	0.50	0.32	ug/l	25.0		109	60-135			
1,1-Dichloroethene	20.6	0.50	0.42	ug/l	25.0		82	70-125			
tert-Butanol (TBA)	126	10	4.9	ug/l	125		101	70-135			
1,2-Dichloroethane	24.2	0.50	0.28	ug/l	25.0		97	60-140			
1,2-Dichlorobenzene	25.5	0.50	0.32	ug/l	25.0		102	75-120			
1,2-Dichloropropane	23.9	0.50	0.35	ug/l	25.0		95	70-125			
1,3-Dichlorobenzene	24.1	0.50	0.35	ug/l	25.0		96	75-120			
1,4-Dichlorobenzene	23.1	0.50	0.37	ug/l	25.0		92	75-120			
Benzene	21.9	0.50	0.28	ug/l	25.0		88	70-120			
Bromodichloromethane	25.4	0.50	0.30	ug/l	25.0		102	70-135			
Bromoform	24.4	0.50	0.40	ug/l	25.0		98	55-130			
Bromomethane	24.1	1.0	0.42	ug/l	25.0		96	65-140			
Carbon tetrachloride	23.2	0.50	0.28	ug/l	25.0		93	65-140			
Chlorobenzene	23.8	0.50	0.36	ug/l	25.0		95	75-120			
Chloroethane	23.1	1.0	0.40	ug/l	25.0		92	60-140			
Chloroform	22.9	0.50	0.33	ug/l	25.0		92	70-130			
Chloromethane	22.2	0.50	0.40	ug/l	25.0		89	50-140			
cis-1,3-Dichloropropene	23.4	0.50	0.22	ug/l	25.0		93	75-125			
Dibromochloromethane	25.6	0.50	0.28	ug/l	25.0		102	70-140			
Ethylbenzene	26.3	0.50	0.25	ug/l	25.0		105	75-125			
Methylene chloride	21.6	1.0	0.95	ug/l	25.0		86	55-130			
Tetrachloroethene	25.1	0.50	0.32	ug/l	25.0		100	70-125			

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B28024 Extracted: 02/28/08</b>											
<b>LCS Analyzed: 02/28/2008 (8B28024-BS1)</b>											
Toluene	23.6	0.50	0.36	ug/l	25.0		95	70-120			
trans-1,2-Dichloroethene	23.4	0.50	0.27	ug/l	25.0		93	70-125			
trans-1,3-Dichloropropene	21.7	0.50	0.32	ug/l	25.0		87	70-125			
Trichloroethene	23.2	0.50	0.26	ug/l	25.0		93	70-125			
Trichlorofluoromethane	24.8	0.50	0.34	ug/l	25.0		99	65-145			
Vinyl chloride	23.1	0.50	0.30	ug/l	25.0		92	55-135			
Xylenes, Total	78.1	1.5	0.90	ug/l	75.0		104	70-125			
Surrogate: Dibromofluoromethane	24.3			ug/l	25.0		97	80-120			
Surrogate: Toluene-d8	24.2			ug/l	25.0		97	80-120			
Surrogate: 4-Bromofluorobenzene	25.2			ug/l	25.0		101	80-120			
<b>Matrix Spike Analyzed: 02/28/2008 (8B28024-MS1)</b>											
<b>Source: IRB2429-01</b>											
1,1,1-Trichloroethane	24.8	0.50	0.30	ug/l	25.0	ND	99	65-140			
1,2,3-Trichloropropane	24.3	1.0	0.40	ug/l	25.0	ND	97	55-135			
1,1,2,2-Tetrachloroethane	23.8	0.50	0.24	ug/l	25.0	ND	95	55-135			
1,2-Dibromoethane (EDB)	24.9	0.50	0.40	ug/l	25.0	ND	100	70-130			
1,1,2-Trichloroethane	26.8	0.50	0.30	ug/l	25.0	ND	107	65-130			
Di-isopropyl Ether (DIPE)	27.9	0.50	0.25	ug/l	25.0	ND	111	60-140			
1,1-Dichloroethane	22.7	0.50	0.27	ug/l	25.0	ND	91	65-130			
Methyl-tert-butyl Ether (MTBE)	32.8	0.50	0.32	ug/l	25.0	5.22	110	55-145			
1,1-Dichloroethene	25.9	0.50	0.42	ug/l	25.0	ND	103	60-130			
tert-Butanol (TBA)	224	10	4.9	ug/l	125	86.0	111	65-140			
1,2-Dichloroethane	29.0	0.50	0.28	ug/l	25.0	1.47	110	60-140			
1,2-Dichlorobenzene	26.3	0.50	0.32	ug/l	25.0	ND	105	75-125			
1,2-Dichloropropane	26.5	0.50	0.35	ug/l	25.0	ND	106	65-130			
1,3-Dichlorobenzene	25.2	0.50	0.35	ug/l	25.0	ND	101	75-125			
1,4-Dichlorobenzene	24.1	0.50	0.37	ug/l	25.0	ND	96	75-125			
Benzene	24.0	0.50	0.28	ug/l	25.0	ND	96	65-125			
Bromodichloromethane	28.5	0.50	0.30	ug/l	25.0	ND	114	70-135			
Bromoform	25.6	0.50	0.40	ug/l	25.0	ND	102	55-135			
Bromomethane	24.2	1.0	0.42	ug/l	25.0	ND	97	55-145			
Carbon tetrachloride	25.8	0.50	0.28	ug/l	25.0	ND	103	65-140			
Chlorobenzene	24.7	0.50	0.36	ug/l	25.0	ND	99	75-125			
Chloroethane	23.3	1.0	0.40	ug/l	25.0	ND	93	55-140			
Chloroform	23.4	0.50	0.33	ug/l	25.0	ND	94	65-135			
Chloromethane	22.4	0.50	0.40	ug/l	25.0	ND	90	45-145			

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Arcadia, CA 91007  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B28024 Extracted: 02/28/08</b>											
<b>Matrix Spike Analyzed: 02/28/2008 (8B28024-MS1)</b>						<b>Source: IRB2429-01</b>					
cis-1,3-Dichloropropene	25.4	0.50	0.22	ug/l	25.0	ND	101	70-130			
Dibromochloromethane	26.1	0.50	0.28	ug/l	25.0	ND	104	65-140			
Ethylbenzene	27.2	0.50	0.25	ug/l	25.0	ND	109	65-130			
Methylene chloride	24.3	1.0	0.95	ug/l	25.0	ND	97	50-135			
Tetrachloroethene	23.9	0.50	0.32	ug/l	25.0	ND	96	65-130			
Toluene	26.8	0.50	0.36	ug/l	25.0	ND	107	70-125			
trans-1,2-Dichloroethene	22.9	0.50	0.27	ug/l	25.0	ND	91	65-130			
trans-1,3-Dichloropropene	24.5	0.50	0.32	ug/l	25.0	ND	98	65-135			
Trichloroethene	26.0	0.50	0.26	ug/l	25.0	ND	104	65-125			
Trichlorofluoromethane	25.4	0.50	0.34	ug/l	25.0	ND	102	60-145			
Vinyl chloride	22.6	0.50	0.30	ug/l	25.0	ND	90	45-140			
Xylenes, Total	79.0	1.5	0.90	ug/l	75.0	ND	105	60-130			
Surrogate: Dibromofluoromethane	23.5			ug/l	25.0		94	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	24.0			ug/l	25.0		96	80-120			
<b>Matrix Spike Dup Analyzed: 02/28/2008 (8B28024-MSD1)</b>						<b>Source: IRB2429-01</b>					
1,1,1-Trichloroethane	24.2	0.50	0.30	ug/l	25.0	ND	97	65-140	3	20	
1,2,3-Trichloropropane	24.4	1.0	0.40	ug/l	25.0	ND	98	55-135	1	30	
1,1,2,2-Tetrachloroethane	23.5	0.50	0.24	ug/l	25.0	ND	94	55-135	1	30	
1,2-Dibromoethane (EDB)	23.8	0.50	0.40	ug/l	25.0	ND	95	70-130	4	25	
1,1,2-Trichloroethane	26.0	0.50	0.30	ug/l	25.0	ND	104	65-130	3	25	
Di-isopropyl Ether (DIPE)	26.9	0.50	0.25	ug/l	25.0	ND	107	60-140	4	25	
1,1-Dichloroethane	23.0	0.50	0.27	ug/l	25.0	ND	92	65-130	1	20	
Methyl-tert-butyl Ether (MTBE)	32.8	0.50	0.32	ug/l	25.0	5.22	110	55-145	0	25	
1,1-Dichloroethene	26.6	0.50	0.42	ug/l	25.0	ND	106	60-130	3	20	
tert-Butanol (TBA)	206	10	4.9	ug/l	125	86.0	96	65-140	9	25	
1,2-Dichloroethane	27.8	0.50	0.28	ug/l	25.0	1.47	105	60-140	4	20	
1,2-Dichlorobenzene	26.3	0.50	0.32	ug/l	25.0	ND	105	75-125	0	20	
1,2-Dichloropropane	25.9	0.50	0.35	ug/l	25.0	ND	104	65-130	2	20	
1,3-Dichlorobenzene	25.5	0.50	0.35	ug/l	25.0	ND	102	75-125	1	20	
1,4-Dichlorobenzene	23.8	0.50	0.37	ug/l	25.0	ND	95	75-125	1	20	
Benzene	23.3	0.50	0.28	ug/l	25.0	ND	93	65-125	3	20	
Bromodichloromethane	26.7	0.50	0.30	ug/l	25.0	ND	107	70-135	7	20	
Bromoform	24.8	0.50	0.40	ug/l	25.0	ND	99	55-135	3	25	
Bromomethane	23.6	1.0	0.42	ug/l	25.0	ND	94	55-145	2	25	

#### TestAmerica Irvine

Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
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Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B28024 Extracted: 02/28/08</b>											
<b>Matrix Spike Dup Analyzed: 02/28/2008 (8B28024-MSD1)</b>						<b>Source: IRB2429-01</b>					
Carbon tetrachloride	24.9	0.50	0.28	ug/l	25.0	ND	99	65-140	4	25	
Chlorobenzene	23.5	0.50	0.36	ug/l	25.0	ND	94	75-125	5	20	
Chloroethane	23.6	1.0	0.40	ug/l	25.0	ND	94	55-140	1	25	
Chloroform	23.0	0.50	0.33	ug/l	25.0	ND	92	65-135	2	20	
Chloromethane	23.1	0.50	0.40	ug/l	25.0	ND	92	45-145	3	25	
cis-1,3-Dichloropropene	25.1	0.50	0.22	ug/l	25.0	ND	100	70-130	1	20	
Dibromochloromethane	25.8	0.50	0.28	ug/l	25.0	ND	103	65-140	1	25	
Ethylbenzene	26.3	0.50	0.25	ug/l	25.0	ND	105	65-130	3	20	
Methylene chloride	23.5	1.0	0.95	ug/l	25.0	ND	94	50-135	3	20	
Tetrachloroethene	23.7	0.50	0.32	ug/l	25.0	ND	95	65-130	1	20	
Toluene	25.7	0.50	0.36	ug/l	25.0	ND	103	70-125	4	20	
trans-1,2-Dichloroethene	23.8	0.50	0.27	ug/l	25.0	ND	95	65-130	4	20	
trans-1,3-Dichloropropene	23.8	0.50	0.32	ug/l	25.0	ND	95	65-135	3	25	
Trichloroethene	24.2	0.50	0.26	ug/l	25.0	ND	97	65-125	7	20	
Trichlorofluoromethane	25.2	0.50	0.34	ug/l	25.0	ND	101	60-145	1	25	
Vinyl chloride	23.9	0.50	0.30	ug/l	25.0	ND	96	45-140	6	30	
Xylenes, Total	76.5	1.5	0.90	ug/l	75.0	ND	102	60-130	3	20	
Surrogate: Dibromofluoromethane	23.5			ug/l	25.0		94	80-120			
Surrogate: Toluene-d8	24.8			ug/l	25.0		99	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		97	80-120			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B26001 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/26/2008 (8B26001-BLK1)</b>											
Acrolein	ND	5.0	4.0	ug/l							
Acrylonitrile	ND	2.0	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	23.8			ug/l	25.0		95	80-120			
Surrogate: Toluene-d8	25.1			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	22.4			ug/l	25.0		89	80-120			
<b>LCS Analyzed: 02/26/2008 (8B26001-BS1)</b>											
2-Chloroethyl vinyl ether	19.0	5.0	1.8	ug/l	25.0		76	25-170			
Surrogate: Dibromofluoromethane	24.3			ug/l	25.0		97	80-120			
Surrogate: Toluene-d8	25.4			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
<b>Matrix Spike Analyzed: 02/26/2008 (8B26001-MS1) Source: IRB2176-03</b>											
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170			M13
Surrogate: Dibromofluoromethane	25.0			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	23.6			ug/l	25.0		94	80-120			
<b>Matrix Spike Dup Analyzed: 02/26/2008 (8B26001-MSD1) Source: IRB2176-03</b>											
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170		25	M13
Surrogate: Dibromofluoromethane	24.6			ug/l	25.0		98	80-120			
Surrogate: Toluene-d8	25.0			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	23.7			ug/l	25.0		95	80-120			

