APPENDIX G

Section 97

Outfall 014, February 20, 2008

MEC^X Data Validation Reports

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB1997

Prepared by

MEC^X, 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:	IRB1997
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 014	IRB1997-01	30290-001, 8022139-01, 973679-1	Water	02/20/08 0830	180.1, 200.8, 245.1, 405.1, 1613, 8315M

II. Sample Management

No anomalies were observed regarding sample management. Eberline did not provide temperature information; however, radiological samples are not required to be chilled. The samples were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact at all laboratories. The FedEx courier did not release the samples to Vista. The remaining COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, Eberline, 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.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight
Date Reviewed: April 9, 2008

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

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

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

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was 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. 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: April 1, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA 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 ≤5%, and all masses of interest were calibrated to ≤0.1 amu and ≤0.9 amu at 10% peak height

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 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: There were no applicable detects in the method blanks or CCBs.

- Interference Check Samples: ICSA/B analyses were performed in association with the dissolved metals analysis. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solutions. 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 the dissolved fraction. All recoveries and RPDs were within the laboratory-established control limits. Mercury method accuracy was evaluated 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. 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^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 180.1, 405.1, and 8315M,* and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: Analytical holding times, 24 hours for conductivity, 48 hours for BOD and turbidity, and seven days for TSS, were met. The hydrazine aliquot was derivitized within three days of collection and the sample was analyzed within three days of derivitization.

- Calibration: The hydrazines r^2 were ≥0.995 and the ICV and QCS recoveries were within the laboratory-established control limits of 85-115%. The conductivity and turbidity check standard recoveries were acceptable. The balance calibration logs 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 samples. Method blanks and CCBs had no other detects.

- Blank Spikes and Laboratory Control Samples: 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: MS/MSD analyses were performed on the sample in this SDG for the hydrazines. The recoveries and RPDs were within the laboratory-established control limits.

- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the reporting limit. The reviewer noted that the hydrazine retention times for the MS/MSD were marginally outside of the retention time window. A notation in the raw data indicated this shift was due to temperature fluctuations.

- 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.

Sample ID: IRB1997-01 Outfall 014 **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30290-001	Date Received:	22-Feb-08
Project:	IRB1997	Sample Size:	1.02 L	QC Batch No.:	9988	Date Extracted:	4-Mar-08
Date Collected:	20-Feb-08			Date Analyzed DB-5:	7-Mar-08	Date Analyzed DB-225:	NA
Time Collected:	0940						

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
2,3,7,8-TCDD	ND	0.000000471			IS 13C-2,3,7,8-TCDD	82.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000696			13C-1,2,3,7,8-PeCDD	82.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000101			13C-1,2,3,4,7,8-HxCDD	70.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000106			13C-1,2,3,6,7,8-HxCDD	77.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000100			13C-1,2,3,4,6,7,8-HpCDD	80.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000184			J	13C-OCDD	58.7	17 - 157	
OCDD	0.000229				13C-2,3,7,8-TCDF	88.5	24 - 169	
2,3,7,8-TCDF	ND	0.000000488			13C-1,2,3,7,8-PeCDF	93.5	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000412			13C-2,3,4,7,8-PeCDF	92.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000384			13C-1,2,3,4,7,8-HxCDF	86.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000374			13C-1,2,3,6,7,8-HxCDF	86.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000413			13C-2,3,4,6,7,8-HxCDF	79.6	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000478			13C-1,2,3,7,8,9-HxCDF	81.9	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000650			13C-1,2,3,4,6,7,8-HpCDF	72.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000991			13C-1,2,3,4,7,8,9-HpCDF	79.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000101			13C-OCDF	73.4	17 - 157	
OCDF	0.00000794			J	CRS 37Cl-2,3,7,8-TCDD	95.8	35 - 197	

Totals			Footnotes
Total TCDD	ND	0.000000471	a. Sample specific estimated detection limit.
Total PeCDD	ND	0.000000696	b. Estimated maximum possible concentration.
Total HxCDD	ND	0.00000102	c. Method detection limit.
Total HpCDD	0.0000528		d. Lower control limit - upper control limit.
Total TCDF	ND	0.000000488	
Total PeCDF	ND	0.000000398	
Total HxCDF	ND	0.000000479	
Total HpCDF	ND	0.00000100	

Analyst: JMH Level IV

Approved By: Martha M. Maier 11-Mar-2008 08:30

NPDES - 3840

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
Boron *	EPA 200.7	8B21050	0.020	0.050	ND	1	02/21/08	02/22/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8B25070	0.11	1.0	**1.6**	1	02/25/08	02/25/08	
Copper J/DNQ	EPA 200.8	8B25070	0.75	2.0	**1.4**	1	02/25/08	02/25/08	J
Lead	EPA 200.8	8B25070	0.30	1.0	**1.2**	1	02/25/08	02/25/08	
Selenium J/DNQ	EPA 200.8	8B25070	0.30	2.0	**0.32**	1	02/25/08	02/25/08	J
Zinc	EPA 200.8	8B25100	2.5	20	**46**	1	02/25/08	02/26/08	

* Analysis not validated

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
Boron *	EPA 200.7-Diss	8B22085	0.020	0.050	ND	1	02/22/08	02/22/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8-Diss	8B22086	0.11	1.0	**1.1**	1	02/22/08	02/22/08	
Copper	EPA 200.8-Diss	8B22086	0.75	2.0	ND	1	02/22/08	02/22/08	
Lead	EPA 200.8-Diss	8B22086	0.30	1.0	ND	1	02/22/08	02/22/08	
Selenium	EPA 200.8-Diss	8B22086	0.30	2.0	ND	1	02/22/08	02/22/08	
Zinc	EPA 200.8-Diss	8B22086	2.5	20	**24**	1	02/22/08	02/22/08	

* Analysis not validated

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved U	EPA 245.1	W8B0837	0.050	0.20	ND	1	02/25/08	02/26/08	
Mercury, Total	EPA 245.1	W8B0837	0.050	0.20	ND	1	02/25/08	02/26/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease) *	EPA 1664A	8B25068	1.3	4.7	**2.7**	1	02/25/08	02/26/08	J
Ammonia-N (Distilled)	EPA 350.2	8B22080	0.30	0.50	ND	1	02/22/08	02/22/08	
Biochemical Oxygen Demand	EPA 405.1	8B20120	0.59	2.0	**4.2**	1	02/20/08	02/25/08	
Chloride *	EPA 300.0	8B20029	0.25	0.50	**7.5**	1	02/20/08	02/20/08	
Fluoride	EPA 340.2	8B22054	0.014	0.10	**0.69**	1	02/22/08	02/22/08	
Nitrate-N	EPA 300.0	8B20029	0.060	0.10	**0.99**	1	02/20/08	02/20/08	
Nitrite-N	EPA 300.0	8B20029	0.090	0.15	ND	1	02/20/08	02/20/08	
Nitrate/Nitrite-N	EPA 300.0	8B20029	0.15	0.26	**0.99**	1	02/20/08	02/20/08	
Sulfate	EPA 300.0	8B20029	0.20	0.50	**7.5**	1	02/20/08	02/20/08	
Total Dissolved Solids	SM2540C	8B26077	10	10	**180**	1	02/26/08	02/26/08	
Total Suspended Solids	EPA 160.2	8B22122	10	10	ND	1	02/22/08	02/22/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids *	EPA 160.5	8B21127	0.10	0.10	ND	1	02/21/08	02/21/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B21126	0.040	1.0	**12**	1	02/21/08	02/21/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Perchlorate *	EPA 314.0	8B27075	1.5	4.0	ND	1	02/27/08	02/27/08	

* Analysis not validated

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

004 1328

NPDES - 3845

Client: TestAmerica Analytical-Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5817

Attention: Joseph Doak
Sample: Water / 1 Sample
Project Name: IRB1997
P.O. Number: IRB1997
Method Number: 8315 (Modified)
Investigation: Hydrazines

REPORT

Laboratory No: 973679
Report Date: March 4, 2008
Sampling Date: February 20, 2008
Receiving Date: February 21, 2008
Extraction Date: February 21, 2008
Analysis Date: February 22, 2008
Units: µg/L
Reported By: JS

Analytical Results

Sample ID	Sample Descript	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
707258-MB	Method Blank *	100	1	ND	ND	ND	None
973679 Outfall 014	IRB1997-01	100	1	U ND	U ND	U ND	None
MDL				0.56	0.32	0.15	
PQL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

* Analysis not validated
LEVEL IV

Note: Results based on detector #1 (UV=365nm) data.

Xuan Dang, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

APPENDIX G

Section 98

Outfall 014, February 20, 2008

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Routine Outfall 014

Sampled: 02/20/08
Received: 02/20/08
Issued: 03/18/08 12:22

NELAP #01108CA California ELAP#1197 CSDLAC #10256

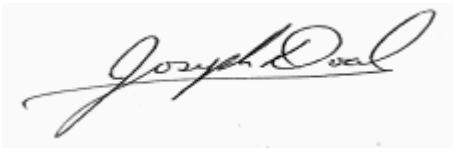
The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. 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
IRB1997-01	OUTFALL 014	Water
IRB1997-02	TRIP BLANK	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: mg/l									
DRO (C13-C22)	EPA 8015B	8B23009	0.094	0.094	ND	0.943	02/23/08	02/26/08	
Surrogate: n-Octacosane (40-125%)					*66 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015B	8B26030	0.030	0.050	ND	1	02/26/08	02/26/08	
Surrogate: 4-BFB (FID) (65-140%)					*96 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

VOLATILE ORGANICS by GCMS SIM

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
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%)					*86 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: ug/l									
1,2,3-Trichloropropane	EPA 624	8B25001	0.40	1.0	ND	1	02/25/08	02/25/08	
1,2-Dibromoethane (EDB)	EPA 624	8B25001	0.40	0.50	ND	1	02/25/08	02/25/08	
Di-isopropyl Ether (DIPE)	EPA 624	8B25001	0.25	0.50	ND	1	02/25/08	02/25/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8B25001	0.32	0.50	ND	1	02/25/08	02/25/08	
tert-Butanol (TBA)	EPA 624	8B25001	4.9	10	ND	1	02/25/08	02/25/08	
Surrogate: Dibromofluoromethane (80-120%)					*97 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*91 %*				
Sample ID: IRB1997-02 (TRIP BLANK - Water)									
Reporting Units: ug/l									
1,2,3-Trichloropropane	EPA 624	8B25001	0.40	1.0	ND	1	02/25/08	02/25/08	
1,2-Dibromoethane (EDB)	EPA 624	8B25001	0.40	0.50	ND	1	02/25/08	02/25/08	
Di-isopropyl Ether (DIPE)	EPA 624	8B25001	0.25	0.50	ND	1	02/25/08	02/25/08	
Methyl-tert-butyl Ether (MTBE)	EPA 624	8B25001	0.32	0.50	ND	1	02/25/08	02/25/08	
tert-Butanol (TBA)	EPA 624	8B25001	4.9	10	ND	1	02/25/08	02/25/08	
Surrogate: Dibromofluoromethane (80-120%)					*98 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*91 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Naphthalene	EPA 625	8B21067	2.8	9.4	ND	0.943	02/21/08	02/24/08	
N-Nitrosodimethylamine	EPA 625	8B21067	2.4	19	ND	0.943	02/21/08	02/24/08	
Surrogate: 2-Fluorophenol (30-120%)					*68 %*				
Surrogate: Phenol-d6 (35-120%)					*83 %*				
Surrogate: 2,4,6-Tribromophenol (40-120%)					*78 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*79 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*84 %*				
Surrogate: Terphenyl-d14 (50-125%)					*86 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	8B21050	0.020	0.050	ND	1	02/21/08	02/22/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8B25070	0.11	1.0	**1.6**	1	02/25/08	02/25/08	
Copper	EPA 200.8	8B25070	0.75	2.0	**1.4**	1	02/25/08	02/25/08	J
Lead	EPA 200.8	8B25070	0.30	1.0	**1.2**	1	02/25/08	02/25/08	
Selenium	EPA 200.8	8B25070	0.30	2.0	**0.32**	1	02/25/08	02/25/08	J
Zinc	EPA 200.8	8B25100	2.5	20	**46**	1	02/25/08	02/26/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7-Diss	8B22085	0.020	0.050	ND	1	02/22/08	02/22/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8-Diss	8B22086	0.11	1.0	**1.1**	1	02/22/08	02/22/08	
Copper	EPA 200.8-Diss	8B22086	0.75	2.0	ND	1	02/22/08	02/22/08	
Lead	EPA 200.8-Diss	8B22086	0.30	1.0	ND	1	02/22/08	02/22/08	
Selenium	EPA 200.8-Diss	8B22086	0.30	2.0	ND	1	02/22/08	02/22/08	
Zinc	EPA 200.8-Diss	8B22086	2.5	20	**24**	1	02/22/08	02/22/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B25068	1.3	4.7	**2.7**	1	02/25/08	02/26/08	J
Ammonia-N (Distilled)	EPA 350.2	8B22080	0.30	0.50	ND	1	02/22/08	02/22/08	
Biochemical Oxygen Demand	EPA 405.1	8B20120	0.59	2.0	**4.2**	1	02/20/08	02/25/08	
Chloride	EPA 300.0	8B20029	0.25	0.50	**7.5**	1	02/20/08	02/20/08	
Fluoride	EPA 340.2	8B22054	0.014	0.10	**0.69**	1	02/22/08	02/22/08	
Nitrate-N	EPA 300.0	8B20029	0.060	0.10	**0.99**	1	02/20/08	02/20/08	
Nitrite-N	EPA 300.0	8B20029	0.090	0.15	ND	1	02/20/08	02/20/08	
Nitrate/Nitrite-N	EPA 300.0	8B20029	0.15	0.26	**0.99**	1	02/20/08	02/20/08	
Sulfate	EPA 300.0	8B20029	0.20	0.50	**7.5**	1	02/20/08	02/20/08	
Total Dissolved Solids	SM2540C	8B26077	10	10	**180**	1	02/26/08	02/26/08	
Total Suspended Solids	EPA 160.2	8B22122	10	10	ND	1	02/22/08	02/22/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8B21127	0.10	0.10	ND	1	02/21/08	02/21/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B21126	0.040	1.0	**12**	1	02/21/08	02/21/08	
Sample ID: IRB1997-01 (OUTFALL 014 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	8B27075	1.5	4.0	ND	1	02/27/08	02/27/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB1997-01 (OUTFALL 014 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0837	0.050	0.20	ND	1	02/25/08	02/26/08	
Mercury, Total	EPA 245.1	W8B0837	0.050	0.20	ND	1	02/25/08	02/26/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: OUTFALL 014 (IRB1997-01) - Water					
EPA 160.5	2	02/20/2008 09:40	02/20/2008 19:05	02/21/2008 13:30	02/21/2008 15:30
EPA 180.1	2	02/20/2008 09:40	02/20/2008 19:05	02/21/2008 13:00	02/21/2008 13:00
EPA 300.0	2	02/20/2008 09:40	02/20/2008 19:05	02/20/2008 20:00	02/20/2008 21:06
EPA 405.1	2	02/20/2008 09:40	02/20/2008 19:05	02/20/2008 22:11	02/25/2008 22:14

