APPENDIX G

Section 5

Outfall 001, February 24, 2008

MEC^{X} Data Validation Reports

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRB2399

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:	IRB2399
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 001	IRB2399-01	30309-001, 8022634-01, 8613-001	Water	02/24/08 1045	120.1, 160.2, 160.5, 180.1, 200.7, 200.8, 245.1, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 1613, ASTM D-5174, SM2340-B

II. Sample Management

No anomalies were observed regarding sample management. The sample was received at Weck within the temperature limits of 4°C ±2°C. The samples were received at TestAmerica-Irvine and Vista below the temperature limit; however, the samples were not noted to be damaged or frozen. Eberline did not provide temperature information; however, radiological samples are not required to be chilled. According to the case narrative for this SDG, the samples were 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, 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 7, 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 200.7, 200.8, 245.1—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: April 1, 2008

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

- Holding Times: The analytical holding times, 6 months for metals and 28 days for mercury, were met.

- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were ≤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: Selenium was detected in a CCB bracketing the total metals analysis at 0.513 µg/L; therefore, total selenium detected in the sample was qualified as an estimated nondetect, "UJ." There were no other applicable detects in the method blanks or CCBs.

- Interference Check Samples: ICSA/B analyses were performed in association with all analyses except total antimony. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solutions. No 6010 analytes required qualification as the concentrations of the interferents were not significant. For the 6020 analytes, the reviewer was not able to ascertain if the detections were indicative of matrix interference.

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

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for the total 6020 metals. The 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 — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: April 2, 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. Aliquots for gross alpha and gross beta were prepared within the five-day analytical holding time for unpreserved samples. Aliquots for radium-226, radium-228, strontium-90, total uranium, and gamma spectroscopy were prepared beyond the five-day holding time for unpreserved samples; therefore, results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects.

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

  The gross alpha detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as an estimated detect, "J." The 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 strontium chemical yield was at least 70% and was considered acceptable. The strontium and radium-226 continuing calibration results were within the laboratory control limits. The radium-228 tracer, yttrium oxalate, yields were greater than 70%. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

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

- 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.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG.

- 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. 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 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.

- Calibration: The conductivity and turbidity check standard recoveries were acceptable. The TSS 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: No laboratory duplicate analyses were performed for the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. 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. Turbidity was reported from a 5× dilution.

- 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: IRB2399-01 Outfall001 **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30309-001	Date Received:	26-Feb-08
Project:	IRB2399	Sample Size:	1.02 L	QC Batch No.:	9997	Date Extracted:	9-Mar-08
Date Collected:	24-Feb-08			Date Analyzed DB-5:	11-Mar-08	Date Analyzed DB-225:	NA
Time Collected:	1200						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
2,3,7,8-TCDD	ND	0.000000521			IS 13C-2,3,7,8-TCDD	78.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000110			13C-1,2,3,7,8-PeCDD	72.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000226			13C-1,2,3,4,7,8-HxCDD	67.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000230			13C-1,2,3,6,7,8-HxCDD	71.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000218			13C-1,2,3,4,6,7,8-HpCDD	72.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000107			J	13C-OCDD	59.7	17 - 157	
OCDD	0.0000952				13C-2,3,7,8-TCDF	76.1	24 - 169	
2,3,7,8-TCDF	ND	0.00000105			13C-1,2,3,7,8-PeCDF	64.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000116			13C-2,3,4,7,8-PeCDF	65.9	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000132			13C-1,2,3,4,7,8-HxCDF	64.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000145			13C-1,2,3,6,7,8-HxCDF	72.2	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000147			13C-2,3,4,6,7,8-HxCDF	70.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000775			13C-1,2,3,7,8,9-HxCDF	70.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000981			13C-1,2,3,4,6,7,8-HpCDF	66.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000228			J	13C-1,2,3,4,7,8,9-HpCDF	69.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000820			13C-OCDF	63.1	17 - 157	
OCDF	0.00000541			J	CRS 37Cl-2,3,7,8-TCDD	115	35 - 197	

Totals			Footnotes
Total TCDD	ND	0.00000100	a. Sample specific estimated detection limit.
Total PeCDD	ND	0.00000205	b. Estimated maximum possible concentration.
Total HxCDD	ND	0.00000413	c. Method detection limit.
Total HpCDD	0.0000221		d. Lower control limit - upper control limit.
Total TCDF	ND	0.00000105	
Total PeCDF	ND	0.00000170	
Total HxCDF	0.00000118		
Total HpCDF	0.00000557		

Analyst: MAS Level III

Approved By: Martha M. Maier 14-Mar-2008 13:05

NPDES - 265

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	8B25079	0.015	0.040	**3.5**	1	02/25/08	02/25/08	
Sample ID: IRB2399-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8B25070	0.11	1.0	ND	1	02/25/08	02/25/08	
Copper	EPA 200.8	8B25070	0.75	2.0	**3.9**	1	02/25/08	02/25/08	
Lead	EPA 200.8	8B25070	0.30	1.0	**1.6**	1	02/25/08	02/25/08	
Manganese	EPA 200.7	8B25079	7.0	20	**45**	1	02/25/08	02/25/08	
Selenium	EPA 200.8	8B25070	0.30	2.0	**0.60**	1	02/25/08	02/25/08	J
Zinc	EPA 200.7	8B25079	6.0	20	**19**	1	02/25/08	02/25/08	J

PM 4/1/08 LEVEL IV

TestAmerica Irvine

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	8B25122	0.015	0.040	**0.14**	1	02/25/08	02/26/08	
Sample ID: IRB2399-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8-Diss	8B25123	0.11	1.0	ND	1	02/25/08	02/26/08	
Copper	EPA 200.8-Diss	8B25123	0.75	2.0	**1.8**	1	02/25/08	02/26/08	J
Lead	EPA 200.8-Diss	8B25123	0.30	1.0	ND	1	02/25/08	02/26/08	
Manganese	EPA 200.7-Diss	8B25122	7.0	20	**10**	1	02/25/08	02/26/08	J
Selenium	EPA 200.8-Diss	8B25123	0.30	2.0	ND	1	02/25/08	02/26/08	
Zinc	EPA 200.7-Diss	8B25122	6.0	20	ND	1	02/25/08	02/26/08	

LEVEL IV

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	
Mercury, Total	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

Eberline Services

ANALYSIS RESULTS

SDG 8613	Client TA IRVINE
Work Order R802172-01	Contract PROJECT# IRB2399
Received Date 02/26/08	Matrix WATER

Client Sample ID	Lab Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	
Outfall 001 IRB2399-01	8613-001	02/24/08	03/16/08	GrossAlpha	3.00 ± 0.96	pCi/L	1.0	J/R
			03/16/08	Gross Beta	4.12 ± 0.66	pCi/L	0.92	
			03/10/08	Ra-228	0.132 ± 0.19	pCi/L	0.46	UJ/H
			03/12/08	K-40 (G)	U	pCi/L	48	↓
			03/12/08	Cs-137 (G)	U	pCi/L	1.9	↓
			03/14/08	H-3	24.5 ± 88	pCi/L	150	U
			03/14/08	Ra-226	0.262 ± 0.43	pCi/L	0.75	UJ/H
			03/10/08	Sr-90	-0.085 ± 0.31	pCi/L	0.76	↓
			03/05/08	Total U	0.510 ± 0.058	pCi/L	0.023	J/H

LEVEL IV

Certified by _____

Report Date 03/20/08

Page 1

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease) *	EPA 1664A	8C04046	1.3	4.7	**1.9**	1	03/04/08	03/04/08	J
Ammonia-N (Distilled)	EPA 350.2	8B26101	0.30	0.50	ND	1	02/26/08	02/26/08	
Biochemical Oxygen Demand	EPA 405.1	8B25101	0.59	2.0	**1.7**	1	02/25/08	03/01/08	J
Chloride	EPA 300.0	8B25042	0.25	0.50	**16**	1	02/25/08	02/25/08	
Nitrate-N	EPA 300.0	8B25042	0.060	0.11	**0.51**	1	02/25/08	02/25/08	
Nitrite-N	EPA 300.0	8B25042	0.090	0.15	ND	1	02/25/08	02/25/08	
Nitrate/Nitrite-N	EPA 300.0	8B25042	0.15	0.26	**0.51**	1	02/25/08	02/25/08	
Sulfate	EPA 300.0	8B25042	0.20	0.50	**53**	1	02/25/08	02/25/08	M-3
Surfactants (MBAS)	SM5540-C	8B25103	0.044	0.10	ND	1	02/25/08	02/25/08	
Total Dissolved Solids	SM2540C	8B27119	10	10	**240**	1	02/27/08	02/27/08	
Total Suspended Solids	EPA 160.2	8B28123	10	10	**38**	1	02/28/08	02/28/08	

* 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 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8B26062	0.10	0.10	**0.20**	1	02/26/08	02/26/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B26063	0.20	5.0	**76**	5	02/26/08	02/26/08	

LEVEL W

TestAmerica Irvine

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8B27115	1.0	1.0	**310**	1	02/27/08	02/27/08	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

APPENDIX G

Section 6

Outfall 001, February 24, 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 001

Sampled: 02/24/08
Received: 02/25/08
Issued: 03/14/08 15:48

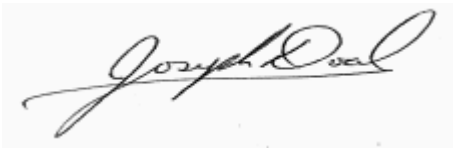
NELAP #01108CA California ELAP#1197 CSDLAC #10256

CASE NARRATIVE

SAMPLE RECEIPT:	Samples were received intact, at 1°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.