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## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B26045 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B26045-BLK1)</b>											
Acenaphthene	ND	10	3.0	ug/l							
Acenaphthylene	ND	10	3.0	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	10	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	2.5	ug/l							
Benzo(g,h,i)perylene	ND	10	4.0	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	3.0	ug/l							
Bis(2-chloroethyl)ether	ND	10	3.0	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	3.0	ug/l							
Butyl benzyl phthalate	ND	20	4.0	ug/l							
4-Chloroaniline	ND	10	2.0	ug/l							
2-Chloronaphthalene	ND	10	3.0	ug/l							
4-Chloro-3-methylphenol	ND	20	2.5	ug/l							
2-Chlorophenol	ND	10	3.0	ug/l							
4-Chlorophenyl phenyl ether	ND	10	2.5	ug/l							
Chrysene	ND	10	2.5	ug/l							
Dibenz(a,h)anthracene	ND	20	3.0	ug/l							
Dibenzofuran	ND	10	4.0	ug/l							
Di-n-butyl phthalate	ND	20	3.0	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	3.5	ug/l							
Diethyl phthalate	ND	10	3.5	ug/l							
2,4-Dimethylphenol	ND	20	3.5	ug/l							
Dimethyl phthalate	ND	10	2.0	ug/l							

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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	RPD Limit	Data Qualifiers
<b>Batch: 8B26045 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B26045-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	4.0	ug/l							
2,4-Dinitrophenol	ND	20	8.0	ug/l							
2,4-Dinitrotoluene	ND	10	3.5	ug/l							
2,6-Dinitrotoluene	ND	10	2.0	ug/l							
Di-n-octyl phthalate	ND	20	3.5	ug/l							
Fluoranthene	ND	10	3.0	ug/l							
Fluorene	ND	10	3.0	ug/l							
Hexachlorobenzene	ND	10	3.0	ug/l							
Hexachlorobutadiene	ND	10	4.0	ug/l							
Hexachlorocyclopentadiene	ND	20	5.0	ug/l							
Hexachloroethane	ND	10	3.5	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	3.5	ug/l							
Isophorone	ND	10	2.5	ug/l							
2-Methylnaphthalene	ND	10	2.0	ug/l							
2-Methylphenol	ND	10	3.0	ug/l							
4-Methylphenol	ND	10	3.0	ug/l							
Naphthalene	ND	10	3.0	ug/l							
2-Nitroaniline	ND	20	2.0	ug/l							
3-Nitroaniline	ND	20	3.0	ug/l							
4-Nitroaniline	ND	20	4.0	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	3.5	ug/l							
Pentachlorophenol	ND	20	3.5	ug/l							
Phenanthrene	ND	10	3.5	ug/l							
Phenol	ND	10	2.0	ug/l							
Pyrene	ND	10	4.0	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	4.5	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	2.5	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
Surrogate: 2-Fluorophenol	154			ug/l	200		77			30-120	

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: 8B26045 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B26045-BLK1)</b>											
Surrogate: Phenol-d6	164			ug/l	200		82	35-120			
Surrogate: 2,4,6-Tribromophenol	202			ug/l	200		101	40-120			
Surrogate: Nitrobenzene-d5	83.0			ug/l	100		83	45-120			
Surrogate: 2-Fluorobiphenyl	81.4			ug/l	100		81	50-120			
Surrogate: Terphenyl-d14	87.6			ug/l	100		88	50-125			
<b>LCS Analyzed: 02/28/2008 (8B26045-BS1)</b>											
Acenaphthene	77.4	10	3.0	ug/l	100		77	60-120			MNR1
Acenaphthylene	82.4	10	3.0	ug/l	100		82	60-120			
Aniline	77.7	10	2.5	ug/l	100		78	35-120			
Anthracene	83.1	10	2.0	ug/l	100		83	65-120			
Benzidine	53.1	20	8.5	ug/l	100		53	30-160			
Benzoic acid	67.9	20	10	ug/l	100		68	25-120			
Benzo(a)anthracene	77.1	10	2.0	ug/l	100		77	65-120			
Benzo(b)fluoranthene	71.1	10	2.0	ug/l	100		71	55-125			
Benzo(k)fluoranthene	77.5	10	2.5	ug/l	100		78	50-125			
Benzo(g,h,i)perylene	73.8	10	4.0	ug/l	100		74	45-135			
Benzo(a)pyrene	77.8	10	2.0	ug/l	100		78	55-130			
Benzyl alcohol	73.9	20	2.5	ug/l	100		74	50-120			
Bis(2-chloroethoxy)methane	71.6	10	3.0	ug/l	100		72	55-120			
Bis(2-chloroethyl)ether	67.3	10	3.0	ug/l	100		67	50-120			
Bis(2-chloroisopropyl)ether	71.4	10	2.5	ug/l	100		71	45-120			
Bis(2-ethylhexyl)phthalate	77.2	50	4.0	ug/l	100		77	65-130			
4-Bromophenyl phenyl ether	78.6	10	3.0	ug/l	100		79	60-120			
Butyl benzyl phthalate	80.9	20	4.0	ug/l	100		81	55-130			
4-Chloroaniline	77.8	10	2.0	ug/l	100		78	55-120			
2-Chloronaphthalene	75.0	10	3.0	ug/l	100		75	60-120			
4-Chloro-3-methylphenol	79.2	20	2.5	ug/l	100		79	60-120			
2-Chlorophenol	65.3	10	3.0	ug/l	100		65	45-120			
4-Chlorophenyl phenyl ether	76.8	10	2.5	ug/l	100		77	65-120			
Chrysene	73.7	10	2.5	ug/l	100		74	65-120			
Dibenz(a,h)anthracene	74.8	20	3.0	ug/l	100		75	50-135			
Dibenzofuran	77.3	10	4.0	ug/l	100		77	65-120			
Di-n-butyl phthalate	85.1	20	3.0	ug/l	100		85	60-125			
1,3-Dichlorobenzene	62.8	10	3.0	ug/l	100		63	35-120			
1,4-Dichlorobenzene	61.4	10	2.5	ug/l	100		61	35-120			

#### TestAmerica Irvine

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B26045 Extracted: 02/26/08</b>											
<b>LCS Analyzed: 02/28/2008 (8B26045-BS1)</b>											
1,2-Dichlorobenzene	63.4	10	3.0	ug/l	100		63	40-120			MNR1
3,3-Dichlorobenzidine	57.7	20	3.0	ug/l	100		58	45-135			
2,4-Dichlorophenol	75.8	10	3.5	ug/l	100		76	55-120			
Diethyl phthalate	83.4	10	3.5	ug/l	100		83	55-120			
2,4-Dimethylphenol	63.7	20	3.5	ug/l	100		64	40-120			
Dimethyl phthalate	79.6	10	2.0	ug/l	100		80	30-120			
4,6-Dinitro-2-methylphenol	78.7	20	4.0	ug/l	100		79	45-120			
2,4-Dinitrophenol	74.5	20	8.0	ug/l	100		75	40-120			
2,4-Dinitrotoluene	87.1	10	3.5	ug/l	100		87	65-120			
2,6-Dinitrotoluene	76.9	10	2.0	ug/l	100		77	65-120			
Di-n-octyl phthalate	79.3	20	3.5	ug/l	100		79	65-135			
Fluoranthene	78.9	10	3.0	ug/l	100		79	60-120			
Fluorene	76.9	10	3.0	ug/l	100		77	65-120			
Hexachlorobenzene	77.9	10	3.0	ug/l	100		78	60-120			
Hexachlorobutadiene	66.2	10	4.0	ug/l	100		66	40-120			
Hexachlorocyclopentadiene	75.7	20	5.0	ug/l	100		76	25-120			
Hexachloroethane	60.6	10	3.5	ug/l	100		61	35-120			
Indeno(1,2,3-cd)pyrene	71.2	20	3.5	ug/l	100		71	45-135			
Isophorone	75.6	10	2.5	ug/l	100		76	50-120			
2-Methylnaphthalene	75.1	10	2.0	ug/l	100		75	55-120			
2-Methylphenol	69.8	10	3.0	ug/l	100		70	50-120			
4-Methylphenol	70.5	10	3.0	ug/l	100		71	50-120			
Naphthalene	70.3	10	3.0	ug/l	100		70	55-120			
2-Nitroaniline	81.3	20	2.0	ug/l	100		81	65-120			
3-Nitroaniline	79.5	20	3.0	ug/l	100		79	60-120			
4-Nitroaniline	89.8	20	4.0	ug/l	100		90	55-125			
Nitrobenzene	71.0	20	2.5	ug/l	100		71	55-120			
2-Nitrophenol	68.6	10	3.5	ug/l	100		69	50-120			
4-Nitrophenol	75.3	20	5.5	ug/l	100		75	45-120			
N-Nitrosodiphenylamine	77.5	10	2.0	ug/l	100		77	60-120			
N-Nitroso-di-n-propylamine	75.2	10	3.5	ug/l	100		75	45-120			
Pentachlorophenol	74.4	20	3.5	ug/l	100		74	50-120			
Phenanthrene	77.8	10	3.5	ug/l	100		78	65-120			
Phenol	61.2	10	2.0	ug/l	100		61	40-120			
Pyrene	79.0	10	4.0	ug/l	100		79	55-125			

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 Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: 8B26045 Extracted: 02/26/08</b>											
<b>LCS Analyzed: 02/28/2008 (8B26045-BS1)</b>											
1,2,4-Trichlorobenzene	69.6	10	2.5	ug/l	100		70	45-120			MNR1
2,4,5-Trichlorophenol	73.8	20	3.0	ug/l	100		74	55-120			
2,4,6-Trichlorophenol	80.0	20	4.5	ug/l	100		80	55-120			
1,2-Diphenylhydrazine/Azobenzene	83.4	20	2.5	ug/l	100		83	60-120			
N-Nitrosodimethylamine	63.8	20	2.5	ug/l	100		64	45-120			
Surrogate: 2-Fluorophenol	117			ug/l	200		58	30-120			
Surrogate: Phenol-d6	126			ug/l	200		63	35-120			
Surrogate: 2,4,6-Tribromophenol	158			ug/l	200		79	40-120			
Surrogate: Nitrobenzene-d5	67.6			ug/l	100		68	45-120			
Surrogate: 2-Fluorobiphenyl	67.6			ug/l	100		68	50-120			
Surrogate: Terphenyl-d14	75.6			ug/l	100		76	50-125			
<b>LCS Dup Analyzed: 02/28/2008 (8B26045-BSD1)</b>											
Acenaphthene	80.2	10	3.0	ug/l	100		80	60-120	4	20	
Acenaphthylene	86.7	10	3.0	ug/l	100		87	60-120	5	20	
Aniline	39.6	10	2.5	ug/l	100		40	35-120	65	30	R-7
Anthracene	85.6	10	2.0	ug/l	100		86	65-120	3	20	
Benzidine	ND	20	8.5	ug/l	100			30-160		35	L6
Benzoic acid	66.8	20	10	ug/l	100		67	25-120	2	30	
Benzo(a)anthracene	80.7	10	2.0	ug/l	100		81	65-120	5	20	
Benzo(b)fluoranthene	76.7	10	2.0	ug/l	100		77	55-125	8	25	
Benzo(k)fluoranthene	79.2	10	2.5	ug/l	100		79	50-125	2	20	
Benzo(g,h,i)perylene	78.5	10	4.0	ug/l	100		79	45-135	6	25	
Benzo(a)pyrene	80.9	10	2.0	ug/l	100		81	55-130	4	25	
Benzyl alcohol	78.4	20	2.5	ug/l	100		78	50-120	6	20	
Bis(2-chloroethoxy)methane	78.9	10	3.0	ug/l	100		79	55-120	10	20	
Bis(2-chloroethyl)ether	70.7	10	3.0	ug/l	100		71	50-120	5	20	
Bis(2-chloroisopropyl)ether	77.2	10	2.5	ug/l	100		77	45-120	8	20	
Bis(2-ethylhexyl)phthalate	81.6	50	4.0	ug/l	100		82	65-130	6	20	
4-Bromophenyl phenyl ether	81.1	10	3.0	ug/l	100		81	60-120	3	25	
Butyl benzyl phthalate	84.3	20	4.0	ug/l	100		84	55-130	4	20	
4-Chloroaniline	66.3	10	2.0	ug/l	100		66	55-120	16	25	
2-Chloronaphthalene	78.5	10	3.0	ug/l	100		78	60-120	4	20	
4-Chloro-3-methylphenol	82.1	20	2.5	ug/l	100		82	60-120	4	25	
2-Chlorophenol	67.2	10	3.0	ug/l	100		67	45-120	3	25	
4-Chlorophenyl phenyl ether	78.8	10	2.5	ug/l	100		79	65-120	3	20	