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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
Batch: 8B23009 Extracted: 02/23/08											
Blank Analyzed: 02/26/2008 (8B23009-BLK1)											
DRO (C13-C22)	ND	0.10	0.10	mg/l							
Surrogate: n-Octacosane	*0.154*			*mg/l*	*0.200*		*77*	*40-125*			
LCS Analyzed: 02/26/2008 (8B23009-BS1)											
EFH (C13 - C40)	0.578	0.10	0.10	mg/l	0.750		77	40-115			
Surrogate: n-Octacosane	*0.155*			*mg/l*	*0.200*		*77*	*40-125*			
Matrix Spike Analyzed: 02/26/2008 (8B23009-MS1)						**Source: IRB1963-01**					
EFH (C13 - C40)	0.565	0.095	0.095	mg/l	0.714	ND	79	40-120			
Surrogate: n-Octacosane	*0.161*			*mg/l*	*0.190*		*85*	*40-125*			
Matrix Spike Dup Analyzed: 02/26/2008 (8B23009-MSD1)						**Source: IRB1963-01**					
EFH (C13 - C40)	0.532	0.095	0.095	mg/l	0.714	ND	74	40-120	6	30	
Surrogate: n-Octacosane	*0.145*			*mg/l*	*0.190*		*76*	*40-125*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B26030 Extracted: 02/26/08											
Blank Analyzed: 02/26/2008 (8B26030-BLK1)											
GRO (C4 - C12)	ND	0.050	0.030	mg/l							
Surrogate: 4-BFB (FID)	*0.0108*			*mg/l*	*0.0100*		*108*	*65-140*			
LCS Analyzed: 02/26/2008 (8B26030-BS1)											
GRO (C4 - C12)	0.774	0.050	0.030	mg/l	0.800		97	80-120			
Surrogate: 4-BFB (FID)	*0.0191*			*mg/l*	*0.0100*		*191*	*65-140*			*ZX*
Matrix Spike Analyzed: 02/26/2008 (8B26030-MS1)						**Source: IRB2154-01**					
GRO (C4 - C12)	0.236	0.050	0.030	mg/l	0.220	ND	107	65-140			
Surrogate: 4-BFB (FID)	*0.0108*			*mg/l*	*0.0100*		*108*	*65-140*			
Matrix Spike Dup Analyzed: 02/26/2008 (8B26030-MSD1)						**Source: IRB2154-01**					
GRO (C4 - C12)	0.231	0.050	0.030	mg/l	0.220	ND	105	65-140	2	20	
Surrogate: 4-BFB (FID)	*0.0114*			*mg/l*	*0.0100*		*114*	*65-140*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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
Batch: 8B27016 Extracted: 02/27/08											
Blank Analyzed: 02/27/2008 (8B27016-BLK1)											
1,4-Dioxane	ND	2.0	1.0	ug/l							
Surrogate: Dibromofluoromethane	*1.04*			*ug/l*	*1.00*		*104*	*80-120*			
LCS Analyzed: 02/27/2008 (8B27016-BS1)											
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*			
Matrix Spike Analyzed: 02/27/2008 (8B27016-MS1)						**Source: IRB1997-01**					
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*			
Matrix Spike Dup Analyzed: 02/27/2008 (8B27016-MSD1)						**Source: IRB1997-01**					
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*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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
Batch: 8B25001 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25001-BLK1)											
1,2,3-Trichloropropane	ND	1.0	0.40	ug/l							
1,2-Dibromoethane (EDB)	ND	0.50	0.40	ug/l							
Di-isopropyl Ether (DIPE)	ND	0.50	0.25	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	0.50	0.32	ug/l							
tert-Butanol (TBA)	ND	10	4.9	ug/l							
Surrogate: Dibromofluoromethane	*24.2*			*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: Toluene-d8	*24.9*			*ug/l*	*25.0*		*99*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.7*			*ug/l*	*25.0*		*91*	*80-120*			
LCS Analyzed: 02/25/2008 (8B25001-BS1)											
1,2,3-Trichloropropane	22.1	1.0	0.40	ug/l	25.0		88	60-130			
1,2-Dibromoethane (EDB)	26.0	0.50	0.40	ug/l	25.0		104	75-125			
Di-isopropyl Ether (DIPE)	26.0	0.50	0.25	ug/l	25.0		104	60-135			
Methyl-tert-butyl Ether (MTBE)	22.9	0.50	0.32	ug/l	25.0		92	60-135			
tert-Butanol (TBA)	143	10	4.9	ug/l	125		114	70-135			
Surrogate: Dibromofluoromethane	*24.6*			*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*25.2*			*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.9*			*ug/l*	*25.0*		*95*	*80-120*			
Matrix Spike Analyzed: 02/25/2008 (8B25001-MS1)						**Source: IRB1997-01**					
1,2,3-Trichloropropane	21.7	1.0	0.40	ug/l	25.0	ND	87	55-135			
1,2-Dibromoethane (EDB)	24.8	0.50	0.40	ug/l	25.0	ND	99	70-130			
Di-isopropyl Ether (DIPE)	24.6	0.50	0.25	ug/l	25.0	ND	98	60-140			
Methyl-tert-butyl Ether (MTBE)	21.6	0.50	0.32	ug/l	25.0	ND	86	55-145			
tert-Butanol (TBA)	131	10	4.9	ug/l	125	ND	105	65-140			
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	*23.7*			*ug/l*	*25.0*		*95*	*80-120*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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
Batch: 8B25001 Extracted: 02/25/08											
Matrix Spike Dup Analyzed: 02/25/2008 (8B25001-MSD1)						**Source: IRB1997-01**					
1,2,3-Trichloropropane	21.6	1.0	0.40	ug/l	25.0	ND	87	55-135	0	30	
1,2-Dibromoethane (EDB)	25.1	0.50	0.40	ug/l	25.0	ND	100	70-130	1	25	
Di-isopropyl Ether (DIPE)	25.4	0.50	0.25	ug/l	25.0	ND	101	60-140	3	25	
Methyl-tert-butyl Ether (MTBE)	21.9	0.50	0.32	ug/l	25.0	ND	87	55-145	1	25	
tert-Butanol (TBA)	137	10	4.9	ug/l	125	ND	110	65-140	4	25	
Surrogate: Dibromofluoromethane	*24.4*			*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*25.2*			*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*			*ug/l*	*25.0*		*95*	*80-120*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B21067 Extracted: 02/21/08											
Blank Analyzed: 02/23/2008 (8B21067-BLK1)											
Naphthalene	ND	10	3.0	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
Surrogate: 2-Fluorophenol	*150*			*ug/l*	*200*		*75*	*30-120*			
Surrogate: Phenol-d6	*180*			*ug/l*	*200*		*90*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*170*			*ug/l*	*200*		*85*	*40-120*			
Surrogate: Nitrobenzene-d5	*84.7*			*ug/l*	*100*		*85*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*89.0*			*ug/l*	*100*		*89*	*50-120*			
Surrogate: Terphenyl-d14	*90.1*			*ug/l*	*100*		*90*	*50-125*			
LCS Analyzed: 02/23/2008 (8B21067-BS1)											**MNR1**
Naphthalene	79.0	10	3.0	ug/l	100		79	55-120			
N-Nitrosodimethylamine	76.3	20	2.5	ug/l	100		76	45-120			
Surrogate: 2-Fluorophenol	*103*			*ug/l*	*200*		*52*	*30-120*			
Surrogate: Phenol-d6	*119*			*ug/l*	*200*		*59*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*146*			*ug/l*	*200*		*73*	*40-120*			
Surrogate: Nitrobenzene-d5	*80.6*			*ug/l*	*100*		*81*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*82.1*			*ug/l*	*100*		*82*	*50-120*			
Surrogate: Terphenyl-d14	*81.2*			*ug/l*	*100*		*81*	*50-125*			
LCS Dup Analyzed: 02/23/2008 (8B21067-BSD1)											
Naphthalene	84.0	10	3.0	ug/l	100		84	55-120	6	20	
N-Nitrosodimethylamine	80.2	20	2.5	ug/l	100		80	45-120	5	20	
Surrogate: 2-Fluorophenol	*142*			*ug/l*	*200*		*71*	*30-120*			
Surrogate: Phenol-d6	*166*			*ug/l*	*200*		*83*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*165*			*ug/l*	*200*		*82*	*40-120*			
Surrogate: Nitrobenzene-d5	*83.2*			*ug/l*	*100*		*83*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*88.6*			*ug/l*	*100*		*89*	*50-120*			
Surrogate: Terphenyl-d14	*86.4*			*ug/l*	*100*		*86*	*50-125*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B21050 Extracted: 02/21/08											
Blank Analyzed: 02/27/2008 (8B21050-BLK1)											
Boron	ND	0.050	0.020	mg/l							
LCS Analyzed: 02/22/2008 (8B21050-BS1)											
Boron	0.478	0.050	0.020	mg/l	0.500		96	85-115			
Matrix Spike Analyzed: 02/22/2008 (8B21050-MS1)						**Source: IRB1854-24**					
Boron	0.943	0.050	0.020	mg/l	0.500	0.493	90	70-130			
Matrix Spike Analyzed: 02/22/2008 (8B21050-MS2)						**Source: IRB1997-01**					
Boron	0.479	0.050	0.020	mg/l	0.500	ND	96	70-130			
Matrix Spike Dup Analyzed: 02/22/2008 (8B21050-MSD1)						**Source: IRB1854-24**					
Boron	0.982	0.050	0.020	mg/l	0.500	0.493	98	70-130	4	20	
Batch: 8B25070 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25070-BLK1)											
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							
LCS Analyzed: 02/25/2008 (8B25070-BS1)											
Cadmium	84.8	1.0	0.11	ug/l	80.0		106	85-115			
Copper	82.8	2.0	0.75	ug/l	80.0		104	85-115			
Lead	88.4	1.0	0.30	ug/l	80.0		111	85-115			
Selenium	84.0	2.0	0.30	ug/l	80.0		105	85-115			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25070 Extracted: 02/25/08											
Matrix Spike Analyzed: 02/25/2008 (8B25070-MS1)						**Source: IRB2399-01**					
Cadmium	77.2	1.0	0.11	ug/l	80.0	ND	97	70-130			
Copper	77.8	2.0	0.75	ug/l	80.0	3.87	92	70-130			
Lead	83.3	1.0	0.30	ug/l	80.0	1.63	102	70-130			
Selenium	80.3	2.0	0.30	ug/l	80.0	0.601	100	70-130			
Matrix Spike Dup Analyzed: 02/25/2008 (8B25070-MSD1)						**Source: IRB2399-01**					
Cadmium	76.9	1.0	0.11	ug/l	80.0	ND	96	70-130	1	20	
Copper	77.2	2.0	0.75	ug/l	80.0	3.87	92	70-130	1	20	
Lead	82.4	1.0	0.30	ug/l	80.0	1.63	101	70-130	1	20	
Selenium	79.4	2.0	0.30	ug/l	80.0	0.601	98	70-130	1	20	
Batch: 8B25100 Extracted: 02/25/08											
Blank Analyzed: 02/26/2008 (8B25100-BLK1)											
Zinc	ND	20	2.5	ug/l							
LCS Analyzed: 02/26/2008 (8B25100-BS1)											
Zinc	78.0	20	2.5	ug/l	80.0		97	85-115			
Matrix Spike Analyzed: 02/26/2008 (8B25100-MS1)						**Source: IRB2407-02**					
Zinc	81.5	20	2.5	ug/l	80.0	5.05	96	70-130			
Matrix Spike Dup Analyzed: 02/26/2008 (8B25100-MSD1)						**Source: IRB2407-02**					
Zinc	79.8	20	2.5	ug/l	80.0	5.05	93	70-130	2	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B22085 Extracted: 02/22/08											
Blank Analyzed: 02/22/2008 (8B22085-BLK1)											
Boron	ND	0.050	0.020	mg/l							
LCS Analyzed: 02/22/2008 (8B22085-BS1)											
Boron	0.992	0.050	0.020	mg/l	1.00		99	85-115			
Matrix Spike Analyzed: 02/22/2008 (8B22085-MS1)						**Source: IRB1995-01**					
Boron	1.06	0.050	0.020	mg/l	1.00	0.0585	100	70-130			
Matrix Spike Dup Analyzed: 02/22/2008 (8B22085-MSD1)						**Source: IRB1995-01**					
Boron	1.01	0.050	0.020	mg/l	1.00	0.0585	95	70-130	5	20	
Batch: 8B22086 Extracted: 02/22/08											
Blank Analyzed: 02/22/2008 (8B22086-BLK1)											
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							
LCS Analyzed: 02/22/2008-02/29/2008 (8B22086-BS1)											
Cadmium	89.2	1.0	0.11	ug/l	80.0		112	85-115			
Copper	83.1	2.0	0.75	ug/l	80.0		104	85-115			
Lead	86.0	1.0	0.30	ug/l	80.0		107	85-115			
Selenium	91.4	2.0	0.30	ug/l	80.0		114	85-115			
Zinc	89.5	20	2.5	ug/l	80.0		112	85-115			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014

Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B22086 Extracted: 02/22/08											
Matrix Spike Analyzed: 02/22/2008 (8B22086-MS1)						**Source: IRB1997-01**					
Cadmium	85.1	1.0	0.11	ug/l	80.0	1.12	105	70-130			
Copper	80.7	2.0	0.75	ug/l	80.0	ND	101	70-130			
Lead	83.3	1.0	0.30	ug/l	80.0	ND	104	70-130			
Selenium	98.1	2.0	0.30	ug/l	80.0	ND	123	70-130			
Zinc	110	20	2.5	ug/l	80.0	23.8	108	70-130			
Matrix Spike Dup Analyzed: 02/22/2008 (8B22086-MSD1)						**Source: IRB1997-01**					
Cadmium	86.2	1.0	0.11	ug/l	80.0	1.12	106	70-130	1	20	
Copper	80.5	2.0	0.75	ug/l	80.0	ND	101	70-130	0	20	
Lead	83.5	1.0	0.30	ug/l	80.0	ND	104	70-130	0	20	
Selenium	99.2	2.0	0.30	ug/l	80.0	ND	124	70-130	1	20	
Zinc	109	20	2.5	ug/l	80.0	23.8	107	70-130	1	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B20029 Extracted: 02/20/08											
Blank Analyzed: 02/20/2008 (8B20029-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.10	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 02/20/2008 (8B20029-BS1)											
Chloride	5.14	0.50	0.25	mg/l	5.00		103	90-110			
Nitrate-N	1.17	0.10	0.060	mg/l	1.13		104	90-110			
Nitrite-N	1.58	0.15	0.090	mg/l	1.52		104	90-110			
Sulfate	9.57	0.50	0.20	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 02/20/2008 (8B20029-MS1)						**Source: IRB1951-01**					
Chloride	8.67	0.50	0.25	mg/l	5.00	3.28	108	80-120			
Nitrate-N	3.22	0.10	0.060	mg/l	1.13	2.31	81	80-120			
Nitrite-N	1.71	0.15	0.090	mg/l	1.52	0.120	105	80-120			
Sulfate	14.7	0.50	0.20	mg/l	10.0	7.69	71	80-120			*M2*
Matrix Spike Analyzed: 02/21/2008 (8B20029-MS2)						**Source: IRB1997-01**					
Chloride	12.0	0.50	0.25	mg/l	5.00	7.49	89	80-120			
Nitrate-N	2.02	0.10	0.060	mg/l	1.13	0.989	91	80-120			
Nitrite-N	1.71	0.15	0.090	mg/l	1.52	ND	113	80-120			
Sulfate	17.1	0.50	0.20	mg/l	10.0	7.45	96	80-120			
Matrix Spike Dup Analyzed: 02/20/2008 (8B20029-MSD1)						**Source: IRB1951-01**					
Chloride	8.60	0.50	0.25	mg/l	5.00	3.28	106	80-120	1	20	
Nitrate-N	3.28	0.10	0.060	mg/l	1.13	2.31	86	80-120	2	20	
Nitrite-N	1.76	0.15	0.090	mg/l	1.52	0.120	108	80-120	3	20	
Sulfate	15.5	0.50	0.20	mg/l	10.0	7.69	78	80-120	5	20	*M2*

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B20120 Extracted: 02/20/08											
Blank Analyzed: 02/25/2008 (8B20120-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 02/25/2008 (8B20120-BS1)											
Biochemical Oxygen Demand	185	100	30	mg/l	198		93	85-115			
LCS Dup Analyzed: 02/25/2008 (8B20120-BSD1)											
Biochemical Oxygen Demand	177	100	30	mg/l	198		89	85-115	4	20	
Batch: 8B21126 Extracted: 02/21/08											
Blank Analyzed: 02/21/2008 (8B21126-BLK1)											
Turbidity	0.100	1.0	0.040	NTU							*J*
Duplicate Analyzed: 02/21/2008 (8B21126-DUP1)						**Source: IRB1995-01**					
Turbidity	1.10	1.0	0.040	NTU		1.02			8	20	
Batch: 8B22054 Extracted: 02/22/08											
Blank Analyzed: 02/22/2008 (8B22054-BLK1)											
Fluoride	0.0289	0.10	0.014	mg/l							*J*
LCS Analyzed: 02/22/2008 (8B22054-BS1)											
Fluoride	1.03	0.10	0.014	mg/l	1.00		103	90-110			
Matrix Spike Analyzed: 02/22/2008 (8B22054-MS1)						**Source: IRB2189-04**					
Fluoride	1.42	0.10	0.014	mg/l	1.00	0.390	103	80-120			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B22054 Extracted: 02/22/08											
Matrix Spike Dup Analyzed: 02/22/2008 (8B22054-MSD1)						**Source: IRB2189-04**					
Fluoride	1.40	0.10	0.014	mg/l	1.00	0.390	101	80-120	2	20	
Batch: 8B22080 Extracted: 02/22/08											
Blank Analyzed: 02/22/2008 (8B22080-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 02/22/2008 (8B22080-BS1)											
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0		101	80-115			
Matrix Spike Analyzed: 02/22/2008 (8B22080-MS1)						**Source: IRB1995-01**					
Ammonia-N (Distilled)	10.4	0.50	0.30	mg/l	10.0	ND	104	70-120			
Matrix Spike Dup Analyzed: 02/22/2008 (8B22080-MSD1)						**Source: IRB1995-01**					
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0	ND	101	70-120	3	15	
Batch: 8B22122 Extracted: 02/22/08											
Blank Analyzed: 02/22/2008 (8B22122-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 02/22/2008 (8B22122-BS1)											
Total Suspended Solids	989	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 02/22/2008 (8B22122-DUP1)						**Source: IRB1959-01**					
Total Suspended Solids	ND	10	10	mg/l		ND				10	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25068 Extracted: 02/25/08											
Blank Analyzed: 02/26/2008 (8B25068-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/26/2008 (8B25068-BS1)											**MNR1**
Hexane Extractable Material (Oil & Grease)	19.5	5.0	1.4	mg/l	20.2		97	78-114			
LCS Dup Analyzed: 02/26/2008 (8B25068-BSD1)											
Hexane Extractable Material (Oil & Grease)	18.5	5.0	1.4	mg/l	20.2		92	78-114	5	11	
Batch: 8B26077 Extracted: 02/26/08											
Blank Analyzed: 02/26/2008 (8B26077-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 02/26/2008 (8B26077-BS1)											
Total Dissolved Solids	1010	10	10	mg/l	1000		101	90-110			
Duplicate Analyzed: 02/26/2008 (8B26077-DUP1)						**Source: IRB2199-01**					
Total Dissolved Solids	2380	10	10	mg/l		2380			0	10	
Batch: 8B27075 Extracted: 02/27/08											
Blank Analyzed: 02/27/2008 (8B27075-BLK1)											
Perchlorate	ND	4.0	1.5	ug/l							
LCS Analyzed: 02/27/2008 (8B27075-BS1)											
Perchlorate	53.4	4.0	1.5	ug/l	50.0		107	85-115			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B27075 Extracted: 02/27/08											
Matrix Spike Analyzed: 02/27/2008 (8B27075-MS1)						**Source: IRB2601-01**					
Perchlorate	53.6	4.0	1.5	ug/l	50.0	4.36	98	80-120			
Matrix Spike Dup Analyzed: 02/27/2008 (8B27075-MSD1)						**Source: IRB2601-01**					
Perchlorate	54.5	4.0	1.5	ug/l	50.0	4.36	100	80-120	2	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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
Batch: W8B0837 Extracted: 02/25/08											
Blank Analyzed: 02/26/2008 (W8B0837-BLK1)											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.20	0.050	ug/l							
LCS Analyzed: 02/26/2008 (W8B0837-BS1)											
Mercury, Dissolved	0.993	0.20	0.050	ug/l	1.00		99	85-115			
Mercury, Total	0.993	0.20	0.050	ug/l	1.00		99	85-115			
Matrix Spike Analyzed: 02/26/2008 (W8B0837-MS1)						**Source: 8022205-01**					
Mercury, Dissolved	0.984	0.20	0.050	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.984	0.20	0.050	ug/l	1.00	ND	98	70-130			
Matrix Spike Analyzed: 02/26/2008 (W8B0837-MS2)						**Source: 8022237-02**					
Mercury, Dissolved	20.8	4.0	1.0	ug/l	1.00	19.6	118	70-130			
Mercury, Total	20.8	4.0	1.0	ug/l	1.00	19.6	118	70-130			
Matrix Spike Dup Analyzed: 02/26/2008 (W8B0837-MSD1)						**Source: 8022205-01**					
Mercury, Dissolved	1.01	0.20	0.050	ug/l	1.00	ND	101	70-130	3	20	
Mercury, Total	1.01	0.20	0.050	ug/l	1.00	ND	101	70-130	3	20	
Matrix Spike Dup Analyzed: 02/26/2008 (W8B0837-MSD2)						**Source: 8022237-02**					
Mercury, Dissolved	20.8	4.0	1.0	ug/l	1.00	19.6	118	70-130	0	20	
Mercury, Total	20.8	4.0	1.0	ug/l	1.00	19.6	118	70-130	0	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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
IRB1997-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	2.75	4.7	15
IRB1997-01	624-Boeing 012/013/014 DT, LOW	1,2-Dibromoethane (EDB)	ug/l	0	0.50	50
IRB1997-01	624-Boeing 012/013/014 DT, LOW	tert-Butanol (TBA)	ug/l	0	10	12
IRB1997-01	8015B-DRO(C13-C22)LL	DRO (C13-C22)	mg/l	0.023	0.094	0.1
IRB1997-01	8015B-GRO(C4-C12)	GRO (C4 - C12)	mg/l	0.0067	0.050	0.1
IRB1997-01	8260B-SIM 1,4-Dioxane	1,4-Dioxane	ug/l	0.22	2.0	3
IRB1997-01	Ammonia-N, Titr (350.2) w/dist	Ammonia-N (Distilled)	mg/l	0.28	0.50	10
IRB1997-01	Boron-200.7	Boron	mg/l	0.0051	0.050	1
IRB1997-01	Cadmium-200.8	Cadmium	ug/l	1.58	1.0	3.1
IRB1997-01	Chloride - 300.0	Chloride	mg/l	7.49	0.50	150
IRB1997-01	Copper-200.8	Copper	ug/l	1.37	2.0	14
IRB1997-01	Fluoride - 340.2	Fluoride	mg/l	0.69	0.10	1.6
IRB1997-01	Hg_w 245.1	Mercury, Total	ug/l	0.023	0.20	0.2
IRB1997-01	Lead-200.8	Lead	ug/l	1.20	1.0	5.2
IRB1997-01	Nitrate-N, 300.0	Nitrate-N	mg/l	0.99	0.10	8
IRB1997-01	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IRB1997-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.99	0.26	8
IRB1997-01	Perchlorate 314.0-DEFAULT	Perchlorate	ug/l	0	4.0	6
IRB1997-01	Selenium-200.8	Selenium	ug/l	0.32	2.0	5
IRB1997-01	Settleable Solids	Total Settleable Solids	ml/l/hr	0	0.10	0.3
IRB1997-01	Sulfate-300.0	Sulfate	mg/l	7.45	0.50	300
IRB1997-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	181	10	950
IRB1997-01	TSS - EPA 160.2	Total Suspended Solids	mg/l	3.00	10	45
IRB1997-01	Zinc-200.8	Zinc	ug/l	46	20	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
IRB1997-02	624-Boeing 012/013/014 DT, LOW	1,2-Dibromoethane (EDB)	ug/l	0	0.50	50
IRB1997-02	624-Boeing 012/013/014 DT, LOW	tert-Butanol (TBA)	ug/l	0	10	12

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014
Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

DATA QUALIFIERS AND DEFINITIONS

J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014

Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

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 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

Subcontracted Laboratories

Truesdail Laboratories-SUB *California Cert #1237*
14201 Franklin Avenue - Tustin, CA 92680
Analysis Performed: Hydrazine
Samples: IRB1997-01

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: IRB1997-01

Weck Laboratories, Inc
14859 E. Clark Avenue - City of Industry, CA 91745
Method Performed: EPA 245.1
Samples: IRB1997-01