LABORATORY ID	CLIENT ID	MATRIX
IRB2399-01	Outfall 001	Water
IRB2399-02	Trip Blanks	Water

Reviewed By:



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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
1,1,1-Trichloroethane	EPA 624	8B27001	0.30	0.50	ND	1	02/27/08	02/27/08	
1,1,2-Trichloroethane	EPA 624	8B27001	0.30	0.50	ND	1	02/27/08	02/27/08	
1,1-Dichloroethane	EPA 624	8B27001	0.27	0.50	ND	1	02/27/08	02/27/08	
1,1-Dichloroethene	EPA 624	8B27001	0.42	0.50	ND	1	02/27/08	02/27/08	
1,2-Dichloroethane	EPA 624	8B27001	0.28	0.50	ND	1	02/27/08	02/27/08	
Benzene	EPA 624	8B27001	0.28	0.50	ND	1	02/27/08	02/27/08	
Carbon tetrachloride	EPA 624	8B27001	0.28	0.50	ND	1	02/27/08	02/27/08	
Chloroform	EPA 624	8B27001	0.33	0.50	ND	1	02/27/08	02/27/08	
Ethylbenzene	EPA 624	8B27001	0.25	0.50	ND	1	02/27/08	02/27/08	
Tetrachloroethene	EPA 624	8B27001	0.32	0.50	ND	1	02/27/08	02/27/08	
Toluene	EPA 624	8B27001	0.36	0.50	ND	1	02/27/08	02/27/08	
Trichloroethene	EPA 624	8B27001	0.26	0.50	ND	1	02/27/08	02/27/08	
Trichlorofluoromethane	EPA 624	8B27001	0.34	0.50	ND	1	02/27/08	02/27/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B27001	0.50	5.0	ND	1	02/27/08	02/27/08	
Vinyl chloride	EPA 624	8B27001	0.30	0.50	ND	1	02/27/08	02/27/08	
Xylenes, Total	EPA 624	8B27001	0.90	1.5	ND	1	02/27/08	02/27/08	
Surrogate: Dibromofluoromethane (80-120%)					*95 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*89 %*				
Sample ID: IRB2399-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
1,1,1-Trichloroethane	EPA 624	8B27001	0.30	0.50	ND	1	02/27/08	02/27/08	
1,1,2-Trichloroethane	EPA 624	8B27001	0.30	0.50	ND	1	02/27/08	02/27/08	
1,1-Dichloroethane	EPA 624	8B27001	0.27	0.50	ND	1	02/27/08	02/27/08	
1,1-Dichloroethene	EPA 624	8B27001	0.42	0.50	ND	1	02/27/08	02/27/08	
1,2-Dichloroethane	EPA 624	8B27001	0.28	0.50	ND	1	02/27/08	02/27/08	
Benzene	EPA 624	8B27001	0.28	0.50	ND	1	02/27/08	02/27/08	
Carbon tetrachloride	EPA 624	8B27001	0.28	0.50	ND	1	02/27/08	02/27/08	
Chloroform	EPA 624	8B27001	0.33	0.50	ND	1	02/27/08	02/27/08	
Ethylbenzene	EPA 624	8B27001	0.25	0.50	ND	1	02/27/08	02/27/08	
Tetrachloroethene	EPA 624	8B27001	0.32	0.50	ND	1	02/27/08	02/27/08	
Toluene	EPA 624	8B27001	0.36	0.50	ND	1	02/27/08	02/27/08	
Trichloroethene	EPA 624	8B27001	0.26	0.50	ND	1	02/27/08	02/27/08	
Trichlorofluoromethane	EPA 624	8B27001	0.34	0.50	ND	1	02/27/08	02/27/08	
Trichlorotrifluoroethane (Freon 113)	EPA 624	8B27001	0.50	5.0	ND	1	02/27/08	02/27/08	
Vinyl chloride	EPA 624	8B27001	0.30	0.50	ND	1	02/27/08	02/27/08	
Xylenes, Total	EPA 624	8B27001	0.90	1.5	ND	1	02/27/08	02/27/08	
Surrogate: Dibromofluoromethane (80-120%)					*95 %*				
Surrogate: Toluene-d8 (80-120%)					*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*88 %*				

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	8B26048	1.6	4.7	ND	0.943	02/26/08	02/28/08	
2,4-Dinitrotoluene	EPA 625	8B26048	0.19	8.5	ND	0.943	02/26/08	02/28/08	
N-Nitrosodimethylamine	EPA 625	8B26048	0.094	7.5	ND	0.943	02/26/08	02/28/08	
Pentachlorophenol	EPA 625	8B26048	0.094	7.5	ND	0.943	02/26/08	02/28/08	
2,4,6-Trichlorophenol	EPA 625	8B26048	0.094	5.7	ND	0.943	02/26/08	02/28/08	
Surrogate: 2-Fluorophenol (30-120%)					*74 %*				
Surrogate: Phenol-d6 (35-120%)					*73 %*				
Surrogate: 2,4,6-Tribromophenol (40-120%)					*113 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*85 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*87 %*				
Surrogate: Terphenyl-d14 (50-125%)					*104 %*				

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Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	8B25062	0.0024	0.0094	ND	0.943	02/25/08	02/26/08	
Surrogate: Decachlorobiphenyl (45-120%)					*79 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*77 %*				

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Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	8B25079	0.015	0.040	**3.5**	1	02/25/08	02/25/08	
Sample ID: IRB2399-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8	8B25070	0.11	1.0	ND	1	02/25/08	02/25/08	
Copper	EPA 200.8	8B25070	0.75	2.0	**3.9**	1	02/25/08	02/25/08	
Lead	EPA 200.8	8B25070	0.30	1.0	**1.6**	1	02/25/08	02/25/08	
Manganese	EPA 200.7	8B25079	7.0	20	**45**	1	02/25/08	02/25/08	
Selenium	EPA 200.8	8B25070	0.30	2.0	**0.60**	1	02/25/08	02/25/08	J
Zinc	EPA 200.7	8B25079	6.0	20	**19**	1	02/25/08	02/25/08	J

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Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	8B25122	0.015	0.040	**0.14**	1	02/25/08	02/26/08	
Sample ID: IRB2399-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Cadmium	EPA 200.8-Diss	8B25123	0.11	1.0	ND	1	02/25/08	02/26/08	
Copper	EPA 200.8-Diss	8B25123	0.75	2.0	**1.8**	1	02/25/08	02/26/08	J
Lead	EPA 200.8-Diss	8B25123	0.30	1.0	ND	1	02/25/08	02/26/08	
Manganese	EPA 200.7-Diss	8B25122	7.0	20	**10**	1	02/25/08	02/26/08	J
Selenium	EPA 200.8-Diss	8B25123	0.30	2.0	ND	1	02/25/08	02/26/08	
Zinc	EPA 200.7-Diss	8B25122	6.0	20	ND	1	02/25/08	02/26/08	

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8C04046	1.3	4.7	**1.9**	1	03/04/08	03/04/08	J
Ammonia-N (Distilled)	EPA 350.2	8B26101	0.30	0.50	ND	1	02/26/08	02/26/08	
Biochemical Oxygen Demand	EPA 405.1	8B25101	0.59	2.0	**1.7**	1	02/25/08	03/01/08	J
Chloride	EPA 300.0	8B25042	0.25	0.50	**16**	1	02/25/08	02/25/08	
Nitrate-N	EPA 300.0	8B25042	0.060	0.11	**0.51**	1	02/25/08	02/25/08	
Nitrite-N	EPA 300.0	8B25042	0.090	0.15	ND	1	02/25/08	02/25/08	
Nitrate/Nitrite-N	EPA 300.0	8B25042	0.15	0.26	**0.51**	1	02/25/08	02/25/08	
Sulfate	EPA 300.0	8B25042	0.20	0.50	**53**	1	02/25/08	02/25/08	M-3
Surfactants (MBAS)	SM5540-C	8B25103	0.044	0.10	ND	1	02/25/08	02/25/08	
Total Dissolved Solids	SM2540C	8B27119	10	10	**240**	1	02/27/08	02/27/08	
Total Suspended Solids	EPA 160.2	8B28123	10	10	**38**	1	02/28/08	02/28/08	

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Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8B26062	0.10	0.10	**0.20**	1	02/26/08	02/26/08	

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Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: NTU									
Turbidity	EPA 180.1	8B26063	0.20	5.0	**76**	5	02/26/08	02/26/08	

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Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	8B26098	2.2	5.0	ND	1	02/26/08	02/26/08	
Perchlorate	EPA 314.0	8B25050	1.5	4.0	ND	1	02/25/08	02/25/08	

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Sampled: 02/24/08
Received: 02/25/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8B27115	1.0	1.0	**310**	1	02/27/08	02/27/08	

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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: IRB2399-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	
Mercury, Total	EPA 245.1	W8B0982	0.050	0.20	ND	1	02/26/08	02/27/08	

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Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 001 (IRB2399-01) - Water					
EPA 160.5	2	02/24/2008 12:00	02/25/2008 05:20	02/26/2008 09:25	02/26/2008 09:25
EPA 180.1	2	02/24/2008 12:00	02/25/2008 05:20	02/26/2008 09:55	02/26/2008 09:55
EPA 300.0	2	02/24/2008 12:00	02/25/2008 05:20	02/25/2008 07:00	02/25/2008 08:56
EPA 405.1	2	02/24/2008 12:00	02/25/2008 05:20	02/25/2008 16:53	03/01/2008 10:00
Filtration	1	02/24/2008 12:00	02/25/2008 05:20	02/25/2008 09:45	02/25/2008 10:11
SM5540-C	2	02/24/2008 12:00	02/25/2008 05:20	02/25/2008 19:44	02/25/2008 22:16

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B27001 Extracted: 02/27/08											
Blank Analyzed: 02/27/2008 (8B27001-BLK1)											
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
1,1-Dichloroethane	ND	0.50	0.27	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
Benzene	ND	0.50	0.28	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.30	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Surrogate: Dibromofluoromethane	*23.8*			*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: Toluene-d8	*25.2*			*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.2*			*ug/l*	*25.0*		*89*	*80-120*			
LCS Analyzed: 02/27/2008 (8B27001-BS1)											
1,1,1-Trichloroethane	22.8	0.50	0.30	ug/l	25.0		91	65-135			
1,1,2-Trichloroethane	26.2	0.50	0.30	ug/l	25.0		105	70-125			
1,1-Dichloroethane	23.7	0.50	0.27	ug/l	25.0		95	70-125			
1,1-Dichloroethene	22.6	0.50	0.42	ug/l	25.0		90	70-125			
1,2-Dichloroethane	22.6	0.50	0.28	ug/l	25.0		90	60-140			
Benzene	24.8	0.50	0.28	ug/l	25.0		99	70-120			
Carbon tetrachloride	25.0	0.50	0.28	ug/l	25.0		100	65-140			
Chloroform	24.2	0.50	0.33	ug/l	25.0		97	70-130			
Ethylbenzene	25.4	0.50	0.25	ug/l	25.0		102	75-125			
Tetrachloroethene	25.6	0.50	0.32	ug/l	25.0		102	70-125			
Toluene	25.6	0.50	0.36	ug/l	25.0		102	70-120			
Trichloroethene	26.4	0.50	0.26	ug/l	25.0		106	70-125			
Trichlorofluoromethane	23.5	0.50	0.34	ug/l	25.0		94	65-145			
Vinyl chloride	23.5	0.50	0.30	ug/l	25.0		94	55-135			
Xylenes, Total	78.8	1.5	0.90	ug/l	75.0		105	70-125			

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Project ID: Routine Outfall 001

Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B27001 Extracted: 02/27/08											
LCS Analyzed: 02/27/2008 (8B27001-BS1)											
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	*23.8*			*ug/l*	*25.0*		*95*	*80-120*			
Matrix Spike Analyzed: 02/27/2008 (8B27001-MS1)						**Source: IRB2405-01**					
1,1,1-Trichloroethane	20.1	0.50	0.30	ug/l	25.0	ND	80	65-140			
1,1,2-Trichloroethane	23.8	0.50	0.30	ug/l	25.0	ND	95	65-130			
1,1-Dichloroethane	20.7	0.50	0.27	ug/l	25.0	ND	83	65-130			
1,1-Dichloroethene	19.6	0.50	0.42	ug/l	25.0	ND	78	60-130			
1,2-Dichloroethane	20.8	0.50	0.28	ug/l	25.0	ND	83	60-140			
Benzene	22.3	0.50	0.28	ug/l	25.0	ND	89	65-125			
Carbon tetrachloride	22.5	0.50	0.28	ug/l	25.0	ND	90	65-140			
Chloroform	21.0	0.50	0.33	ug/l	25.0	ND	84	65-135			
Ethylbenzene	23.0	0.50	0.25	ug/l	25.0	ND	92	65-130			
Tetrachloroethene	23.4	0.50	0.32	ug/l	25.0	ND	94	65-130			
Toluene	23.4	0.50	0.36	ug/l	25.0	ND	93	70-125			
Trichloroethene	23.9	0.50	0.26	ug/l	25.0	ND	96	65-125			
Trichlorofluoromethane	20.5	0.50	0.34	ug/l	25.0	ND	82	60-145			
Vinyl chloride	20.4	0.50	0.30	ug/l	25.0	ND	81	45-140			
Xylenes, Total	71.5	1.5	0.90	ug/l	75.0	ND	95	60-130			
Surrogate: Dibromofluoromethane	*23.8*			*ug/l*	*25.0*		*95*	*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*			
Matrix Spike Dup Analyzed: 02/27/2008 (8B27001-MSD1)						**Source: IRB2405-01**					
1,1,1-Trichloroethane	21.6	0.50	0.30	ug/l	25.0	ND	86	65-140	7	20	
1,1,2-Trichloroethane	26.3	0.50	0.30	ug/l	25.0	ND	105	65-130	10	25	
1,1-Dichloroethane	22.7	0.50	0.27	ug/l	25.0	ND	91	65-130	9	20	
1,1-Dichloroethene	21.0	0.50	0.42	ug/l	25.0	ND	84	60-130	7	20	
1,2-Dichloroethane	22.7	0.50	0.28	ug/l	25.0	ND	91	60-140	9	20	
Benzene	23.6	0.50	0.28	ug/l	25.0	ND	95	65-125	6	20	
Carbon tetrachloride	23.9	0.50	0.28	ug/l	25.0	ND	96	65-140	6	25	
Chloroform	23.0	0.50	0.33	ug/l	25.0	ND	92	65-135	9	20	
Ethylbenzene	24.1	0.50	0.25	ug/l	25.0	ND	96	65-130	4	20	
Tetrachloroethene	24.3	0.50	0.32	ug/l	25.0	ND	97	65-130	4	20	
Toluene	24.9	0.50	0.36	ug/l	25.0	ND	100	70-125	7	20	

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Sampled: 02/24/08
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B27001 Extracted: 02/27/08											
Matrix Spike Dup Analyzed: 02/27/2008 (8B27001-MSD1)						**Source: IRB2405-01**					
Trichloroethene	25.0	0.50	0.26	ug/l	25.0	ND	100	65-125	4	20	
Trichlorofluoromethane	21.9	0.50	0.34	ug/l	25.0	ND	88	60-145	7	25	
Vinyl chloride	21.8	0.50	0.30	ug/l	25.0	ND	87	45-140	7	30	
Xylenes, Total	74.6	1.5	0.90	ug/l	75.0	ND	99	60-130	4	20	
Surrogate: Dibromofluoromethane	*24.7*			*ug/l*	*25.0*		*99*	*80-120*			
Surrogate: Toluene-d8	*25.4*			*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.8*			*ug/l*	*25.0*		*95*	*80-120*			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B26048 Extracted: 02/26/08											
Blank Analyzed: 02/28/2008 (8B26048-BLK1)											
Bis(2-ethylhexyl)phthalate	2.06	5.0	1.7	ug/l							*J*
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	*13.5*			*ug/l*	*20.0*		*68*	*30-120*			
Surrogate: Phenol-d6	*11.1*			*ug/l*	*20.0*		*56*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*18.2*			*ug/l*	*20.0*		*91*	*40-120*			
Surrogate: Nitrobenzene-d5	*6.54*			*ug/l*	*10.0*		*65*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*7.52*			*ug/l*	*10.0*		*75*	*50-120*			
Surrogate: Terphenyl-d14	*10.5*			*ug/l*	*10.0*		*105*	*50-125*			
LCS Analyzed: 02/28/2008 (8B26048-BS1)											**MNR1**
Bis(2-ethylhexyl)phthalate	11.2	5.0	1.7	ug/l	10.0		112	65-130			
2,4-Dinitrotoluene	9.00	9.0	0.20	ug/l	10.0		90	65-120			
N-Nitrosodimethylamine	7.00	8.0	0.10	ug/l	10.0		70	45-120			*J*
Pentachlorophenol	8.94	8.0	0.10	ug/l	10.0		89	50-120			
2,4,6-Trichlorophenol	8.88	6.0	0.10	ug/l	10.0		89	55-120			
Surrogate: 2-Fluorophenol	*13.3*			*ug/l*	*20.0*		*66*	*30-120*			
Surrogate: Phenol-d6	*13.0*			*ug/l*	*20.0*		*65*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*19.5*			*ug/l*	*20.0*		*97*	*40-120*			
Surrogate: Nitrobenzene-d5	*7.84*			*ug/l*	*10.0*		*78*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*8.14*			*ug/l*	*10.0*		*81*	*50-120*			
Surrogate: Terphenyl-d14	*8.86*			*ug/l*	*10.0*		*89*	*50-125*			
LCS Dup Analyzed: 02/28/2008 (8B26048-BSD1)											
Bis(2-ethylhexyl)phthalate	11.3	5.0	1.7	ug/l	10.0		113	65-130	1	20	
2,4-Dinitrotoluene	8.88	9.0	0.20	ug/l	10.0		89	65-120	1	20	*J*
N-Nitrosodimethylamine	7.08	8.0	0.10	ug/l	10.0		71	45-120	1	20	*J*
Pentachlorophenol	8.56	8.0	0.10	ug/l	10.0		86	50-120	4	25	
2,4,6-Trichlorophenol	8.46	6.0	0.10	ug/l	10.0		85	55-120	5	30	
Surrogate: 2-Fluorophenol	*13.8*			*ug/l*	*20.0*		*69*	*30-120*			
Surrogate: Phenol-d6	*12.5*			*ug/l*	*20.0*		*62*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*19.2*			*ug/l*	*20.0*		*96*	*40-120*			
Surrogate: Nitrobenzene-d5	*7.28*			*ug/l*	*10.0*		*73*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*7.74*			*ug/l*	*10.0*		*77*	*50-120*			

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Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B26048 Extracted: 02/26/08											
LCS Dup Analyzed: 02/28/2008 (8B26048-BSD1)											
Surrogate: Terphenyl-d14	*9.46*			*ug/l*	*10.0*		*95*	*50-125*			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25062 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25062-BLK1)											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	*0.434*			*ug/l*	*0.500*		*87*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.427*			*ug/l*	*0.500*		*85*	*35-115*			
LCS Analyzed: 02/25/2008 (8B25062-BS1)											**MNR1**
alpha-BHC	0.442	0.010	0.0025	ug/l	0.500		88	45-115			
Surrogate: Decachlorobiphenyl	*0.441*			*ug/l*	*0.500*		*88*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.425*			*ug/l*	*0.500*		*85*	*35-115*			
LCS Dup Analyzed: 02/25/2008 (8B25062-BSD1)											
alpha-BHC	0.408	0.010	0.0025	ug/l	0.500		82	45-115	8	30	
Surrogate: Decachlorobiphenyl	*0.439*			*ug/l*	*0.500*		*88*	*45-120*			
Surrogate: Tetrachloro-m-xylene	*0.384*			*ug/l*	*0.500*		*77*	*35-115*			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 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			
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: 8B25079 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25079-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Manganese	ND	20	7.0	ug/l							
Zinc	ND	20	6.0	ug/l							

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25079 Extracted: 02/25/08											
LCS Analyzed: 02/25/2008 (8B25079-BS1)											
Iron	0.494	0.040	0.015	mg/l	0.500		99	85-115			
Manganese	498	20	7.0	ug/l	500		100	85-115			
Zinc	478	20	6.0	ug/l	500		96	85-115			
Matrix Spike Analyzed: 02/25/2008 (8B25079-MS1)						**Source: IRB1985-01**					
Iron	0.971	0.40	0.15	mg/l	0.500	0.506	93	70-130			
Manganese	473	200	70	ug/l	500	ND	95	70-130			
Zinc	467	200	60	ug/l	500	ND	93	70-130			
Matrix Spike Dup Analyzed: 02/25/2008 (8B25079-MSD1)						**Source: IRB1985-01**					
Iron	1.01	0.40	0.15	mg/l	0.500	0.506	101	70-130	4	20	
Manganese	474	200	70	ug/l	500	ND	95	70-130	0	20	
Zinc	478	200	60	ug/l	500	ND	96	70-130	2	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25122 Extracted: 02/25/08											
Blank Analyzed: 02/26/2008 (8B25122-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Manganese	ND	20	7.0	ug/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 02/26/2008 (8B25122-BS1)											
Iron	0.975	0.040	0.015	mg/l	1.00		98	85-115			
Manganese	959	20	7.0	ug/l	1000		96	85-115			
Zinc	963	20	6.0	ug/l	1000		96	85-115			
Matrix Spike Analyzed: 02/26/2008 (8B25122-MS1)						**Source: IRB2473-01**					
Iron	1.01	0.040	0.015	mg/l	1.00	ND	101	70-130			
Manganese	980	20	7.0	ug/l	1000	ND	98	70-130			
Zinc	1010	20	6.0	ug/l	1000	28.9	99	70-130			
Matrix Spike Dup Analyzed: 02/26/2008 (8B25122-MSD1)						**Source: IRB2473-01**					
Iron	1.03	0.040	0.015	mg/l	1.00	ND	103	70-130	2	20	
Manganese	999	20	7.0	ug/l	1000	ND	100	70-130	2	20	
Zinc	1030	20	6.0	ug/l	1000	28.9	100	70-130	1	20	
Batch: 8B25123 Extracted: 02/25/08											
Blank Analyzed: 02/26/2008 (8B25123-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							