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: 8B26045 Extracted: 02/26/08</b>											
<b>LCS Dup Analyzed: 02/28/2008 (8B26045-BSD1)</b>											
Chrysene	78.3	10	2.5	ug/l	100		78	65-120	6	20	
Dibenz(a,h)anthracene	78.3	20	3.0	ug/l	100		78	50-135	5	25	
Dibenzofuran	80.6	10	4.0	ug/l	100		81	65-120	4	20	
Di-n-butyl phthalate	90.6	20	3.0	ug/l	100		91	60-125	6	20	
1,3-Dichlorobenzene	58.5	10	3.0	ug/l	100		59	35-120	7	25	
1,4-Dichlorobenzene	60.4	10	2.5	ug/l	100		60	35-120	2	25	
1,2-Dichlorobenzene	64.8	10	3.0	ug/l	100		65	40-120	2	25	
3,3-Dichlorobenzidine	53.6	20	3.0	ug/l	100		54	45-135	7	25	
2,4-Dichlorophenol	78.4	10	3.5	ug/l	100		78	55-120	3	20	
Diethyl phthalate	87.2	10	3.5	ug/l	100		87	55-120	5	30	
2,4-Dimethylphenol	69.1	20	3.5	ug/l	100		69	40-120	8	25	
Dimethyl phthalate	82.4	10	2.0	ug/l	100		82	30-120	4	30	
4,6-Dinitro-2-methylphenol	84.7	20	4.0	ug/l	100		85	45-120	7	25	
2,4-Dinitrophenol	81.0	20	8.0	ug/l	100		81	40-120	8	25	
2,4-Dinitrotoluene	93.1	10	3.5	ug/l	100		93	65-120	7	20	
2,6-Dinitrotoluene	83.3	10	2.0	ug/l	100		83	65-120	8	20	
Di-n-octyl phthalate	83.5	20	3.5	ug/l	100		84	65-135	5	20	
Fluoranthene	84.1	10	3.0	ug/l	100		84	60-120	6	20	
Fluorene	80.8	10	3.0	ug/l	100		81	65-120	5	20	
Hexachlorobenzene	81.2	10	3.0	ug/l	100		81	60-120	4	20	
Hexachlorobutadiene	64.1	10	4.0	ug/l	100		64	40-120	3	25	
Hexachlorocyclopentadiene	81.7	20	5.0	ug/l	100		82	25-120	8	30	
Hexachloroethane	57.5	10	3.5	ug/l	100		57	35-120	5	25	
Indeno(1,2,3-cd)pyrene	76.4	20	3.5	ug/l	100		76	45-135	7	25	
Isophorone	79.8	10	2.5	ug/l	100		80	50-120	5	20	
2-Methylnaphthalene	79.9	10	2.0	ug/l	100		80	55-120	6	20	
2-Methylphenol	72.5	10	3.0	ug/l	100		72	50-120	4	20	
4-Methylphenol	74.9	10	3.0	ug/l	100		75	50-120	6	20	
Naphthalene	72.5	10	3.0	ug/l	100		73	55-120	3	20	
2-Nitroaniline	87.8	20	2.0	ug/l	100		88	65-120	8	20	
3-Nitroaniline	87.3	20	3.0	ug/l	100		87	60-120	9	25	
4-Nitroaniline	94.1	20	4.0	ug/l	100		94	55-125	5	20	
Nitrobenzene	74.4	20	2.5	ug/l	100		74	55-120	5	25	
2-Nitrophenol	70.7	10	3.5	ug/l	100		71	50-120	3	25	
4-Nitrophenol	78.2	20	5.5	ug/l	100		78	45-120	4	30	

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B26045 Extracted: 02/26/08</b>											
<b>LCS Dup Analyzed: 02/28/2008 (8B26045-BSD1)</b>											
N-Nitrosodiphenylamine	78.9	10	2.0	ug/l	100		79	60-120	2	20	
N-Nitroso-di-n-propylamine	78.6	10	3.5	ug/l	100		79	45-120	4	20	
Pentachlorophenol	80.3	20	3.5	ug/l	100		80	50-120	8	25	
Phenanthrene	81.5	10	3.5	ug/l	100		82	65-120	5	20	
Phenol	59.3	10	2.0	ug/l	100		59	40-120	3	25	
Pyrene	80.5	10	4.0	ug/l	100		80	55-125	2	25	
1,2,4-Trichlorobenzene	69.4	10	2.5	ug/l	100		69	45-120	0	20	
2,4,5-Trichlorophenol	76.8	20	3.0	ug/l	100		77	55-120	4	30	
2,4,6-Trichlorophenol	82.9	20	4.5	ug/l	100		83	55-120	4	30	
1,2-Diphenylhydrazine/Azobenzene	88.9	20	2.5	ug/l	100		89	60-120	6	25	
N-Nitrosodimethylamine	65.5	20	2.5	ug/l	100		65	45-120	3	20	
Surrogate: 2-Fluorophenol	110			ug/l	200		55	30-120			
Surrogate: Phenol-d6	120			ug/l	200		60	35-120			
Surrogate: 2,4,6-Tribromophenol	160			ug/l	200		80	40-120			
Surrogate: Nitrobenzene-d5	72.0			ug/l	100		72	45-120			
Surrogate: 2-Fluorobiphenyl	70.1			ug/l	100		70	50-120			
Surrogate: Terphenyl-d14	79.8			ug/l	100		80	50-125			

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 Attention: Bronwyn Kelly

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Sampled: 02/25/08  
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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	RPD Limit	Data Qualifiers
<b>Batch: 8B26041 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B26041-BLK1)</b>											
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
gamma-BHC (Lindane)	ND	0.010	0.0030	ug/l							
Chlordane	ND	0.10	0.030	ug/l							
4,4'-DDD	ND	0.0050	0.0020	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
Endrin ketone	ND	0.010	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Methoxychlor	ND	0.0050	0.0035	ug/l							
Toxaphene	ND	0.10	0.070	ug/l							
Surrogate: Decachlorobiphenyl	0.460			ug/l	0.500		92	45-120			
Surrogate: Tetrachloro-m-xylene	0.415			ug/l	0.500		83	35-115			

### LCS Analyzed: 02/28/2008 (8B26041-BS1)

Aldrin	0.321	0.0050	0.0015	ug/l	0.500		64	40-115			
alpha-BHC	0.310	0.0050	0.0025	ug/l	0.500		62	45-115			
beta-BHC	0.369	0.010	0.0040	ug/l	0.500		74	55-115			
delta-BHC	0.405	0.0050	0.0035	ug/l	0.500		81	55-115			
gamma-BHC (Lindane)	0.316	0.010	0.0030	ug/l	0.500		63	45-115			
4,4'-DDD	0.459	0.0050	0.0020	ug/l	0.500		92	55-120			
4,4'-DDE	0.438	0.0050	0.0030	ug/l	0.500		88	50-120			
4,4'-DDT	0.447	0.010	0.0040	ug/l	0.500		89	55-120			
Dieldrin	0.390	0.0050	0.0020	ug/l	0.500		78	55-115			
Endosulfan I	0.392	0.0050	0.0020	ug/l	0.500		78	55-115			
Endosulfan II	0.330	0.0050	0.0030	ug/l	0.500		66	55-120			
Endosulfan sulfate	0.465	0.010	0.0030	ug/l	0.500		93	60-120			

MNR1

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Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B26041 Extracted: 02/26/08</b>											
<b>LCS Analyzed: 02/28/2008 (8B26041-BS1)</b>											
Endrin	0.432	0.0050	0.0020	ug/l	0.500		86	55-115			MNR1
Endrin aldehyde	0.410	0.010	0.0020	ug/l	0.500		82	50-120			
Endrin ketone	0.437	0.010	0.0030	ug/l	0.500		87	55-120			
Heptachlor	0.332	0.010	0.0030	ug/l	0.500		66	45-115			
Heptachlor epoxide	0.372	0.0050	0.0025	ug/l	0.500		74	55-115			
Methoxychlor	0.453	0.0050	0.0035	ug/l	0.500		91	60-120			
Surrogate: Decachlorobiphenyl	0.414			ug/l	0.500		83	45-120			
Surrogate: Tetrachloro-m-xylene	0.324			ug/l	0.500		65	35-115			
<b>LCS Dup Analyzed: 02/28/2008 (8B26041-BSD1)</b>											
Aldrin	0.363	0.0050	0.0015	ug/l	0.500		73	40-115	12	30	
alpha-BHC	0.377	0.0050	0.0025	ug/l	0.500		75	45-115	20	30	
beta-BHC	0.421	0.010	0.0040	ug/l	0.500		84	55-115	13	30	
delta-BHC	0.449	0.0050	0.0035	ug/l	0.500		90	55-115	10	30	
gamma-BHC (Lindane)	0.383	0.010	0.0030	ug/l	0.500		77	45-115	19	30	
4,4'-DDD	0.477	0.0050	0.0020	ug/l	0.500		95	55-120	4	30	
4,4'-DDE	0.447	0.0050	0.0030	ug/l	0.500		89	50-120	2	30	
4,4'-DDT	0.454	0.010	0.0040	ug/l	0.500		91	55-120	1	30	
Dieldrin	0.413	0.0050	0.0020	ug/l	0.500		83	55-115	6	30	
Endosulfan I	0.415	0.0050	0.0020	ug/l	0.500		83	55-115	6	30	
Endosulfan II	0.445	0.0050	0.0030	ug/l	0.500		89	55-120	30	30	
Endosulfan sulfate	0.482	0.010	0.0030	ug/l	0.500		96	60-120	4	30	
Endrin	0.457	0.0050	0.0020	ug/l	0.500		91	55-115	6	30	
Endrin aldehyde	0.414	0.010	0.0020	ug/l	0.500		83	50-120	1	30	
Endrin ketone	0.456	0.010	0.0030	ug/l	0.500		91	55-120	4	30	
Heptachlor	0.378	0.010	0.0030	ug/l	0.500		76	45-115	13	30	
Heptachlor epoxide	0.395	0.0050	0.0025	ug/l	0.500		79	55-115	6	30	
Methoxychlor	0.460	0.0050	0.0035	ug/l	0.500		92	60-120	2	30	
Surrogate: Decachlorobiphenyl	0.458			ug/l	0.500		92	45-120			
Surrogate: Tetrachloro-m-xylene	0.376			ug/l	0.500		75	35-115			