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 014

Report Number: IRB1997

Sampled: 02/20/08
Received: 02/20/08

TestAmerica Irvine

Joseph Doak
Project Manager

IRB1997 IRB1997

Test America Version 12/20/07

CHAIN OF CUSTODY FORM

Client Name/Address	Project
MWH-Arcadia 618 Michillinda Avenue. Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 014** APTF Test Stand
Project Manager: Bronwyn Kelly Sampler: R BARAJAS	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (1664-HEM)	8015 - gas	8015 - diesel/jet fuel	TRPH =Total Rec. Petroleum Hydrocarbons (8015)	1,4-Dioxane (8260B)	BOD_5 (20 degrees C)	625 (Naphthalene +NDMA analysis)	Ammonia-N (350.2)	Cl, SO_4, F, NO_3+NO_2-N Perchlorate	Nitrate-N, Nitrite-N	Comments
Outfall 014	W	1L Amber	1	2-20-08 05:45	HCl	1A	X										
Outfall 014 Dup	W	1L Amber	1		HCl	1B	X										
Outfall 014	W	VOAs	1		HCl	2A		X									
Outfall 014 Dup	W	VOAs	2		HCl	2B, 2C		X									
Outfall 014	W	1L Amber	1		None	3A			X								
Outfall 014 Dup	W	1L Amber	1		None	3B			X								
Outfall 014	W	1L Amber	1		HCl	4A				X							
Outfall 014 Dup	W	1L Amber	1		HCl	4B				X							
Outfall 014	W	VOAs	1		HCl	5A					X						
Outfall 014 Dup	W	VOAs	2		HCl	5B, 5C					X						
Outfall 014	W	1L Poly	1		None	6						X					
Outfall 014	W	1L Amber	1		None	7A							X				
Outfall 014 Dup	W	1L Amber	1		None	7B							X				
Outfall 014	W	500 ml Poly	1		H_2SO_4	8								X			
Outfall 014	W	500 ml Poly	2		None	9A, 9B									X		
Outfall 014	W	500 ml Poly	1	2-20-08 09:40	None	10										X	

ANALYSIS REQUIRED

Field readings
Temp = 10 [illegible] = [illegible]
pH = 7.7
Time of readings = 0 1:40

Relinquished By	Date/Time:	Received By	Date/Time:
2-20-08	1535		2/20/08 1535
Relinquished By	Date/Time:	Received By	Date/Time:
	2/20/08 1905		2-20-08 1905
Relinquished By	Date/Time:	Received By	Date/Time:

Turn around Time: (check)
24 Hours ____ 5 Days ____
48 Hours ____ 10 Days ____
72 Hours ____ Normal X

Sample Integrity: (check)
Intact ✓ On Ice: ✓

A.C. 2130 2/24/08

4-2/2.2C

NPDES - 3878

031

Test America Version 12/20/07

CHAIN OF CUSTODY FORM

Client Name/Address:	Project:	ANALYSIS REQUIRED
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 014** APTF Test Stand	
Project Manager: Bronwyn Kelly Sampler: R BARAON	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Turbidity, TDS, TSS	Settleable Solids	624 (EDB, 1,2,3-TCP, MTBE, DIPE, TBA)	Total Recoverable Metals, Cd, Se, Zn, B, Cu, Pb, Hg	Total Dissolved Metals, Cd, Se, Zn, B, Cu, Pb, Hg	TCDD (and all congeners)	Monomethyl hydrazine				Comments
Outfall 014	W	500 ml Poly	2	2-20-08 09:40	None	11A, 11B	X										
Outfall 014	W	1L Poly	1		None	12		X									
Outfall 014	W	VOAs	1		HCl	13A			X								
Outfall 014 Dup	W	VOAs	2		HCl	13B, 13C			X								
Outfall 014	W	1L Poly	2		HNO_3	14A, 14B				X							
Outfall 014	W	1L Poly	1		None	15					X						Filter w/in 24hrs of receipt at lab
Outfall 014	W	1L Amber	2		None	16A, 16B						X					
Outfall 014	W	1L Amber	2	2-20-08 09:40	None	17A, 17B							X				
Trip Blanks	W	VOAs	3		HCl	18A, 18B, 18C			X								

Relinquished By	Date/Time:	Received By	Date/Time:
2-20-08	1535	2/21/08	1535
Relinquished By	Date/Time:	Received By	Date/Time:
2/21/08	1905	2-20-08	1905
Relinquished By	Date/Time:	Received By	Date/Time:

Turn around Time: (check)
24 Hours _____ 5 Days _____
48 Hours _____ 10 Days _____
72 Hours _____ Normal X

Sample Integrity: (check)
Intact X On Ice: X

NPDES - 3879

4.2/2.2C

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

March 4, 2008

Client: TestAmerica - Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614

Attention: Joseph Doak

Project Name: IRB1997
Project Number: IRB1997

Date Received: 2/21/08
Truesdail Project: 973679

Samples Cross-reference

Truesdail ID	*Client ID*	*Matrix*	*Date Sampled*	*Time Sampled*	*Analysis Requested*
973679-1	IRB1997-01	Water	02/20/08	0940	Hydrazines by EPA 8315M

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

K. R. P. Iyer

K.R.P. Iyer
Quality Control/Quality Assurance Officer

Xuan Huong Dang
Project Manager

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

March 4, 2008

Client: TestAmerica - Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614

Attention: Joseph Doak

Project Name: **IRB1997**
Project Number: **IRB1997**

Date Received: **02/21/08**
Truesdail Project: **973679**

Case Narrative

Sample Receipt The sample was received at 4 °C and in good condition. It was kept in a refrigerator until analysis. Thereafter, it is being kept in ambient storage for an additional 2 months before disposal. Any anomalies would be noted in the "Comments" section.

Analysis The analysis was performed as requested on the chain-of-custody.

Quality Control The analytical results for each batch of samples performed include a minimum of one set of laboratory control sample/laboratory control sample duplicate (LCS/LCSD), one matrix spike (MS) and a reagent blank (Method blank). Any exceptions or problems would be noted in the "Comments" section.

Comments Matrix spike and matrix spike duplicate were done on a sample from a different client project, 973688-3, as the method requirement per batch of 20 samples.

All quality assurance requirements set forth by the method specification and all quality control recoveries were within the laboratory acceptance limits. No anomalies or nonconformance events occurred during the course of analysis.

The results are quantitated down to the MDL level.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

K.R.P. Iyer
Quality Control/Quality Assurance Officer

Xuan Huong Dang
Project Manager

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Client: TestAmerica Analytical-Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5817

Attention: Joseph Doak
Sample: Water / 1 Sample
Project Name: IRB1997
P.O. Number: IRB1997
Method Number: 8315 (Modified)
Investigation: Hydrazines

REPORT

Laboratory No: 973679
Report Date: March 4, 2008
Sampling Date: February 20, 2008
Receiving Date: February 21, 2008
Extraction Date: February 21, 2008
Analysis Date: February 22, 2008
Units: µg/L
Reported By: JS

Analytical Results

Sample ID	Sample Descript	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
707258-MB	Method Blank	100	1	ND	ND	ND	None
973679	IRB1997-01	100	1	ND	ND	ND	None
MDL				0.56	0.32	0.15	
PQL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

Note: Results based on detector #1 (UV=365nm) data.

Xuan Dang, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

NP065 3883

Client:	**TestAmerica Analytical-Irvine**
	17461 Derian Avenue, Suite 100
	Irvine, CA 92614-5817
Client Contact:	**Joseph Doak**
Sample:	Water / 1 Sample
Sample ID:	**IRB1997**
P.O. Number:	**IRB1997**
Method Number:	**8315 (Modified)**
Investigation:	**Hydrazines**
Run Batch No.:	Extraction: 4289; Analysis: 599

QC Lab. No.:	707258
Project Lab. No.:	973679
Spiked Sample ID:	973688-3
Report Date:	March 4, 2008
Sampling Date:	February 20, 2008
Receiving Date:	February 21, 2008
Extraction Date:	February 21, 2008
Analysis Date:	February 22, 2008
Reported By:	JS

Quality Control/Quality Assurance Calibration Report

ICV

Parameter	Theoretical Value (ug/L)	Measured Value (ug/L)	Percent Recovery	Control Limits	Flag
Monomethyl Hydrazine	25.0	23.5	94.2	85-115	PASS
u-Dimethyl Hydrazine	25.0	23.5	94.2	85-115	PASS
Hydrazine	5.0	4.92	98.4	85-115	PASS

QCS

Parameter	Theoretical Value (ug/L)	Measured Value (ug/L)	Percent Recovery	Control Limits	Flag
Monomethyl Hydrazine	50.0	42.6	85.2	85-115	PASS
u-Dimethyl Hydrazine	50.0	46.7	93.4	85-115	PASS
Hydrazine	10.0	9.92	99.2	85-115	PASS

Quality Control/Quality Assurance Spikes Report

LCS/LCSD

Parameter	Spiked Conc. ug/L	Recovered Concentration LCS	LCSD	MB	Percent Recovery (%) LCS	LCSD	LCS/LCSD RPD	Flag	Control Limits %D	% Rec.
Monomethyl Hydrazine	50.0	42.5	43.0	0.0	84.9	86.1	1.36%	PASS	20	70-130
u-Dimethyl Hydrazine	50.0	45.4	46.1	0.0	90.9	92.3	1.48%	PASS	20	70-130
Hydrazine	10.0	9.59	9.74	0.0	95.9	97.4	1.52%	PASS	20	70-130

MS/MSD

Parameter	Recovered Concentration MS	MSD	Sample	Percent Recovery (%) MS	MSD	MS/MSD RPD	Flag	Accuracy Control Limits %D	% Rec.
Monomethyl Hydrazine	47.2	46.9	0.00	94.3	93.7	0.59%	PASS	20	30-130
u-Dimethyl Hydrazine	46.8	47.7	0.00	93.6	95.5	1.96%	PASS	20	30-130
Hydrazine	9.32	9.75	0.00	93.2	97.5	4.54%	PASS	20	30-130

Note: Results based on detector #1 (UV=365nm) data.

Xuan Dang, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Client: TestAmerica Analytical-Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5817

Attention: Joseph Doak
Project Name: IRB1997
Method Number: 8315 (Modified)
Investigation: Hydrazines

Laboratory No: 973679
Report Date: March 4, 2008
Sampling Date: February 20, 2008
Receiving Date: February 21, 2008
Analysis Date: February 22, 2008
Reported By: JS

Qualifier Codes and Definitions

Code	Definition
FPS	Force Peak Start: Peak start needs to be adjusted to the baseline
FPE	Force Peak End: Peak end needs to be adjusted to the baseline
SP	Split Peak: Background or co-eluting peaks need to be split.
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
ND	Not Detected: Analyte is not detected at or above the method detection limit.
N/A	Not Applicable
ICV	Initial Calibration Verification: First source calibration standard run at a mid-level spike prior to samples.
QCS	Quality Control Standard: Second source calibration standard run at a mid-level spike after all samples.
MB	Method Blank: Reagent water extracted and run with each batch of 20 samples to demonstrate that all analytes are not detected from the extraction process.
LCS (D)	Laboratory Control Spike: Second source standard spiked into blank matrix and extracted and run with each batch of 20 samples (run in duplicate).
MS (D)	Matrix Spike: Second source standard spiked into sample matrix and extracted and run with each batch of 20 samples (run in duplicate).
RPD	Relative Percent Difference: A calculated value of the deviation between the spikes and spike duplicates to measure precision.
J	J-flags: Any result found between the MDL and the PQL will be reported with a "J" attached.
Flag	Pass if within Control Limits; otherwise "Fail"

SUBCONTRACT ORDER

TestAmerica Irvine

IRB1997

973679

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:

Truesdail Laboratories-SUB
14201 Franklin Avenue
Tustin, CA 92680
Phone :(714) 730-6239
Fax: (714) 730-6462
Project Location: California
Receipt Temperature:_____°C Ice: Y / N

Rec'd 02/21/08
sld 973679

Analysis	Units	Due	Expires	Comments
Sample ID: IRB1997-01	**Water**		Sampled: **02/20/08 09:40**	**ph=7.7, temp=50.0**
Hydrazine-OUT	%	02/29/08	02/23/08 09:40	Truesdail-Monomethylhydrazine, J flags, 72hr HT!!!
Level 4 Data Package - Out	N/A	02/29/08	03/19/08 09:40	Boeing

Containers Supplied:
1 L Amber (AE) 1 L Amber (AF)

ALERT !!
Level IV QC

For Sample Conditions See Form Attached

Released By	2/21/08 0755 Date/Time	Received By TAE	2/21/08 0755 Date/Time
Released By TAE	2/21/08 0845 Date/Time	Received By L. Stuebenrauch	2/21/08 8:45 Date/Time

008

Vista
Analytical Laboratory

March 11, 2008

Vista Project I.D.: 30290

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 22, 2008 under your Project Name "IRB1997". 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. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

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: **2/22/2008**

Vista Lab. ID	Client Sample ID
30290-001	IRB1997-01

SECTION II

Method Blank **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9988	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	4-Mar-08	Date Analyzed DB-5:	6-Mar-08
				Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.00000174		
1,2,3,7,8-PeCDD	ND	0.00000230		
1,2,3,4,7,8-HxCDD	ND	0.00000250		
1,2,3,6,7,8-HxCDD	ND	0.00000241		
1,2,3,7,8,9-HxCDD	ND	0.00000236		
1,2,3,4,6,7,8-HpCDD	ND	0.00000542		
OCDD	ND	0.0000101		
2,3,7,8-TCDF	ND	0.00000199		
1,2,3,7,8-PeCDF	ND	0.00000163		
2,3,4,7,8-PeCDF	ND	0.00000146		
1,2,3,4,7,8-HxCDF	ND	0.00000184		
1,2,3,6,7,8-HxCDF	ND	0.00000163		
2,3,4,6,7,8-HxCDF	ND	0.00000186		
1,2,3,7,8,9-HxCDF	ND	0.00000281		
1,2,3,4,6,7,8-HpCDF	ND	0.00000530		
1,2,3,4,7,8,9-HpCDF	ND	0.00000617		
OCDF	ND	0.00000633		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	83.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	88.0	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	73.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	91.5	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	86.2	23 - 140	
	13C-OCDD	61.8	17 - 157	
	13C-2,3,7,8-TCDF	87.3	24 - 169	
	13C-1,2,3,7,8-PeCDF	89.9	24 - 185	
	13C-2,3,4,7,8-PeCDF	92.7	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	85.5	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	105	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	95.0	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	91.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	86.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	26 - 138	
	13C-OCDF	88.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	92.0	35 - 197	

Totals

Total TCDD	ND	0.00000174	
Total PeCDD	ND	0.00000230	
Total HxCDD	ND	0.00000242	
Total HpCDD	ND	0.00000542	
Total TCDF	ND	0.00000199	
Total PeCDF	ND	0.00000154	
Total HxCDF	ND	0.00000204	
Total HpCDF	ND	0.00000574	

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: Martha M. Maier 11-Mar-2008 08:30

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9988	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	4-Mar-08	Date Analyzed DB-5:	5-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	8.84	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	83.5	25 - 164	
1,2,3,7,8-PeCDD	50.0	50.7	35 - 71		13C-1,2,3,7,8-PeCDD	90.5	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	52.5	35 - 82		13C-1,2,3,4,7,8-HxCDD	65.6	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	50.0	38 - 67		13C-1,2,3,6,7,8-HxCDD	87.3	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	50.6	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	83.7	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	50.8	35 - 70		13C-OCDD	66.2	17 - 157	
OCDD	100	104	78 - 144		13C-2,3,7,8-TCDF	89.2	24 - 169	
2,3,7,8-TCDF	10.0	9.08	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	96.4	24 - 185	
1,2,3,7,8-PeCDF	50.0	49.1	40 - 67		13C-2,3,4,7,8-PeCDF	97.1	21 - 178	
2,3,4,7,8-PeCDF	50.0	49.2	34 - 80		13C-1,2,3,4,7,8-HxCDF	83.4	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	46.3	36 - 67		13C-1,2,3,6,7,8-HxCDF	96.8	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	47.4	42 - 65		13C-2,3,4,6,7,8-HxCDF	89.9	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	45.4	35 - 78		13C-1,2,3,7,8,9-HxCDF	85.4	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	47.1	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	78.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	47.4	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	84.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	44.6	39 - 69		13C-OCDF	85.1	17 - 157	
OCDF	100	98.3	63 - 170	CRS	37Cl-2,3,7,8-TCDD	98.0	35 - 197	

Analyst: JMH

Approved By: Martha M. Maier 11-Mar-2008 08:30

Sample ID: **IRB1997-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30290-001	Date Received:	22-Feb-08
Project:	IRB1997	Sample Size:	1.02 L	QC Batch No.:	9988	Date Extracted:	4-Mar-08
Date Collected:	20-Feb-08			Date Analyzed DB-5:	7-Mar-08	Date Analyzed DB-225:	NA
Time Collected:	0940						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000471		
1,2,3,7,8-PeCDD	ND	0.000000696		
1,2,3,4,7,8-HxCDD	ND	0.00000101		
1,2,3,6,7,8-HxCDD	ND	0.00000106		
1,2,3,7,8,9-HxCDD	ND	0.00000100		
1,2,3,4,6,7,8-HpCDD	0.0000184			J
OCDD	0.000229			
2,3,7,8-TCDF	ND	0.000000488		
1,2,3,7,8-PeCDF	ND	0.000000412		
2,3,4,7,8-PeCDF	ND	0.000000384		
1,2,3,4,7,8-HxCDF	ND	0.000000374		
1,2,3,6,7,8-HxCDF	ND	0.000000413		
2,3,4,6,7,8-HxCDF	ND	0.000000478		
1,2,3,7,8,9-HxCDF	ND	0.000000650		
1,2,3,4,6,7,8-HpCDF	ND	0.000000991		
1,2,3,4,7,8,9-HpCDF	ND	0.00000101		
OCDF	0.00000794			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	82.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	82.6	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	70.3	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	77.1	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	80.5	23 - 140	
	13C-OCDD	58.7	17 - 157	
	13C-2,3,7,8-TCDF	88.5	24 - 169	
	13C-1,2,3,7,8-PeCDF	93.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	92.3	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	86.9	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	86.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	79.6	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	81.9	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	72.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	79.5	26 - 138	
	13C-OCDF	73.4	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	95.8	35 - 197	

Totals

Total TCDD	ND	0.000000471
Total PeCDD	ND	0.000000696
Total HxCDD	ND	0.00000102
Total HpCDD	0.0000528	
Total TCDF	ND	0.000000488
Total PeCDF	ND	0.000000398
Total HxCDF	ND	0.000000479
Total HpCDF	ND	0.00000100

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: Martha M. Maier 11-Mar-2008 08:30

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
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

IRB1997

30290 3.8°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: IRB1997-01	**Water**		Sampled: **02/20/08 09:40**	**ph=7.7, temp=50.0**
1613-Dioxin-HR-Alta	ug/l	02/29/08	02/27/08 09:40	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Level 4 + EDD-OUT	N/A	02/29/08	03/19/08 09:40	Excel EDD email to pm,Include Std logs for Lvl IV

Containers Supplied:

1 L Amber (Y) 1 L Amber (Z)

[signature]	2/21/08 17:00	FedEx	2/21/08 17:00
Released By	Date/Time	Received By	Date/Time
		[signature]	2/22/08 0947
Released By	Date/Time	Received By	Date/Time

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 30290 TAT N/A

Samples Arrival:	**Date/Time** 2/22/08 0927	**Initials:** DB	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 2/22/08 1237	**Initials:** DB	**Location:** WR-2 **Shelf/Rack:** B-1

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		
Temp °C 5,8	**Time:** 0942	**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 # 7904 5318 8621	✓		
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?				✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)		
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine

IRB1997 8022139

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
14859 E. Clark Avenue
City of Industry, CA 91745
Phone :(626) 336-2139
Fax: (626) 336-2634
Project Location: California
Receipt Temperature: 2.1 °C Ice: (Y) / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRB1997-01	**Water**		Sampled: **02/20/08 09:40**	**ph=7.7, temp=50.0**
Level 4 Data Package - Wec	N/A	02/29/08	03/19/08 09:40	
Mercury - 245.1, Diss -OUT	ug/l	02/29/08	03/19/08 09:40	Out to Weck Level 4 Boeing, permit, J flags
Mercury - 245.1-OUT	ug/l	02/29/08	03/19/08 09:40	Out to Weck Level 4 Boeing, permit, J flags

Containers Supplied:

125 mL Poly w/HNO3 (AC) 125 mL Poly (AD)

Released By	2/21/08 1045 Date/Time	Received By TAE	2/21/08 1045 Date/Time
Released By TAE	2/21/08 1420 Date/Time	Received By	2/21/08 1420 Date/Time

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634
info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

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

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

Report Date: 03/05/08 16:38
Received Date: 02/21/08 14:20
Turn Around: 6 days

Work Order #: 8022139

Client Project: IRB1997

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 02/21/08 14:20 with the Chain of Custody document. The samples were received in good condition. The samples were received at 2.1 °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: 8022139
Project ID: IRB1997