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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 001
Report Number: IRB2399

Sampled: 02/24/08
Received: 02/25/08

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: 8B25123 Extracted: 02/25/08											
LCS Analyzed: 02/26/2008 (8B25123-BS1)											
Cadmium	78.9	1.0	0.11	ug/l	80.0		99	85-115			
Copper	80.6	2.0	0.75	ug/l	80.0		101	85-115			
Lead	83.1	1.0	0.30	ug/l	80.0		104	85-115			
Selenium	78.7	2.0	0.30	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 02/26/2008 (8B25123-MS1)						**Source: IRB2107-01**					
Cadmium	77.0	1.0	0.11	ug/l	80.0	ND	96	70-130			
Copper	69.6	2.0	0.75	ug/l	80.0	1.17	85	70-130			
Lead	77.8	1.0	0.30	ug/l	80.0	ND	97	70-130			
Selenium	97.0	2.0	0.30	ug/l	80.0	0.917	120	70-130			
Matrix Spike Dup Analyzed: 02/26/2008 (8B25123-MSD1)						**Source: IRB2107-01**					
Cadmium	82.5	1.0	0.11	ug/l	80.0	ND	103	70-130	7	20	
Copper	71.8	2.0	0.75	ug/l	80.0	1.17	88	70-130	3	20	
Lead	79.1	1.0	0.30	ug/l	80.0	ND	99	70-130	2	20	
Selenium	101	2.0	0.30	ug/l	80.0	0.917	125	70-130	4	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25042 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25042-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: 02/25/2008 (8B25042-BS1)											
Chloride	5.09	0.50	0.25	mg/l	5.00		102	90-110			
Nitrate-N	1.09	0.11	0.060	mg/l	1.13		96	90-110			
Nitrite-N	1.49	0.15	0.090	mg/l	1.52		98	90-110			
Sulfate	9.95	0.50	0.20	mg/l	10.0		99	90-110			*M-3*
Matrix Spike Analyzed: 02/25/2008 (8B25042-MS1)						**Source: IRB2399-01**					
Chloride	20.2	0.50	0.25	mg/l	5.00	15.9	88	80-120			
Nitrate-N	1.61	0.11	0.060	mg/l	1.13	0.512	97	80-120			
Nitrite-N	1.74	0.15	0.090	mg/l	1.52	ND	115	80-120			
Matrix Spike Dup Analyzed: 02/25/2008 (8B25042-MSD1)						**Source: IRB2399-01**					
Chloride	20.2	0.50	0.25	mg/l	5.00	15.9	87	80-120	0	20	
Nitrate-N	1.56	0.11	0.060	mg/l	1.13	0.512	93	80-120	3	20	
Nitrite-N	1.76	0.15	0.090	mg/l	1.52	ND	116	80-120	1	20	
Batch: 8B25050 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25050-BLK1)											
Perchlorate	ND	4.0	1.5	ug/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25050 Extracted: 02/25/08											
LCS Analyzed: 02/25/2008 (8B25050-BS1)											
Perchlorate	48.8	4.0	1.5	ug/l	50.0		98	85-115			
Matrix Spike Analyzed: 02/25/2008 (8B25050-MS1)						**Source: IRB2309-01**					
Perchlorate	55.6	4.0	1.5	ug/l	50.0	ND	111	80-120			
Matrix Spike Dup Analyzed: 02/25/2008 (8B25050-MSD1)						**Source: IRB2309-01**					
Perchlorate	56.6	4.0	1.5	ug/l	50.0	ND	113	80-120	2	20	
Batch: 8B25101 Extracted: 02/25/08											
Blank Analyzed: 03/01/2008 (8B25101-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 03/01/2008 (8B25101-BS1)											
Biochemical Oxygen Demand	184	100	30	mg/l	198		93	85-115			
LCS Dup Analyzed: 03/01/2008 (8B25101-BSD1)											
Biochemical Oxygen Demand	184	100	30	mg/l	198		93	85-115	0	20	
Batch: 8B25103 Extracted: 02/25/08											
Blank Analyzed: 02/25/2008 (8B25103-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 02/25/2008 (8B25103-BS1)											
Surfactants (MBAS)	0.265	0.10	0.044	mg/l	0.250		106	90-110			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B25103 Extracted: 02/25/08											
Matrix Spike Analyzed: 02/25/2008 (8B25103-MS1)						**Source: IRB2403-01**					
Surfactants (MBAS)	0.287	0.10	0.044	mg/l	0.250	ND	115	50-125			
Matrix Spike Dup Analyzed: 02/25/2008 (8B25103-MSD1)						**Source: IRB2403-01**					
Surfactants (MBAS)	0.276	0.10	0.044	mg/l	0.250	ND	111	50-125	4	20	
Batch: 8B26063 Extracted: 02/26/08											
Blank Analyzed: 02/26/2008 (8B26063-BLK1)											
Turbidity	0.100	1.0	0.040	NTU							*J*
Duplicate Analyzed: 02/26/2008 (8B26063-DUP1)						**Source: IRB2402-01**					
Turbidity	2.98	1.0	0.040	NTU		3.03			2	20	
Batch: 8B26098 Extracted: 02/26/08											
Blank Analyzed: 02/26/2008 (8B26098-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/26/2008 (8B26098-BS1)											
Total Cyanide	197	5.0	2.2	ug/l	200		99	90-110			
Matrix Spike Analyzed: 02/26/2008 (8B26098-MS1)						**Source: IRB2473-01**					
Total Cyanide	198	5.0	2.2	ug/l	200	ND	99	70-115			
Matrix Spike Dup Analyzed: 02/26/2008 (8B26098-MSD1)						**Source: IRB2473-01**					
Total Cyanide	200	5.0	2.2	ug/l	200	ND	100	70-115	1	15	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B26101 Extracted: 02/26/08											
Blank Analyzed: 02/26/2008 (8B26101-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 02/26/2008 (8B26101-BS1)											
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0		101	80-115			
Matrix Spike Analyzed: 02/26/2008 (8B26101-MS1)						**Source: IRB2399-01**					
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0	ND	101	70-120			
Matrix Spike Dup Analyzed: 02/26/2008 (8B26101-MSD1)						**Source: IRB2399-01**					
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0	ND	101	70-120	0	15	
Batch: 8B27115 Extracted: 02/27/08											
Duplicate Analyzed: 02/27/2008 (8B27115-DUP1)						**Source: IRB2090-01**					
Specific Conductance	150	1.0	1.0	umhos/cm		150			0	5	
Reference Analyzed: 02/27/2008 (8B27115-SRM1)											
Specific Conductance	549	1.0	1.0	umhos/cm	530		104	90-110			
Batch: 8B27119 Extracted: 02/27/08											
Blank Analyzed: 02/27/2008 (8B27119-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 02/27/2008 (8B27119-BS1)											
Total Dissolved Solids	980	10	10	mg/l	1000		98	90-110			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8B27119 Extracted: 02/27/08											
Duplicate Analyzed: 02/27/2008 (8B27119-DUP1)						**Source: IRB2154-02**					
Total Dissolved Solids	4760	10	10	mg/l		4760			0	10	
Batch: 8B28123 Extracted: 02/28/08											
Blank Analyzed: 02/28/2008 (8B28123-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 02/28/2008 (8B28123-BS1)											
Total Suspended Solids	1030	10	10	mg/l	1000		103	85-115			
Duplicate Analyzed: 02/28/2008 (8B28123-DUP1)						**Source: IRB2355-10**					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
Batch: 8C04046 Extracted: 03/04/08											
Blank Analyzed: 03/04/2008 (8C04046-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/04/2008 (8C04046-BS1)											**MNR1**
Hexane Extractable Material (Oil & Grease)	18.1	5.0	1.4	mg/l	20.2		90	78-114			
LCS Dup Analyzed: 03/04/2008 (8C04046-BSD1)											
Hexane Extractable Material (Oil & Grease)	18.9	5.0	1.4	mg/l	20.2		94	78-114	4	11	

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METHOD BLANK/QC DATA

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: W8B0982 Extracted: 02/26/08											
Blank Analyzed: 02/27/2008 (W8B0982-BLK1)											
Mercury, Dissolved	ND	0.20	0.050	ug/l							
Mercury, Total	ND	0.20	0.050	ug/l							
LCS Analyzed: 02/27/2008 (W8B0982-BS1)											
Mercury, Dissolved	0.920	0.20	0.050	ug/l	1.00		92	85-115			
Mercury, Total	0.920	0.20	0.050	ug/l	1.00		92	85-115			
Matrix Spike Analyzed: 02/27/2008 (W8B0982-MS1)						**Source: 8022631-01**					
Mercury, Dissolved	1.95	0.40	0.10	ug/l	2.00	ND	98	70-130			
Mercury, Total	1.95	0.40	0.10	ug/l	2.00	0.0950	93	70-130			
Matrix Spike Analyzed: 02/27/2008 (W8B0982-MS2)						**Source: 8022633-01**					
Mercury, Dissolved	1.91	0.40	0.10	ug/l	2.00	ND	96	70-130			
Mercury, Total	1.91	0.40	0.10	ug/l	2.00	ND	96	70-130			
Matrix Spike Dup Analyzed: 02/27/2008 (W8B0982-MSD1)						**Source: 8022631-01**					
Mercury, Dissolved	2.00	0.40	0.10	ug/l	2.00	ND	100	70-130	2	20	
Mercury, Total	2.00	0.40	0.10	ug/l	2.00	0.0950	95	70-130	2	20	
Matrix Spike Dup Analyzed: 02/27/2008 (W8B0982-MSD2)						**Source: 8022633-01**					
Mercury, Dissolved	1.93	0.40	0.10	ug/l	2.00	ND	96	70-130	1	20	
Mercury, Total	1.93	0.40	0.10	ug/l	2.00	ND	96	70-130	1	20	

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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
IRB2399-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	1.90	4.7	10
IRB2399-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0094	0.01
IRB2399-01	624-Boeing 001/002 Q (Fr113+X), L	1,1-Dichloroethene	ug/l	0	0.50	3.2
IRB2399-01	624-Boeing 001/002 Q (Fr113+X), L	Trichloroethene	ug/l	0	0.50	5
IRB2399-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.5
IRB2399-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.5	9.1
IRB2399-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	1.53	4.7	4
IRB2399-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.5	8.1
IRB2399-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.5	8.2
IRB2399-01	Ammonia-N, Titr (350.2) w/dist	Ammonia-N (Distilled)	mg/l	0.28	0.50	2
IRB2399-01	BOD	Biochemical Oxygen Demand	mg/l	1.72	2.0	20
IRB2399-01	Cadmium-200.8	Cadmium	ug/l	0.089	1.0	2
IRB2399-01	Chloride - 300.0	Chloride	mg/l	16	0.50	150
IRB2399-01	Copper-200.8	Copper	ug/l	3.87	2.0	7.1
IRB2399-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	1.97	5.0	5
IRB2399-01	Hg_w 245.1	Mercury, Total	ug/l	0.017	0.20	0.2
IRB2399-01	**Iron-200.7**	**Iron**	**mg/l**	**3.48**	**0.040**	**0.3**
IRB2399-01	Lead-200.8	Lead	ug/l	1.63	1.0	2.6
IRB2399-01	Manganese-200.7	Manganese	ug/l	45	20	50
IRB2399-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.032	0.10	0.5
IRB2399-01	Nitrate-N, 300.0	Nitrate-N	mg/l	0.51	0.11	8
IRB2399-01	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IRB2399-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.51	0.26	8
IRB2399-01	Perchlorate 314.0-DEFAULT	Perchlorate	ug/l	0	4.0	6
IRB2399-01	Selenium-200.8	Selenium	ug/l	0.60	2.0	4.1
IRB2399-01	**Settleable Solids**	**Total Settleable Solids**	**ml/l/hr**	**0.20**	**0.10**	**0.1**
IRB2399-01	Sulfate-300.0	Sulfate	mg/l	53	0.50	300
IRB2399-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	235	10	950
IRB2399-01	**TSS - EPA 160.2**	**Total Suspended Solids**	**mg/l**	**38**	**10**	**15**
IRB2399-01	Zinc-200.7	Zinc	ug/l	19	20	54

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LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IRB2399-02	624-Boeing 001/002 Q (Fr113+X), L	1,1-Dichloroethene	ug/l	0	0.50	3.2
IRB2399-02	624-Boeing 001/002 Q (Fr113+X), L	Trichloroethene	ug/l	0	0.50	5

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DATA QUALIFIERS AND DEFINITIONS

J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
M-3	Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 120.1	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 200.7-Diss	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM2540C	Water	X	
SM5540-C	Water	X	X

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

Subcontracted Laboratories

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Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IRB2399-01

Analysis Performed: Gross Alpha
Samples: IRB2399-01

Analysis Performed: Gross Beta
Samples: IRB2399-01

Analysis Performed: Radium, Combined
Samples: IRB2399-01

Analysis Performed: Strontium 90
Samples: IRB2399-01

Analysis Performed: Tritium
Samples: IRB2399-01

Analysis Performed: Uranium, Combined
Samples: IRB2399-01

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: IRB2399-01

Weck Laboratories, Inc

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

Method Performed: EPA 245.1
Samples: IRB2399-01

TestAmerica Irvine

Joseph Doak
Project Manager

Test America Version 12/20/07

CHAIN OF CUSTODY FORM

JRB2399

Client Name/Address	Project	Phone Number / Fax Number
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL NPDES **Routine Outfall 001**	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515
Project Manager: Bronwyn Kelly Sampler: MARISCAL, J. Barroso, R.		

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, **Mn, Fe**	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 001	W	1L Poly	1	2/24/08 12:00	HNO_3	1A	X													24 TAT; Mn and Fe exceeded 2/28/06 and 4/15/06, resp.
Outfall 001 Dup	W	1L Poly	1		HNO_3	1B	X													24 TAT
Outfall 001	W	1L Poly	1		None	2		X												
Outfall 001	W	1L Amber	2		None	3A, 3B			X											MS: 2/25/08 09:20
Outfall 001	W	1L Amber	2		HCl	4A, 4B				X										
Outfall 001	W	500 ml Poly	1		NaOH	5					X									
Outfall 001	W	1L Poly	1		None	6						X								
Outfall 001	W	500 ml Poly	2		None	7A, 7B							X							
Outfall 001	W	500 ml Poly	2		None	8A, 8B								X						24 TAT
Outfall 001	W	500 ml Poly	1		None	9									X					24 TAT
Outfall 001	W	500 ml Poly	2		None	10A, 10B										X				
Outfall 001	W	500 ml Poly	1		H_2SO_4	11											X			
Outfall 001	W	1L Amber	2		None	12A, 12B												X		
Outfall 001	W	1L Amber	2	12-24-08 12:00	None	13A, 13B													X	

Field readings:
Temp = 5.4 c
pH = 7.8
Time of readings = 12:00

Comments

Relinquished By	Date/Time:	Received By	Date/Time:
Ruben Barroso	2-24-08 1430		2/24/08 1430
Relinquished By	Date/Time:	Received By	Date/Time:
	2/24/08 1745		
Relinquished By	Date/Time:	Received By	Date/Time:
Rec. Fridge	2/25/08 0520		2/25/08 0520

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

Sample Integrity: (check)
Intact ✓ On Ice: ✓
3.4/1.4°C

#130

NPDES - 309

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 001**	
Project Manager: Bronwyn Kelly Sampler: MARISCAL, J. 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 — MC	Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, **Mn, Fe**	Comments
Outfall 001	W	VOAs	5	2-24-08 12:05	HCl	14A, 14B, 14C, 14D, 14E	X				
Outfall 001	W	2.5 Gal Cube 500 ml Amber	1 1		None None	15A 15B		X			Unfiltered and unpreserved analysis
~~Outfall 001~~	~~W~~	1 Gal Cube	~~1~~		~~None~~	~~16~~			X		~~Only test if first rain event of the year~~
Outfall 001	W	1L Poly	1	2-24-08 12:05	None	17				X	Filter w/in 24hrs of receipt at lab; Mn and Fe exceeded 2/28/06 and 4/15/06, resp.
Trip Blanks	W	VOAs	3		HCl	18A, 18B, 18C	X				

Relinquished By	Date/Time:	Received By	Date/Time:
Ruben Barroso	2-24-08 1430	[signature]	2/24/08 1430
Relinquished By	Date/Time:	Received By	Date/Time:
Relinquished By	Date/Time:	Received By	Date/Time:
Rec. Fridge.	2/25/08 0520	[signature]	2/25/08 0520

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

Sample Integrity: (check)
Intact ✓ On Ice: ✓ 3.4/1.4°C

NPDES - 310

#130

SUBCONTRACT ORDER

TestAmerica Irvine

IRB2399 80226 30

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: 4.4 °C Ice: (Y) / N

Analysis	Units	Due	Expires	Comments
Sample ID: IRB2399-01	**Water**		Sampled: **02/24/08 12:00**	
Level 4 Data Package - Wet(	N/A	03/05/08	03/23/08 12:00	
Mercury - 245.1, Diss -OUT	ug/l	03/05/08	03/23/08 12:00	Boeing, J flags, Out to Weck
Mercury - 245.1-OUT	ug/l	02/26/08	03/23/08 12:00	Boeing, permit, J flags, out to Weck

Containers Supplied:

125 mL Poly w/HNO3 (AD) 250 mL Poly (AE)

Released By	Date/Time	Received By	Date/Time
Released By	Date/Time	Received By	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: 02/27/08 16:13
Received Date: 02/26/08 12:05
Turn Around: 1 day

Work Order #: 8022630

Client Project: IRB2399

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

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

Dear Joseph Doak :

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

Reviewed by:

Kim G Tu

Project Manager

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

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

Report ID: 8022630
Project ID: IRB2399

Date Received: 02/26/08 12:05
Date Reported: 02/27/08 16:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IRB2399-01	Client		8022630-01	Water	02/24/08 12:00

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

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

Report ID: 8022630
Project ID: IRB2399

Date Received: 02/26/08 12:05
Date Reported: 02/27/08 16:13

IRB2399-01 8022630-01 (Water) Date Sampled: 02/24/08 12:00

Metals by EPA 200 Series Methods

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

Weck Laboratories, Inc
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: 8022630
Project ID: IRB2399

Date Received: 02/26/08 12:05
Date Reported: 02/27/08 16:13

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: 8022630
Project ID: IRB2399

Date Received: 02/26/08 12:05
Date Reported: 02/27/08 16:13

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 W8B0982 - EPA 245.1										
Blank (W8B0982-BLK1)				Analyzed: 02/27/08						
Mercury, Dissolved	ND	0.20	ug/l							
Mercury, Total	ND	0.20	ug/l							
LCS (W8B0982-BS1)				Analyzed: 02/27/08						
Mercury, Dissolved	0.920	0.20	ug/l	1.00		92	85-115			
Mercury, Total	0.920	0.20	ug/l	1.00		92	85-115			
Matrix Spike (W8B0982-MS1)		**Source: 8022631-01**		Analyzed: 02/27/08						
Mercury, Dissolved	1.95	0.40	ug/l	2.00	ND	98	70-130			
Mercury, Total	1.95	0.40	ug/l	2.00	0.0950	93	70-130			
Matrix Spike (W8B0982-MS2)		**Source: 8022633-01**		Analyzed: 02/27/08						
Mercury, Dissolved	1.91	0.40	ug/l	2.00	ND	96	70-130			
Mercury, Total	1.91	0.40	ug/l	2.00	ND	96	70-130			
Matrix Spike Dup (W8B0982-MSD1)		**Source: 8022631-01**		Analyzed: 02/27/08						
Mercury, Dissolved	2.00	0.40	ug/l	2.00	ND	100	70-130	2	20	
Mercury, Total	2.00	0.40	ug/l	2.00	0.0950	95	70-130	2	20	
Matrix Spike Dup (W8B0982-MSD2)		**Source: 8022633-01**		Analyzed: 02/27/08						
Mercury, Dissolved	1.93	0.40	ug/l	2.00	ND	96	70-130	0.9	20	
Mercury, Total	1.93	0.40	ug/l	2.00	ND	96	70-130	0.9	20	

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

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

Report ID: 8022630
Project ID: IRB2399

Date Received: 02/26/08 12:05
Date Reported: 02/27/08 16:13

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.

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.

EBERLINE
SERVICES

March 20, 2008

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

Reference: Test America Project Nos. IRB1995, IRB2337, IRB2341, IRB2342, IRB2399
IRB2400, IRB2401, IRB2403
Eberline Services NELAP Cert #01120CA
Eberline Services Reports R802140-8609, R802169-8610, R802170-8611
R802171-8612, R802172-8613, R802173-8614
R802174-8615, R802175-8616

Dear Mr. Doak:

Attached are data reports for eight water samples. The samples were received at Eberline Services on February 22, 26, 2008 under eight separate Test America subcontract orders. 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). The parenthetical G after a nuclide indicates that the result was obtained by gamma spectroscopy; a "U" in the results column indicates that the nuclide was not detected greater than the indicated minimum detectable activity (MDA). The samples were not filtered prior to analysis. The samples were analyzed in batches with common QC samples. 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 samples were batched with QC samples 8609-002, 003, 004, and 005 for all analyses. 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

Melissa Mannion
Senior Program Manager

MCM/njv

Enclosure: Reports

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 8613
Work Order R802172-01
Received Date 02/26/08

Client TA IRVINE
Contract PROJECT# IRB2399
Matrix WATER

Client Sample ID	Lab Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
IRB2399-01	8613-001	02/24/08	03/16/08	GrossAlpha	3.00 ± 0.96	pCi/L	1.0
			03/16/08	Gross Beta	4.12 ± 0.66	pCi/L	0.92
			03/10/08	Ra-228	0.132 ± 0.19	pCi/L	0.46
			03/12/08	K-40 (G)	U	pCi/L	48
			03/12/08	Cs-137 (G)	U	pCi/L	1.9
			03/14/08	H-3	24.5 ± 88	pCi/L	150
			03/14/08	Ra-226	0.262 ± 0.43	pCi/L	0.75
			03/10/08	Sr-90	-0.085 ± 0.31	pCi/L	0.76
			03/05/08	Total U	0.510 ± 0.058	pCi/L	0.023

Certified by
Report Date 03/20/08

Eberline Services

QC RESULTS

SDG 8613 | Client TA IRVINE
Work Order R802172-01 | Contract PROJECT# IRB2399
Received Date 02/26/08 | Matrix WATER

Lab Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
LCS						
8609-002	GrossAlpha	12.8 ± 0.90	pCi/Smpl	10.2	0.25	125% recovery
	Gross Beta	8.65 ± 0.36	pCi/Smpl	9.37	0.27	92% recovery
	Ra-228	9.55 ± 0.58	pCi/Smpl	8.63	0.79	111% recovery
	Co-60 (G)	216 ± 6.8	pCi/Smpl	223	3.1	97% recovery
	Cs-137 (G)	247 ± 6.5	pCi/Smpl	235	4.3	105% recovery
	Am-241 (G)	208 ± 15	pCi/Smpl	254	17	82% recovery
	H-3	222 ± 14	pCi/Smpl	239	15	93% recovery
	Ra-226	4.52 ± 0.24	pCi/Smpl	4.46	0.081	101% recovery
	Sr-90	10.4 ± 0.75	pCi/Smpl	9.38	0.30	111% recovery
	Total U	1.10 ± 0.13	pCi/Smpl	1.13	0.005	97% recovery
BLANK						
8609-003	GrossAlpha	0 ± 0.15	pCi/Smpl	NA	0.28	<MDA
	Gross Beta	-0.185 ± 0.27	pCi/Smpl	NA	0.44	<MDA
	Ra-228	-0.178 ± 0.26	pCi/Smpl	NA	0.76	<MDA
	K-40 (G)	U	pCi/Smpl	NA	140	<MDA
	Cs-137 (G)	U	pCi/Smpl	NA	5.3	<MDA
	H-3	-3.37 ± 8.5	pCi/Smpl	NA	14	<MDA
	Ra-226	-0.003 ± 0.035	pCi/Smpl	NA	0.071	<MDA
	Sr-90	-0.157 ± 0.21	pCi/Smpl	NA	0.57	<MDA
	Total U	0.00E 00 ± 2.0E-04	pCi/Smpl	NA	4.6E-04	<MDA

DUPLICATES				ORIGINALS					
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	RPD	3σ (Tot)	Eval
8609-004	GrossAlpha	1.98 ± 1.7	2.4	8609-001	3.00 ± 2.0	2.8	41	164	satis.
	Gross Beta	4.45 ± 1.4	2.0		2.91 ± 2.0	3.3	42	108	satis.
	K-40 (G)	U	20		U	39	-	0	satis.
	Cs-137 (G)	U	1.1		U	1.7	-	0	satis.
	H-3	-43.9 ± 86	150		-40.9 ± 84	140	-	0	satis.
	Ra-226	0.125 ± 0.40	0.74		-0.003 ± 0.41	0.79	-	0	satis.
	Sr-90	0.093 ± 0.38	0.86		0.137 ± 0.49	1.1	-	0	satis.
	Total U	1.19 ± 0.13	0.023		1.30 ± 0.15	0.023	9	31	satis.

Certified by _____
Report Date 03/20/08

Eberline Services

QC RESULTS

SDG 8613
Work Order R802172-01
Received Date 02/26/08

Client TA IRVINE
Contract PROJECT# IRB2399
Matrix WATER

SPIKED SAMPLE				ORIGINAL SAMPLE				
Sample ID	Nuclide	Results ± 2σ	MDA	Sample ID	Results ± 2σ	MDA	Added	%Recv
8609-005	GrossAlpha	207 ± 11	2.6	8609-001	3.00 ± 2.0	2.8	164	124
	Gross Beta	148 ± 4.0	2.4		2.91 ± 2.0	3.3	144	101
	H-3	14800 ± 280	150		-40.9 ± 84	140	16000	93
	Ra-226	113 ± 4.4	0.81		-0.003 ± 0.41	0.79	112	101
	Total U	113 ± 14	2.3		1.30 ± 0.15	0.023	113	99

Certified by
Report Date 03/20/08

TestAmerica
ANALYTICAL TESTING CORPORATION

8613

SUBCONTRACT ORDER - PROJECT # IRB2399

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

Project Location: California

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

Analysis	Expiration	Comments
Sample ID: IRB2399-01 Water	**Sampled: 02/24/08 12:00**	
Gamma Spec-O	02/23/09 12:00	Out to Eberline, K-40 and CS-137 only
Gross Alpha-O	08/22/08 12:00	Out to Eberline
Gross Beta-O	08/22/08 12:00	Out to Eberline
Level 4 Data Package - Out	03/23/08 12:00	
Radium, Combined-O	02/23/09 12:00	Out to Eberline
Strontium 90-O	02/23/09 12:00	Out to Eberline
Tritium-O	02/23/09 12:00	Out to Eberline
Uranium, Combined-O	02/23/09 12:00	pCui, Out to Eberline

Containers Supplied:
2.5 gal Poly (IRB2399-01AA)
500 mL Amber (IRB2399-01AB)

SAMPLE INTEGRITY:

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

Released By	Date	Time	Received By	Date	Time
	2/25/08	17:00	Fed-Ex	2/25/08	17:00
FED EX			flex	2/26/08	10:00

NPDES - 322

EBERLINE

RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 2/26/08 10:00 CoC No. IRB2399

Container I.D. No. N/A Requested TAT (Days) STND P.O. Received Yes [ ] No [ ]

INSPECTION

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

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
15. Inspected by JR Date: 2/26/08 Time: 1310

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
IRB2399	< 60						

Ion Chamber Ser. No. _____ Calibration date _____

Alpha Meter Ser. No. _____ Calibration date _____

Beta/Gamma Meter Ser. No. 100482 Calibration date 9 may 2007

Vista
Analytical Laboratory

March 14, 2008

Vista Project I.D.: 30309

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 26, 2008 under your Project Name "IRB2399". 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 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: **2/26/2008**

Vista Lab. ID	Client Sample ID
30309-001	IRB2399-01

SECTION II

Method Blank **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9997	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	9-Mar-08	Date Analyzed DB-5:	10-Mar-08
				Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000937		
1,2,3,7,8-PeCDD	ND	0.00000106		
1,2,3,4,7,8-HxCDD	ND	0.00000142		
1,2,3,6,7,8-HxCDD	ND	0.00000142		
1,2,3,7,8,9-HxCDD	ND	0.00000136		
1,2,3,4,6,7,8-HpCDD	ND	0.00000250		
OCDD	ND	0.00000890		
2,3,7,8-TCDF	ND	0.000000547		
1,2,3,7,8-PeCDF	ND	0.000000924		
2,3,4,7,8-PeCDF	ND	0.000000985		
1,2,3,4,7,8-HxCDF	ND	0.000000699		
1,2,3,6,7,8-HxCDF	ND	0.000000669		
2,3,4,6,7,8-HxCDF	ND	0.000000795		
1,2,3,7,8,9-HxCDF	ND	0.00000107		
1,2,3,4,6,7,8-HpCDF	ND	0.000000964		
1,2,3,4,7,8,9-HpCDF	ND	0.00000105		
OCDF	ND	0.00000275		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	87.0	25 - 164	
	13C-1,2,3,7,8-PeCDD	77.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	82.4	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	88.5	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	81.0	23 - 140	
	13C-OCDD	72.3	17 - 157	
	13C-2,3,7,8-TCDF	85.2	24 - 169	
	13C-1,2,3,7,8-PeCDF	73.1	24 - 185	
	13C-2,3,4,7,8-PeCDF	73.2	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	82.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	94.2	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	89.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	83.4	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	79.0	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	81.7	26 - 138	
	13C-OCDF	72.4	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	113	35 - 197	

Totals

Total TCDD	ND	0.000000937
Total PeCDD	ND	0.00000167
Total HxCDD	ND	0.00000235
Total HpCDD	ND	0.00000320
Total TCDF	ND	0.000000547
Total PeCDF	ND	0.000000953
Total HxCDF	ND	0.000000792
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: MAS

Approved By: Martha M. Maier 14-Mar-2008 13:05

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9997	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	9-Mar-08	Date Analyzed DB-5:	10-Mar-08	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	10.5	6.7 - 15.8	**IS**	13C-2,3,7,8-TCDD	84.4	25 - 164	
1,2,3,7,8-PeCDD	50.0	50.9	35 - 71		13C-1,2,3,7,8-PeCDD	78.2	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	49.8	35 - 82		13C-1,2,3,4,7,8-HxCDD	77.7	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	50.3	38 - 67		13C-1,2,3,6,7,8-HxCDD	80.5	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	50.3	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	77.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	51.0	35 - 70		13C-OCDD	67.4	17 - 157	
OCDD	100	102	78 - 144		13C-2,3,7,8-TCDF	82.6	24 - 169	
2,3,7,8-TCDF	10.0	9.70	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	72.2	24 - 185	
1,2,3,7,8-PeCDF	50.0	51.5	40 - 67		13C-2,3,4,7,8-PeCDF	73.8	21 - 178	
2,3,4,7,8-PeCDF	50.0	51.5	34 - 80		13C-1,2,3,4,7,8-HxCDF	78.8	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	52.0	36 - 67		13C-1,2,3,6,7,8-HxCDF	82.8	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	52.6	42 - 65		13C-2,3,4,6,7,8-HxCDF	78.7	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	53.6	35 - 78		13C-1,2,3,7,8,9-HxCDF	78.2	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	51.9	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	74.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.4	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	75.3	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.1	39 - 69		13C-OCDF	67.4	17 - 157	
OCDF	100	103	63 - 170	**CRS**	37Cl-2,3,7,8-TCDD	107	35 - 197	

Analyst: MAS

Approved By: Martha M. Maier 14-Mar-2008 13:05

Sample ID: **IRB2399-01** **EPA Method 1613**

Client Data

Name: Test America-Irvine, CA
Project: IRB2399
Date Collected: 24-Feb-08
Time Collected: 1200

Sample Data

Matrix: Aqueous
Sample Size: 1.02 L

Laboratory Data

Lab Sample: 30309-001
QC Batch No.: 9997
Date Analyzed DB-5: 11-Mar-08
Date Received: 26-Feb-08
Date Extracted: 9-Mar-08
Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000521		
1,2,3,7,8-PeCDD	ND	0.00000110		
1,2,3,4,7,8-HxCDD	ND	0.00000226		
1,2,3,6,7,8-HxCDD	ND	0.00000230		
1,2,3,7,8,9-HxCDD	ND	0.00000218		
1,2,3,4,6,7,8-HpCDD	0.0000107			J
OCDD	0.0000952			
2,3,7,8-TCDF	ND	0.00000105		
1,2,3,7,8-PeCDF	ND	0.00000116		
2,3,4,7,8-PeCDF	ND	0.00000132		
1,2,3,4,7,8-HxCDF	ND	0.00000145		
1,2,3,6,7,8-HxCDF	ND	0.00000147		
2,3,4,6,7,8-HxCDF	ND	0.000000775		
1,2,3,7,8,9-HxCDF	ND	0.000000981		
1,2,3,4,6,7,8-HpCDF	0.00000228			J
1,2,3,4,7,8,9-HpCDF	ND	0.000000820		
OCDF	0.00000541			J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	78.5	25 - 164	
	13C-1,2,3,7,8-PeCDD	72.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	67.0	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	71.9	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	72.0	23 - 140	
	13C-OCDD	59.7	17 - 157	
	13C-2,3,7,8-TCDF	76.1	24 - 169	
	13C-1,2,3,7,8-PeCDF	64.4	24 - 185	
	13C-2,3,4,7,8-PeCDF	65.9	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	64.4	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	72.2	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	70.4	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	70.6	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	66.4	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	69.5	26 - 138	
	13C-OCDF	63.1	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	115	35 - 197	

Totals

Total TCDD	ND	0.00000100	
Total PeCDD	ND	0.00000205	
Total HxCDD	ND	0.00000413	
Total HpCDD	0.0000221		
Total TCDF	ND	0.00000105	
Total PeCDF	ND	0.00000170	
Total HxCDF	0.00000118		
Total HpCDF	0.00000557		

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: Martha M. Maier 14-Mar-2008 13:05

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

IRB2399 30309 1.3° 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: IRB2399-01	**Water**		Sampled: **02/24/08 12:00**	
1613-Dioxin-HR-Alta	ug/l	03/05/08	03/02/08 12:00	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Level 4 + EDD-OUT	N/A	03/05/08	03/23/08 12:00	**LEVEL IV QC, ACCESS 7 EDD**
Containers Supplied:				
1 L Amber (D)	1 L Amber (E)			

Released By — Date/Time: 2/25/08 1700
Received By: FedEx — Date/Time: 2/25/08 1700
Released By: Fedex — Date/Time: 2/26/08
Received By — Date/Time: 2/27/08 0931

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 30309 TAT unspecified

Samples Arrival:	**Date/Time** 2/26/08 0910	**Initials:** JBB	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 2/27/08 0914	**Initials:** BM	**Location:** WR-2 **Shelf/Rack:** E 2

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		
Temp °C 1.3°	**Time:** 0932	**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 # 7983 8170 4163	✓		
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:

APPENDIX G

Section 7

Outfall 002, January 25, 2008

MEC^{X} Data Validation Reports

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRA2496

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:	IRA2496
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 002	IRA2496-01	30208-001	Water	01/25/08 0940	120.1, 160.2, 160.5, 180.1, 200.8, 245.1, 200.7, 200.8, 625, 624, 900.0, 901.1, 903.1, 904.0, 905.0, 906.0, 1613, ASTM D-5174
Trip Blank	IRA2496-02	N/A	Water	01/25/08	624

II. Sample Management

No anomalies were observed regarding sample management. The sample in this SDG was received at TestAmerica-Irvine within the temperature limits of 4°C ±2°C. The sample was received below the temperature limit at Vista; however, the sample was not noted to have been frozen. The sample was received above the temperature limit at Weck; however, mercury is not considered a volatile analyte. No receipt temperature was noted by 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. Eberline did not sign the transfer COC. The remaining 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 upon receipt 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: March 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 Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (8/02).

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

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

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: Total HpCDD was detected in the method blank above the EDL. The result in the sample was qualified as estimated, "J," as a portion of the reported total HpCDD was

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

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

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

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

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

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

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

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the estimated detection limit (EDL).

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

Reviewed By: P. Meeks
Date Reviewed: March 6, 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 245.1, 200.7, and 200.8,* 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. Mercury was recovered at 66% in the MDL check standard; however, mercury was not detected in the site sample. All remaining MDL and reporting limit check standards were recovered within 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 ICP metals and the ICP-MS total metals analyses. Recoveries were within the method-established control limits. Most 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 not performed on the sample in this SDG. Evaluation of 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. Aliquots for gross alpha and, gross beta were prepared within the five-day analytical holding time for unpreserved samples. The aliquots for radium-226, radium-228, strontium-90, gamma spectroscopy, and total uranium were prepared beyond the five-day holding time for unpreserved samples; therefore, these results were qualified as estimated, "J," for detects and, "UJ," for nondetects.

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

  The gross alpha detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as an estimated detect, "J." The 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: A laboratory duplicate analysis was performed on the sample in this SDG for gross alpha, gross beta, radium-226, radium-228, tritium, strontium-90, and the gamma spectroscopy analytes. The RPDs were within the laboratory-established control limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for the sample in this SDG for gross alpha, gross beta, radium-226, and tritium. The gross alpha recovery was above the control limit; therefore, gross alpha detected in the sample was qualified as an estimated detect, "J." The remaining recoveries were within the laboratory-established control limits. Method accuracy for the remaining analytes was evaluated based on the LCS results.

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. 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 625—Semivolatile Organic Compounds (SVOCs)

Reviewed By: L. Calvin
Date Reviewed: March 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 Semivolatile Organics (DVP-3, Rev. 0), EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review* (2/94).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted within seven days of collection and analyzed within 40 days of extraction.

- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. Samples were analyzed within 12 hours of the DFTPP injection time.

- Calibration: Calibration criteria were met. For applicable target compounds, initial calibration average RRFs were ≥0.05 and %RSDs ≤35%. Continuing calibration RRFs were ≥0.05 and %Ds ≤20%.

- Blanks: Method blanks had no target compound detects above the MDL.

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

- Surrogate Recovery: Recoveries were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision was based on LSC/LSCD results.

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

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

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

- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times.

- Compound Identification: Compound identification was verified. The laboratory analyzed for five semivolatile target compounds by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Reported nondetects are valid to the reporting limit.

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

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

E. 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 ≥0.05 and %RSDs ≤35%. Continuing calibration RRFs were ≥0.05 and %Ds ≤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 002. 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. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any results reported between the MDL and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

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

F. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 6, 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 120.1, 160.2, 160.5, 180.1,* and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: Analytical holding times 48 hours for settleable solids and turbidity, seven days for TSS, and 28 days for conductivity, were met.

- Calibration: 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: No laboratory duplicate analyses were performed for the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. 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. Turbidity was reported from a 5× dilution.

- 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: IRA2496-01 Outfall 002 — **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	30208-001	Date Received:	29-Jan-08
Project:	IRA2496	Sample Size:	1.01 L	QC Batch No.:	9921	Date Extracted:	2-Feb-08
Date Collected:	25-Jan-08			Date Analyzed DB-5:	7-Feb-08	Date Analyzed DB-225:	NA
Time Collected:	0940						

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000925		
1,2,3,7,8-PeCDD	ND	0.00000169		
1,2,3,4,7,8-HxCDD	ND	0.00000232		
1,2,3,6,7,8-HxCDD	ND	0.00000281		
1,2,3,7,8,9-HxCDD	0.00000242			J
1,2,3,4,6,7,8-HpCDD	0.0000860			
OCDD	0.00103			
2,3,7,8-TCDF	ND	0.000000812		
1,2,3,7,8-PeCDF	ND	0.00000112		
2,3,4,7,8-PeCDF	ND	0.00000121		
1,2,3,4,7,8-HxCDF	ND	0.000000815		
1,2,3,6,7,8-HxCDF	0.00000101			J
2,3,4,6,7,8-HxCDF	ND	0.00000102		
1,2,3,7,8,9-HxCDF	ND	0.000000854		
1,2,3,4,6,7,8-HpCDF	0.0000188			J
1,2,3,4,7,8,9-HpCDF	ND	0.00000278		
OCDF	0.0000562			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	84.0	25 - 164	
	13C-1,2,3,7,8-PeCDD	76.5	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	76.0	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	76.4	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	80.7	23 - 140	
	13C-OCDD	67.1	17 - 157	
	13C-2,3,7,8-TCDF	78.5	24 - 169	
	13C-1,2,3,7,8-PeCDF	74.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	65.9	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	82.5	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	72.7	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	70.3	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.4	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	71.8	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	75.7	26 - 138	
	13C-OCDF	72.4	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	85.6	35 - 197	

Totals			
Total TCDD	ND	0.00000191	
Total PeCDD	ND	0.00000379	
Total HxCDD	0.0000208		
Total HpCDD	0.000185		B
Total TCDF	0.00000236		
Total PeCDF	0.00000101		0.00000272
Total HxCDF	0.0000153		
Total HpCDF	0.0000538		

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: MAS

Level IV

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

NPDES - 350

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

Project ID: Routine Outfall 002
Report Number: IRA2496

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

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Barium	EPA 200.8	8A26027	0.00040	0.0010	**0.065**	1	01/26/08	01/26/08	
Iron	EPA 200.7	8A26028	0.015	0.040	**4.3**	1	01/26/08	01/28/08	
Sample ID: IRA2496-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Arsenic	EPA 200.8	8A26027	0.70	1.0	**2.4**	1	01/26/08	01/26/08	
Beryllium J/DNQ	EPA 200.8	8A26027	0.20	0.50	**0.29**	1	01/26/08	01/26/08	J
Cadmium ↓	EPA 200.8	8A26027	0.11	1.0	**0.18**	1	01/26/08	01/26/08	J
Chromium	EPA 200.8	8A26027	0.70	2.0	**9.7**	1	01/26/08	01/26/08	
Copper	EPA 200.8	8A26027	0.75	2.0	**8.4**	1	01/26/08	01/26/08	
Lead	EPA 200.8	8A26027	0.30	1.0	**7.1**	1	01/26/08	01/26/08	
Manganese	EPA 200.8	8A26027	0.75	1.0	**120**	1	01/26/08	01/28/08	
Nickel	EPA 200.8	8A26027	0.90	2.0	**7.2**	1	01/26/08	01/26/08	
Selenium U	EPA 200.8	8A26027	0.30	2.0	ND	1	01/26/08	01/26/08	
Zinc	EPA 200.7	8A26028	6.0	20	**36**	1	01/26/08	01/28/08	

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002
Report Number: IRA2496

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

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Barium	EPA 200.8-Diss	8B04109	0.00080	0.0020	**0.019**	2	02/04/08	02/05/08	
Iron	EPA 200.7-Diss	8A25155	0.015	0.040	**0.10**	1	01/25/08	01/26/08	
Sample ID: IRA2496-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Arsenic U	EPA 200.8-Diss	8B04109	1.4	2.0	ND	2	02/04/08	02/05/08	RL1
Beryllium	EPA 200.8-Diss	8B04109	0.40	1.0	ND	2	02/04/08	02/05/08	RL1
Cadmium	EPA 200.8-Diss	8B04109	0.22	2.0	ND	2	02/04/08	02/05/08	RL1
Chromium	EPA 200.8-Diss	8B04109	1.4	4.0	ND	2	02/04/08	02/05/08	RL1
Copper J/DNQ	EPA 200.8-Diss	8B04109	1.5	4.0	**3.1**	2	02/04/08	02/05/08	RL1, J
Lead U	EPA 200.8-Diss	8B04109	0.60	2.0	ND	2	02/04/08	02/05/08	RL1
Manganese	EPA 200.8-Diss	8B04109	1.5	2.0	**7.7**	2	02/04/08	02/05/08	
Nickel J/DNQ	EPA 200.8-Diss	8B04109	1.8	4.0	**2.2**	2	02/04/08	02/05/08	RL1, J
Selenium U	EPA 200.8-Diss	8B04109	0.60	4.0	ND	2	02/04/08	02/05/08	RL1
Zinc	EPA 200.7-Diss	8A25155	6.0	20	ND	1	01/25/08	01/26/08	

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Report Number: IRA2496

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

Metals by EPA 200 Series Methods

Analyte		Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.										
Reporting Units: ug/l										
Mercury, Dissolved	U	EPA 245.1	W8A1034	0.050	0.20	ND	1	01/29/08	01/30/08	
Mercury, Total	U	EPA 245.1	W8A1034	0.050	0.20	ND	1	01/29/08	01/30/08	

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Eberline Services

ANALYSIS RESULTS

SDG	8687	Client	TA IRVINE
Work Order	R801170-01	Contract	PROJECT# IRA2496
Received Date	01/29/08	Matrix	WATER

Client Sample ID	Lab Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	
Outfall 002								
IRA2496-01	8687-001	01/25/08	02/15/08	GrossAlpha	2.21 ± 1.1	pCi/L	1.4	J/R,Q
			02/15/08	Gross Beta	4.33 ± 1.0	pCi/L	1.5	
			02/20/08	Ra-228	0.159 ± 0.19	pCi/L	0.49	UJ/H
			02/12/08	K-40 (G)	U	pCi/L	12	
			02/12/08	Cs-137 (G)	U	pCi/L	0.53	U
			02/21/08	H-3	-77.4 ± 91	pCi/L	160	
			02/20/08	Ra-226	0.047 ± 0.45	pCi/L	0.83	UJ/H
			02/14/08	Sr-90	0.076 ± 0.32	pCi/L	0.68	
			02/19/08	Total U	0.636 ± 0.070	pCi/L	0.022	J/H

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Certified by _____

Report Date 02/27/08

Page 1

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Project ID: Routine Outfall 002
Report Number: IRA2496

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

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	8A29057	1.6	4.8	**5.7**	0.966	01/29/08	01/31/08	
2,4-Dinitrotoluene	EPA 625	8A29057	0.19	8.7	ND	0.966	01/29/08	01/31/08	
N-Nitrosodimethylamine	EPA 625	8A29057	0.097	7.7	ND	0.966	01/29/08	01/31/08	
Pentachlorophenol	EPA 625	8A29057	0.097	7.7	ND	0.966	01/29/08	01/31/08	
2,4,6-Trichlorophenol	EPA 625	8A29057	0.097	5.8	ND	0.966	01/29/08	01/31/08	
Surrogate: 2-Fluorophenol (30-120%)					*73 %*				
Surrogate: Phenol-d6 (35-120%)					*76 %*				
Surrogate: 2,4,6-Tribromophenol (40-120%)					*114 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*80 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*85 %*				
Surrogate: Terphenyl-d14 (50-125%)					*104 %*				

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IRA2496

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

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	8A29009	0.28	2.0	ND	1	01/29/08	01/29/08	
Carbon tetrachloride	EPA 624	8A29009	0.28	5.0	ND	1	01/29/08	01/29/08	
Chloroform	EPA 624	8A29009	0.33	2.0	ND	1	01/29/08	01/29/08	
1,1-Dichloroethane	EPA 624	8A29009	0.27	2.0	ND	1	01/29/08	01/29/08	
1,2-Dichloroethane	EPA 624	8A29009	0.28	2.0	ND	1	01/29/08	01/29/08	
1,1-Dichloroethene	EPA 624	8A29009	0.42	3.0	ND	1	01/29/08	01/29/08	
Ethylbenzene	EPA 624	8A29009	0.25	2.0	ND	1	01/29/08	01/29/08	
Tetrachloroethene	EPA 624	8A29009	0.32	2.0	ND	1	01/29/08	01/29/08	
Toluene	EPA 624	8A29009	0.36	2.0	ND	1	01/29/08	01/29/08	
1,1,1-Trichloroethane	EPA 624	8A29009	0.30	2.0	ND	1	01/29/08	01/29/08	
1,1,2-Trichloroethane	EPA 624	8A29009	0.30	2.0	ND	1	01/29/08	01/29/08	
Trichloroethene	EPA 624	8A29009	0.26	5.0	**1.0**	1	01/29/08	01/29/08	J
Trichlorofluoromethane	EPA 624	8A29009	0.34	5.0	ND	1	01/29/08	01/29/08	
Vinyl chloride	EPA 624	8A29009	0.30	5.0	ND	1	01/29/08	01/29/08	
Xylenes, Total	EPA 624	8A29009	0.90	4.0	ND	1	01/29/08	01/29/08	
Surrogate: Dibromofluoromethane (80-120%)					*99 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*90 %*				
Sample ID: IRA2496-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	8A29009	0.28	2.0	ND	1	01/29/08	01/29/08	
Carbon tetrachloride	EPA 624	8A29009	0.28	5.0	ND	1	01/29/08	01/29/08	
Chloroform	EPA 624	8A29009	0.33	2.0	ND	1	01/29/08	01/29/08	
1,1-Dichloroethane	EPA 624	8A29009	0.27	2.0	ND	1	01/29/08	01/29/08	
1,2-Dichloroethane	EPA 624	8A29009	0.28	2.0	ND	1	01/29/08	01/29/08	
1,1-Dichloroethene	EPA 624	8A29009	0.42	3.0	ND	1	01/29/08	01/29/08	
Ethylbenzene	EPA 624	8A29009	0.25	2.0	ND	1	01/29/08	01/29/08	
Tetrachloroethene	EPA 624	8A29009	0.32	2.0	ND	1	01/29/08	01/29/08	
Toluene	EPA 624	8A29009	0.36	2.0	ND	1	01/29/08	01/29/08	
1,1,1-Trichloroethane	EPA 624	8A29009	0.30	2.0	ND	1	01/29/08	01/29/08	
1,1,2-Trichloroethane	EPA 624	8A29009	0.30	2.0	ND	1	01/29/08	01/29/08	
Trichloroethene	EPA 624	8A29009	0.26	5.0	ND	1	01/29/08	01/29/08	
Trichlorofluoromethane	EPA 624	8A29009	0.34	5.0	ND	1	01/29/08	01/29/08	
Vinyl chloride	EPA 624	8A29009	0.30	5.0	ND	1	01/29/08	01/29/08	
Xylenes, Total	EPA 624	8A29009	0.90	4.0	ND	1	01/29/08	01/29/08	
Surrogate: Dibromofluoromethane (80-120%)					*95 %*				
Surrogate: Toluene-d8 (80-120%)					*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*92 %*				

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 002
Report Number: IRA2496

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

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	8B04061	1.3	4.8	ND	1	02/04/08	02/04/08	
Ammonia-N (Distilled)	EPA 350.2	8A29110	0.30	0.50	ND	1	01/29/08	01/29/08	
Biochemical Oxygen Demand	EPA 405.1	8A25151	0.59	2.0	**2.6**	1	01/25/08	01/30/08	
Chloride	EPA 300.0	8A25053	0.25	0.50	**17**	1	01/25/08	01/25/08	
Nitrate-N	EPA 300.0	8A25053	0.060	0.11	**1.2**	1	01/25/08	01/25/08	
Nitrite-N	EPA 300.0	8A25053	0.090	0.15	ND	1	01/25/08	01/25/08	
Nitrate/Nitrite-N	EPA 300.0	8A25053	0.15	0.26	**1.2**	1	01/25/08	01/25/08	
Sulfate	EPA 300.0	8A25053	0.20	0.50	**52**	1	01/25/08	01/25/08	
Surfactants (MBAS)	SM5540-C	8A25148	0.044	0.10	**0.064**	1	01/25/08	01/25/08	J
Total Dissolved Solids	SM2540C	8A31077	10	10	**210**	1	01/31/08	01/31/08	
Total Suspended Solids	EPA 160.2	8A30131	10	10	**140**	1	01/30/08	01/30/08	

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	8A26035	0.10	0.10	**0.30**	1	01/26/08	01/26/08	

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.									
Reporting Units: NTU									
Turbidity	EPA 180.1	8A26036	0.20	5.0	**140**	5	01/26/08	01/26/08	

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRA2496-01 (Outfall 002 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	8A31072	1.0	1.0	**310**	1	01/31/08	01/31/08	

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