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B26041 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/27/2008 (8B26041-BLK1)</b>											
Aroclor 1016	ND	0.50	0.45	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.30	ug/l							
Surrogate: Decachlorobiphenyl	0.429			ug/l	0.500		86	45-120			
<b>LCS Analyzed: 02/27/2008 (8B26041-BS2)</b>											
Aroclor 1016	3.34	0.50	0.45	ug/l	4.00		83	50-115			MNR1
Aroclor 1260	4.07	0.50	0.30	ug/l	4.00		102	60-120			
Surrogate: Decachlorobiphenyl	0.506			ug/l	0.500		101	45-120			
<b>LCS Dup Analyzed: 02/27/2008 (8B26041-BSD2)</b>											
Aroclor 1016	3.12	0.50	0.45	ug/l	4.00		78	50-115	7	30	
Aroclor 1260	3.99	0.50	0.30	ug/l	4.00		100	60-120	2	25	
Surrogate: Decachlorobiphenyl	0.475			ug/l	0.500		95	45-120			

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Report Number: IRB2473

Sampled: 02/25/08  
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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: 8B27069 Extracted: 02/27/08</b>											
<b>Blank Analyzed: 02/29/2008 (8B27069-BLK1)</b>											
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
<b>LCS Analyzed: 02/29/2008 (8B27069-BS1)</b>											
Arsenic	478	10	7.0	ug/l	500		96	85-115			
Beryllium	468	2.0	0.90	ug/l	500		94	85-115			
Boron	0.487	0.050	0.020	mg/l	0.500		97	85-115			
Calcium	2.41	0.10	0.050	mg/l	2.50		96	85-115			
Chromium	479	5.0	2.0	ug/l	500		96	85-115			
Magnesium	2.34	0.020	0.012	mg/l	2.50		94	85-115			
Nickel	472	10	2.0	ug/l	500		94	85-115			
<b>Matrix Spike Analyzed: 02/29/2008 (8B27069-MS1)</b>											
						<b>Source: IRB2473-01</b>					
Arsenic	492	10	7.0	ug/l	500	ND	98	70-130			
Beryllium	483	2.0	0.90	ug/l	500	ND	97	70-130			
Boron	0.493	0.050	0.020	mg/l	0.500	ND	99	70-130			
Calcium	10.0	0.10	0.050	mg/l	2.50	7.62	96	70-130			
Chromium	484	5.0	2.0	ug/l	500	ND	97	70-130			
Magnesium	3.31	0.020	0.012	mg/l	2.50	0.963	94	70-130			
Nickel	475	10	2.0	ug/l	500	ND	95	70-130			
<b>Matrix Spike Analyzed: 02/29/2008 (8B27069-MS2)</b>											
						<b>Source: IRB2540-01</b>					
Arsenic	465	10	7.0	ug/l	500	ND	93	70-130			
Beryllium	458	2.0	0.90	ug/l	500	ND	92	70-130			
Boron	0.617	0.050	0.020	mg/l	0.500	0.165	90	70-130			
Calcium	42.5	0.10	0.050	mg/l	2.50	42.3	9	70-130			MHA
Chromium	453	5.0	2.0	ug/l	500	ND	91	70-130			
Magnesium	13.7	0.020	0.012	mg/l	2.50	12.5	46	70-130			MHA
Nickel	500	10	2.0	ug/l	500	62.1	88	70-130			

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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B27069 Extracted: 02/27/08</b>											
<b>Matrix Spike Dup Analyzed: 02/29/2008 (8B27069-MSD1)</b>						<b>Source: IRB2473-01</b>					
Arsenic	501	10	7.0	ug/l	500	ND	100	70-130	2	20	
Beryllium	488	2.0	0.90	ug/l	500	ND	98	70-130	1	20	
Boron	0.503	0.050	0.020	mg/l	0.500	ND	101	70-130	2	20	
Calcium	9.96	0.10	0.050	mg/l	2.50	7.62	93	70-130	1	20	
Chromium	493	5.0	2.0	ug/l	500	ND	99	70-130	2	20	
Magnesium	3.35	0.020	0.012	mg/l	2.50	0.963	96	70-130	1	20	
Nickel	485	10	2.0	ug/l	500	ND	97	70-130	2	20	

**Batch: 8B28067 Extracted: 02/28/08**

**Blank Analyzed: 02/28/2008 (8B28067-BLK1)**

Antimony	ND	2.0	0.20	ug/l							
Cadmium	0.133	1.0	0.11	ug/l							J
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Selenium	ND	2.0	0.30	ug/l							
Silver	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	6.39	20	2.5	ug/l							J

**LCS Analyzed: 02/28/2008 (8B28067-BS1)**

Antimony	77.9	2.0	0.20	ug/l	80.0		97	85-115			
Cadmium	76.7	1.0	0.11	ug/l	80.0		96	85-115			
Copper	79.3	2.0	0.75	ug/l	80.0		99	85-115			
Lead	79.9	1.0	0.30	ug/l	80.0		100	85-115			
Selenium	74.4	2.0	0.30	ug/l	80.0		93	85-115			
Silver	78.1	1.0	0.30	ug/l	80.0		98	85-115			
Thallium	75.5	1.0	0.20	ug/l	80.0		94	85-115			
Zinc	77.1	20	2.5	ug/l	80.0		96	85-115			

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Report Number: IRB2473

Sampled: 02/25/08  
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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B28067 Extracted: 02/28/08</b>											
<b>Matrix Spike Analyzed: 02/28/2008 (8B28067-MS1)</b>						<b>Source: IRB2460-02</b>					
Antimony	78.3	2.0	0.20	ug/l	80.0	ND	98	70-130			
Cadmium	74.6	1.0	0.11	ug/l	80.0	0.128	93	70-130			
Copper	76.4	2.0	0.75	ug/l	80.0	1.05	94	70-130			
Lead	77.7	1.0	0.30	ug/l	80.0	ND	97	70-130			
Selenium	71.5	2.0	0.30	ug/l	80.0	ND	89	70-130			
Silver	73.7	1.0	0.30	ug/l	80.0	ND	92	70-130			
Thallium	73.2	1.0	0.20	ug/l	80.0	ND	92	70-130			
Zinc	74.0	20	2.5	ug/l	80.0	6.52	84	70-130			
<b>Matrix Spike Analyzed: 02/28/2008 (8B28067-MS2)</b>						<b>Source: IRB2402-01</b>					
Antimony	77.4	2.0	0.20	ug/l	80.0	2.51	94	70-130			
Cadmium	75.9	1.0	0.11	ug/l	80.0	1.94	92	70-130			
Copper	78.5	2.0	0.75	ug/l	80.0	2.79	95	70-130			
Lead	79.1	1.0	0.30	ug/l	80.0	1.66	97	70-130			
Selenium	69.4	2.0	0.30	ug/l	80.0	ND	87	70-130			
Silver	74.7	1.0	0.30	ug/l	80.0	ND	93	70-130			
Thallium	76.3	1.0	0.20	ug/l	80.0	ND	95	70-130			
Zinc	133	20	2.5	ug/l	80.0	65.8	84	70-130			
<b>Matrix Spike Dup Analyzed: 02/28/2008 (8B28067-MSD1)</b>						<b>Source: IRB2460-02</b>					
Antimony	78.5	2.0	0.20	ug/l	80.0	ND	98	70-130	0	20	
Cadmium	76.2	1.0	0.11	ug/l	80.0	0.128	95	70-130	2	20	
Copper	78.4	2.0	0.75	ug/l	80.0	1.05	97	70-130	3	20	
Lead	78.3	1.0	0.30	ug/l	80.0	ND	98	70-130	1	20	
Selenium	72.4	2.0	0.30	ug/l	80.0	ND	91	70-130	1	20	
Silver	75.9	1.0	0.30	ug/l	80.0	ND	95	70-130	3	20	
Thallium	76.6	1.0	0.20	ug/l	80.0	ND	96	70-130	5	20	
Zinc	75.2	20	2.5	ug/l	80.0	6.52	86	70-130	2	20	

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Sampled: 02/25/08  
Received: 02/25/08

## METHOD BLANK/QC DATA

### DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B25122 Extracted: 02/25/08</b>											
<b>Blank Analyzed: 02/26/2008 (8B25122-BLK1)</b>											
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	0.0320	0.050	0.020	mg/l							J
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
Hardness (as CaCO3)	ND	1.0	1.0	mg/l							
<b>LCS Analyzed: 02/26/2008 (8B25122-BS1)</b>											
Arsenic	988	10	7.0	ug/l	1000		99	85-115			
Beryllium	990	2.0	0.90	ug/l	1000		99	85-115			
Boron	1.01	0.050	0.020	mg/l	1.00		101	85-115			
Calcium	0.964	0.10	0.050	mg/l	1.00		96	85-115			
Chromium	976	5.0	2.0	ug/l	1000		98	85-115			
Magnesium	0.950	0.020	0.012	mg/l	1.00		95	85-115			
Nickel	998	10	2.0	ug/l	1000		100	85-115			
<b>Matrix Spike Analyzed: 02/26/2008 (8B25122-MS1) Source: IRB2473-01</b>											
Arsenic	1030	10	7.0	ug/l	1000	7.56	102	70-130			
Beryllium	999	2.0	0.90	ug/l	1000	ND	100	70-130			
Boron	1.03	0.050	0.020	mg/l	1.00	ND	103	70-130			
Calcium	8.38	0.10	0.050	mg/l	1.00	7.52	86	70-130			MHA
Chromium	996	5.0	2.0	ug/l	1000	ND	100	70-130			
Magnesium	1.98	0.020	0.012	mg/l	1.00	1.00	97	70-130			
Nickel	1020	10	2.0	ug/l	1000	ND	102	70-130			
<b>Matrix Spike Dup Analyzed: 02/26/2008 (8B25122-MSD1) Source: IRB2473-01</b>											
Arsenic	1030	10	7.0	ug/l	1000	7.56	102	70-130	0	20	
Beryllium	1010	2.0	0.90	ug/l	1000	ND	101	70-130	2	20	
Boron	1.02	0.050	0.020	mg/l	1.00	ND	102	70-130	1	20	
Calcium	8.50	0.10	0.050	mg/l	1.00	7.52	98	70-130	1	20	MHA
Chromium	1000	5.0	2.0	ug/l	1000	ND	100	70-130	1	20	
Magnesium	2.00	0.020	0.012	mg/l	1.00	1.00	99	70-130	1	20	
Nickel	1030	10	2.0	ug/l	1000	ND	103	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	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 8B26090 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/28/2008 (8B26090-BLK1)</b>											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.30	ug/l							
Selenium	0.565	2.0	0.30	ug/l							J
Silver	ND	1.0	0.30	ug/l							
Thallium	ND	1.0	0.20	ug/l							
Zinc	ND	20	2.5	ug/l							
<b>LCS Analyzed: 02/28/2008 (8B26090-BS1)</b>											
Antimony	81.8	2.0	0.20	ug/l	80.0		102	85-115			
Cadmium	80.9	1.0	0.11	ug/l	80.0		101	85-115			
Copper	81.5	2.0	0.75	ug/l	80.0		102	85-115			
Lead	83.1	1.0	0.30	ug/l	80.0		104	85-115			
Selenium	77.0	2.0	0.30	ug/l	80.0		96	85-115			
Silver	81.5	1.0	0.30	ug/l	80.0		102	85-115			
Thallium	82.4	1.0	0.20	ug/l	80.0		103	85-115			
Zinc	80.3	20	2.5	ug/l	80.0		100	85-115			
<b>Matrix Spike Analyzed: 02/28/2008 (8B26090-MS1)</b>											
						<b>Source: IRB2473-01</b>					
Antimony	81.6	2.0	0.20	ug/l	80.0	0.759	101	70-130			
Cadmium	78.2	1.0	0.11	ug/l	80.0	0.404	97	70-130			
Copper	80.1	2.0	0.75	ug/l	80.0	1.50	98	70-130			
Lead	80.4	1.0	0.30	ug/l	80.0	ND	100	70-130			
Selenium	74.5	2.0	0.30	ug/l	80.0	0.485	93	70-130			
Silver	77.1	1.0	0.30	ug/l	80.0	ND	96	70-130			
Thallium	79.8	1.0	0.20	ug/l	80.0	ND	100	70-130			
Zinc	104	20	2.5	ug/l	80.0	29.8	93	70-130			