Date Received: 02/21/08 14:20
Date Reported: 03/05/08 16:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRB1997-01	Client		8022139-01	Water	02/20/08 09:40

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: 8022139
Project ID: IRB1997

Date Received: 02/21/08 14:20
Date Reported: 03/05/08 16:38

IRB1997-01 8022139-01 (Water) Date Sampled: 02/20/08 09:40

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	W8B0837	02/25/08	02/26/08	jlp	
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8B0837	02/25/08	02/26/08	jlp	

Weck Laboratories, Inc
Kim G Tu, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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: 8022139
Project ID: IRB1997

Date Received: 02/21/08 14:20
Date Reported: 03/05/08 16:38

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: 8022139
Project ID: IRB1997

Date Received: 02/21/08 14:20
Date Reported: 03/05/08 16:38

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8B0837 - EPA 245.1										
Blank (W8B0837-BLK1)				Analyzed: 02/26/08						
Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.20	ug/l							
LCS (W8B0837-BS1)				Analyzed: 02/26/08						
Mercury, Dissolved	0.993	0.20	ug/l	1.00		99	85-115			
Mercury, Total	0.993	0.20	ug/l	1.00		99	85-115			
Matrix Spike (W8B0837-MS1)		**Source: 8022205-01**		Analyzed: 02/26/08						
Mercury, Dissolved	0.984	0.20	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.984	0.20	ug/l	1.00	ND	98	70-130			
Matrix Spike (W8B0837-MS2)		**Source: 8022237-02**		Analyzed: 02/26/08						
Mercury, Dissolved	20.8	4.0	ug/l	1.00	19.6	118	70-130			
Mercury, Total	20.8	4.0	ug/l	1.00	19.6	118	70-130			
Matrix Spike Dup (W8B0837-MSD1)		**Source: 8022205-01**		Analyzed: 02/26/08						
Mercury, Dissolved	1.01	0.20	ug/l	1.00	ND	101	70-130	3	20	
Mercury, Total	1.01	0.20	ug/l	1.00	ND	101	70-130	3	20	
Matrix Spike Dup (W8B0837-MSD2)		**Source: 8022237-02**		Analyzed: 02/26/08						
Mercury, Dissolved	20.8	4.0	ug/l	1.00	19.6	118	70-130	0	20	
Mercury, Total	20.8	4.0	ug/l	1.00	19.6	118	70-130	0	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: 8022139
Project ID: IRB1997

Date Received: 02/21/08 14:20
Date Reported: 03/05/08 16:38

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 99

Outfall 018, January 23, 2008

MEC^X Data Validation Reports

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRA2156

Prepared by

MEC^X, 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:	IRA2156
Project Manager:	B. Kelly
Matrix:	Soil
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 018	IRA2156-01	30198-001	Water	01/23/08 1345	120.1, 160.2, 160.5, 180.1, 200.8, 245.1, 624, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 1613, ASTM D-5174
Trip Blank	IRA2156-02	N/A	Water	01/23/08	624

II. Sample Management

No anomalies were observed regarding sample management. The sample in this SDG was received at TestAmerica-Irvine and Weck 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 Eberline; however, radiological samples are not required to be chilled. 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 Eberline and Vista. Custody seals were not present on the cooler received at Weck. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight
Date Reviewed: February 29, 2008

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

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

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

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was 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 200.8, 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: March 4, 2008

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA 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 ≤5%, and all masses of interest were calibrated to ≤ 0.1 amu and ≤0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury.
- Blanks: Zinc was reported in a bracketing CCB at -3.8 µg/L; therefore, dissolved lead detected in the sample was qualified as an estimated detect, "J." There were no other applicable detects in the method blanks or CCBs.

- Interference Check Samples: ICSA/B analyses were performed in association with the dissolved metals analyses only. Recoveries were within the method-established control limits. All analytes were reported in the 6020 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 total and dissolved 6020 analytes. 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. VARIOUS EPA METHODS — Radionuclides

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

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0, ASTM Method D-5174,* and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquots for strontium-90, radium-226 and total uranium were prepared one day beyond the five day holding time for unpreserved samples; therefore, these results were qualified as estimated, "J," for detects and, "UJ," for nondetect. Aliquots for gross alpha, gross beta, radium-228, strontium-90, and gamma spectroscopy were prepared within the five-day analytical holding time for unpreserved samples.

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

  The gross alpha detector efficiency was less than 20%; therefore, nondetected gross alpha in the sample was qualified as an estimated nondetect, "UJ." The gross beta detector efficiency was greater than 20%.

  The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The tritium detector efficiency for the sample was at least 20% and was considered acceptable. The internal spike efficiency to default efficiency ratios was near 1, indicating that quenching did not occur.

  The strontium chemical yield was at least 70% and was considered acceptable. The strontium continuing calibration results were within the laboratory control limits.

  The radium-226 cell efficiencies were determined in September 2006. The radium-226 continuing calibration results were within the laboratory-established control limits. The radium-228 calibration utilized actinium-228 and was verified in February 2001. The radium-228 tracer, yttrium oxalate yields were greater than 70%.

  The gamma spectroscopy geometry-specific, detector efficiencies were determined in September 1999 and February 2007. All analytes were determined at the maximum photopeak energy.

  The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All calibration check standard recoveries were within 90-110% and were deemed acceptable.

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

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

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG for radium-228.

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

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Reported nondetects are valid to the MDA.

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

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

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

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

Reviewed By: L. Calvin
Date Reviewed: March 1, 2008

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X 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 blank 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 018. 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 ±30 seconds for retention times.

- Compound Identification: Compound identification was verified. The laboratory analyzed for 15 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 4, 2008

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 120.1, 160.2, 160.5, 180.1,* and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: Analytical holding times, 24 hours for conductivity, 48 hours for settleable solids and turbidity, and seven days for TSS, were met.

- Calibratione: The conductivity and turbidity check standard recoveries were acceptable. The balance calibration logs were acceptable. Calibration is not applicable to settleable solids.

- Blanks: Turbidity was detected in the method blank but not at a concentration sufficient to qualify the site samples. Method blanks and CCBs had no other detects.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits. The LCS is not applicable to settleable solids or turbidity.

- Laboratory Duplicates: Laboratory duplicate analyses were performed for turbidity and TSS. Both RPDs were within the laboratory-established control limits.

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

- Sample Result Verification: Review is not applicable at a Level V validation. 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.

Sample ID: IRA2156-01 Outfall 018 **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30198-001	Date Received:	25-Jan-08
Project:	IRA2156	Sample Size:	1.00 L	QC Batch No.:	9906	Date Extracted:	27-Jan-08
Date Collected:	23-Jan-08			Date Analyzed DB-5:	29-Jan-08	Date Analyzed DB-225:	NA
Time Collected:	1345						

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000693		
1,2,3,7,8-PeCDD	ND	0.00000173		
1,2,3,4,7,8-HxCDD	ND	0.00000291		
1,2,3,6,7,8-HxCDD	ND	0.00000269		
1,2,3,7,8,9-HxCDD	0.00000186			J
1,2,3,4,6,7,8-HpCDD	0.0000462			
OCDD	0.000533			
2,3,7,8-TCDF	ND		0.000000883	
1,2,3,7,8-PeCDF	ND	0.00000177		
2,3,4,7,8-PeCDF	ND	0.00000100		
1,2,3,4,7,8-HxCDF	ND	0.000000959		
1,2,3,6,7,8-HxCDF	ND	0.00000103		
2,3,4,6,7,8-HxCDF	ND	0.00000109		
1,2,3,7,8,9-HxCDF	ND	0.000000891		
1,2,3,4,6,7,8-HpCDF	0.00000676			J
1,2,3,4,7,8,9-HpCDF	ND	0.00000144		
OCDF	0.0000144			J

Labeled Standard		%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	79.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	69.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	74.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	73.3	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	74.7	23 - 140	
	13C-OCDD	61.7	17 - 157	
	13C-2,3,7,8-TCDF	78.9	24 - 169	
	13C-1,2,3,7,8-PeCDF	65.3	24 - 185	
	13C-2,3,4,7,8-PeCDF	65.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	68.0	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	68.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	68.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	71.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	64.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	69.6	26 - 138	
	13C-OCDF	64.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	89.6	35 - 197	

Totals			
Total TCDD	ND	0.00000162	
Total PeCDD	ND	0.00000318	
Total HxCDD	0.00000681		0.0000112
Total HpCDD	0.0000954		
Total TCDF	0.00000143		0.00000231
Total PeCDF	ND	0.00000181	
Total HxCDF	0.00000475		
Total HpCDF	0.0000153		

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 30-Jan-2008 10:07

NPDES - 3917

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
Cadmium U	EPA 200.8	8A23139	0.11	1.0	ND	1	01/23/08	01/24/08	
Copper J/DNQ	EPA 200.8	8A23139	0.75	2.0	**1.6**	1	01/23/08	01/24/08	J
Lead	EPA 200.8	8A23139	0.30	1.0	**1.0**	1	01/23/08	01/24/08	
Selenium J/DNQ	EPA 200.8	8A23139	0.30	2.0	**0.30**	1	01/23/08	01/24/08	J
Zinc J/B,DNQ	EPA 200.8	8A23139	2.5	20	**15**	1	01/23/08	01/24/08	J

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
Cadmium U	EPA 200.8-Diss	8A23140	0.11	1.0	ND	1	01/23/08	01/24/08	
Copper J/DNQ	EPA 200.8-Diss	8A23140	0.75	2.0	**0.84**	1	01/23/08	01/24/08	J
Lead U	EPA 200.8-Diss	8A23140	0.30	1.0	ND	1	01/23/08	01/25/08	
Selenium U	EPA 200.8-Diss	8A23140	0.30	2.0	ND	1	01/23/08	01/24/08	
Zinc J/B,DNQ	EPA 200.8-Diss	8A23140	2.5	20	**7.0**	1	01/23/08	01/24/08	J

LEVEL IV

PM 3/4/08

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved U	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	
Mercury, Total U	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

Eberline Services

ANALYSIS RESULTS

SDG 8686	Client TA IRVINE
Work Order R801164-01	Contract PROJECT# IRA2156
Received Date 01/28/08	Matrix WATER

Client Sample ID	Lab Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
Outfall 018							
IRA2156-01	8686-001	01/23/08	02/06/08	GrossAlpha	-1.16 ± 1.3	pCi/L	2.5 UJ/R
			02/06/08	Gross Beta	4.16 ± 1.0	pCi/L	1.4
			02/04/08	Ra-228	-0.058 ± 0.16	pCi/L	0.45 U
			01/31/08	K-40 (G)	U	pCi/L	8.7
			01/31/08	Cs-137 (G)	U	pCi/L	0.66
			02/15/08	H-3	-28.6 ± 94	pCi/L	160
			02/11/08	Ra-226	0.623 ± 0.36	pCi/L	0.16 J/H
			02/07/08	Sr-90	-0.093 ± 0.24	pCi/L	0.53 UJ/H
			02/19/08	Total U	0.409 ± 0.046	pCi/L	0.022 J/H

LEVEL IV

Certified by

Report Date 02/22/08

Page 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
Carbon tetrachloride	EPA 624	8A27002	0.28	5.0	ND	1	01/27/08	01/27/08	
Chloroform	EPA 624	8A27002	0.33	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethane	EPA 624	8A27002	0.27	2.0	ND	1	01/27/08	01/27/08	
1,2-Dichloroethane	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethene	EPA 624	8A27002	0.42	3.0	ND	1	01/27/08	01/27/08	
Ethylbenzene	EPA 624	8A27002	0.25	2.0	ND	1	01/27/08	01/27/08	
Tetrachloroethene	EPA 624	8A27002	0.32	2.0	ND	1	01/27/08	01/27/08	
Toluene	EPA 624	8A27002	0.36	2.0	ND	1	01/27/08	01/27/08	
1,1,1-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
1,1,2-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
Trichloroethene	EPA 624	8A27002	0.26	5.0	ND	1	01/27/08	01/27/08	
Trichlorofluoromethane	EPA 624	8A27002	0.34	5.0	ND	1	01/27/08	01/27/08	
Vinyl chloride	EPA 624	8A27002	0.30	5.0	ND	1	01/27/08	01/27/08	
Xylenes, Total	EPA 624	8A27002	0.90	4.0	ND	1	01/27/08	01/27/08	
Surrogate: Dibromofluoromethane (80-120%)					*86 %*				
Surrogate: Toluene-d8 (80-120%)					*94 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*84 %*				
Sample ID: IRA2156-02 (TRIP BLANK - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
Carbon tetrachloride	EPA 624	8A27002	0.28	5.0	ND	1	01/27/08	01/27/08	
Chloroform	EPA 624	8A27002	0.33	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethane	EPA 624	8A27002	0.27	2.0	ND	1	01/27/08	01/27/08	
1,2-Dichloroethane	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethene	EPA 624	8A27002	0.42	3.0	ND	1	01/27/08	01/27/08	
Ethylbenzene	EPA 624	8A27002	0.25	2.0	ND	1	01/27/08	01/27/08	
Tetrachloroethene	EPA 624	8A27002	0.32	2.0	ND	1	01/27/08	01/27/08	
Toluene	EPA 624	8A27002	0.36	2.0	ND	1	01/27/08	01/27/08	
1,1,1-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
1,1,2-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
Trichloroethene	EPA 624	8A27002	0.26	5.0	ND	1	01/27/08	01/27/08	
Trichlorofluoromethane	EPA 624	8A27002	0.34	5.0	ND	1	01/27/08	01/27/08	
Vinyl chloride	EPA 624	8A27002	0.30	5.0	ND	1	01/27/08	01/27/08	
Xylenes, Total	EPA 624	8A27002	0.90	4.0	ND	1	01/27/08	01/27/08	
Surrogate: Dibromofluoromethane (80-120%)					*88 %*				
Surrogate: Toluene-d8 (80-120%)					*95 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*84 %*				

Level IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8A28083	1.3	4.8	ND	1	01/28/08	01/28/08	
Ammonia-N (Distilled)	EPA 350.2	8A24139	0.30	0.50	ND	1	01/24/08	01/24/08	
Biochemical Oxygen Demand	EPA 405.1	8A23145	0.59	2.0	**1.9**	1	01/23/08	01/28/08	J
Chloride	EPA 300.0	8A23041	5.0	10	**84**	20	01/23/08	01/23/08	
Nitrate-N	EPA 300.0	8A23041	0.060	0.11	**0.20**	1	01/23/08	01/23/08	
Nitrite-N	EPA 300.0	8A23041	0.090	0.15	ND	1	01/23/08	01/23/08	
Nitrate/Nitrite-N	EPA 300.0	8A23041	0.15	0.26	**0.20**	1	01/23/08	01/23/08	J
Sulfate	EPA 300.0	8A23041	4.0	10	**84**	20	01/23/08	01/23/08	
Surfactants (MBAS)	EPA 425.1	8A24147	0.044	0.10	**0.050**	1	01/24/08	01/24/08	J
Total Dissolved Solids	EPA 160.1	8A24152	10	10	**360**	1	01/24/08	01/24/08	
Total Suspended Solids	EPA 160.2	8A24163	10	10	ND	1	01/24/08	01/24/08	
Sample ID: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8A24103	0.10	0.10	ND	1	01/24/08	01/24/08	
Sample ID: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	8A24108	0.040	1.0	**18**	1	01/24/08	01/24/08	
Sample ID: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	8A28126	2.2	5.0	ND	1	01/28/08	01/28/08	
Perchlorate	EPA 314.0	8A24068	1.5	4.0	ND	1	01/24/08	01/24/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8A24150	1.0	1.0	**560**	1	01/24/08	01/24/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

APPENDIX G

Section 100

Outfall 018, January 23, 2008

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

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

Project: Routine Outfall 018

Sampled: 01/23/08
Received: 01/23/08
Issued: 02/25/08 10:57

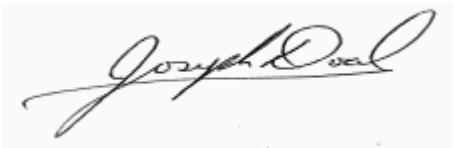
NELAP #01108CA California ELAP#1197 CSDLAC #10256

CASE NARRATIVE

SAMPLE RECEIPT:	Samples were received intact, at 0°C, on ice and with chain of custody documentation.
HOLDING TIMES:	All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	Results that fall between the MDL and RL are 'J' flagged.
SUBCONTRACTED:	Refer to the last page for specific subcontract laboratory information included in this report.
ADDITIONAL INFORMATION:	This is a final report to include all subcontract data.

LABORATORY ID	CLIENT ID	MATRIX
IRA2156-01	OUTFALL 018	Water
IRA2156-02	TRIP BLANK	Water

Reviewed By:



TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
Carbon tetrachloride	EPA 624	8A27002	0.28	5.0	ND	1	01/27/08	01/27/08	
Chloroform	EPA 624	8A27002	0.33	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethane	EPA 624	8A27002	0.27	2.0	ND	1	01/27/08	01/27/08	
1,2-Dichloroethane	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethene	EPA 624	8A27002	0.42	3.0	ND	1	01/27/08	01/27/08	
Ethylbenzene	EPA 624	8A27002	0.25	2.0	ND	1	01/27/08	01/27/08	
Tetrachloroethene	EPA 624	8A27002	0.32	2.0	ND	1	01/27/08	01/27/08	
Toluene	EPA 624	8A27002	0.36	2.0	ND	1	01/27/08	01/27/08	
1,1,1-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
1,1,2-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
Trichloroethene	EPA 624	8A27002	0.26	5.0	ND	1	01/27/08	01/27/08	
Trichlorofluoromethane	EPA 624	8A27002	0.34	5.0	ND	1	01/27/08	01/27/08	
Vinyl chloride	EPA 624	8A27002	0.30	5.0	ND	1	01/27/08	01/27/08	
Xylenes, Total	EPA 624	8A27002	0.90	4.0	ND	1	01/27/08	01/27/08	
Surrogate: Dibromofluoromethane (80-120%)					*86 %*				
Surrogate: Toluene-d8 (80-120%)					*94 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*84 %*				
Sample ID: IRA2156-02 (TRIP BLANK - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
Carbon tetrachloride	EPA 624	8A27002	0.28	5.0	ND	1	01/27/08	01/27/08	
Chloroform	EPA 624	8A27002	0.33	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethane	EPA 624	8A27002	0.27	2.0	ND	1	01/27/08	01/27/08	
1,2-Dichloroethane	EPA 624	8A27002	0.28	2.0	ND	1	01/27/08	01/27/08	
1,1-Dichloroethene	EPA 624	8A27002	0.42	3.0	ND	1	01/27/08	01/27/08	
Ethylbenzene	EPA 624	8A27002	0.25	2.0	ND	1	01/27/08	01/27/08	
Tetrachloroethene	EPA 624	8A27002	0.32	2.0	ND	1	01/27/08	01/27/08	
Toluene	EPA 624	8A27002	0.36	2.0	ND	1	01/27/08	01/27/08	
1,1,1-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
1,1,2-Trichloroethane	EPA 624	8A27002	0.30	2.0	ND	1	01/27/08	01/27/08	
Trichloroethene	EPA 624	8A27002	0.26	5.0	ND	1	01/27/08	01/27/08	
Trichlorofluoromethane	EPA 624	8A27002	0.34	5.0	ND	1	01/27/08	01/27/08	
Vinyl chloride	EPA 624	8A27002	0.30	5.0	ND	1	01/27/08	01/27/08	
Xylenes, Total	EPA 624	8A27002	0.90	4.0	ND	1	01/27/08	01/27/08	
Surrogate: Dibromofluoromethane (80-120%)					*88 %*				
Surrogate: Toluene-d8 (80-120%)					*95 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*84 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	8A29057	1.6	4.8	**1.7**	0.962	01/29/08	01/31/08	J
2,4-Dinitrotoluene	EPA 625	8A29057	0.19	8.7	ND	0.962	01/29/08	01/31/08	
N-Nitrosodimethylamine	EPA 625	8A29057	0.096	7.7	ND	0.962	01/29/08	01/31/08	
Pentachlorophenol	EPA 625	8A29057	0.096	7.7	ND	0.962	01/29/08	01/31/08	
2,4,6-Trichlorophenol	EPA 625	8A29057	0.096	5.8	ND	0.962	01/29/08	01/31/08	
Surrogate: 2-Fluorophenol (30-120%)					*79 %*				
Surrogate: Phenol-d6 (35-120%)					*78 %*				
Surrogate: 2,4,6-Tribromophenol (40-120%)					*108 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*85 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*92 %*				
Surrogate: Terphenyl-d14 (50-125%)					*105 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	8A24100	0.0024	0.0095	ND	0.952	01/24/08	01/29/08	
Surrogate: Decachlorobiphenyl (45-120%)					*88 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*73 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8A23139	0.11	1.0	ND	1	01/23/08	01/24/08	
Copper	EPA 200.8	8A23139	0.75	2.0	**1.6**	1	01/23/08	01/24/08	J
Lead	EPA 200.8	8A23139	0.30	1.0	**1.0**	1	01/23/08	01/24/08	
Selenium	EPA 200.8	8A23139	0.30	2.0	**0.30**	1	01/23/08	01/24/08	J
Zinc	EPA 200.8	8A23139	2.5	20	**15**	1	01/23/08	01/24/08	J