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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: 8B26090 Extracted: 02/26/08</b>											
<b>Matrix Spike Dup Analyzed: 02/28/2008 (8B26090-MSD1)</b>						<b>Source: IRB2473-01</b>					
Antimony	83.3	2.0	0.20	ug/l	80.0	0.759	103	70-130	2	20	
Cadmium	79.8	1.0	0.11	ug/l	80.0	0.404	99	70-130	2	20	
Copper	81.2	2.0	0.75	ug/l	80.0	1.50	100	70-130	1	20	
Lead	81.6	1.0	0.30	ug/l	80.0	ND	102	70-130	2	20	
Selenium	74.7	2.0	0.30	ug/l	80.0	0.485	93	70-130	0	20	
Silver	78.6	1.0	0.30	ug/l	80.0	ND	98	70-130	2	20	
Thallium	80.6	1.0	0.20	ug/l	80.0	ND	101	70-130	1	20	
Zinc	105	20	2.5	ug/l	80.0	29.8	94	70-130	1	20	

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## 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: 8B25043 Extracted: 02/25/08</b>											
<b>Blank Analyzed: 02/25/2008 (8B25043-BLK1)</b>											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
<b>LCS Analyzed: 02/25/2008 (8B25043-BS1)</b>											
Chloride	4.91	0.50	0.25	mg/l	5.00		98	90-110			
Nitrate-N	1.05	0.11	0.060	mg/l	1.13		93	90-110			M-3
Nitrite-N	1.53	0.15	0.090	mg/l	1.52		101	90-110			
Sulfate	9.66	0.50	0.20	mg/l	10.0		97	90-110			
<b>Matrix Spike Analyzed: 02/25/2008 (8B25043-MS1)</b>											
						<b>Source: IRB2349-05</b>					
Chloride	95.8	5.0	2.5	mg/l	50.0	52.5	87	80-120			
Nitrate-N	10.9	1.1	0.60	mg/l	11.3	ND	96	80-120			
Nitrite-N	14.7	1.5	0.90	mg/l	15.2	ND	97	80-120			
Sulfate	123	5.0	2.0	mg/l	100	29.9	94	80-120			
<b>Matrix Spike Analyzed: 02/25/2008 (8B25043-MS2)</b>											
						<b>Source: IRB2443-02</b>					
Nitrite-N	2.08	0.15	0.090	mg/l	1.52	ND	137	80-120			MI
<b>Matrix Spike Dup Analyzed: 02/25/2008 (8B25043-MSD1)</b>											
						<b>Source: IRB2349-05</b>					
Chloride	96.1	5.0	2.5	mg/l	50.0	52.5	87	80-120	0	20	
Nitrate-N	11.0	1.1	0.60	mg/l	11.3	ND	97	80-120	1	20	
Nitrite-N	14.7	1.5	0.90	mg/l	15.2	ND	97	80-120	0	20	
Sulfate	125	5.0	2.0	mg/l	100	29.9	95	80-120	1	20	

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Project Manager

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B26063 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/26/2008 (8B26063-BLK1)</b>											
Turbidity	0.100	1.0	0.040	NTU							J
<b>Duplicate Analyzed: 02/26/2008 (8B26063-DUP1)</b>											
Turbidity	2.98	1.0	0.040	NTU		3.03			2	20	
<b>Source: IRB2402-01</b>											
<b>Batch: 8B26098 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/26/2008 (8B26098-BLK1)</b>											
Total Cyanide	ND	0.0050	0.0022	mg/l							
<b>LCS Analyzed: 02/26/2008 (8B26098-BS1)</b>											
Total Cyanide	0.197	0.0050	0.0022	mg/l	0.200		99	90-110			
<b>Matrix Spike Analyzed: 02/26/2008 (8B26098-MS1)</b>											
Total Cyanide	0.198	0.0050	0.0022	mg/l	0.200	ND	99	70-115			
<b>Source: IRB2473-01</b>											
<b>Matrix Spike Dup Analyzed: 02/26/2008 (8B26098-MSD1)</b>											
Total Cyanide	0.200	0.0050	0.0022	mg/l	0.200	ND	100	70-115	1	15	
<b>Source: IRB2473-01</b>											
<b>Batch: 8B26101 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/26/2008 (8B26101-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 02/26/2008 (8B26101-BS1)</b>											
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0		101	80-115			

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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: 8B26101 Extracted: 02/26/08</b>											
<b>Matrix Spike Analyzed: 02/26/2008 (8B26101-MS1)</b>						<b>Source: IRB2399-01</b>					
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0	ND	101	70-120			
<b>Matrix Spike Dup Analyzed: 02/26/2008 (8B26101-MSD1)</b>						<b>Source: IRB2399-01</b>					
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0	ND	101	70-120	0	15	
<b>Batch: 8B27072 Extracted: 02/27/08</b>											
<b>Blank Analyzed: 03/03/2008 (8B27072-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 03/03/2008 (8B27072-BS1)</b>											
Biochemical Oxygen Demand	216	100	30	mg/l	198		109	85-115			
<b>LCS Dup Analyzed: 03/03/2008 (8B27072-BSD1)</b>											
Biochemical Oxygen Demand	207	100	30	mg/l	198		105	85-115	4	20	
<b>Batch: 8B27094 Extracted: 02/27/08</b>											
<b>Blank Analyzed: 02/27/2008 (8B27094-BLK1)</b>											
Fluoride	0.0271	0.10	0.014	mg/l							J
<b>LCS Analyzed: 02/27/2008 (8B27094-BS1)</b>											
Fluoride	1.02	0.10	0.014	mg/l	1.00		102	90-110			
<b>Matrix Spike Analyzed: 02/27/2008 (8B27094-MS1)</b>						<b>Source: IRB2039-02</b>					
Fluoride	1.40	0.10	0.014	mg/l	1.00	0.388	101	80-120			

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B27094 Extracted: 02/27/08</u></b>											
<b>Matrix Spike Dup Analyzed: 02/27/2008 (8B27094-MSD1)</b>						<b>Source: IRB2039-02</b>					
Fluoride	1.37	0.10	0.014	mg/l	1.00	0.388	98	80-120	2	20	
<b><u>Batch: 8B27129 Extracted: 02/27/08</u></b>											
<b>Blank Analyzed: 02/27/2008 (8B27129-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/27/2008 (8B27129-BS1)</b>											
Total Dissolved Solids	1010	10	10	mg/l	1000		101	90-110			
<b>Duplicate Analyzed: 02/27/2008 (8B27129-DUP1)</b>						<b>Source: IRB2361-03</b>					
Total Dissolved Solids	3160	10	10	mg/l		3190			1	10	
<b><u>Batch: 8B28123 Extracted: 02/28/08</u></b>											
<b>Blank Analyzed: 02/28/2008 (8B28123-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/28/2008 (8B28123-BS1)</b>											
Total Suspended Solids	1030	10	10	mg/l	1000		103	85-115			
<b>Duplicate Analyzed: 02/28/2008 (8B28123-DUP1)</b>						<b>Source: IRB2355-10</b>					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b><u>Batch: 8B29056 Extracted: 02/29/08</u></b>											
<b>Blank Analyzed: 02/29/2008 (8B29056-BLK1)</b>											
Perchlorate	ND	4.0	1.5	ug/l							

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: 8B29056 Extracted: 02/29/08</u></b>											
<b>LCS Analyzed: 02/29/2008 (8B29056-BS1)</b>											
Perchlorate	51.1	4.0	1.5	ug/l	50.0		102	85-115			
<b>Matrix Spike Analyzed: 02/29/2008 (8B29056-MS1)</b>											
						<b>Source: IRB2585-01</b>					
Perchlorate	51.0	4.0	1.5	ug/l	50.0	ND	102	80-120			
<b>Matrix Spike Dup Analyzed: 02/29/2008 (8B29056-MSD1)</b>											
						<b>Source: IRB2585-01</b>					
Perchlorate	51.5	4.0	1.5	ug/l	50.0	ND	103	80-120	1	20	
<b><u>Batch: 8C04046 Extracted: 03/04/08</u></b>											
<b>Blank Analyzed: 03/04/2008 (8C04046-BLK1)</b>											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
<b>LCS Analyzed: 03/04/2008 (8C04046-BS1)</b>											
Hexane Extractable Material (Oil & Grease)	18.1	5.0	1.4	mg/l	20.2		90	78-114			MNR1
<b>LCS Dup Analyzed: 03/04/2008 (8C04046-BSD1)</b>											
Hexane Extractable Material (Oil & Grease)	18.9	5.0	1.4	mg/l	20.2		94	78-114	4	11	

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## 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: W8B0982 Extracted: 02/26/08</b>											
<b>Blank Analyzed: 02/27/2008 (W8B0982-BLK1)</b>											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 02/27/2008 (W8B0982-BS1)</b>											
Mercury, Dissolved	0.920	0.20	0.050	ug/l	1.00		92	85-115			
Mercury, Total	0.920	0.20	0.050	ug/l	1.00		92	85-115			
<b>Matrix Spike Analyzed: 02/27/2008 (W8B0982-MS1) Source: 8022631-01</b>											
Mercury, Dissolved	1.95	0.40	0.10	ug/l	2.00	ND	98	70-130			
Mercury, Total	1.95	0.40	0.10	ug/l	2.00	0.0950	93	70-130			
<b>Matrix Spike Analyzed: 02/27/2008 (W8B0982-MS2) Source: 8022633-01</b>											
Mercury, Dissolved	1.91	0.40	0.10	ug/l	2.00	ND	96	70-130			
Mercury, Total	1.91	0.40	0.10	ug/l	2.00	ND	96	70-130			
<b>Matrix Spike Dup Analyzed: 02/27/2008 (W8B0982-MSD1) Source: 8022631-01</b>											
Mercury, Dissolved	2.00	0.40	0.10	ug/l	2.00	ND	100	70-130	2	20	
Mercury, Total	2.00	0.40	0.10	ug/l	2.00	0.0950	95	70-130	2	20	
<b>Matrix Spike Dup Analyzed: 02/27/2008 (W8B0982-MSD2) Source: 8022633-01</b>											
Mercury, Dissolved	1.93	0.40	0.10	ug/l	2.00	ND	96	70-130	1	20	
Mercury, Total	1.93	0.40	0.10	ug/l	2.00	ND	96	70-130	1	20	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## 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
IRB2473-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	1.90	4.8	15
IRB2473-01	624-Boeing 012/013/014 DT, LOW	1,2-Dibromoethane (EDB)	ug/l	0	0.50	50
IRB2473-01	624-Boeing 012/013/014 DT, LOW	tert-Butanol (TBA)	ug/l	0	10	12
IRB2473-01	625+NDMA+Hydrazine	Naphthalene	ug/l	0	9.5	21
IRB2473-01	8015B-DRO(C13-C22)LL	DRO (C13-C22)	mg/l	0.061	0.11	0.1
IRB2473-01	8015B-GRO(C4-C12)	GRO (C4 - C12)	mg/l	0.0084	0.050	0.1
IRB2473-01	8260B-SIM 1,4-Dioxane	1,4-Dioxane	ug/l	0.32	2.0	3
IRB2473-01	Ammonia-N, Titr (350.2) w/dist	Ammonia-N (Distilled)	mg/l	0.28	0.50	10
IRB2473-01	Boron-200.7	Boron	mg/l	0.0095	0.050	1
IRB2473-01	Cadmium-200.8	Cadmium	ug/l	0.47	2.0	3.1
IRB2473-01	Chloride - 300.0	Chloride	mg/l	35	2.5	150
IRB2473-01	Copper-200.8	Copper	ug/l	2.01	4.0	14
IRB2473-01	Fluoride - 340.2	Fluoride	mg/l	0.28	0.10	1.6
IRB2473-01	Hg_w 245.1	Mercury, Total	ug/l	0.020	0.20	0.2
IRB2473-01	Lead-200.8	Lead	ug/l	0.42	2.0	5.2
IRB2473-01	Nitrate-N, 300.0	Nitrate-N	mg/l	0.79	0.11	8
IRB2473-01	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IRB2473-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.79	0.26	8
IRB2473-01	Perchlorate 314.0-DEFAULT	Perchlorate	ug/l	0	4.0	6
IRB2473-01	Selenium-200.8	Selenium	ug/l	0.100	4.0	5
IRB2473-01	Settleable Solids	Total Settleable Solids	ml/l/hr	0	0.10	0.3
IRB2473-01	Sulfate-300.0	Sulfate	mg/l	9.01	0.50	300
IRB2473-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	148	10	950
IRB2473-01	TSS - EPA 160.2	Total Suspended Solids	mg/l	0	10	45
IRB2473-01	Zinc-200.8	Zinc	ug/l	37	40	160

## 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
IRB2473-02	624-Boeing 012/013/014 DT, LOW	1,2-Dibromoethane (EDB)	ug/l	0	0.50	50
IRB2473-02	624-Boeing 012/013/014 DT, LOW	tert-Butanol (TBA)	ug/l	0	10	12

### TestAmerica Irvine

Joseph Doak  
Project Manager

MWH-Pasadena/Boeing  
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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

## DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- 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.
- L6** Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M13** The sample spiked had a pH of less than 2. 2-Chloroethylvinylether degrades under acidic conditions.
- 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).
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- 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.
- RL1** Reporting limit raised due to sample matrix effects.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- 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.

### For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

### For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

**TestAmerica Irvine**

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Project Manager

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**IRB2473 <Page 54 of 56>**  
**NPDES - 3210**

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

Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
 Received: 02/25/08

## Certification Summary

### TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 1664A	Water		
EPA 180.1	Water	X	X
EPA 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 335.2	Water	X	X
EPA 340.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B-SIM	Water		
Filtration	Water	N/A	N/A
SM2340B	Water	X	X
SM2540C	Water	X	

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

### Subcontracted Laboratories

#### Aquatic Testing Laboratories-SUB California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr  
 Samples: IRB2473-01

Analysis Performed: Level 4 Data Package  
 Samples: IRB2473-01

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Project ID: Annual Outfall 012

Report Number: IRB2473

Sampled: 02/25/08  
Received: 02/25/08

**Vista 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: IRB2473-01

Analysis Performed: Level 4 + EDD  
Samples: IRB2473-01

**Weck Laboratories, Inc**

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

Method Performed: EPA 245.1  
Samples: IRB2473-01

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Project Manager

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LRB-413

Client Name/Address: MVH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPDES <b>Annual Outfall 012</b> Alfa Test Stand		ANALYSIS REQUIRED										Field readings: Temp = 16.3 = 50 pH = 8.0 Time of readings = 10:50											
Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly SAMPLER: J M V K S L C R L B A C A		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Oil & Grease (1664-HEM)		8015 - gas		8015 - diesel/jet fuel		TRPH = Total Rec. (8015)		1,4-Dioxane (8260B)		BOD <sub>5</sub> (20 degrees C)		625 (Naphthalene + NDMA analysis + SVOCs) + PP		Ammonia-N (350.2)		Cl <sup>-</sup> , SO <sub>4</sub> <sup>-2</sup> , NO <sub>3</sub> +NO <sub>2</sub> -N, Perchlorate		Nitrate-N, Nitrite-N			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	8015 - gas	8015 - diesel/jet fuel	TRPH = Total Rec. (8015)	1,4-Dioxane (8260B)	BOD <sub>5</sub> (20 degrees C)	625 (Naphthalene + NDMA analysis + SVOCs) + PP	Ammonia-N (350.2)	Cl <sup>-</sup> , SO <sub>4</sub> <sup>-2</sup> , NO <sub>3</sub> +NO <sub>2</sub> -N, Perchlorate	Nitrate-N, Nitrite-N	Comments									
Outfall 012	W	1L Amber	1	2-25-08 18:30	HCl	1A	X																		
Outfall 012 Dup	W	1L Amber	1		HCl	1B	X																		
Outfall 012	W	VOAs	1		HCl	2A		X																	
Outfall 012 Dup	W	VOAs	2		HCl	2B, 2C		X																	
Outfall 012	W	1L Amber	1		None	3A		X																	
Outfall 012 Dup	W	1L Amber	1		None	3B		X																	
Outfall 012	W	1L Amber	1		HCl	4A			X																
Outfall 012 Dup	W	1L Amber	1		HCl	4B			X																
Outfall 012	W	VOAs	1		HCl	5A				X															
Outfall 012 Dup	W	VOAs	2		HCl	5B, 5C				X															
Outfall 012	W	1L Poly	1		None	6					X														
Outfall 012	W	1L Amber	1		None	7A						X													
Outfall 012 Dup	W	1L Amber	1		None	7B						X													
Outfall 012	W	500 ml Poly	1		H <sub>2</sub> SO <sub>4</sub>	8							X												
Outfall 012	W	500 ml Poly	2		None	9A, 9B								X											
Outfall 012	W	500 ml Poly	1		None	10									X										
Relinquished By	J M V K S L C		2-25-08	Date/Time	Received By		J M V K S L C		Date/Time	2/25/08 1510		Turn around Time: (check)		24 Hours		5 Days		48 Hours		10 Days		72 Hours		Normal	
Relinquished By	J M V K S L C		2/25/08	Date/Time	Received By		J M V K S L C		Date/Time	2/25/08 1730		Sample Integrity: (check)		Intact		On Ice:		✓							
Relinquished By	J M V K S L C		2/25/08	Date/Time	Received By		J M V K S L C		Date/Time	2/25/08 1730		Sample Integrity: (check)		Intact		On Ice:		✓							

5-8/28  
HE 2-25-08  
1910  
#125

# CHAIN OF CUSTODY FORM

Test America Version 12/20/07

Client Name/Address		Project		ANALYSIS REQUIRED										Comments			
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007		Boeing-SSFL NPDES Annual Outfall 012 Alfa Test Stand		Turbidity, TDS, TSS	Settleable Solids	624 (EDB, 1,2,3-TCP, MTBE, DIFE, TBA) + PP	VOCs 624, xylenes +A+A+2CVE	Total Recoverable Metals, Cd, Se, Zn, B, Cu, Pb, Hg + PP	Hardness as CaCO <sub>3</sub>	Total Dissolved Metals, Cd, Se, Zn, B, Cu, Pb, Hg + PP	Cyanide	Pesticides/PCBs + PP	TCDD (and all congeners)	Acute Toxicity			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #											
Outfall 012	WV	500 ml Poly	2	2-25-08 10:30	None	11A, 11B	X										
Outfall 012	WV	1L Poly	1		None	12	X										
Outfall 012	WV	VOAs	1		HCl	13A											
Outfall 012 Dup	WV	VOAs	2		HCl	13B, 13C											
Outfall 012	WV	VOAs	3		None	14A, 14B, 14C											
Outfall 012	WV	1L Poly	2		HNO <sub>3</sub>	15A, 15B		X									
Outfall 012	WV	1L Poly	1		None	16											
Outfall 012	WV	500 ml Poly	1		NaOH	17											
Outfall 012	WV	1L Amber	2		None	18A, 18B											
Outfall 012	WV	1L Amber	2		None	19A, 19B											
Outfall 012	WV	1 Gal Cube	1	2-25-08 10:30	None	20											
Trip Blanks	WV	VOAs	3		HCl	21A, 21B, 21C											
Trip Blanks	WV	VOAs	3		None	22A, 22B, 22C											
Relinquished By				Date/Time: 2/25/08 1510	Received By: [Signature]				Date/Time: 2/25/08 1510	Turn around Time: (check) 24 Hours _____ 48 Hours _____ 72 Hours _____ 5 Days _____ 10 Days _____ Normal _____				Sample Integrity: (check) Intact _____ On Ice: _____			
Relinquished By: [Signature]				Date/Time: 2/25/08 1730	Received By: [Signature]				Date/Time: 2/25/08 1730	Sample Integrity: (check) Intact _____ On Ice: _____				5.8/3.8			
Relinquished By: [Signature]				Date/Time: 2/25/08 1730	Received By: [Signature]				Date/Time: 2/25/08 1730	Sample Integrity: (check) Intact _____ On Ice: _____				5.8/3.8			

# 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:** March 2, 2008  
**Client:** Test America – Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Joseph Doak

**Laboratory No.:** A-08022606-001  
**Sample ID.:** IRB2473-01 (Outfall 012)

**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.

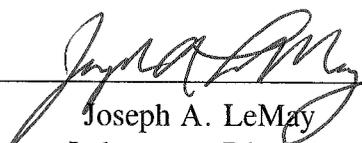
Date Sampled: 02/25/08  
Date Received: 02/26/08  
Temp. Received: 1°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 02/26/08 to 03/01/08

**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>
IRB2473-01	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-08022606-001  
 Client/ID: TestAmerica - IRB2473-01

Start Date: 02/26/2008

**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-080204.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.1	8.7	7.8	0	0	Rv 1500
	100%	19.5	9.8	7.3	0	0	
24 Hr	Control	20.1	8.5	7.5	0	0	Rv 1400
	100%	20.2	8.2	7.2	0	0	
48 Hr	Control	20.3	6.9	7.5	0	0	Rv 1300
	100%	20.3	7.4	7.2	0	0	
Renewal	Control	20.8	8.6	7.8	0	0	Rv 1300
	100%	19.8	10.1	7.1	0	0	
72 Hr	Control	20.1	6.7	7.4	0	0	Rv 1200
	100%	20.3	6.8	7.3	0	0	
96 Hr	Control	20.1	7.5	7.5	0	0	Rv 1400
	100%	20.1	7.9	7.1	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.3; Conductivity: 190 umho; Temp: 1°C;  
 DO: 9.8 mg/l; Alkalinity: 33 mg/l; Hardness: 25 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: 65 mg/l; Hardness: 89 mg/l; Conductivity: 285 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> %
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SUBCONTRACT ORDER

TestAmerica Irvine

IRB2473

SENDING LABORATORY:

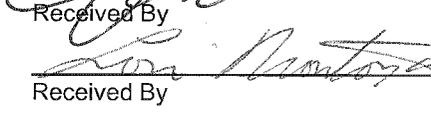
TestAmerica Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
Phone: (949) 261-1022  
Fax: (949) 260-3297  
Project Manager: Joseph Doak

RECEIVING LABORATORY:

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

Analysis	Units	Due	Expires	Comments
Sample ID: IRB2473-01	Water		Sampled: 02/25/08 10:30	
Bioassay-Acute 96hr	% Survival	03/05/08	02/26/08 22:30	FH minnow, EPA/821-R02-012, Sub to AqTox Labs
Level 4 Data Package - Out	N/A	03/05/08	03/24/08 10:30	Boeing
<i>Containers Supplied:</i>				
1 gal Poly (AM)				

  
 Released By \_\_\_\_\_ Date/Time 2/26/08 0740  
  
 Released By \_\_\_\_\_ Date/Time 2/26/08 1330

  
 Received By \_\_\_\_\_ Date/Time 2/26/08 0740  
  
 Received By \_\_\_\_\_ Date/Time 2-26-08 1330



***REFERENCE  
TOXICANT  
DATA***

# FATHEAD MINNOW ACUTE

## Method 2000.0

### Reference Toxicant - SDS



QA/QC Batch No.: RT-080204

#### TEST SUMMARY

Species: *Pimephales promelas*.