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
Cadmium	EPA 200.8-Diss	8A23140	0.11	1.0	ND	1	01/23/08	01/24/08	
Copper	EPA 200.8-Diss	8A23140	0.75	2.0	**0.84**	1	01/23/08	01/24/08	J
Lead	EPA 200.8-Diss	8A23140	0.30	1.0	ND	1	01/23/08	01/25/08	
Selenium	EPA 200.8-Diss	8A23140	0.30	2.0	ND	1	01/23/08	01/24/08	
Zinc	EPA 200.8-Diss	8A23140	2.5	20	**7.0**	1	01/23/08	01/24/08	J

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8A28083	1.3	4.8	ND	1	01/28/08	01/28/08	
Ammonia-N (Distilled)	EPA 350.2	8A24139	0.30	0.50	ND	1	01/24/08	01/24/08	
Biochemical Oxygen Demand	EPA 405.1	8A23145	0.59	2.0	**1.9**	1	01/23/08	01/28/08	J
Chloride	EPA 300.0	8A23041	5.0	10	**84**	20	01/23/08	01/23/08	
Nitrate-N	EPA 300.0	8A23041	0.060	0.11	**0.20**	1	01/23/08	01/23/08	
Nitrite-N	EPA 300.0	8A23041	0.090	0.15	ND	1	01/23/08	01/23/08	
Nitrate/Nitrite-N	EPA 300.0	8A23041	0.15	0.26	**0.20**	1	01/23/08	01/23/08	J
Sulfate	EPA 300.0	8A23041	4.0	10	**84**	20	01/23/08	01/23/08	
Surfactants (MBAS)	EPA 425.1	8A24147	0.044	0.10	**0.050**	1	01/24/08	01/24/08	J
Total Dissolved Solids	EPA 160.1	8A24152	10	10	**360**	1	01/24/08	01/24/08	
Total Suspended Solids	EPA 160.2	8A24163	10	10	ND	1	01/24/08	01/24/08	
Sample ID: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8A24103	0.10	0.10	ND	1	01/24/08	01/24/08	
Sample ID: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	8A24108	0.040	1.0	**18**	1	01/24/08	01/24/08	
Sample ID: IRA2156-01 (OUTFALL 018 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	8A28126	2.2	5.0	ND	1	01/28/08	01/28/08	
Perchlorate	EPA 314.0	8A24068	1.5	4.0	ND	1	01/24/08	01/24/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8A24150	1.0	1.0	**560**	1	01/24/08	01/24/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2156-01 (OUTFALL 018 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	
Mercury, Total	EPA 245.1	W8A0913	0.050	0.20	ND	1	01/25/08	01/28/08	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018

Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: OUTFALL 018 (IRA2156-01) - Water					
EPA 160.5	2	01/23/2008 13:45	01/23/2008 17:55	01/24/2008 20:00	01/24/2008 20:00
EPA 180.1	2	01/23/2008 13:45	01/23/2008 17:55	01/24/2008 17:45	01/24/2008 17:45
EPA 300.0	2	01/23/2008 13:45	01/23/2008 17:55	01/23/2008 18:10	01/23/2008 20:19
EPA 405.1	2	01/23/2008 13:45	01/23/2008 17:55	01/23/2008 22:23	01/28/2008 14:00
EPA 425.1	2	01/23/2008 13:45	01/23/2008 17:55	01/24/2008 16:43	01/24/2008 17:29

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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
Batch: 8A27002 Extracted: 01/27/08											
Blank Analyzed: 01/27/2008 (8A27002-BLK1)											
Benzene	ND	2.0	0.28	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,1-Dichloroethene	ND	3.0	0.42	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.30	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							
Surrogate: Dibromofluoromethane	*21.2*			*ug/l*	*25.0*		*85*	*80-120*			
Surrogate: Toluene-d8	*23.4*			*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.0*			*ug/l*	*25.0*		*84*	*80-120*			
LCS Analyzed: 01/27/2008 (8A27002-BS1)											
Benzene	25.9	2.0	0.28	ug/l	25.0		104	70-120			
Carbon tetrachloride	29.2	5.0	0.28	ug/l	25.0		117	65-140			
Chloroform	25.9	2.0	0.33	ug/l	25.0		104	70-130			
1,1-Dichloroethane	24.3	2.0	0.27	ug/l	25.0		97	70-125			
1,2-Dichloroethane	26.9	2.0	0.28	ug/l	25.0		107	60-140			
1,1-Dichloroethene	23.2	3.0	0.42	ug/l	25.0		93	70-125			
Ethylbenzene	27.5	2.0	0.25	ug/l	25.0		110	75-125			
Tetrachloroethene	27.7	2.0	0.32	ug/l	25.0		111	70-125			
Toluene	25.0	2.0	0.36	ug/l	25.0		100	70-120			
1,1,1-Trichloroethane	27.8	2.0	0.30	ug/l	25.0		111	65-135			
1,1,2-Trichloroethane	25.9	2.0	0.30	ug/l	25.0		104	70-125			
Trichloroethene	26.7	5.0	0.26	ug/l	25.0		107	70-125			
Trichlorofluoromethane	26.2	5.0	0.34	ug/l	25.0		105	65-145			
Vinyl chloride	23.5	5.0	0.30	ug/l	25.0		94	55-135			
Xylenes, Total	78.3	4.0	0.90	ug/l	75.0		104	70-125			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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
Batch: 8A27002 Extracted: 01/27/08											
LCS Analyzed: 01/27/2008 (8A27002-BS1)											
Surrogate: Dibromofluoromethane	*21.4*			*ug/l*	*25.0*		*86*	*80-120*			
Surrogate: Toluene-d8	*23.8*			*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.8*			*ug/l*	*25.0*		*87*	*80-120*			
Matrix Spike Analyzed: 01/27/2008 (8A27002-MS1)						**Source: IRA2191-01**					
Benzene	24.4	2.0	0.28	ug/l	25.0	1.43	92	65-125			
Carbon tetrachloride	26.3	5.0	0.28	ug/l	25.0	ND	105	65-140			
Chloroform	22.9	2.0	0.33	ug/l	25.0	ND	92	65-135			
1,1-Dichloroethane	21.3	2.0	0.27	ug/l	25.0	ND	85	65-130			
1,2-Dichloroethane	24.3	2.0	0.28	ug/l	25.0	ND	97	60-140			
1,1-Dichloroethene	19.4	3.0	0.42	ug/l	25.0	ND	78	60-130			
Ethylbenzene	35.5	2.0	0.25	ug/l	25.0	10.8	99	65-130			
Tetrachloroethene	24.1	2.0	0.32	ug/l	25.0	ND	96	65-130			
Toluene	38.8	2.0	0.36	ug/l	25.0	18.7	81	70-125			
1,1,1-Trichloroethane	25.0	2.0	0.30	ug/l	25.0	ND	100	65-140			
1,1,2-Trichloroethane	22.9	2.0	0.30	ug/l	25.0	ND	92	65-130			
Trichloroethene	24.0	5.0	0.26	ug/l	25.0	0.360	94	65-125			
Trichlorofluoromethane	22.2	5.0	0.34	ug/l	25.0	ND	89	60-145			
Vinyl chloride	19.6	5.0	0.30	ug/l	25.0	ND	78	45-140			
Xylenes, Total	142	4.0	0.90	ug/l	75.0	79.0	84	60-130			
Surrogate: Dibromofluoromethane	*21.5*			*ug/l*	*25.0*		*86*	*80-120*			
Surrogate: Toluene-d8	*23.4*			*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.7*			*ug/l*	*25.0*		*87*	*80-120*			
Matrix Spike Dup Analyzed: 01/27/2008 (8A27002-MSD1)						**Source: IRA2191-01**					
Benzene	22.8	2.0	0.28	ug/l	25.0	1.43	86	65-125	7	20	
Carbon tetrachloride	24.2	5.0	0.28	ug/l	25.0	ND	97	65-140	8	25	
Chloroform	21.2	2.0	0.33	ug/l	25.0	ND	85	65-135	8	20	
1,1-Dichloroethane	19.9	2.0	0.27	ug/l	25.0	ND	80	65-130	7	20	
1,2-Dichloroethane	22.0	2.0	0.28	ug/l	25.0	ND	88	60-140	10	20	
1,1-Dichloroethene	18.6	3.0	0.42	ug/l	25.0	ND	74	60-130	4	20	
Ethylbenzene	32.8	2.0	0.25	ug/l	25.0	10.8	88	65-130	8	20	
Tetrachloroethene	22.4	2.0	0.32	ug/l	25.0	ND	90	65-130	7	20	
Toluene	36.4	2.0	0.36	ug/l	25.0	18.7	71	70-125	7	20	
1,1,1-Trichloroethane	22.8	2.0	0.30	ug/l	25.0	ND	91	65-140	9	20	
1,1,2-Trichloroethane	21.5	2.0	0.30	ug/l	25.0	ND	86	65-130	6	25	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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
Batch: 8A27002 Extracted: 01/27/08											
Matrix Spike Dup Analyzed: 01/27/2008 (8A27002-MSD1)						**Source: IRA2191-01**					
Trichloroethene	22.2	5.0	0.26	ug/l	25.0	0.360	88	65-125	7	20	
Trichlorofluoromethane	23.6	5.0	0.34	ug/l	25.0	ND	94	60-145	6	25	
Vinyl chloride	17.8	5.0	0.30	ug/l	25.0	ND	71	45-140	9	30	
Xylenes, Total	135	4.0	0.90	ug/l	75.0	79.0	75	60-130	5	20	
Surrogate: Dibromofluoromethane	*21.5*			*ug/l*	*25.0*		*86*	*80-120*			
Surrogate: Toluene-d8	*23.8*			*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.9*			*ug/l*	*25.0*		*87*	*80-120*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A29057 Extracted: 01/29/08											
Blank Analyzed: 01/31/2008 (8A29057-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/l							
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l							
Pentachlorophenol	ND	8.0	0.10	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	*14.9*			*ug/l*	*20.0*		*75*	*30-120*			
Surrogate: Phenol-d6	*16.3*			*ug/l*	*20.0*		*81*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*18.4*			*ug/l*	*20.0*		*92*	*40-120*			
Surrogate: Nitrobenzene-d5	*8.42*			*ug/l*	*10.0*		*84*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*8.88*			*ug/l*	*10.0*		*89*	*50-120*			
Surrogate: Terphenyl-d14	*10.6*			*ug/l*	*10.0*		*106*	*50-125*			
LCS Analyzed: 01/31/2008 (8A29057-BS1)											**MNR1**
Bis(2-ethylhexyl)phthalate	11.3	5.0	1.7	ug/l	10.0		113	65-130			
2,4-Dinitrotoluene	11.2	9.0	0.20	ug/l	10.0		112	65-120			
N-Nitrosodimethylamine	8.42	8.0	0.10	ug/l	10.0		84	45-120			
Pentachlorophenol	8.90	8.0	0.10	ug/l	10.0		89	50-120			
2,4,6-Trichlorophenol	8.46	6.0	0.10	ug/l	10.0		85	55-120			
Surrogate: 2-Fluorophenol	*15.6*			*ug/l*	*20.0*		*78*	*30-120*			
Surrogate: Phenol-d6	*17.1*			*ug/l*	*20.0*		*86*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*21.2*			*ug/l*	*20.0*		*106*	*40-120*			
Surrogate: Nitrobenzene-d5	*8.44*			*ug/l*	*10.0*		*84*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*8.82*			*ug/l*	*10.0*		*88*	*50-120*			
Surrogate: Terphenyl-d14	*9.24*			*ug/l*	*10.0*		*92*	*50-125*			
LCS Dup Analyzed: 01/31/2008 (8A29057-BSD1)											
Bis(2-ethylhexyl)phthalate	11.3	5.0	1.7	ug/l	10.0		113	65-130	1	20	
2,4-Dinitrotoluene	10.2	9.0	0.20	ug/l	10.0		102	65-120	9	20	
N-Nitrosodimethylamine	7.74	8.0	0.10	ug/l	10.0		77	45-120	8	20	*J*
Pentachlorophenol	8.24	8.0	0.10	ug/l	10.0		82	50-120	8	25	
2,4,6-Trichlorophenol	8.06	6.0	0.10	ug/l	10.0		81	55-120	5	30	
Surrogate: 2-Fluorophenol	*14.4*			*ug/l*	*20.0*		*72*	*30-120*			
Surrogate: Phenol-d6	*16.3*			*ug/l*	*20.0*		*82*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*19.6*			*ug/l*	*20.0*		*98*	*40-120*			
Surrogate: Nitrobenzene-d5	*7.74*			*ug/l*	*10.0*		*77*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*7.68*			*ug/l*	*10.0*		*77*	*50-120*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A29057 Extracted: 01/29/08											
LCS Dup Analyzed: 01/31/2008 (8A29057-BSD1)											
Surrogate: Terphenyl-d14	*8.94*			*ug/l*	*10.0*		*89*	*50-125*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A24100 Extracted: 01/24/08											
Blank Analyzed: 01/29/2008 (8A24100-BLK1)											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	*0.447*			*ug/l*	*0.500*		*89*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.454*			*ug/l*	*0.500*		*91*	*35-115*			
LCS Analyzed: 01/30/2008 (8A24100-BS1)											**MNR1**
alpha-BHC	0.435	0.010	0.0025	ug/l	0.500		87	45-115			
Surrogate: Decachlorobiphenyl	*0.440*			*ug/l*	*0.500*		*88*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.416*			*ug/l*	*0.500*		*83*	*35-115*			
LCS Dup Analyzed: 01/30/2008 (8A24100-BSD1)											
alpha-BHC	0.426	0.010	0.0025	ug/l	0.500		85	45-115	2	30	
Surrogate: Decachlorobiphenyl	*0.426*			*ug/l*	*0.500*		*85*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.409*			*ug/l*	*0.500*		*82*	*35-115*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A23139 Extracted: 01/23/08											
Blank Analyzed: 01/24/2008 (8A23139-BLK1)											
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							
LCS Analyzed: 01/24/2008 (8A23139-BS1)											
Cadmium	81.6	1.0	0.11	ug/l	80.0		102	85-115			
Copper	83.0	2.0	0.75	ug/l	80.0		104	85-115			
Lead	83.1	1.0	0.30	ug/l	80.0		104	85-115			
Selenium	81.2	2.0	0.30	ug/l	80.0		101	85-115			
Zinc	81.7	20	2.5	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 01/24/2008 (8A23139-MS1)						**Source: IRA2156-01**					
Cadmium	80.8	1.0	0.11	ug/l	80.0	ND	101	70-130			
Copper	78.4	2.0	0.75	ug/l	80.0	1.59	96	70-130			
Lead	77.6	1.0	0.30	ug/l	80.0	1.01	96	70-130			
Selenium	76.9	2.0	0.30	ug/l	80.0	0.302	96	70-130			
Zinc	88.9	20	2.5	ug/l	80.0	14.8	93	70-130			
Matrix Spike Dup Analyzed: 01/24/2008 (8A23139-MSD1)						**Source: IRA2156-01**					
Cadmium	81.8	1.0	0.11	ug/l	80.0	ND	102	70-130	1	20	
Copper	78.5	2.0	0.75	ug/l	80.0	1.59	96	70-130	0	20	
Lead	77.7	1.0	0.30	ug/l	80.0	1.01	96	70-130	0	20	
Selenium	77.7	2.0	0.30	ug/l	80.0	0.302	97	70-130	1	20	
Zinc	89.0	20	2.5	ug/l	80.0	14.8	93	70-130	0	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A23140 Extracted: 01/23/08											
Blank Analyzed: 01/24/2008-01/25/2008 (8A23140-BLK1)											
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							
LCS Analyzed: 01/24/2008-01/25/2008 (8A23140-BS1)											
Cadmium	87.6	1.0	0.11	ug/l	80.0		110	85-115			
Copper	82.8	2.0	0.75	ug/l	80.0		103	85-115			
Lead	81.8	1.0	0.30	ug/l	80.0		102	85-115			
Selenium	91.1	2.0	0.30	ug/l	80.0		114	85-115			
Zinc	91.1	20	2.5	ug/l	80.0		114	85-115			
Matrix Spike Analyzed: 01/24/2008-01/25/2008 (8A23140-MS1)						**Source: IRA2156-01**					
Cadmium	83.6	1.0	0.11	ug/l	80.0	ND	104	70-130			
Copper	78.0	2.0	0.75	ug/l	80.0	0.844	96	70-130			
Lead	78.8	1.0	0.30	ug/l	80.0	ND	98	70-130			
Selenium	84.7	2.0	0.30	ug/l	80.0	ND	106	70-130			
Zinc	87.8	20	2.5	ug/l	80.0	6.99	101	70-130			
Matrix Spike Dup Analyzed: 01/24/2008-01/25/2008 (8A23140-MSD1)						**Source: IRA2156-01**					
Cadmium	84.9	1.0	0.11	ug/l	80.0	ND	106	70-130	2	20	
Copper	78.6	2.0	0.75	ug/l	80.0	0.844	97	70-130	1	20	
Lead	78.4	1.0	0.30	ug/l	80.0	ND	98	70-130	0	20	
Selenium	85.8	2.0	0.30	ug/l	80.0	ND	107	70-130	1	20	
Zinc	88.6	20	2.5	ug/l	80.0	6.99	102	70-130	1	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018

Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A23041 Extracted: 01/23/08											
Blank Analyzed: 01/23/2008 (8A23041-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 01/23/2008 (8A23041-BS1)											
Chloride	5.19	0.50	0.25	mg/l	5.00		104	90-110			
Nitrate-N	1.21	0.11	0.060	mg/l	1.13		107	90-110			
Nitrite-N	1.60	0.15	0.090	mg/l	1.52		105	90-110			
Sulfate	10.7	0.50	0.20	mg/l	10.0		107	90-110			
Matrix Spike Analyzed: 01/23/2008 (8A23041-MS1)						**Source: IRA2039-01**					
Chloride	419	25	12	mg/l	50.0	389	59	80-120			*MHA*
Nitrate-N	25.4	5.5	3.0	mg/l	11.3	8.72	147	80-120			*M1*
Nitrite-N	9.92	7.5	4.5	mg/l	15.2	ND	65	80-120			*M2*
Sulfate	402	25	10	mg/l	100	319	83	80-120			
Matrix Spike Analyzed: 01/23/2008 (8A23041-MS2)						**Source: IRA2039-17**					
Chloride	258	25	12	mg/l	50.0	214	89	80-120			
Nitrate-N	12.4	5.5	3.0	mg/l	11.3	ND	110	80-120			
Nitrite-N	15.4	7.5	4.5	mg/l	15.2	ND	101	80-120			
Sulfate	370	25	10	mg/l	100	267	103	80-120			
Matrix Spike Dup Analyzed: 01/23/2008 (8A23041-MSD1)						**Source: IRA2039-01**					
Chloride	421	25	12	mg/l	50.0	389	64	80-120	1	20	*MHA*
Nitrate-N	25.5	5.5	3.0	mg/l	11.3	8.72	149	80-120	1	20	*M1*
Nitrite-N	9.75	7.5	4.5	mg/l	15.2	ND	64	80-120	2	20	*M2*
Sulfate	407	25	10	mg/l	100	319	88	80-120	1	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A23145 Extracted: 01/23/08											
Blank Analyzed: 01/28/2008 (8A23145-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 01/28/2008 (8A23145-BS1)											
Biochemical Oxygen Demand	190	100	30	mg/l	198		96	85-115			
LCS Dup Analyzed: 01/28/2008 (8A23145-BSD1)											
Biochemical Oxygen Demand	186	100	30	mg/l	198		94	85-115	2	20	
Batch: 8A24068 Extracted: 01/24/08											
Blank Analyzed: 01/24/2008 (8A24068-BLK1)											
Perchlorate	ND	4.0	1.5	ug/l							
LCS Analyzed: 01/24/2008 (8A24068-BS1)											
Perchlorate	53.8	4.0	1.5	ug/l	50.0		108	85-115			
Matrix Spike Analyzed: 01/24/2008 (8A24068-MS1)						**Source: IRA2213-01**					
Perchlorate	55.7	4.0	1.5	ug/l	50.0	3.88	104	80-120			
Matrix Spike Dup Analyzed: 01/24/2008 (8A24068-MSD1)						**Source: IRA2213-01**					
Perchlorate	56.0	4.0	1.5	ug/l	50.0	3.88	104	80-120	1	20	
Batch: 8A24108 Extracted: 01/24/08											
Blank Analyzed: 01/24/2008 (8A24108-BLK1)											
Turbidity	0.100	1.0	0.040	NTU							*J*