Age: 14 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>2-4-08 1430</u>			<u>2-5-08 1330</u>						<u>2-6-08 1430</u>					
	<u>Rn</u>			<u>Rn</u>						<u>Rn</u>					
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead			
A							B	A				B			
Control	<u>19.8</u>	<u>8.4</u>	<u>7.4</u>	<u>19.1</u>	<u>7.9</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.4</u>	<u>7.2</u>	<u>7.6</u>	<u>0</u>	<u>0</u>		
1.0 mg/l	<u>19.9</u>	<u>8.4</u>	<u>7.5</u>	<u>19.1</u>	<u>7.8</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.4</u>	<u>6.9</u>	<u>7.6</u>	<u>0</u>	<u>0</u>		
2.0 mg/l	<u>19.9</u>	<u>8.5</u>	<u>7.5</u>	<u>19.0</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>19.4</u>	<u>6.6</u>	<u>7.5</u>	<u>0</u>	<u>0</u>		
4.0 mg/l	<u>20.0</u>	<u>8.5</u>	<u>7.5</u>	<u>19.0</u>	<u>8.0</u>	<u>7.4</u>	<u>0</u>	<u>1</u>	<u>19.4</u>	<u>6.7</u>	<u>7.5</u>	<u>2</u>	<u>0</u>		
8.0 mg/l	<u>20.0</u>	<u>8.6</u>	<u>7.5</u>	<u>19.1</u>	<u>8.0</u>	<u>7.4</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>2-6-08 1430</u>			<u>2-7-08 1200</u>						<u>2-8-08 1300</u>					
	<u>Rn</u>			<u>Rn</u>						<u>Rn</u>					
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead			
A							B	A				B			
Control	<u>20.3</u>	<u>8.9</u>	<u>7.8</u>	<u>19.4</u>	<u>7.5</u>	<u>7.7</u>	<u>0</u>	<u>0</u>	<u>19.2</u>	<u>8.0</u>	<u>7.5</u>	<u>0</u>	<u>0</u>		
1.0 mg/l	<u>20.3</u>	<u>8.9</u>	<u>7.8</u>	<u>19.3</u>	<u>7.5</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.2</u>	<u>8.0</u>	<u>7.5</u>	<u>0</u>	<u>0</u>		
2.0 mg/l	<u>20.3</u>	<u>8.8</u>	<u>7.8</u>	<u>19.3</u>	<u>7.7</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.3</u>	<u>8.1</u>	<u>7.4</u>	<u>0</u>	<u>0</u>		
4.0 mg/l	<u>20.3</u>	<u>8.8</u>	<u>7.8</u>	<u>19.3</u>	<u>7.6</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.3</u>	<u>8.2</u>	<u>7.4</u>	<u>0</u>	<u>1</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: 64 mg/l; Hardness: 96 mg/l; Conductivity: 287 umho.

SDS: Alkalinity: 64 mg/l; Hardness: 47 mg/l; Conductivity: 290 umho.

Concentration-response relationship acceptable? (see attached computer analysis):

Yes (response curve normal)

No (dose interrupted indicated or non-normal)

**Acute Fish Test-96 Hr Survival**

Start Date: 2/4/2008 14:30    Test ID: RT-080204    Sample ID: REF-Ref Toxicant  
 End Date: 2/8/2008 13:00    Lab ID: CAATL-Aquatic Testing Labs    Sample Type: SDS-Sodium dodecyl sulfate  
 Sample Date: 2/4/2008    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	0.8000	0.8000
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	0.8000	0.8000	1.1071	1.1071	1.1071	0.000	2	4	20
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

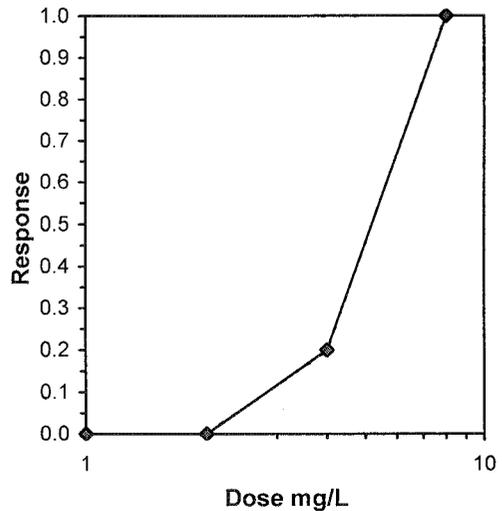
**Auxiliary Tests**

Normality of the data set cannot be confirmed  
 Equality of variance cannot be confirmed

Statistic      Critical      Skew      Kurt

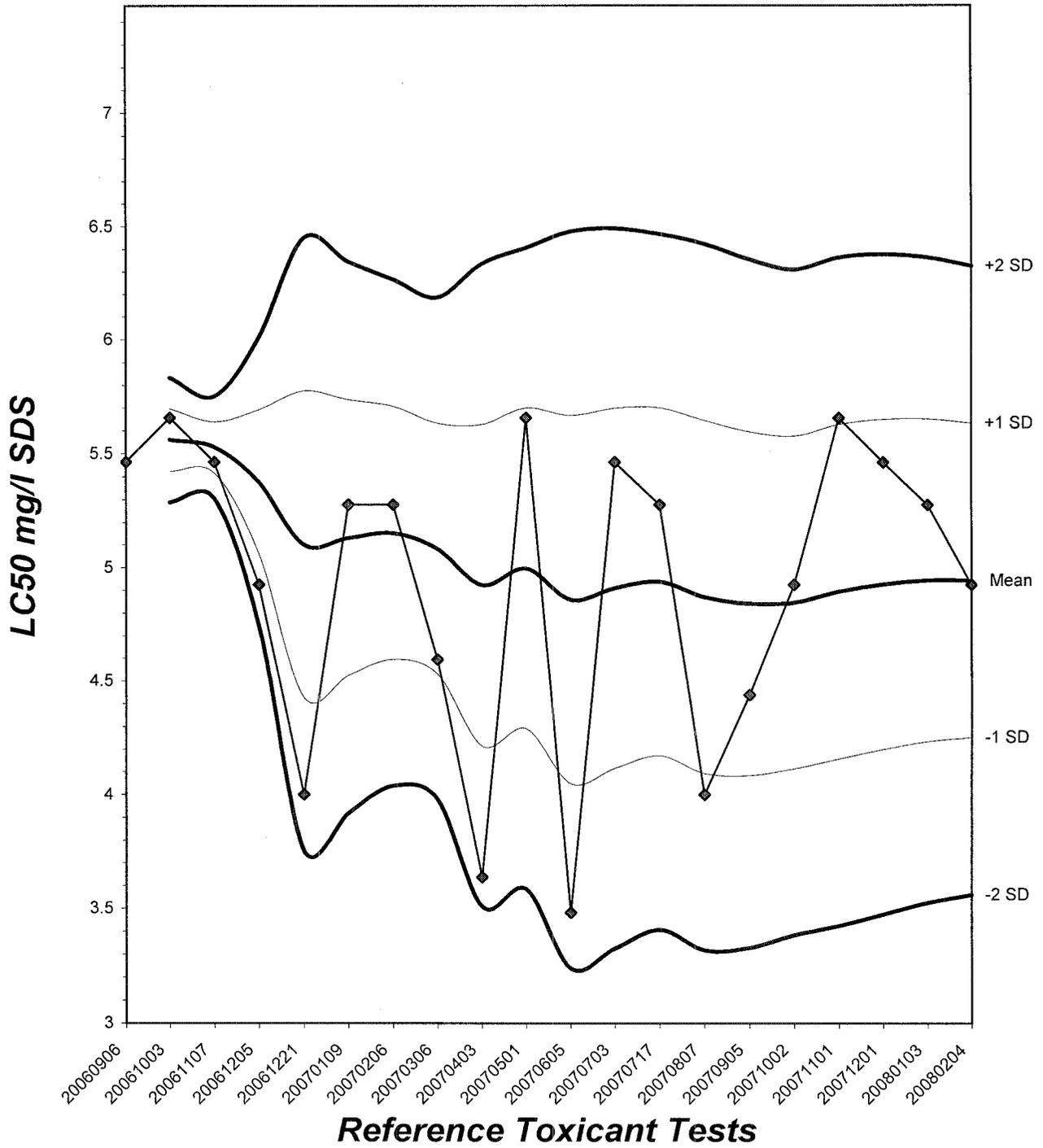
**Trimmed Spearman-Kärber**

Trim Level	EC50	95% CL	
0.0%	4.9246	4.3503	5.5747
5.0%	5.0215	4.3576	5.7866
10.0%	5.1038	4.2923	6.0686
20.0%	5.1874	4.7084	5.7150
Auto-0.0%	4.9246	4.3503	5.5747



# Fathead Minnow Acute Laboratory Control Chart

CV% = 14



# TEST ORGANISM LOG



## FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT-080204

SOURCE: In-Lab Culture

DATE HATCHED: 01-21-08

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATE USED IN LAB: 2/4/08

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.: 19.8 °C

pH: 7.4

Ammonia: 0.1 mg/l NH<sub>3</sub>-N

DO: 8.4 mg/l

Alkalinity: 64 mg/l

Hardness: 96 mg/l

READINGS RECORDED BY: [Signature]

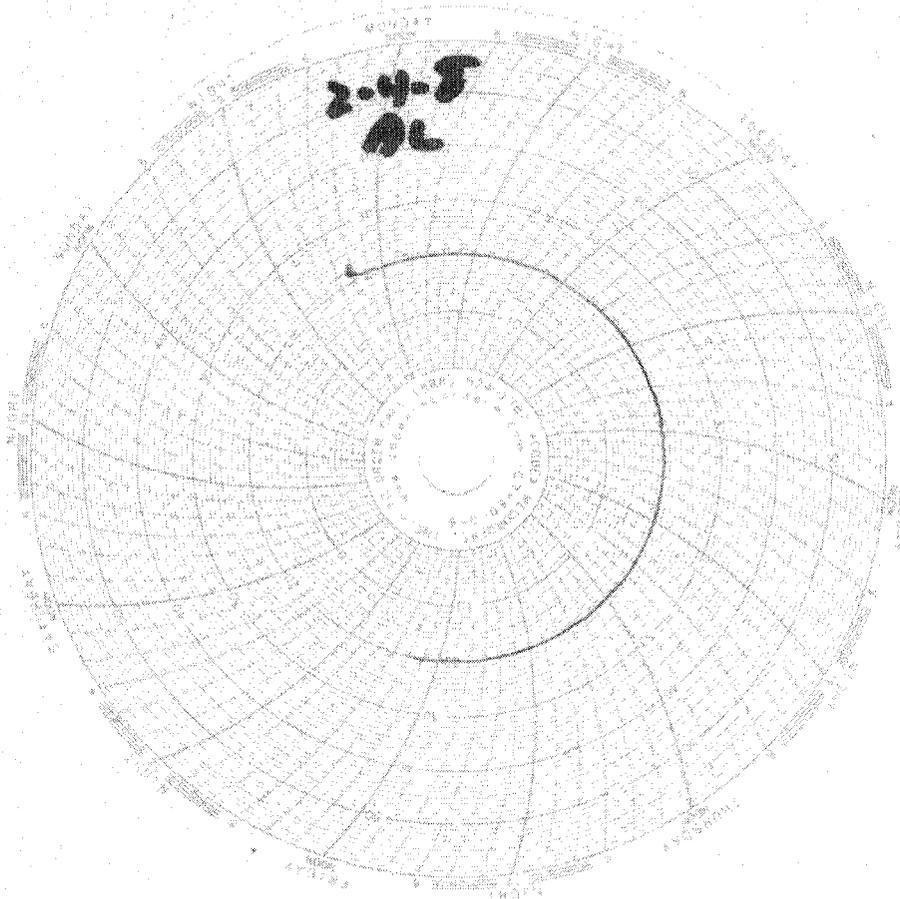
DATE: 2-4-8

# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-080202*

*Date Tested: 02/02/08 to 02/06/08*

*Acceptable Range: 20+/- 1°C*



SUBCONTRACT ORDER

TestAmerica Irvine

IRB2473

8022636

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Weck Laboratories, Inc-SUB  
14859 E. Clark Avenue  
City of Industry, CA 91745  
Phone :(626) 336-2139  
Fax: (626) 336-2634  
Project Location: California  
Receipt Temperature: 4.6 °C

Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB2473-01</b>		<b>Water</b>		
		Sampled: 02/25/08 10:30		
Level 4 Data Package - Wec	N/A	03/05/08	03/24/08 10:30	
Mercury - 245.1, Diss -OUT	ug/l	03/05/08	03/24/08 10:30	Boeing, permit, J flags/ OUT to Weck
Mercury - 245.1-OUT	ug/l	03/05/08	03/24/08 10:30	Boeing, permit, J flags/ OUT to Weck
<i>Containers Supplied:</i>				
500 mL Poly (AF)	125 #E	500 mL Poly w/HNO3		
125 #E	(AG)			