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A24108 Extracted: 01/24/08											
Duplicate Analyzed: 01/24/2008 (8A24108-DUP1)						**Source: IRA2156-01**					
Turbidity	17.0	1.0	0.040	NTU		17.5			3	20	
Batch: 8A24139 Extracted: 01/24/08											
Blank Analyzed: 01/24/2008 (8A24139-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 01/24/2008 (8A24139-BS1)											
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0		101	80-115			
Matrix Spike Analyzed: 01/24/2008 (8A24139-MS1)						**Source: IRA2156-01**					
Ammonia-N (Distilled)	9.80	0.50	0.30	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 01/24/2008 (8A24139-MSD1)						**Source: IRA2156-01**					
Ammonia-N (Distilled)	9.80	0.50	0.30	mg/l	10.0	ND	98	70-120	0	15	
Batch: 8A24147 Extracted: 01/24/08											
Blank Analyzed: 01/24/2008 (8A24147-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 01/24/2008 (8A24147-BS1)											
Surfactants (MBAS)	0.259	0.10	0.044	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 01/24/2008 (8A24147-MS1)						**Source: IRA2156-01**					
Surfactants (MBAS)	0.266	0.10	0.044	mg/l	0.250	0.0495	87	50-125			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A24147 Extracted: 01/24/08											
Matrix Spike Dup Analyzed: 01/24/2008 (8A24147-MSD1)						**Source: IRA2156-01**					
Surfactants (MBAS)	0.260	0.10	0.044	mg/l	0.250	0.0495	84	50-125	2	20	
Batch: 8A24150 Extracted: 01/24/08											
LCS Analyzed: 01/24/2008 (8A24150-BS1)											
Specific Conductance	543	1.0	1.0	umhos/cm	530		102	90-110			
Duplicate Analyzed: 01/24/2008 (8A24150-DUP1)						**Source: IRA2156-01**					
Specific Conductance	560	1.0	1.0	umhos/cm		558			0	5	
Batch: 8A24152 Extracted: 01/24/08											
Blank Analyzed: 01/24/2008 (8A24152-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/24/2008 (8A24152-BS1)											
Total Dissolved Solids	1010	10	10	mg/l	1000		101	90-110			
Duplicate Analyzed: 01/24/2008 (8A24152-DUP1)						**Source: IRA1927-01**					
Total Dissolved Solids	1260	10	10	mg/l		1260			0	10	
Batch: 8A24163 Extracted: 01/24/08											
Blank Analyzed: 01/24/2008 (8A24163-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A24163 Extracted: 01/24/08											
LCS Analyzed: 01/24/2008 (8A24163-BS1)											
Total Suspended Solids	1040	10	10	mg/l	1000		104	85-115			
Duplicate Analyzed: 01/24/2008 (8A24163-DUP1)						**Source: IRA2156-01**					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
Batch: 8A28083 Extracted: 01/28/08											
Blank Analyzed: 01/28/2008 (8A28083-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 01/28/2008 (8A28083-BS1)											**MNR1**
Hexane Extractable Material (Oil & Grease)	20.2	5.0	1.4	mg/l	20.2		100	78-114			
LCS Dup Analyzed: 01/28/2008 (8A28083-BSD1)											
Hexane Extractable Material (Oil & Grease)	21.2	5.0	1.4	mg/l	20.2		105	78-114	5	11	
Batch: 8A28126 Extracted: 01/28/08											
Blank Analyzed: 01/28/2008 (8A28126-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/28/2008 (8A28126-BS1)											
Total Cyanide	197	5.0	2.2	ug/l	200		99	90-110			
Matrix Spike Analyzed: 01/28/2008 (8A28126-MS1)						**Source: IRA2156-01**					
Total Cyanide	203	5.0	2.2	ug/l	200	ND	101	70-115			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8A28126 Extracted: 01/28/08											
Matrix Spike Dup Analyzed: 01/28/2008 (8A28126-MSD1)						**Source: IRA2156-01**					
Total Cyanide	199	5.0	2.2	ug/l	200	ND	99	70-115	2	15	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018

Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

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
Batch: W8A0913 Extracted: 01/25/08											
Blank Analyzed: 01/28/2008 (W8A0913-BLK1)											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.050	0.025	ug/l							
LCS Analyzed: 01/28/2008 (W8A0913-BS1)											
Mercury, Dissolved	0.967	0.20	0.050	ug/l	1.00		97	85-115			
Mercury, Total	0.967	0.050	0.025	ug/l	1.00		97	85-115			
Matrix Spike Analyzed: 01/28/2008 (W8A0913-MS1)						**Source: 8012328-01**					
Mercury, Dissolved	1.01	0.20	0.050	ug/l	1.00	ND	101	70-130			
Mercury, Total	1.01	0.050	0.025	ug/l	1.00	ND	101	70-130			
Matrix Spike Analyzed: 01/28/2008 (W8A0913-MS2)						**Source: 8012328-02**					
Mercury, Dissolved	0.978	0.20	0.050	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.978	0.050	0.025	ug/l	1.00	ND	98	70-130			
Matrix Spike Dup Analyzed: 01/28/2008 (W8A0913-MSD1)						**Source: 8012328-01**					
Mercury, Dissolved	0.992	0.20	0.050	ug/l	1.00	ND	99	70-130	2	20	
Mercury, Total	0.992	0.050	0.025	ug/l	1.00	ND	99	70-130	2	20	
Matrix Spike Dup Analyzed: 01/28/2008 (W8A0913-MSD2)						**Source: 8012328-02**					
Mercury, Dissolved	1.01	0.20	0.050	ug/l	1.00	ND	101	70-130	3	20	
Mercury, Total	1.01	0.050	0.025	ug/l	1.00	ND	101	70-130	3	20	

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

DATA QUALIFIERS AND DEFINITIONS

J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
M1	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See 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.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018

Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 1664A	Water		
EPA 180.1	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 350.2	Water		X
EPA 405.1	Water	X	X
EPA 425.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB *California Cert #1775*
4350 Transport Street, Unit 107 - Ventura, CA 93003
Analysis Performed: Bioassay-7 dy Chrnic
Samples: IRA2156-01

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Routine Outfall 018
Report Number: IRA2156

Sampled: 01/23/08
Received: 01/23/08

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IRA2156-01

Analysis Performed: Gross Alpha
Samples: IRA2156-01

Analysis Performed: Gross Beta
Samples: IRA2156-01

Analysis Performed: Radium, Combined
Samples: IRA2156-01

Analysis Performed: Strontium 90
Samples: IRA2156-01

Analysis Performed: Tritium
Samples: IRA2156-01

Analysis Performed: Uranium, Combined
Samples: IRA2156-01

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: IRA2156-01

Weck Laboratories, Inc

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

Method Performed: EPA 245.1
Samples: IRA2156-01

TestAmerica Irvine

Joseph Doak
Project Manager

IRA1156

Test America Version 12/20/07 CHAIN OF CUSTODY FORM

KTA-156

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Avenue Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 018**
Project Manager: Bronwyn Kelly Sampler: MARISOL M. Barroso/R	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals Cu, Pb, Hg, Cd, Se, Zn	Settleable Solids	TCDD (and all congeners)	Oil & Grease (1664-HEM)	Cyanide (total recoverable)	BOD_5 (20 degrees C)	Surfactants (MBAS)	Cl, SO_4, NO_3+NO_2-N, Perchlorate	Nitrate-N, Nitrite-N	Turbidity, TDS, TSS, Conductivity	Ammonia-N (350.2)	Alpha BHC (608)	2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate NDMA, PCP (SVOCs 625)	Comments
Outfall 018	W	1L Poly	1	1-23-08 1345	HNO_3	1A	X													24 TAT
Outfall 018 Dup	W	1L Poly	1		HNO_3	1B	X													24 TAT
Outfall 018	W	1L Poly	1		None	2		X												
Outfall 018	W	1L Amber	2		None	3A, 3B			X											
Outfall 018	W	1L Amber	2		HCl	4A, 4B				X										
Outfall 018	W	500 ml Poly	1		NaOH	5					X									
Outfall 018	W	1L Poly	1		None	6						X								
Outfall 018	W	500 ml Poly	2		None	7A, 7B							X							
Outfall 018	W	500 ml Poly	2		None	8A, 8B								X						24 TAT
Outfall 018	W	500 ml Poly	1		None	9									X					24 TAT
Outfall 018	W	500 ml Poly	2		None	10A, 10B										X				
Outfall 018	W	500 ml Poly	1		H_2SO_4	11											X			
Outfall 018	W	1L Amber	2		None	12A, 12B												X		
Outfall 018	W	1L Amber	2	1-23-08 1345	None	13A, 13B													X	

ANALYSIS REQUIRED

Field readings
Temp = 48.2
pH = 7.5
Time of readings = 13.45

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	1-23-08 1345	[signature] TAI	1/23/08 1445
[signature] TAI	1/23/08 1755	[signature]	1/23/08 1755

Turn around Time: (check)
24 Hours ____ 5 Days ____
48 Hours ____ 10 Days ____
72 Hours ____ Normal X

Sample Integrity: (check)
Intact X On Ice: 2.1/0.1°C

1910 1/23/08

NPDES - 3954

Test America Version 12/20/07 CHAIN OF CUSTODY FORM

Client Name/Address:	Project:	ANALYSIS REQUIRED
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 018**	
Project Manager: Bronwyn Kelly Sampler: MARKEL, L. BARROSO, R.	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs 624 + xylenes	Gross Alpha(900.0), Gross Beta(900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1)	Chronic Toxicity	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn	Comments
Outfall 018	W	VOAs	5	1-23-08 1345	HCl	14A, 14B, 14C, 14D, 14E	X				
Outfall 018	W	2.5 Gal Cube 500 ml Amber	1 1		None None	15A 15B		X			Unfiltered and unpreserved analysis
Outfall 018	W	1 Gal Cube	1		None	16			X		**Only test if second rain event of the year** -EW
Outfall 018	W	1L Poly	1	1-23-08 1345	None	17				X	Filter w/in 24hrs of receipt at lab
Trip Blanks	W	VOAs	3		HCl	18A, 18B, 18C	X				

Relinquished By	Date/Time:	Received By	Date/Time:
Ron Bam	1-23-08 1445	TAE	1/23/08 1445
TAE	1/23/08 1755		1/23/08 1755

Turn around Time: (check)
24 Hours _____ 5 Days _____
48 Hours _____ 10 Days _____
72 Hours _____ Normal X

Sample Integrity: (check)
Intact X On Ice: 2/4.1C

NPDES - 3955

#1

LABORATORY REPORT

Aquatic Testing Laboratories
"dedicated to providing quality aquatic toxicity testing"
4350 Transport Street, Unit 107
Ventura, CA 93003
(805) 650-0546 FAX (805) 650-0756
CA DOHS ELAP Cert. No.: 1775

Date: January 31, 2008

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

Laboratory No.: A-08012401-001
Sample ID.: IRA2156-01 (Outfall 018)

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

Date Sampled:	01/23/08
Date Received:	01/24/08
Temp. Received:	4°C
Chlorine (TRC):	0.0 mg/l
Date Tested:	01/24/08 to 01/30/08

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

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

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

Result Summary:

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

Quality Control: Reviewed and approved by:

Joseph A. LeMay
Laboratory Director

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0

Aquatic Testing Laboratories

Lab No.: A-08012401-001
Client/ID: Test America – Outfall 018

Date Tested: 01/24/08 to 01/30/08

TEST SUMMARY

Test type: Daily static-renewal.
Species: *Ceriodaphnia dubia*.
Age: < 24 hrs; all released within 8 hrs.
Test vessel size: 30 ml.
Number of test organisms per vessel: 1.
Temperature: 25 +/- 1°C.
Dilution water: Mod. hard reconstituted (MHRW).
QA/QC Batch No.: RT-080106.

Endpoints: Survival and Reproduction.
Source: In-laboratory culture.
Food: .1 ml YTC, algae per day.
Test solution volume: 15 ml.
Number of replicates: 10.
Photoperiod: 16/8 hrs. light/dark cycle.
Test duration: 6 days.
Statistics: ToxCalc computer program.

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	23.9
100% Sample	100%	25.2
Sample not statistically significantly less than Control for either endpoint.		

CHRONIC TOXICITY

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

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (23.9 young)
≥60% surviving controls had 3 broods	Pass (90% with 3 broods)
PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 14.1%)
Statistically significantly different concentrations relative difference >13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)

Ceriodaphnia Survival and Reproduction Test-Survival Day 6

Start Date:	1/24/2008 14:00	Test ID:	8012401	Sample ID:	Outfall 018
End Date:	1/30/2008 15:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	EFF2-Industrial
Sample Date:	1/23/2008 13:45	Protocol:	FWCH 4TH-EPA-821-R-02-0	Test Species:	CD-Ceriodaphnia dubia
Comments:					

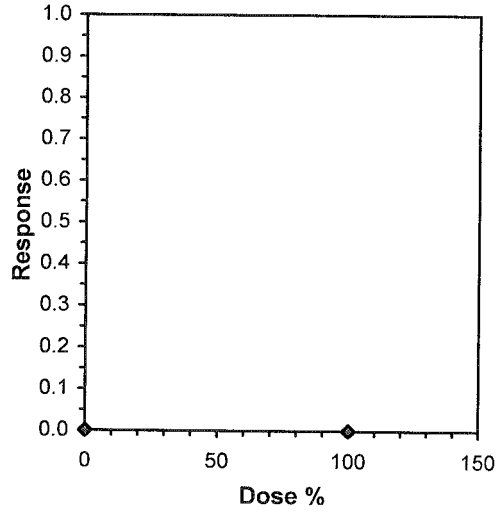
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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

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

Linear Interpolation (200 Resamples)

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



Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	1/24/2008 14:00	Test ID: 8012401	Sample ID: Outfall 018
End Date:	1/30/2008 15:00	Lab ID: CAATL-Aquatic Testing Labs	Sample Type: EFF2-Industrial
Sample Date:	1/23/2008 13:45	Protocol: FWCH 4TH-EPA-821-R-02-0	Test Species: CD-Ceriodaphnia dubia
Comments:			

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	27.000	24.000	25.000	28.000	24.000	24.000	24.000	28.000	22.000	13.000
100	26.000	15.000	23.000	31.000	28.000	24.000	26.000	27.000	23.000	29.000

			Transform: Untransformed					Rank	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
D-Control	23.900	1.0000	23.900	13.000	28.000	18.018	10			24.550	1.0000
100	25.200	1.0544	25.200	15.000	31.000	17.528	10	114.50	82.00	24.550	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.84615	0.905	-1.4811	2.47963
F-Test indicates equal variances (p = 0.94)	1.05213	6.54109		

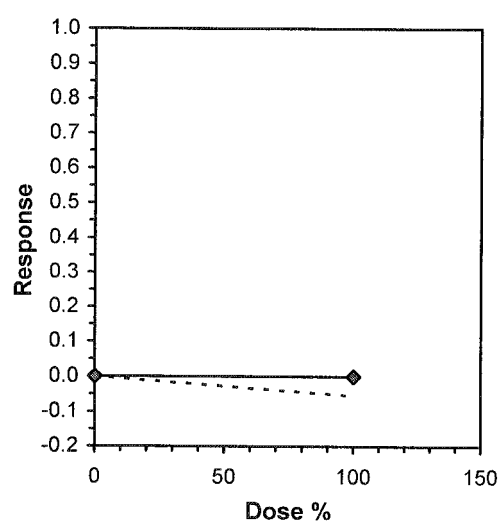
Hypothesis Test (1-tail, 0.05)

Wilcoxon Two-Sample Test indicates no significant differences

Treatments vs D-Control

Linear Interpolation (200 Resamples)

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



CERIODAPHNIA DUBIA CHRONIC BIOASSAY
EPA METHOD 1002.0 Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-08012401-001
Client ID: TestAmerica - IRA2156-01 (Outfall 018)
Start Date: 01/24/2008

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:															
Time of Readings:		1400	1400	1400	1500	1500	1320	1300	1500	1500	1500	1500	1500	1500	—
Control	DO	8.0	8.5	8.0	8.5	7.9	7.5	7.7	7.4	7.4	8.3	8.9	8.6	8.1	—
	pH	7.6	7.8	7.8	7.8	7.7	7.6	7.4	7.4	7.8	8.0	8.0	7.8	7.8	—
	Temp	24.7	24.3	25.3	24.8	25.4	25.1	25.1	24.7	24.2	24.8	24.2	24.9	24.6	—
100%	DO	11.3	8.7	11.0	8.6	10.9	8.3	10.4	8.4	10.6	8.4	10.7	8.6	11.1	—
	pH	7.4	7.7	7.3	7.7	7.4	7.5	7.3	7.5	7.2	7.7	7.3	7.6	7.3	—
	Temp	24.3	24.5	24.6	24.8	24.8	25.1	24.8	24.7	24.9	25.0	25.0	25.0	24.8	—

Additional Parameters	Control	100% Sample
Conductivity (umohms)	290	475
Alkalinity (mg/l $CaCO_3$)	66	63
Hardness (mg/l $CaCO_3$)	98	153
Ammonia (mg/l NH_3-N)	<0.2	0.4

Source of Neonates

Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	B2	C1	D3	H3	J1	C5	D4	E4	G4	I6

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	5	4	0	4	0	0	4	17	10	
	4	5	5	4	0	0	4	0	5	5	0	28	10	
	5	10	9	9	10	8	10	6	10	8	9	89	10	
	6	12	10	12	13	12	10	14	13	9	0	105	10	
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	27	24	25	28	24	24	24	28	22	13	239	10	
100%	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	4	5	0	0	0	4	0	5	18	10	
	4	5	4	(8)	0	5	4	4	0	4	0	34	10	
	5	9	11	0	11	10	8	10	9	8	12	88	10	
	6	12	0	11	15	13	12	12	14	11	12	112	10	
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	26	15	23	31	28	24	26	27	23	29	252	10	

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

SUBCONTRACT ORDER

TestAmerica Irvine

IRA2156

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:

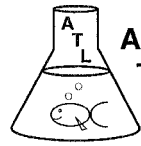
Aquatic Testing Laboratories-SUB
4350 Transport Street, Unit 107
Ventura, CA 93003
Phone :(805) 650-0546
Fax: (805) 650-0756
Project Location: California
Receipt Temperature: 4 °C Ice: (Y) / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2156-01	**Water**		Sampled: **01/23/08 13:45**	
Bioassay-7 dy Chrnic	N/A	02/01/08	01/25/08 01:45	Cerio, EPA/821-R02-013, Sub to Aquatic testing

Containers Supplied:
1 gal Poly (AC)

Released By	Date/Time	Received By	Date/Time
	1/24/08 0710	TAI	1/24/08 0710
Released By	Date/Time	Received By	Date/Time
TAI	1/24/08 1000		1-24-08 1000

NPDES - 3961



Aquatic
Testing
Laboratories

REFERENCE TOXICANT DATA

NPDES - 3962

CERIODAPHNIA CHRONIC BIOASSAY
EPA METHOD 1002.0
REFERENCE TOXICANT - NaCl

Aquatic Testing Laboratories

QA/QC Batch No.: RT-080106

Date Tested: 01/06/08 to 01/12/08

TEST SUMMARY

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

Endpoints: Survival and Reproduction.
Source: In-laboratory culture.
Food: .1 ml YTC, algae per day.
Test solution volume: 20 ml.
Number of replicates: 10.
Photoperiod: 16/8 hrs. light/dark cycle.
Test duration: 6 days.
Statistics: ToxCalc computer program.

RESULTS SUMMARY

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		20.5	
0.25 g/l	100%		19.5	
0.5 g/l	100%		19.5	
1.0 g/l	100%		14.0	*
2.0 g/l	80%		3.2	*
4.0 g/l	0%	*	0	**

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

CHRONIC TOXICITY

Survival LC50	2.5 g/l
Reproduction IC25	0.88 g/l

QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥15 young per surviving control female	Pass (20.5 young)
≥60% surviving controls had 3 broods	Pass (90% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 19.1%)
Stat. sig. diff. conc. relative difference >13%	Pass (Stat. sig. diff. conc. = 31.7%)
Concentration response relationship acceptable	Pass (Response curve normal)

Ceriodaphnia Survival and Reproduction Test-Survival Day 6

Start Date:	1/6/2008 13:00	Test ID:	RT-080106c	Sample ID:	REF-Ref Toxicant
End Date:	1/12/2008 13:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	NACL-Sodium chloride
Sample Date:	1/6/2008	Protocol:	FWCH-EPA-821-R-02-013	Test Species:	CD-Ceriodaphnia dubia
Comments:					

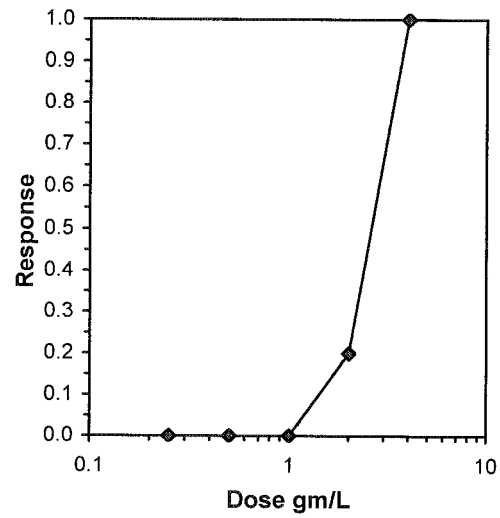
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000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

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	0.8000	0.8000	2	8	10	10	0.2368	0.0500	2	10
4	0.0000	0.0000	10	0	10	10			10	10

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

Trimmed Spearman-Karber

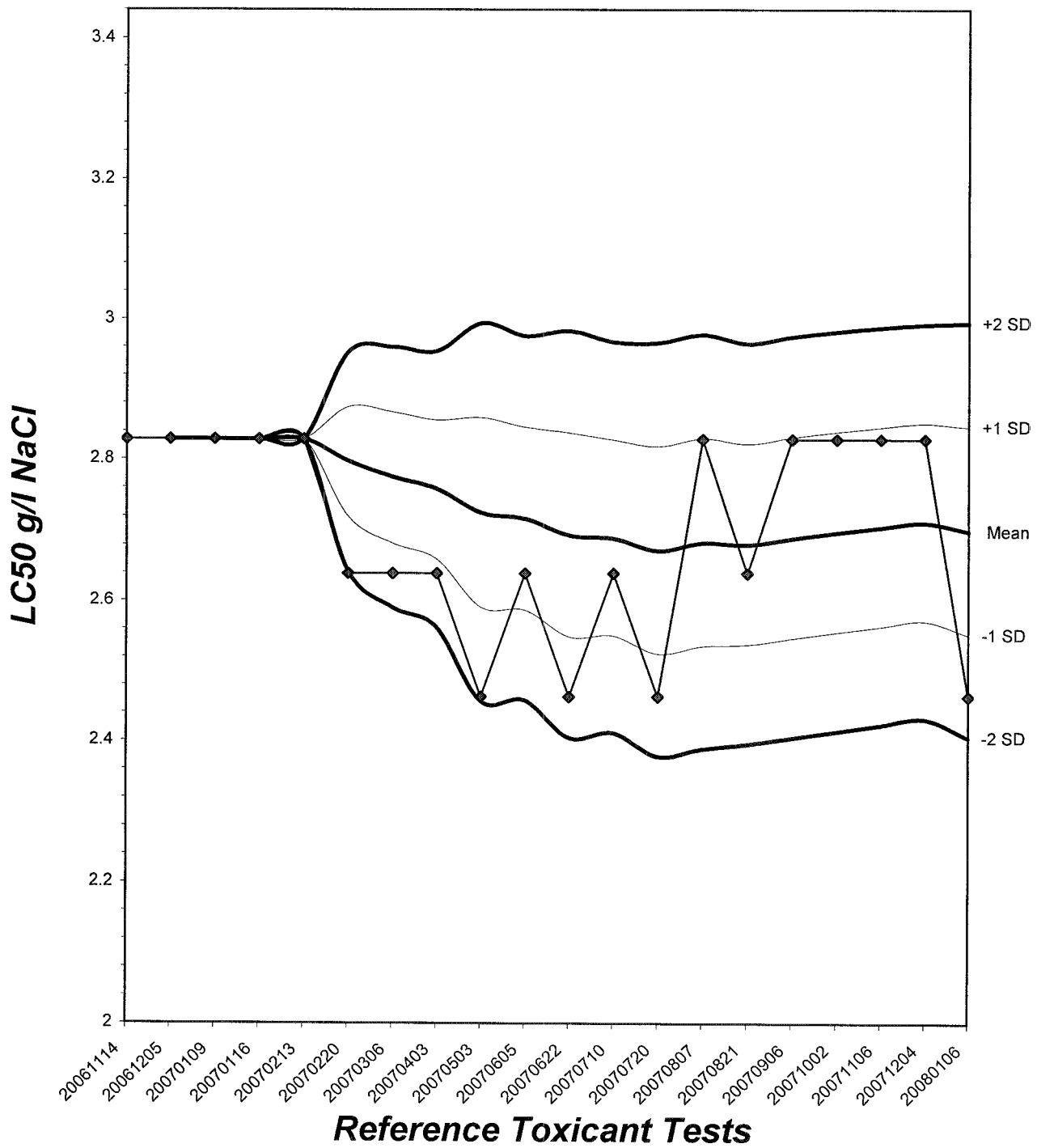
Trim Level	EC50	95% CL	
0.0%	2.4623	2.0663	2.9342
5.0%	2.5108	2.0545	3.0683
10.0%	2.5519	1.9976	3.2599
20.0%	2.5937	2.2616	2.9745
Auto-0.0%	2.4623	2.0663	2.9342



Reviewed by:

Ceriodaphnia dubia Chronic Survival Laboratory Control Chart

CV% = 5.46



Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	1/6/2008 13:00	Test ID:	RT-080106c	Sample ID:	REF-Ref Toxicant
End Date:	1/12/2008 13:00	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	NACL-Sodium chloride
Sample Date:	1/6/2008	Protocol:	FWCH-EPA-821-R-02-013	Test Species:	CD-Ceriodaphnia dubia
Comments:					

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	23.000	11.000	21.000	21.000	23.000	20.000	19.000	22.000	20.000	25.000
0.25	12.000	24.000	19.000	22.000	9.000	20.000	21.000	21.000	22.000	25.000
0.5	21.000	19.000	21.000	22.000	16.000	12.000	22.000	21.000	22.000	19.000
1	19.000	9.000	9.000	19.000	14.000	10.000	16.000	17.000	19.000	8.000
2	8.000	2.000	2.000	5.000	4.000	3.000	3.000	5.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

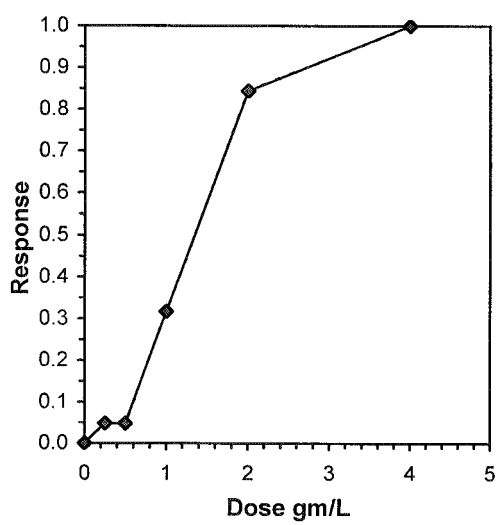
			Transform: Untransformed					Rank	1-Tailed	Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean
D-Control	20.500	1.0000	20.500	11.000	25.000	18.432	10			20.500	1.0000
0.25	19.500	0.9512	19.500	9.000	25.000	26.177	10	102.00	76.00	19.500	0.9512
0.5	19.500	0.9512	19.500	12.000	22.000	16.617	10	94.50	76.00	19.500	0.9512
*1	14.000	0.6829	14.000	8.000	19.000	32.819	10	62.50	76.00	14.000	0.6829
*2	3.200	0.1561	3.200	0.000	8.000	76.263	10	55.00	76.00	3.200	0.1561
4	0.000	0.0000	0.000	0.000	0.000	0.000	10			0.000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.91281	0.947	-0.9793	0.67912
Bartlett's Test indicates equal variances (p = 0.25)	5.39	13.2767		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Steel's Many-One Rank Test	0.5	1	0.70711	
Treatments vs D-Control				

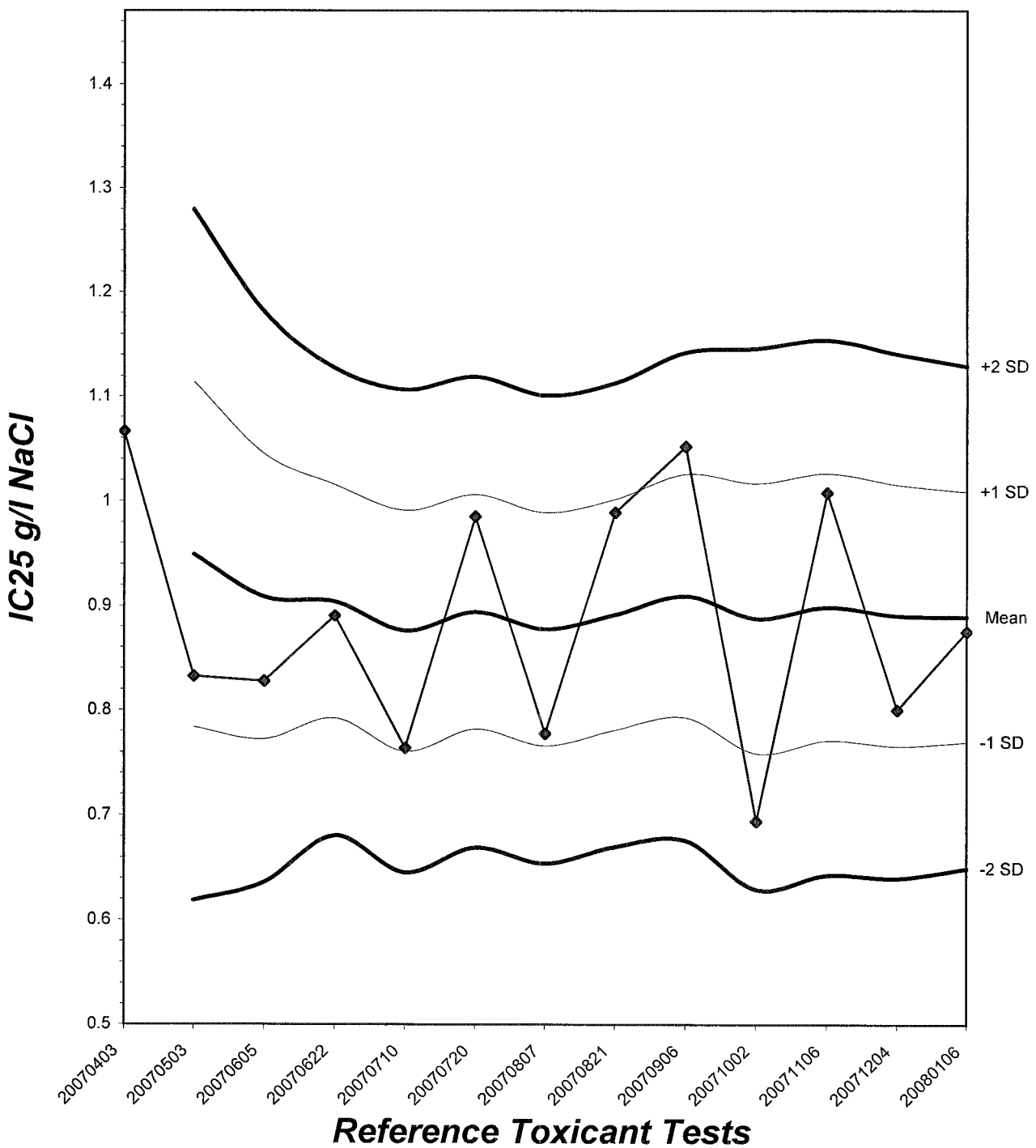
Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	0.5023	0.1876	0.0809	0.6178	-0.0659
IC10	0.5955	0.1768	0.1617	0.7497	-0.5184
IC15	0.6886	0.1424	0.2426	0.9253	-0.5389
IC20	0.7818	0.1259	0.4995	1.0352	0.2728
IC25	0.8750	0.1224	0.6413	1.1094	0.3153
IC40	1.1574	0.1139	0.9216	1.3331	-0.0890
IC50	1.3472	0.0972	1.1197	1.4847	-0.4227



Ceriodaphnia dubia Chronic Reproduction Laboratory Control Chart

CV% = 13.5



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

Aquatic Testing Laboratories

QA/QC No.: RT-080106

Start Date: 01/06/2008

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	2	0	0	0	3	0	3	0	8	10	
	4	4	3	0	4	3	2	0	2	0	3	21	10	
	5	9	8	7	7	6	7	6	7	6	7	70	10	
	6	10	0	12	10	14	11	10	13	11	15	106	10	
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	23	11	21	21	23	20	19	22	20	25	205	10	
0.25 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	3	0	3	0	2	0	0	3	0	11	10	
	4	4	0	2	0	3	6	4	2	0	3	24	10	
	5	8	8	7	5	6	0	7	6	7	8	62	10	
	6	0	13	10	14	0	12	10	13	12	14	98	10	
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	12	24	19	22	9	20	21	21	22	25	195	10	
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	2	0	2	0	0	0	3	2	0	0	9	10	
	4	0	3	0	3	4	3	0	0	3	3	19	10	
	5	9	6	7	7	0	9	8	7	7	6	66	10	
	6	10	10	12	12	12	0	11	12	12	10	101	10	
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total	21	19	21	22	16	12	22	21	22	19	195	10	

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-080106

Start Date: 01/06/2008

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	
	3	0	0	0	0	0	3	0	0	2	0	5	10	
	4	3	2	2	3	0	0	3	2	0	2	17	10	
	5	5	7	7	4	5	7	5	4	7	6	57	10	
	6	11	0	0	12	9	0	8	11	10	0	61	10	
	7	–	–	–	–	–	–	–	–	–	–	–	–	–
	Total	19	9	9	19	14	10	16	17	19	8	140	10	
2.0 g/l	1	0	0	0	0	0	0	0	0	X	0	0	9	
	2	0	0	0	0	0	0	0	0	–	0	0	9	
	3	0	0	0	0	0	0	0	0	–	0	0	9	
	4	2	0	2	3	0	0	0	2	–	0	9	9	
	5	3	0	0	2	2	3	3	0	–	0	13	9	
	6	3	2	0	0	2	0	0	3	–	X	10	8	
	7	–	–	–	–	–	–	–	–	–	–	–	–	–
	Total	8	2	2	5	4	3	3	5	0	0	32	8	
4.0 g/l	1	X	X	X	X	X	X	X	X	X	X	0	0	
	2	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–	–
	5	–	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	–	–	–	–	–	–	–	–	–	–	–
	7	–	–	–	–	–	–	–	–	–	–	–	–	–
	Total	0	0	0	0	0	0	0	0	0	0	0	0	

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-080106

Start Date: 01/06/2008

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst Initials:		JL	JL	JL	JL	JL	JL	JL	JL	JL	JL	JL	JL	—	—
Time of Readings:		1330	1330	1330	1330	1330	1230	1230	1300	1330	1330	1330	1330	—	—
Control	DO	7.6	7.2	7.4	7.7	7.4	7.6	7.4	7.5	8.2	7.8	7.9	7.7	—	—
	pH	7.6	7.4	7.4	7.3	7.3	7.2	7.2	7.7	7.5	7.6	7.9	7.6	—	—
	Temp	24.3	25.1	25.4	24.8	24.1	24.5	24.9	25.1	24.4	25.0	24.6	25.1	—	—
0.25 g/l	DO	7.5	7.3	7.5	7.5	7.5	7.7	7.3	7.4	8.2	7.8	7.9	7.7	—	—
	pH	7.6	7.3	7.4	7.4	7.4	7.2	7.3	7.4	7.6	7.5	7.6	7.7	—	—
	Temp	24.4	25.2	25.3	24.9	24.2	24.5	24.7	25.0	24.4	25.1	24.6	25.1	—	—
0.5 g/l	DO	7.4	7.2	7.4	7.6	7.4	7.5	7.4	7.6	8.5	7.6	8.0	7.8	—	—
	pH	7.5	7.3	7.4	7.4	7.4	7.2	7.3	7.5	7.6	7.5	7.7	7.7	—	—
	Temp	24.3	25.1	25.3	24.9	24.1	25.2	24.6	24.9	24.4	24.9	24.4	24.9	—	—
1.0 g/l	DO	7.5	7.2	7.6	7.7	7.3	7.8	7.4	7.4	8.4	7.8	7.7	7.7	—	—
	pH	7.5	7.3	7.6	7.5	7.4	7.2	7.3	7.5	7.6	7.6	7.5	7.6	—	—
	Temp	24.4	25.2	25.1	24.7	24.2	25.2	24.6	25.0	24.4	24.9	24.6	25.0	—	—
2.0 g/l	DO	7.4	7.4	7.6	7.5	7.4	7.8	7.2	7.6	8.2	7.6	7.6	7.7	—	—
	pH	7.5	7.4	7.6	7.6	7.4	7.3	7.2	7.6	7.5	7.6	7.9	7.6	—	—
	Temp	24.5	25.1	25.0	24.6	24.2	25.3	24.8	25.2	24.4	24.8	24.6	25.1	—	—
4.0 g/l	DO	7.5	7.8	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.6	7.8	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	24.3	24.6	—	—	—	—	—	—	—	—	—	—	—	—

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

Additional Parameters	Control			High Concentration		
	Day 1	Day 3	Day 5	Day 1	Day 3	Day 5
Conductivity (µS)	350	348	305	6400	3100	3210
Alkalinity (mg/l $CaCO_3$)	66	65	63	65	66	64
Hardness (mg/l $CaCO_3$)	98	97	98	98	97	98

Source of Neonates

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

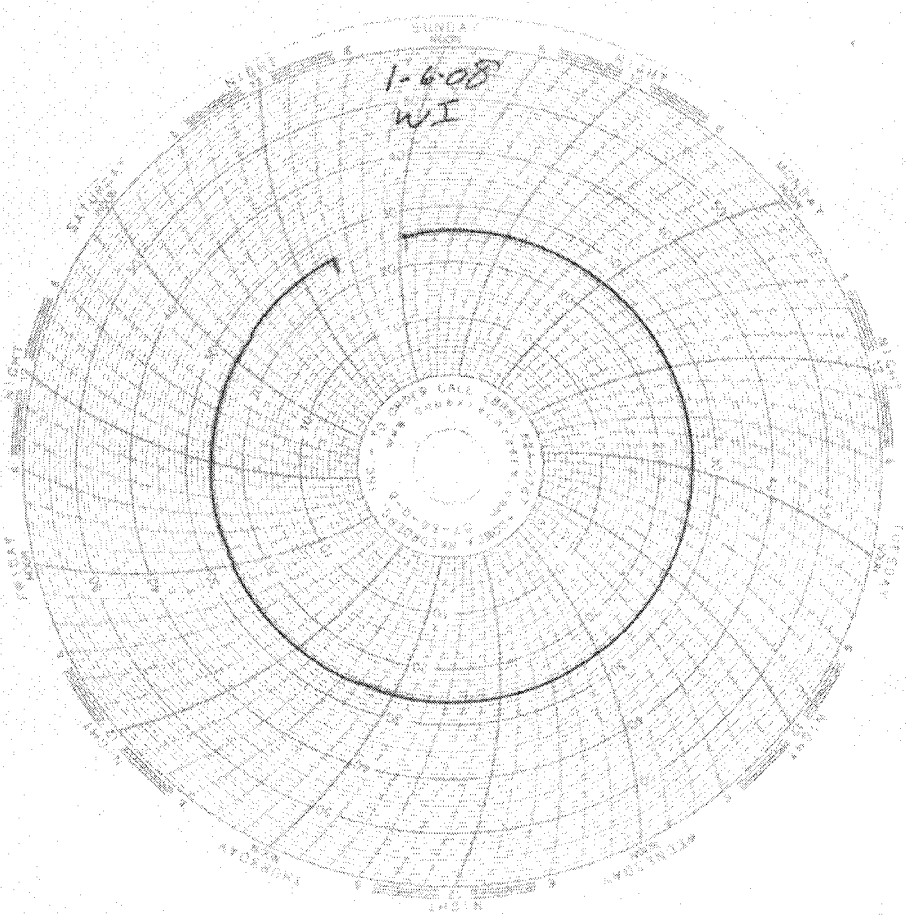
Aquatic Testing Laboratories

Laboratory Temperature Chart

QA/QC Batch No: RT-080106

Date Tested: 01/06/08 to 01/12/08

Acceptable Range: 25+/- 1°C



EBERLINE
SERVICES

February 22, 2008

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

Reference: Eberline Services NELAP Cert #01120CA
Test America Project Nos. IRA1233, IRA2025, IRA2352, IRA2350, IRA2349, IRA2156
Eberline Services Reports R801067-8681, R801142-8682, R801161-8683 R801162-8684, R801163-8685, R801164-8686

Dear Mr. Doak:

Enclosed are results from the analyses of six water samples. One sample was received on January 16, one on January 24, three on January 26, and one on January 28, 2008. The samples were analyzed according to the accompanying Test America Subcontract Order Forms, the requested analyses were: gross alpha/gross beta (EPA 900.0), tritium (H-3, EPA906.0), Sr-90 (EPA905.0), Ra-226 (EPA903.1), Ra-228 (EPA 904.0), total uranium (ASTM D-5174), and gamma spectroscopy (EPA901.1, K-40 and Cs-137 only). Batch quality control samples consisted of LCS's, blank analyses, duplicate analyses, and matrix spike analyses (gross alpha/gross beta, H-3, Ra-226, Total-U only). All QC sample results were within the limits defined in Eberline Services Quality Control Procedures Manual.

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

Regards,

Melissa Mannion
Senior Program Manager

MCM/njv

Enclosure: Reports/CoC's
Invoices

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

Eberline Services

ANALYSIS RESULTS

SDG 8686
Work Order R801164-01
Received Date 01/28/08

Client TA IRVINE
Contract PR0JECT# IRA2156
Matrix WATER

Client Sample ID	Lab Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
IRA2156-01	8686-001	01/23/08	02/06/08	GrossAlpha	-1.16 ± 1.3	pCi/L	2.5
			02/06/08	Gross Beta	4.16 ± 1.0	pCi/L	1.4
			02/04/08	Ra-228	-0.058 ± 0.16	pCi/L	0.45
			01/31/08	K-40 (G)	U	pCi/L	8.7
			01/31/08	Cs-137 (G)	U	pCi/L	0.66
			02/15/08	H-3	-28.6 ± 94	pCi/L	160
			02/11/08	Ra-226	0.623 ± 0.36	pCi/L	0.16
			02/07/08	Sr-90	-0.093 ± 0.24	pCi/L	0.53
			02/19/08	Total U	0.409 ± 0.046	pCi/L	0.022

Certified by
Report Date 02/22/08

Eberline Services

QC RESULTS

SDG 8686 | Client TA IRVINE
Work Order R801164-01 | Contract PR0JECT# IRA2156
Received Date 01/28/08 | Matrix WATER

Lab Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
LCS						
8682-002	GrossAlpha	10.6 ± 0.84	pCi/Smpl	10.1	0.29	105% recovery
	Gross Beta	9.49 ± 0.38	pCi/Smpl	9.39	0.29	101% recovery
	Ra-228	8.69 ± 0.54	pCi/Smpl	8.73	0.75	100% recovery
	Co-60 (G)	223 ± 11	pCi/Smpl	226	7.0	99% recovery
	Cs-137 (G)	253 ± 11	pCi/Smpl	236	8.1	107% recovery
	Am-241 (G)	215 ± 37	pCi/Smpl	252	47	85% recovery
	H-3	228 ± 14	pCi/Smpl	240	16	95% recovery
	Ra-226	5.92 ± 0.27	pCi/Smpl	5.58	0.085	106% recovery
	Sr-90	9.45 ± 0.73	pCi/Smpl	9.40	0.32	101% recovery
	Total U	1.06 ± 0.12	pCi/Smpl	1.13	0.004	94% recovery
BLANK						
8682-003	GrossAlpha	0.006 ± 0.13	pCi/Smpl	NA	0.25	<MDA
	Gross Beta	-0.090 ± 0.27	pCi/Smpl	NA	0.44	<MDA
	Ra-228	-0.089 ± 0.33	pCi/Smpl	NA	0.78	<MDA
	K-40 (G)	U	pCi/Smpl	NA	190	<MDA
	Cs-137 (G)	U	pCi/Smpl	NA	7.4	<MDA
	H-3	-4.88 ± 9.0	pCi/Smpl	NA	15	<MDA
	Ra-226	-0.014 ± 0.026	pCi/Smpl	NA	0.071	<MDA
	Sr-90	0.078 ± 0.24	pCi/Smpl	NA	0.54	<MDA
	Total U	0.00E 00 ± 1.9E-04	pCi/Smpl	NA	4.4E-04	<MDA

DUPLICATES				ORIGINALS					
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	RPD	3σ (Tot)	Eval
8682-004	GrossAlpha	3.13 ± 2.1	2.2	8682-001	2.52 ± 2.0	2.4	22	160	satis.
	Gross Beta	42.1 ± 2.3	2.1		42.3 ± 2.4	2.4	0	44	satis.
	Ra-228	0.070 ± 0.15	0.42		0.145 ± 0.17	0.44	-	0	satis.

Certified by
Report Date 02/22/08

Eberline Services

SDG 8686 Client TA IRVINE
Work Order R801164-01 Contract PR0JECT# IRA2156
Received Date 01/28/08 Matrix WATER

K-40	(G)	42.6 ± 18	9.6	36.0 ± 19	13	17	102	satis.
Cs-137	(G)	U	0.92	U	1.1	-	0	satis.
Tl-208	(G)	U	1.2	U		200	302	satis.
Pb-210	(G)	U	230	U		200	302	satis.
Bi-212	(G)	U	7.7	U		200	302	satis.
Pb-212	(G)	U	1.6	U		200	302	satis.
Bi-214	(G)	U	2.1	U		200	301	satis.
Pb-214	(G)	U	2.2	U		200	302	satis.
Ra-226	(G)	U	18	U		200	302	satis.
Ac-228	(G)	U	5.0	U		200	302	satis.
Th-234	(G)	U	31	U		200	302	satis.
U-235	(G)	U	6.5	U		200	302	satis.
U-238	(G)	U	130	U		200	302	satis.
Am-241	(G)	U	6.7	U		200	302	satis.
H-3		-73.7 ± 92	160	-62.4 ± 94	160	-	0	satis.
Ra-226		0.111 ± 0.44	0.80	-0.149 ± 0.46	0.96	-	0	satis.
Sr-90		-0.108 ± 0.44	1.1	0.032 ± 0.30	0.58	-	0	satis.
Total U		2.88 ± 0.32	0.022	2.75 ± 0.30	0.022	5	30	satis.

SPIKED SAMPLE / ORIGINAL SAMPLE

Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	Added	%Recv
8682-005	GrossAlpha	225 ± 12	2.5	8682-001	2.52 ± 2.0	2.4	163	136
	Gross Beta	192 ± 4.5	2.4		42.3 ± 2.4	2.4	145	103
	H-3	15800 ± 310	160		-62.4 ± 94	160	16000	99
	Ra-226	124 ± 4.7	0.94		-0.149 ± 0.46	0.96	112	111
	Total U	120 ± 15	2.2		2.75 ± 0.30	0.022	113	104

Certified by
Report Date 02/22/08

SUBCONTRACT ORDER

TestAmerica Irvine

8486

IRA2156

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:

Eberline Services - SUB
2030 Wright Avenue
Richmond, CA 94804
Phone :(510) 235-2633
Fax: (510) 235-0438
Project Location: California
Receipt Temperature: 10 °C Ice: (Y) / N MELTED

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2156-01	**Water**		Sampled: **01/23/08 13:45**	
Gamma Spec-O	mg/kg	02/01/08	01/22/09 13:45	Boeing, J flags, K-40 and CS-137 only
Gross Alpha-O	pCi/L	02/01/08	07/21/08 13:45	Boeing, J flags
Gross Beta-O	pCi/L	02/01/08	07/21/08 13:45	Boeing, J flags
Level 4 Data Package - Out	N/A	02/01/08	02/20/08 13:45	
Radium, Combined-O	pCi/L	02/01/08	01/22/09 13:45	Boeing, J flags
Strontium 90-O	pCi/L	02/01/08	01/22/09 13:45	Boeing, J flags
Tritium-O	pCi/L	02/01/08	01/22/09 13:45	Boeing, J flags
Uranium, Combined-O	pCi/L	02/01/08	01/22/09 13:45	Boeing, J flags

Containers Supplied:
2.5 gal Poly (AA) 500 mL Amber (AB)

Released By	1/24/08 17:00 Date/Time	FedEx Received By	1/24/08 1700 Date/Time
Released By	Date/Time	Received By	01/28/08 09:32 Date/Time

NPDES - 3976

Vista
Analytical Laboratory

January 29, 2008

Vista Project I.D.: 30198

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 25, 2008 under your Project Name "IRA2156". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A rush 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. 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: **1/25/2008**

Vista Lab. ID	Client Sample ID
30198-001	IRA2156-01

SECTION II

Method Blank **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9906	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	27-Jan-08	Date Analyzed DB-5:	29-Jan-08
				Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000647		
1,2,3,7,8-PeCDD	ND	0.00000122		
1,2,3,4,7,8-HxCDD	ND	0.00000111		
1,2,3,6,7,8-HxCDD	ND	0.00000109		
1,2,3,7,8,9-HxCDD	ND	0.00000105		
1,2,3,4,6,7,8-HpCDD	ND	0.00000123		
OCDD	ND	0.00000681		
2,3,7,8-TCDF	ND	0.000000578		
1,2,3,7,8-PeCDF	ND	0.000000800		
2,3,4,7,8-PeCDF	ND	0.000000796		
1,2,3,4,7,8-HxCDF	ND	0.000000512		
1,2,3,6,7,8-HxCDF	ND	0.000000533		
2,3,4,6,7,8-HxCDF	ND	0.000000583		
1,2,3,7,8,9-HxCDF	ND	0.000000671		
1,2,3,4,6,7,8-HpCDF	ND	0.000000428		
1,2,3,4,7,8,9-HpCDF	ND	0.000000460		
OCDF	ND	0.00000140		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	86.5	25 - 164	
	13C-1,2,3,7,8-PeCDD	79.3	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	88.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	86.9	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	91.4	23 - 140	
	13C-OCDD	73.6	17 - 157	
	13C-2,3,7,8-TCDF	90.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	76.2	24 - 185	
	13C-2,3,4,7,8-PeCDF	77.2	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	80.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	82.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	82.6	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	91.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	81.2	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	85.2	26 - 138	
	13C-OCDF	78.4	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	84.0	35 - 197	

Totals

Total TCDD	ND	0.00000122
Total PeCDD	ND	0.00000195
Total HxCDD	ND	0.00000207
Total HpCDD	ND	0.00000302
Total TCDF	ND	0.000000578
Total PeCDF	ND	0.00000209
Total HxCDF	ND	0.000000573
Total HpCDF	ND	0.000000443

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg 29-Jan-2008 14:45

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9906	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	27-Jan-08	Date Analyzed DB-5:	29-Jan-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	9.57	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	89.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	48.6	35 - 71		13C-1,2,3,7,8-PeCDD	80.6	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	45.8	35 - 82		13C-1,2,3,4,7,8-HxCDD	89.6	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67		13C-1,2,3,6,7,8-HxCDD	87.3	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	47.0	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	91.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	45.3	35 - 70		13C-OCDD	73.9	17 - 157	
OCDD	100	95.0	78 - 144		13C-2,3,7,8-TCDF	93.6	24 - 169	
2,3,7,8-TCDF	10.0	8.78	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	79.3	24 - 185	
1,2,3,7,8-PeCDF	50.0	45.0	40 - 67		13C-2,3,4,7,8-PeCDF	78.5	21 - 178	
2,3,4,7,8-PeCDF	50.0	45.9	34 - 80		13C-1,2,3,4,7,8-HxCDF	79.6	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	46.7	36 - 67		13C-1,2,3,6,7,8-HxCDF	82.1	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	46.4	42 - 65		13C-2,3,4,6,7,8-HxCDF	81.7	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	46.5	35 - 78		13C-1,2,3,7,8,9-HxCDF	88.5	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	45.4	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	80.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	45.1	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	86.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	44.9	39 - 69		13C-OCDF	79.2	17 - 157	
OCDF	100	91.4	63 - 170	CRS	37Cl-2,3,7,8-TCDD	82.9	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 29-Jan-2008 14:45

Sample ID: **IRA2156-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30198-001	Date Received:	25-Jan-08
Project:	IRA2156	Sample Size:	1.00 L	QC Batch No.:	9906	Date Extracted:	27-Jan-08
Date Collected:	23-Jan-08			Date Analyzed DB-5:	29-Jan-08	Date Analyzed DB-225:	NA
Time Collected:	1345						

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000693		
1,2,3,7,8-PeCDD	ND	0.00000173		
1,2,3,4,7,8-HxCDD	ND	0.00000291		
1,2,3,6,7,8-HxCDD	ND	0.00000269		
1,2,3,7,8,9-HxCDD	0.00000186			J
1,2,3,4,6,7,8-HpCDD	0.0000462			
OCDD	0.000533			
2,3,7,8-TCDF	ND		0.000000883	
1,2,3,7,8-PeCDF	ND	0.00000177		
2,3,4,7,8-PeCDF	ND	0.00000100		
1,2,3,4,7,8-HxCDF	ND	0.000000959		
1,2,3,6,7,8-HxCDF	ND	0.00000103		
2,3,4,6,7,8-HxCDF	ND	0.00000109		
1,2,3,7,8,9-HxCDF	ND	0.000000891		
1,2,3,4,6,7,8-HpCDF	0.00000676			J
1,2,3,4,7,8,9-HpCDF	ND	0.00000144		
OCDF	0.0000144			J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	79.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	69.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	74.1	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	73.3	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	74.7	23 - 140	
	13C-OCDD	61.7	17 - 157	
	13C-2,3,7,8-TCDF	78.9	24 - 169	
	13C-1,2,3,7,8-PeCDF	65.3	24 - 185	
	13C-2,3,4,7,8-PeCDF	65.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	68.0	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	68.8	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	68.1	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	71.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	64.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	69.6	26 - 138	
	13C-OCDF	64.2	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	89.6	35 - 197	

Totals

Total TCDD	ND	0.00000162	
Total PeCDD	ND	0.00000318	
Total HxCDD	0.00000681		0.0000112
Total HpCDD	0.0000954		
Total TCDF	0.00000143		0.00000231
Total PeCDF	ND	0.00000181	
Total HxCDF	0.00000475		
Total HpCDF	0.0000153		

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: MAS

Approved By: William J. Luksemburg 30-Jan-2008 10:07

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

Accrediting Authority	Certificate Number
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

IRA2156 30198 1.4°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: IRA2156-01	**Water**		Sampled: **01/23/08 13:45**	
1613-Dioxin-HR-Alta	ug/l	02/01/08	01/30/08 13:45	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Level 4 Data Package	N/A	02/01/08	02/20/08 13:45	
Containers Supplied:				
1 L Amber (D)	1 L Amber (E)			

Released By	Date/Time	Received By	Date/Time
		Fed Ex	1/24/08 17:00
Released By	Date/Time	Received By	Date/Time
		Bethmarie Benedict	1/25/08 1038

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 30198 TAT 7

Samples Arrival:	**Date/Time** 1/25/08 0915	**Initials:** BJB	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 1/25/08 1037	**Initials:** BJB	**Location:** WR-2 **Shelf/Rack:** B-4

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	
Temp °C 1.4°C	**Time:** 0928			**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 # 7992 6106 4790	✓		
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?			✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	(None)	
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica Irvine

IRA2156 8012420

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: 2.3 °C Ice: (Y) N

Analysis	Units	Due	Expires	Comments
Sample ID: IRA2156-01	**Water**		Sampled: **01/23/08 13:45**	
Level 4 Data Package - Wec	N/A	02/01/08	02/20/08 13:45	
Mercury - 245.1, Diss -OUT	mg/l	02/01/08	02/20/08 13:45	Boeing, J flags
Mercury - 245.1-OUT	mg/l	01/24/08	02/20/08 13:45	Boeing, permit, J flags
Containers Supplied:				
125 mL Poly (AE)	125 mL Poly w/HNO3 (AF)			

Released By	Date/Time	Received By	Date/Time
			1/24/8 910
Released By	Date/Time	Received By	Date/Time
	1/24/8 1020	Sam Gomez	1/24/08 1020

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634
info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

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

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

Report Date: 01/29/08 15:45
Received Date: 01/24/08 10:20
Turn Around: 6 days

Work Order #: 8012420

Client Project: IRA2156

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 01/24/08 10:20 with the Chain of Custody document. The samples were received in good condition. The samples were received at 2.3 °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: 8012420
Project ID: IRA2156

Date Received: 01/24/08 10:20
Date Reported: 01/29/08 15:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRA2156-01	Client		8012420-01	Water	01/23/08 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: 8012420
Project ID: IRA2156

Date Received: 01/24/08 10:20
Date Reported: 01/29/08 15:45

IRA2156-01 8012420-01 (Water) Date Sampled: 01/23/08 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	W8A0913	01/25/08	01/28/08	jlp	
Mercury, Total	ND	0.050	ug/l	0.20	1	EPA 245.1	W8A0913	01/25/08	01/28/08	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: 8012420
Project ID: IRA2156

Date Received: 01/24/08 10:20
Date Reported: 01/29/08 15:45

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: 8012420
Project ID: IRA2156

Date Received: 01/24/08 10:20
Date Reported: 01/29/08 15:45

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8A0913 - EPA 245.1										
Blank (W8A0913-BLK1)				Analyzed: 01/28/08						
Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.050	ug/l							
LCS (W8A0913-BS1)				Analyzed: 01/28/08						
Mercury, Dissolved	0.967	0.20	ug/l	1.00		97	85-115			
Mercury, Total	0.967	0.050	ug/l	1.00		97	85-115			
Matrix Spike (W8A0913-MS1)	**Source: 8012328-01**			Analyzed: 01/28/08						
Mercury, Dissolved	1.01	0.20	ug/l	1.00	ND	101	70-130			
Mercury, Total	1.01	0.050	ug/l	1.00	ND	101	70-130			
Matrix Spike (W8A0913-MS2)	**Source: 8012328-02**			Analyzed: 01/28/08						
Mercury, Dissolved	0.978	0.20	ug/l	1.00	ND	98	70-130			
Mercury, Total	0.978	0.050	ug/l	1.00	ND	98	70-130			
Matrix Spike Dup (W8A0913-MSD1)	**Source: 8012328-01**			Analyzed: 01/28/08						
Mercury, Dissolved	0.992	0.20	ug/l	1.00	ND	99	70-130	2	20	
Mercury, Total	0.992	0.050	ug/l	1.00	ND	99	70-130	2	20	
Matrix Spike Dup (W8A0913-MSD2)	**Source: 8012328-02**			Analyzed: 01/28/08						
Mercury, Dissolved	1.01	0.20	ug/l	1.00	ND	101	70-130	3	20	
Mercury, Total	1.01	0.050	ug/l	1.00	ND	101	70-130	3	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: 8012420
Project ID: IRA2156

Date Received: 01/24/08 10:20
Date Reported: 01/29/08 15:45

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.