Handwritten Signature  
Released By  
Handwritten Signature  
Released By

Date/Time  
2/26/08  
Date/Time

Handwritten Signature  
Received By  
James Ginner 1205  
Date/Time  
2/26/08  
Received By  
Date/Time



### CERTIFICATE OF ANALYSIS

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

**Report Date:** 02/28/08 07:50  
**Received Date:** 02/26/08 12:05  
**Turn Around:** 6 days

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

**Work Order #:** 8022636  
**Client Project:** IRB2473

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 Joseph Doak :

Enclosed are the results of analyses for samples received 02/26/08 12:05 with the Chain of Custody document. The samples were received in good condition. The samples were received at 4.6 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Kim G Tu

Project Manager





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: 8022636  
Project ID: IRB2473

Date Received: 02/26/08 12:05  
Date Reported: 02/28/08 07:50

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRB2473-01	Client		8022636-01	Water	02/25/08 10:30



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: 8022636  
Project ID: IRB2473

Date Received: 02/26/08 12:05  
Date Reported: 02/28/08 07:50

**IRB2473-01 8022636-01 (Water)**

Date Sampled: 02/25/08 10:30

**Metals by EPA 200 Series Methods**

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Mercury, Dissolved	ND	0.050	ug/l	0.20	1	EPA 245.1	W8B0982	02/26/08	02/27/08	jlp	
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8B0982	02/26/08	02/27/08	jlp	



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: 8022636  
Project ID: IRB2473

Date Received: 02/26/08 12:05  
Date Reported: 02/28/08 07:50

# 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: 8022636  
 Project ID: IRB2473

Date Received: 02/26/08 12:05  
 Date Reported: 02/28/08 07:50

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

%REC

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

**Batch W8B0982 - EPA 245.1**

**Blank (W8B0982-BLK1)**

Analyzed: 02/27/08

Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.20	ug/l							

**LCS (W8B0982-BS1)**

Analyzed: 02/27/08

Mercury, Dissolved	0.920	0.20	ug/l	1.00		92	85-115			
Mercury, Total	0.920	0.20	ug/l	1.00		92	85-115			

**Matrix Spike (W8B0982-MS1)**

Source: 8022631-01

Analyzed: 02/27/08

Mercury, Dissolved	1.95	0.40	ug/l	2.00	ND	98	70-130			
Mercury, Total	1.95	0.40	ug/l	2.00	0.0950	93	70-130			

**Matrix Spike (W8B0982-MS2)**

Source: 8022633-01

Analyzed: 02/27/08

Mercury, Dissolved	1.91	0.40	ug/l	2.00	ND	96	70-130			
Mercury, Total	1.91	0.40	ug/l	2.00	ND	96	70-130			

**Matrix Spike Dup (W8B0982-MSD1)**

Source: 8022631-01

Analyzed: 02/27/08

Mercury, Dissolved	2.00	0.40	ug/l	2.00	ND	100	70-130	2	20	
Mercury, Total	2.00	0.40	ug/l	2.00	0.0950	95	70-130	2	20	

**Matrix Spike Dup (W8B0982-MSD2)**

Source: 8022633-01

Analyzed: 02/27/08

Mercury, Dissolved	1.93	0.40	ug/l	2.00	ND	96	70-130	0.9	20	
Mercury, Total	1.93	0.40	ug/l	2.00	ND	96	70-130	0.9	20	



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: 8022636  
Project ID: IRB2473

Date Received: 02/26/08 12:05  
Date Reported: 02/28/08 07:50

### 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.

March 14, 2008

**Vista Project I.D.: 30313**

Mr. Joseph Doak  
Test America-Irvine, CA  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on February 27, 2008 under your Project Name "IRB2473". 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, Vista's current certifications, and copies of the raw data (if requested).

Vista 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 Vista as part of your analytical support team.

Sincerely,



Martha M. Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC 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 Vista Analytical Laboratory.*



**Section I: Sample Inventory Report**

**Date Received: 2/27/2008**

Vista Lab. ID

Client Sample ID

30313-001

IRB2473-01

## SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	9999	Lab Sample:	0-MB001	Date Analyzed DB-5:	11-Mar-08	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	10-Mar-08						
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	0.00000119			<b>IS</b> 13C-2,3,7,8-TCDD	76.6	25 - 164		
1,2,3,7,8-PeCDD	ND	0.00000333			13C-1,2,3,7,8-PeCDD	66.6	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000181			13C-1,2,3,4,7,8-HxCDD	67.1	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000181			13C-1,2,3,6,7,8-HxCDD	73.2	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000174			13C-1,2,3,4,6,7,8-HpCDD	67.0	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000593			13C-OCDD	60.0	17 - 157		
OCDD	ND	0.00000839			13C-2,3,7,8-TCDF	79.7	24 - 169		
2,3,7,8-TCDF	ND	0.000000737			13C-1,2,3,7,8-PeCDF	64.6	24 - 185		
1,2,3,7,8-PeCDF	ND	0.00000183			13C-2,3,4,7,8-PeCDF	66.4	21 - 178		
2,3,4,7,8-PeCDF	ND	0.00000205			13C-1,2,3,4,7,8-HxCDF	63.2	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000724			13C-1,2,3,6,7,8-HxCDF	69.5	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000778			13C-2,3,4,6,7,8-HxCDF	70.6	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000790			13C-1,2,3,7,8,9-HxCDF	69.1	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.00000109			13C-1,2,3,4,6,7,8-HpCDF	63.1	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000957			13C-1,2,3,4,7,8,9-HpCDF	66.4	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.00000109			13C-OCDF	58.4	17 - 157		
OCDF	ND	0.00000256			<b>CRS</b> 37Cl-2,3,7,8-TCDD	92.8	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.00000119			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000333			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000178			c. Method detection limit.				
Total HpCDD	ND	0.00000593			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000737							
Total PeCDF	ND	0.00000194							
Total HxCDF	ND	0.000000837							
Total HpCDF	ND	0.00000102							

Analyst: MAS

Approved By: Martha M. Maier 14-Mar-2008 13:34

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	9999	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	10-Mar-08	Date Analyzed DB-5:	11-Mar-08	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	<b>IS</b> 13C-2,3,7,8-TCDD	76.8	25 - 164	
1,2,3,7,8-PeCDD	50.0	51.0	35 - 71	13C-1,2,3,7,8-PeCDD	69.9	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	51.7	35 - 82	13C-1,2,3,4,7,8-HxCDD	67.4	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	51.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	71.7	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	52.4	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	67.8	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	50.8	35 - 70	13C-OCDD	59.5	17 - 157	
OCDD	100	103	78 - 144	13C-2,3,7,8-TCDF	78.4	24 - 169	
2,3,7,8-TCDF	10.0	9.73	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	69.0	24 - 185	
1,2,3,7,8-PeCDF	50.0	51.2	40 - 67	13C-2,3,4,7,8-PeCDF	71.3	21 - 178	
2,3,4,7,8-PeCDF	50.0	50.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	65.6	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.2	36 - 67	13C-1,2,3,6,7,8-HxCDF	71.8	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	52.2	42 - 65	13C-2,3,4,6,7,8-HxCDF	69.5	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	49.8	35 - 78	13C-1,2,3,7,8,9-HxCDF	67.6	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	51.2	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	64.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	50.7	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	67.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	51.2	39 - 69	13C-OCDF	60.1	17 - 157	
OCDF	100	102	63 - 170	<b>CRS</b> 37Cl-2,3,7,8-TCDD	91.0	35 - 197	

Analyst: MAS

Approved By: Martha M. Maier 14-Mar-2008 13:34

Sample ID: <b>IRB2473-01</b>					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA		Matrix:	Aqueous	Lab Sample:	30313-001	Date Received:	27-Feb-08
Project:	IRB2473		Sample Size:	1.03 L	QC Batch No.:	9999	Date Extracted:	10-Mar-08
Date Collected:	25-Feb-08				Date Analyzed DB-5:	11-Mar-08	Date Analyzed DB-225:	NA
Time Collected:	1030							
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	0.000000722			<b>IS</b> 13C-2,3,7,8-TCDD	79.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000136			13C-1,2,3,7,8-PeCDD	67.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000233			13C-1,2,3,4,7,8-HxCDD	66.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000239			13C-1,2,3,6,7,8-HxCDD	72.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000467			13C-1,2,3,4,6,7,8-HpCDD	71.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000338				13C-OCDD	63.5	17 - 157	
OCDD	0.000253				13C-2,3,7,8-TCDF	83.6	24 - 169	
2,3,7,8-TCDF	ND	0.000000683			13C-1,2,3,7,8-PeCDF	68.8	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000127			13C-2,3,4,7,8-PeCDF	68.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000139			13C-1,2,3,4,7,8-HxCDF	64.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000140			13C-1,2,3,6,7,8-HxCDF	69.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND		0.000000999		13C-2,3,4,6,7,8-HxCDF	67.8	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000140			13C-1,2,3,7,8,9-HxCDF	69.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000728			13C-1,2,3,4,6,7,8-HpCDF	64.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000248				13C-1,2,3,4,7,8,9-HpCDF	69.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000183			13C-OCDF	62.9	17 - 157	
OCDF	0.0000274			J	<b>CRS</b> 37Cl-2,3,7,8-TCDD	94.1	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000134			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000216			b. Estimated maximum possible concentration.			
Total HxCDD	0.00000807				c. Method detection limit.			
Total HpCDD	0.0000749				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000119						
Total PeCDF	0.00000145							
Total HxCDF	0.0000108		0.0000130					
Total HpCDF	0.0000381							

Analyst: MAS

Approved By: Martha M. Maier 14-Mar-2008 13:34

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

<b>B</b>	<b>This compound was also detected in the method blank.</b>
<b>D</b>	<b>Dilution</b>
<b>E</b>	<b>The amount detected is above the High Calibration Limit.</b>
<b>P</b>	<b>The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.</b>
<b>H</b>	<b>The signal-to-noise ratio is greater than 10:1.</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Low Calibration Limit.</b>
<b>*</b>	<b>See Cover Letter</b>
<b>Conc.</b>	<b>Concentration</b>
<b>DL</b>	<b>Sample-specific estimated detection limit</b>
<b>MDL</b>	<b>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.</b>
<b>EMPC</b>	<b>Estimated Maximum Possible Concentration</b>
<b>NA</b>	<b>Not applicable</b>
<b>RL</b>	<b>Reporting Limit – concentrations that correspond to low calibration point</b>
<b>ND</b>	<b>Not Detected</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>

**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

TestAmerica Irvine

IRB2473

30313 1.9°C

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Vista Analytical Laboratory- SUB  
1104 Windfield Way  
El Dorado Hills, CA 95762  
Phone : (916) 673-1520  
Fax: (916) 673-0106  
Project Location: California  
Receipt Temperature: \_\_\_\_\_ °C      Ice: Y / N

Analysis	Units	Due	Expires	Comments
<b>Sample ID: IRB2473-01</b>	<b>Water</b>		Sampled: 02/25/08 10:30	
1613-Dioxin-HR-Alfa	ug/l	03/05/08	03/03/08 10:30	J flags, 17 congeners, no TEQ, ug/L, sub=Vista
Level 4 + EDD-OUT	N/A	03/05/08	03/24/08 10:30	Excel EDD email to pm, Include Std logs for Lvl IV
<i>Containers Supplied:</i>				
1 L Amber (AK)	1 L Amber (AL)			

Handwritten Signature  
Released By

2-26-08/17:00  
Date/Time

Handwritten Signature  
Received By

2/27/08 1405  
Date/Time

Released By

Date/Time

Received By

Date/Time

SAMPLE LOG-IN CHECKLIST



Vista Project #: 30313

TAT unspecified

Samples Arrival:	Date/Time 2/27/08 0906	Initials: RSB	Location: WR-2 Shelf/Rack: N/A			
Logged In:	Date/Time 2/27/08 1403	Initials: AB	Location: WR-2 Shelf/Rack: E-2			
Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C	1.9°	Time:	0908	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 # 7926 5553 6670	✓			
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	Vista	Client	Retain	Return	Dispose

Comments: