# APPENDIX G

## Section 105

Outfall 018 - BMP Effectiveness, February 5, 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: Boeing BMP Effectiveness Monitoring Program

Sampled: 02/05/08
Received: 02/05/08
Issued: 02/14/08 15:39

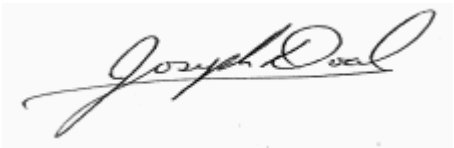
NELAP #01108CA California ELAP#1197 CSDLAC #10256

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

## SAMPLE CROSS REFERENCE

| LABORATORY ID | CLIENT ID | MATRIX |
|---|---|---|
| IRB0427-01 | 018 EFF-1 | Water |

Reviewed By:



**TestAmerica Irvine**

Joseph Doak
Project Manager

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Attention: Bronwyn Kelly

Project ID: Boeing BMP Effectiveness Monitoring Program
Report Number: IRB0427

Sampled: 02/05/08
Received: 02/05/08

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB0427-01 (018 EFF-1 - Water)** | | | | | | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8B11085 | N/A | NA | **1.0** | 1 | 02/11/08 | 02/11/08 | |
| **Sample ID: IRB0427-01 (018 EFF-1 - Water)** | | | | | | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| Sediment | ASTM D3977 | 8B14087 | 10 | 10 | ND | 1 | 02/14/08 | 02/14/08 | |

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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: 8B11085 Extracted: 02/11/08** | | | | | | | | | | | |
| **Duplicate Analyzed: 02/11/2008 (8B11085-DUP1)** | | | | | | **Source: IRA3091-01** | | | | | |
| Density | 0.999 | NA | N/A | g/cc | | 1.00 | | | 0 | 20 | |

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## DATA QUALIFIERS AND DEFINITIONS

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

**RPD** Relative Percent Difference

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## Certification Summary

**TestAmerica Irvine**

| Method | Matrix | Nelac | California |
|---|---|---|---|
| ASTM D3977 | Water | | |
| Displacement | Water | | |

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

**TestAmerica Irvine**

Joseph Doak
Project Manager

IRB0427

# Test America Version 12/20/07 — CHAIN OF CUSTODY FORM — IRB0427 — Page 1 of 1

| Client Name/Address: | Project: **Boeing BMP Effectiveness Monitoring Program** |
|---|---|
| MWH-Arcadia<br>618 Michillinda Avenue, Suite 200<br>Arcadia, CA 91007<br><br>Test America Contact: Joseph Doak | |
| Project Manager: Bronwyn Kelly<br><br>Sampler: FRANCISCAL, J.<br>Borroso, R. | Phone Number:<br>(626) 568-6691<br>Fax Number:<br>(626) 568-6515 |

| Sample Description | Sample Matrix | Container Type | # of Cont. | Sampling Date/Time | Preservative | Bottle # | ANALYSIS REQUIRED: Suspended Sediment Concentration (SSC, ASTM-D3977-1997) | Comments |
|---|---|---|---|---|---|---|---|---|
| 018 EFF-1 | W | 500 mL Poly | 1 | 2/5/08 12 25 EC | None | 1 | X | GRAB |
| ~~018 EFF-2~~ | ~~W~~ | ~~500 mL Poly~~ | ~~1~~ | | ~~None~~ | ~~2~~ | ~~X~~ | |
| 018 EFF-3 | W | 500 mL Poly | 1 | | None | 3 | X | |
| 018 EFF-4 | W | 500 mL Poly | 1 | | None | 4 | X | |
| 018 EFF-5 | W | 500 mL Poly | 1 | | None | 5 | X | |
| 018 EFF-6 | W | 500 mL Poly | 1 | | None | 6 | X | |
| 018 EFF-7 | W | 500 mL Poly | 1 | | None | 7 | X | |
| 018 EFF-8 | W | 500 mL Poly | 1 | | None | 8 | X | |
| 018 EFF-9 | W | 500 mL Poly | 1 | | None | 9 | X | |
| 018 EFF-10 | W | 500 mL Poly | 1 | | None | 10 | X | |
| 018 EFF-11 | W | 500 mL Poly | 1 | | None | 11 | X | |
| 018 EFF-12 | W | 500 mL Poly | 1 | | None | 12 | X | |
| 018 EFF-13 | W | 500 mL Poly | 1 | | None | 13 | X | |
| 018 EFF-14 | W | 500 mL Poly | 1 | | None | 14 | X | |
| 018 EFF-15 | W | 500 mL Poly | 1 | | None | 15 | X | |
| 018 EFF-16 | W | 500 mL Poly | 1 | | None | 16 | X | |
| 018 EFF-17 | W | 500 mL Poly | 1 | | None | 17 | X | |
| 018 EFF-18 | W | 500 mL Poly | 1 | | None | 18 | X | |
| 018 EFF-19 | W | 500 mL Poly | 1 | | None | 19 | X | |
| 018 EFF-20 | W | 500 mL Poly | 1 | | None | 20 | X | |
| 018 EFF-21 | W | 500 mL Poly | 1 | | None | 21 | X | |
| 018 EFF-22 | W | 500 mL Poly | 1 | | None | 22 | X | |
| 018 EFF-23 | W | 500 mL Poly | 1 | | None | 23 | X | |
| 018 EFF-24 | W | 500 mL Poly | 1 | | None | 24 | X | |

Field readings:
~~Temp =~~ NA
~~pH =~~ NA
~~Time of readings =~~ NA

| Relinquished By | Date/Time: | Received By | Date/Time: |
|---|---|---|---|
| Ruben Borroso | 2/5/08 | | |
| Relinquished By | Date/Time: | Received By | Date/Time: |
| | 2/5/8 1850 | | 2/5/8 1525 |
| Relinquished By | Date/Time: | Received By | Date/Time: |
| | | James Magnuson | 2/5/08 1850 |

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

Sample Integrity: (check)
Intact ✓ On Ice: ✓
5°/3°C

KY 2/06/08 8 16

B3

NPDES - 4179

# APPENDIX G

## Section 106

Outfall 018, February 24, 2008

MEC$^X$ Data Validation Reports

# DATA VALIDATION REPORT

## Boeing SSFL NPDES

### SAMPLE DELIVERY GROUP: IRB2403

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: | IRB2403 |
| 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 018 | IRB2403-01 | 30305-001, 8022634-01, 8616-001 | Water | 02/24/08 1245 | 120.1, 180.1, 200.8, 245.1, 625, 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 8, 2008

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had no target compound detects above the EDL.

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

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

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

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

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

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

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

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

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

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

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

- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were ≤5%, and all masses of interest were calibrated to ≤0.1 amu and ≤0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration $r^2$ values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS

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

- Blanks: Zinc and cadmium were detected in the total metals method blank at 6.39 and 0.133 µg/L, respectively; therefore, the detect for total zinc 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 the total ICP-MS analyses only. Recoveries were within the method-established control limits. Most analytes were reported in the ICSA solution; however. 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: No MS/MSD analyses were performed on the sample in this. 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. Due to matrix interference, the total metals fraction was reported from a 2× dilution. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

  The reviewer noted that cadmium and lead were detected at marginally above the MDL in the dissolved metals sample fraction but was not detected in the total metals fraction. The difference between the total and dissolved results was within the sensitivity limits of the analytical instrument and, therefore, the reviewer considered the total and dissolved results to be equivalent. Zinc was originally detected at a higher concentration in the total metals fraction but was subsequently qualified as an estimated nondetect due to method blank contamination.

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

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

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

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

Reviewed By: L. Calvin
Date Reviewed: April 3, 2008

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC$^X$ Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625* 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. Initial calibration average RRFs were $\geq$0.05 and %RSDs $\leq$35% or $r^2$ >0.995 for the applicable target compounds. Continuing calibration RRFs were $\geq$0.05 and %Ds $\leq$20%.

- Blanks: The method blank had a detect above the reporting limit for bis(2-ethylhexyl)phthalate at 2.06 µg/L. The sample detect above the reporting limit for bis(2-ethylhexyl)phthalate was qualified as an estimated nondetect, "UJ," at the level of contamination.
- 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 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. 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.

## E. VARIOUS EPA METHODS—General Minerals

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

The sample listed in Table 1 for these analyses 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 and 180.1,* and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: Conductivity was measured beyond the 24-hour holding time; therefore, conductivity reported in the site sample was qualified as an estimated detect, "J." The remaining analytical holding time, 48 hours for turbidity, was met.

- Calibration: The turbidity and conductivity check standard recoveries were acceptable.

- Blanks: Turbidity was detected in the method blank but not at a concentration sufficient to qualify the site sample.

- Blank Spikes and Laboratory Control Samples: The LCS is not applicable to conductivity or turbidity.

- Laboratory Duplicates: Laboratory duplicate analyses were performed for the sample in this SDG for conductivity. The RPD was within the laboratory-established control limit.

- Matrix Spike/Matrix Spike Duplicate: Not applicable to these analyses.

- Sample Result Verification: Review is not applicable at a Level V validation. Nondetects are valid to the reporting limit.

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

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

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

**Sample ID:** IRB2403-01 Outfall 018 — **EPA Method 1613**

| Client Data | | Sample Data | | Laboratory Data | | | |
|---|---|---|---|---|---|---|---|
| Name: | Test America-Irvine, CA | Matrix: | Aqueous | Lab Sample: | 30305-001 | Date Received: | 26-Feb-08 |
| Project: | IRB2403 | Sample Size: | 1.03 L | QC Batch No.: | 9997 | Date Extracted: | 9-Mar-08 |
| Date Collected: | 24-Feb-08 | | | Date Analyzed DB-5: | 10-Mar-08 | Date Analyzed DB-225: | NA |
| Time Collected: | 1245 | | | | | | |

| Analyte | Conc. (ug/L) | DL [a] | EMPC [b] | Qualifiers |
|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | 0.000000871 | | |
| 1,2,3,7,8-PeCDD | ND | 0.00000163 | | |
| 1,2,3,4,7,8-HxCDD | ND | 0.00000239 | | |
| 1,2,3,6,7,8-HxCDD | ND | 0.00000432 | | |
| 1,2,3,7,8,9-HxCDD | ND | 0.00000412 | | |
| 1,2,3,4,6,7,8-HpCDD | 0.0000401 | | | |
| OCDD | 0.000404 | | | |
| 2,3,7,8-TCDF | ND | 0.00000157 | | |
| 1,2,3,7,8-PeCDF | ND | 0.00000162 | | |
| 2,3,4,7,8-PeCDF | ND | 0.000000987 | | |
| 1,2,3,4,7,8-HxCDF | ND | 0.00000106 | | |
| 1,2,3,6,7,8-HxCDF | ND | 0.00000108 | | |
| 2,3,4,6,7,8-HxCDF | ND | 0.00000153 | | |
| 1,2,3,7,8,9-HxCDF | ND | 0.000000844 | | |
| 1,2,3,4,6,7,8-HpCDF | 0.00000916 | | | J |
| 1,2,3,4,7,8,9-HpCDF | ND | 0.00000120 | | |
| OCDF | 0.0000158 | | | J |

| Totals | | | |
|---|---|---|---|
| Total TCDD | ND | 0.000000871 | |
| Total PeCDD | ND | 0.00000342 | |
| Total HxCDD | 0.00000968 | | |
| Total HpCDD | 0.0000812 | | |
| Total TCDF | ND | | 0.00000188 |
| Total PeCDF | ND | | 0.000000778 |
| Total HxCDF | 0.00000828 | | |
| Total HpCDF | 0.0000208 | | |

| | Labeled Standard | %R | LCL-UCL [d] | Qualifiers |
|---|---|---|---|---|
| IS | 13C-2,3,7,8-TCDD | 74.5 | 25 - 164 | |
| | 13C-1,2,3,7,8-PeCDD | 69.0 | 25 - 181 | |
| | 13C-1,2,3,4,7,8-HxCDD | 68.6 | 32 - 141 | |
| | 13C-1,2,3,6,7,8-HxCDD | 76.0 | 28 - 130 | |
| | 13C-1,2,3,4,6,7,8-HpCDD | 71.8 | 23 - 140 | |
| | 13C-OCDD | 64.2 | 17 - 157 | |
| | 13C-2,3,7,8-TCDF | 76.2 | 24 - 169 | |
| | 13C-1,2,3,7,8-PeCDF | 64.3 | 24 - 185 | |
| | 13C-2,3,4,7,8-PeCDF | 65.8 | 21 - 178 | |
| | 13C-1,2,3,4,7,8-HxCDF | 68.5 | 26 - 152 | |
| | 13C-1,2,3,6,7,8-HxCDF | 77.3 | 26 - 123 | |
| | 13C-2,3,4,6,7,8-HxCDF | 74.4 | 28 - 136 | |
| | 13C-1,2,3,7,8,9-HxCDF | 73.1 | 29 - 147 | |
| | 13C-1,2,3,4,6,7,8-HpCDF | 66.7 | 28 - 143 | |
| | 13C-1,2,3,4,7,8,9-HpCDF | 71.0 | 26 - 138 | |
| | 13C-OCDF | 65.9 | 17 - 157 | |
| CRS | 37Cl-2,3,7,8-TCDD | 109 | 35 - 197 | |

**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: Martha M. Maier 14-Mar-2008 11:33

NPDES - 4193

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

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Cadmium U | EPA 200.8 | 8B28067 | 0.22 | 2.0 | ND | 2 | 02/28/08 | 02/29/08 | RL1 |
| **Copper** J/DNQ | EPA 200.8 | 8B28067 | 1.5 | 4.0 | **3.4** | 2 | 02/28/08 | 02/29/08 | RL1, J |
| **Lead** ↓ | EPA 200.8 | 8B28067 | 0.60 | 2.0 | **0.81** | 2 | 02/28/08 | 02/29/08 | RL1, J |
| Selenium U | EPA 200.8 | 8B28067 | 0.60 | 4.0 | ND | 2 | 02/28/08 | 02/29/08 | RL1 |
| **Zinc** UJ/B | EPA 200.8 | 8B28067 | 5.0 | 40 | **28** | 2 | 02/28/08 | 02/29/08 | B, RL1, J |

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Project Manager

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| **Cadmium** J/DNQ | EPA 200.8-Diss | 8B25123 | 0.11 | 1.0 | **0.12** | 1 | 02/25/08 | 02/26/08 | J |
| **Copper** ↓ | EPA 200.8-Diss | 8B25123 | 0.75 | 2.0 | **0.86** | 1 | 02/25/08 | 02/26/08 | J |
| Lead U | EPA 200.8-Diss | 8B25123 | 0.30 | 1.0 | ND | 1 | 02/25/08 | 02/26/08 | |
| Selenium ↓ | EPA 200.8-Diss | 8B25123 | 0.30 | 2.0 | ND | 1 | 02/25/08 | 02/26/08 | |
| **Zinc** J/DNQ | EPA 200.8-Diss | 8B25123 | 2.5 | 20 | **13** | 1 | 02/25/08 | 02/26/08 | J |

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - 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

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Joseph Doak
Project Manager

# Eberline Services

## ANALYSIS RESULTS

| | |
|---|---|
| SDG 8616 | Client TA IRVINE |
| Work Order R802175-01 | Contract PROJECT# IRB2403 |
| Received Date 02/26/08 | Matrix WATER |

| Client Sample ID | Lab Sample ID | Collected | Analyzed | Nuclide | Results ± 2σ | Units | MDA | |
|---|---|---|---|---|---|---|---|---|
| IRB2403-01 | 8616-001 | 02/24/08 | 03/16/08 | GrossAlpha | 2.15 ± 1.1 | pCi/L | 1.3 | J/R |
| | | | 03/16/08 | Gross Beta | 4.36 ± 1.1 | pCi/L | 1.7 | |
| | | | 03/10/08 | Ra-228 | -0.101 ± 0.15 | pCi/L | 0.45 | UJ/H |
| | | | 03/12/08 | K-40 (G) | U | pCi/L | 14 | |
| | | | 03/12/08 | Cs-137 (G) | U | pCi/L | 0.94 | |
| | | | 03/14/08 | H-3 | -58.7 ± 85 | pCi/L | 150 | U |
| | | | 03/14/08 | Ra-226 | 2.27 ± 0.71 | pCi/L | 0.78 | J/H |
| | | | 03/10/08 | Sr-90 | -0.106 ± 0.36 | pCi/L | 0.88 | UJ/H |
| | | | 03/05/08 | Total U | 0.533 ± 0.060 | pCi/L | 0.023 | J/H |

LEVEL IV

Certified by _____

Report Date 03/20/08

Page 1

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| **Bis(2-ethylhexyl)phthalate** UJ/B | EPA 625 | 8B26048 | 1.6 | 4.8 | **19** | 0.952 | 02/26/08 | 02/28/08 | B |
| 2,4-Dinitrotoluene U | EPA 625 | 8B26048 | 0.19 | 8.6 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| N-Nitrosodimethylamine | EPA 625 | 8B26048 | 0.095 | 7.6 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| Pentachlorophenol | EPA 625 | 8B26048 | 0.095 | 7.6 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| 2,4,6-Trichlorophenol | EPA 625 | 8B26048 | 0.095 | 5.7 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| *Surrogate: 2-Fluorophenol (30-120%)* | | | | | *65 %* | | | | |
| *Surrogate: Phenol-d6 (35-120%)* | | | | | *59 %* | | | | |
| *Surrogate: 2,4,6-Tribromophenol (40-120%)* | | | | | *108 %* | | | | |
| *Surrogate: Nitrobenzene-d5 (45-120%)* | | | | | *74 %* | | | | |
| *Surrogate: 2-Fluorobiphenyl (50-120%)* | | | | | *77 %* | | | | |
| *Surrogate: Terphenyl-d14 (50-125%)* | | | | | *107 %* | | | | |

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Hexane Extractable Material (Oil & Grease)** * | EPA 1664A | 8C04046 | 1.4 | 4.9 | **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 | **2.2** | 1 | 02/25/08 | 03/01/08 | |
| **Chloride** | EPA 300.0 | 8B25042 | 0.25 | 0.50 | **22** | 1 | 02/25/08 | 02/25/08 | |
| **Nitrate-N** | EPA 300.0 | 8B25042 | 0.060 | 0.11 | **0.68** | 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 | **0.68** | 1 | 02/25/08 | 02/25/08 | |
| **Sulfate** | EPA 300.0 | 8B25042 | 0.40 | 1.0 | **84** | 2 | 02/25/08 | 02/25/08 | |
| Surfactants (MBAS) | EPA 425.1 | 8B25103 | 0.044 | 0.10 | ND | 1 | 02/25/08 | 02/25/08 | |
| **Total Dissolved Solids** | EPA 160.1 | 8B27119 | 10 | 10 | **290** | 1 | 02/27/08 | 02/27/08 | |
| **Total Suspended Solids** | EPA 160.2 | 8B28123 | 10 | 10 | **27** | 1 | 02/28/08 | 02/28/08 | |
| **Sample ID: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **Reporting Units: ml/l/hr** | | | | | | | | | |
| Total Settleable Solids * | EPA 160.5 | 8B26062 | 0.10 | 0.10 | ND | 1 | 02/26/08 | 02/26/08 | |
| **Sample ID: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **Reporting Units: NTU** | | | | | | | | | |
| **Turbidity** | EPA 180.1 | 8B26063 | 0.040 | 1.0 | **22** | 1 | 02/26/08 | 02/26/08 | |
| **Sample ID: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **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 | 8B28045 | 1.5 | 4.0 | ND | 1 | 02/28/08 | 02/29/08 | |

* Analysis not validated

LEVEL IV

**TestAmerica Irvine**

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

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: umhos/cm** | | | | | | | | | |
| **Specific Conductance** J/4 | EPA 120.1 | 8B27117 | 1.0 | 1.0 | **440** | 1 | 02/27/08 | 02/27/08 | |

LEVEL IV

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Joseph Doak
Project Manager

# APPENDIX G

## Section 107

Outfall 018, 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 018

Sampled: 02/24/08
Received: 02/25/08
Issued: 03/17/08 14:10

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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

## CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 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.

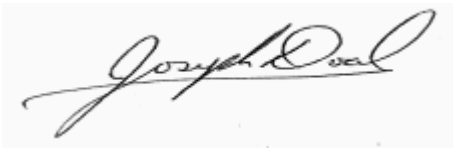
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

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 |
|---|---|---|
| IRB2403-01 | Outfall 018 | Water |
| IRB2403-02 | Trip Blank | Water |

Reviewed By:



**TestAmerica Irvine**

Joseph Doak
Project Manager

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - 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%)* | | | | | *97 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | | *100 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | | *90 %* | | | | |
| **Sample ID: IRB2403-02 (Trip Blank - 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%)* | | | | | *96 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | | *101 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | | *89 %* | | | | |

**TestAmerica Irvine**

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Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| **Bis(2-ethylhexyl)phthalate** | EPA 625 | 8B26048 | 1.6 | 4.8 | **19** | 0.952 | 02/26/08 | 02/28/08 | B |
| 2,4-Dinitrotoluene | EPA 625 | 8B26048 | 0.19 | 8.6 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| N-Nitrosodimethylamine | EPA 625 | 8B26048 | 0.095 | 7.6 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| Pentachlorophenol | EPA 625 | 8B26048 | 0.095 | 7.6 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| 2,4,6-Trichlorophenol | EPA 625 | 8B26048 | 0.095 | 5.7 | ND | 0.952 | 02/26/08 | 02/28/08 | |
| *Surrogate: 2-Fluorophenol (30-120%)* | | | | | *65 %* | | | | |
| *Surrogate: Phenol-d6 (35-120%)* | | | | | *59 %* | | | | |
| *Surrogate: 2,4,6-Tribromophenol (40-120%)* | | | | | *108 %* | | | | |
| *Surrogate: Nitrobenzene-d5 (45-120%)* | | | | | *74 %* | | | | |
| *Surrogate: 2-Fluorobiphenyl (50-120%)* | | | | | *77 %* | | | | |
| *Surrogate: Terphenyl-d14 (50-125%)* | | | | | *107 %* | | | | |

**TestAmerica Irvine**

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - 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%)* | | | | | *77 %* | | | | |
| *Surrogate: Tetrachloro-m-xylene (35-115%)* | | | | | *77 %* | | | | |

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Received: 02/25/08

## METALS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Cadmium | EPA 200.8 | 8B28067 | 0.22 | 2.0 | ND | 2 | 02/28/08 | 02/29/08 | RL1 |
| **Copper** | EPA 200.8 | 8B28067 | 1.5 | 4.0 | **3.4** | 2 | 02/28/08 | 02/29/08 | RL1, J |
| **Lead** | EPA 200.8 | 8B28067 | 0.60 | 2.0 | **0.81** | 2 | 02/28/08 | 02/29/08 | RL1, J |
| Selenium | EPA 200.8 | 8B28067 | 0.60 | 4.0 | ND | 2 | 02/28/08 | 02/29/08 | RL1 |
| **Zinc** | EPA 200.8 | 8B28067 | 5.0 | 40 | **28** | 2 | 02/28/08 | 02/29/08 | B, RL1, J |

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Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| **Cadmium** | EPA 200.8-Diss | 8B25123 | 0.11 | 1.0 | **0.12** | 1 | 02/25/08 | 02/26/08 | J |
| **Copper** | EPA 200.8-Diss | 8B25123 | 0.75 | 2.0 | **0.86** | 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 | |
| Selenium | EPA 200.8-Diss | 8B25123 | 0.30 | 2.0 | ND | 1 | 02/25/08 | 02/26/08 | |
| **Zinc** | EPA 200.8-Diss | 8B25123 | 2.5 | 20 | **13** | 1 | 02/25/08 | 02/26/08 | J |

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Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Hexane Extractable Material (Oil & Grease)** | EPA 1664A | 8C04046 | 1.4 | 4.9 | **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 | **2.2** | 1 | 02/25/08 | 03/01/08 | |
| **Chloride** | EPA 300.0 | 8B25042 | 0.25 | 0.50 | **22** | 1 | 02/25/08 | 02/25/08 | |
| **Nitrate-N** | EPA 300.0 | 8B25042 | 0.060 | 0.11 | **0.68** | 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 | **0.68** | 1 | 02/25/08 | 02/25/08 | |
| **Sulfate** | EPA 300.0 | 8B25042 | 0.40 | 1.0 | **84** | 2 | 02/25/08 | 02/25/08 | |
| Surfactants (MBAS) | EPA 425.1 | 8B25103 | 0.044 | 0.10 | ND | 1 | 02/25/08 | 02/25/08 | |
| **Total Dissolved Solids** | EPA 160.1 | 8B27119 | 10 | 10 | **290** | 1 | 02/27/08 | 02/27/08 | |
| **Total Suspended Solids** | EPA 160.2 | 8B28123 | 10 | 10 | **27** | 1 | 02/28/08 | 02/28/08 | |
| **Sample ID: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **Reporting Units: ml/l/hr** | | | | | | | | | |
| Total Settleable Solids | EPA 160.5 | 8B26062 | 0.10 | 0.10 | ND | 1 | 02/26/08 | 02/26/08 | |
| **Sample ID: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **Reporting Units: NTU** | | | | | | | | | |
| **Turbidity** | EPA 180.1 | 8B26063 | 0.040 | 1.0 | **22** | 1 | 02/26/08 | 02/26/08 | |
| **Sample ID: IRB2403-01 (Outfall 018 - Water)** | | | | | | | | | |
| **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 | 8B28045 | 1.5 | 4.0 | ND | 1 | 02/28/08 | 02/29/08 | |

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Report Number: IRB2403

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: IRB2403-01 (Outfall 018 - Water) - cont.** | | | | | | | | | |
| **Reporting Units: umhos/cm** | | | | | | | | | |
| **Specific Conductance** | EPA 120.1 | 8B27117 | 1.0 | 1.0 | **440** | 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: IRB2403-01 (Outfall 018 - 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: IRB2403

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 018 (IRB2403-01) - Water** | | | | | |
| EPA 160.5 | 2 | 02/24/2008 12:45 | 02/25/2008 05:20 | 02/26/2008 09:25 | 02/26/2008 09:25 |
| EPA 180.1 | 2 | 02/24/2008 12:45 | 02/25/2008 05:20 | 02/26/2008 09:55 | 02/26/2008 09:55 |
| EPA 300.0 | 2 | 02/24/2008 12:45 | 02/25/2008 05:20 | 02/25/2008 07:00 | 02/25/2008 10:38 |
| EPA 405.1 | 2 | 02/24/2008 12:45 | 02/25/2008 05:20 | 02/25/2008 16:53 | 03/01/2008 10:00 |
| EPA 425.1 | 2 | 02/24/2008 12:45 | 02/25/2008 05:20 | 02/25/2008 19:44 | 02/25/2008 22:16 |
| Filtration | 1 | 02/24/2008 12:45 | 02/25/2008 05:20 | 02/25/2008 09:45 | 02/25/2008 10:11 |

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Report Number: IRB2403

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 018
Report Number: IRB2403

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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Project ID: Routine Outfall 018
Report Number: IRB2403

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** | | | | | | | | | | | |
| **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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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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** | | | | | | | | | | | |
| **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: IRB2403

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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Received: 02/25/08

## METHOD BLANK/QC DATA

## ORGANOCHLORINE PESTICIDES (EPA 608)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 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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Received: 02/25/08

## METHOD BLANK/QC DATA

## METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 8B28067 Extracted: 02/28/08** | | | | | | | | | | | |
| **Blank Analyzed: 02/28/2008 (8B28067-BLK1)** | | | | | | | | | | | |
| Cadmium | 0.133 | 1.0 | 0.11 | ug/l | | | | | | | *J* |
| Copper | ND | 2.0 | 0.75 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.30 | ug/l | | | | | | | |
| Selenium | ND | 2.0 | 0.30 | ug/l | | | | | | | |
| Zinc | 6.39 | 20 | 2.5 | ug/l | | | | | | | *J* |
| **LCS Analyzed: 02/28/2008 (8B28067-BS1)** | | | | | | | | | | | |
| Cadmium | 76.7 | 1.0 | 0.11 | ug/l | 80.0 | | 96 | 85-115 | | | |
| Copper | 79.3 | 2.0 | 0.75 | ug/l | 80.0 | | 99 | 85-115 | | | |
| Lead | 79.9 | 1.0 | 0.30 | ug/l | 80.0 | | 100 | 85-115 | | | |
| Selenium | 74.4 | 2.0 | 0.30 | ug/l | 80.0 | | 93 | 85-115 | | | |
| Zinc | 77.1 | 20 | 2.5 | ug/l | 80.0 | | 96 | 85-115 | | | |
| **Matrix Spike Analyzed: 02/28/2008 (8B28067-MS1)** | | | | | | **Source: IRB2460-02** | | | | | |
| Cadmium | 74.6 | 1.0 | 0.11 | ug/l | 80.0 | 0.128 | 93 | 70-130 | | | |
| Copper | 76.4 | 2.0 | 0.75 | ug/l | 80.0 | 1.05 | 94 | 70-130 | | | |
| Lead | 77.7 | 1.0 | 0.30 | ug/l | 80.0 | ND | 97 | 70-130 | | | |
| Selenium | 71.5 | 2.0 | 0.30 | ug/l | 80.0 | ND | 89 | 70-130 | | | |
| Zinc | 74.0 | 20 | 2.5 | ug/l | 80.0 | 6.52 | 84 | 70-130 | | | |
| **Matrix Spike Analyzed: 02/28/2008 (8B28067-MS2)** | | | | | | **Source: IRB2402-01** | | | | | |
| Cadmium | 75.9 | 1.0 | 0.11 | ug/l | 80.0 | 1.94 | 92 | 70-130 | | | |
| Copper | 78.5 | 2.0 | 0.75 | ug/l | 80.0 | 2.79 | 95 | 70-130 | | | |
| Lead | 79.1 | 1.0 | 0.30 | ug/l | 80.0 | 1.66 | 97 | 70-130 | | | |
| Selenium | 69.4 | 2.0 | 0.30 | ug/l | 80.0 | ND | 87 | 70-130 | | | |
| Zinc | 133 | 20 | 2.5 | ug/l | 80.0 | 65.8 | 84 | 70-130 | | | |
| **Matrix Spike Dup Analyzed: 02/28/2008 (8B28067-MSD1)** | | | | | | **Source: IRB2460-02** | | | | | |
| Cadmium | 76.2 | 1.0 | 0.11 | ug/l | 80.0 | 0.128 | 95 | 70-130 | 2 | 20 | |
| Copper | 78.4 | 2.0 | 0.75 | ug/l | 80.0 | 1.05 | 97 | 70-130 | 3 | 20 | |
| Lead | 78.3 | 1.0 | 0.30 | ug/l | 80.0 | ND | 98 | 70-130 | 1 | 20 | |
| Selenium | 72.4 | 2.0 | 0.30 | ug/l | 80.0 | ND | 91 | 70-130 | 1 | 20 | |
| Zinc | 75.2 | 20 | 2.5 | ug/l | 80.0 | 6.52 | 86 | 70-130 | 2 | 20 | |

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Report Number: IRB2403

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** | | | | | | | | | | | |
| **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 | | | | | | | |
| Zinc | ND | 20 | 2.5 | ug/l | | | | | | | |
| **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 | | | |
| Zinc | 80.6 | 20 | 2.5 | ug/l | 80.0 | | 101 | 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 | | | |
| Zinc | 72.5 | 20 | 2.5 | ug/l | 80.0 | ND | 91 | 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 | |
| Zinc | 75.6 | 20 | 2.5 | ug/l | 80.0 | ND | 95 | 70-130 | 4 | 20 | |

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Report Number: IRB2403

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

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **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: 8B25101 Extracted: 02/25/08** | | | | | | | | | | | |
| **Blank Analyzed: 03/01/2008 (8B25101-BLK1)** | | | | | | | | | | | |
| Biochemical Oxygen Demand | ND | 2.0 | 0.59 | mg/l | | | | | | | |

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Report Number: IRB2403

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

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 8B25101 Extracted: 02/25/08** | | | | | | | | | | | |
| **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 | | | |
| **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 | |

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Received: 02/25/08

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **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 | |
| **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: 8B27117 Extracted: 02/27/08** | | | | | | | | | | | |
| **Duplicate Analyzed: 02/27/2008 (8B27117-DUP1)** | | | | | | **Source: IRB2403-01** | | | | | |
| Specific Conductance | 442 | 1.0 | 1.0 | umhos/cm | | 440 | | | 1 | 5 | |

**TestAmerica Irvine**

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Routine Outfall 018
Report Number: IRB2403

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

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 8B27117 Extracted: 02/27/08** | | | | | | | | | | | |
| **Reference Analyzed: 02/27/2008 (8B27117-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 | | | |
| **Duplicate Analyzed: 02/27/2008 (8B27119-DUP1)** | | | | | | **Source: IRB2154-02** | | | | | |
| Total Dissolved Solids | 4760 | 10 | 10 | mg/l | | 4760 | | | 0 | 10 | |
| **Batch: 8B28045 Extracted: 02/28/08** | | | | | | | | | | | |
| **Blank Analyzed: 02/28/2008 (8B28045-BLK1)** | | | | | | | | | | | |
| Perchlorate | ND | 4.0 | 1.5 | ug/l | | | | | | | |
| **LCS Analyzed: 02/28/2008 (8B28045-BS1)** | | | | | | | | | | | |
| Perchlorate | 54.9 | 4.0 | 1.5 | ug/l | 50.0 | | 110 | 85-115 | | | |
| **Matrix Spike Analyzed: 02/28/2008 (8B28045-MS1)** | | | | | | **Source: IRB2453-07** | | | | | |
| Perchlorate | 61.1 | 4.0 | 1.5 | ug/l | 50.0 | 5.03 | 112 | 80-120 | | | |
| **Matrix Spike Dup Analyzed: 02/28/2008 (8B28045-MSD1)** | | | | | | **Source: IRB2453-07** | | | | | |
| Perchlorate | 60.6 | 4.0 | 1.5 | ug/l | 50.0 | 5.03 | 111 | 80-120 | 1 | 20 | |

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **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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Report Number: IRB2403

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

## METHOD BLANK/QC DATA

## Metals by EPA 200 Series Methods

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **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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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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

## Compliance Check

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

| LabNumber | Analysis | Analyte | Units | Result | MRL | Compliance Limit |
|---|---|---|---|---|---|---|
| IRB2403-01 | 1664-HEM | Hexane Extractable Material (Oil & Greas | mg/l | 1.94 | 4.9 | 15 |
| IRB2403-01 | 608-Pest Boeing 001/002 Q (LL) | alpha-BHC | ug/l | 0 | 0.0094 | 0.03 |
| IRB2403-01 | 624-Boeing 001/002 Q (Fr113+X), L | 1,1-Dichloroethene | ug/l | 0 | 0.50 | 6 |
| IRB2403-01 | 624-Boeing 001/002 Q (Fr113+X), L | Trichloroethene | ug/l | 0 | 0.50 | 5 |
| IRB2403-01 | 625-Boeing 001/002 Q-LL | 2,4,6-Trichlorophenol | ug/l | 0 | 5.7 | 13 |
| IRB2403-01 | 625-Boeing 001/002 Q-LL | 2,4-Dinitrotoluene | ug/l | 0 | 8.6 | 18 |
| **IRB2403-01** | **625-Boeing 001/002 Q-LL** | **Bis(2-ethylhexyl)phthalate** | **ug/l** | **19** | **4.8** | **4** |
| IRB2403-01 | 625-Boeing 001/002 Q-LL | N-Nitrosodimethylamine | ug/l | 0 | 7.6 | 16 |
| IRB2403-01 | 625-Boeing 001/002 Q-LL | Pentachlorophenol | ug/l | 0 | 7.6 | 16 |
| IRB2403-01 | Ammonia-N, Titr (350.2) w/dist | Ammonia-N (Distilled) | mg/l | 0.28 | 0.50 | 10 |
| IRB2403-01 | BOD | Biochemical Oxygen Demand | mg/l | 2.25 | 2.0 | 30 |
| IRB2403-01 | Cadmium-200.8 | Cadmium | ug/l | 0.060 | 2.0 | 3.1 |
| IRB2403-01 | Chloride - 300.0 | Chloride | mg/l | 22 | 0.50 | 150 |
| IRB2403-01 | Copper-200.8 | Copper | ug/l | 3.43 | 4.0 | 14 |
| IRB2403-01 | Cyanide-335.2 5ppb | Total Cyanide | ug/l | -2 | 5.0 | 8.5 |
| IRB2403-01 | Hg_w 245.1 | Mercury, Total | ug/l | 0.015 | 0.20 | 0.2 |
| IRB2403-01 | Lead-200.8 | Lead | ug/l | 0.81 | 2.0 | 5.2 |
| IRB2403-01 | MBAS - 425.1 | Surfactants (MBAS) | mg/l | 0.026 | 0.10 | 0.5 |
| IRB2403-01 | Nitrate-N, 300.0 | Nitrate-N | mg/l | 0.68 | 0.11 | 8 |
| IRB2403-01 | Nitrite-N, 300.0 | Nitrite-N | mg/l | 0 | 0.15 | 1 |
| IRB2403-01 | Nitrogen, NO3+NO2 -N | Nitrate/Nitrite-N | mg/l | 0.68 | 0.26 | 8 |
| IRB2403-01 | Perchlorate 314.0-DEFAULT | Perchlorate | ug/l | 0 | 4.0 | 6 |
| IRB2403-01 | Selenium-200.8 | Selenium | ug/l | 0.23 | 4.0 | 5 |
| IRB2403-01 | Settleable Solids | Total Settleable Solids | ml/l/hr | 0 | 0.10 | 0.3 |
| IRB2403-01 | Sulfate-300.0 | Sulfate | mg/l | 84 | 1.0 | 300 |
| IRB2403-01 | TDS - EPA 160.1 | Total Dissolved Solids | mg/l | 291 | 10 | 950 |
| IRB2403-01 | TSS - EPA 160.2 | Total Suspended Solids | mg/l | 27 | 10 | 45 |
| IRB2403-01 | Zinc-200.8 | Zinc | ug/l | 28 | 40 | 120 |

## 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 |
|---|---|---|---|---|---|---|
| IRB2403-02 | 624-Boeing 001/002 Q (Fr113+X), L | 1,1-Dichloroethene | ug/l | 0 | 0.50 | 6 |

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018
Report Number: IRB2403

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

| | | | | | |
|---|---|---|---|---|---|
| IRB2403-02 | 624-Boeing 001/002 Q (Fr113+X), LTrichloroethene | ug/l | 0 | 0.50 | 5 |

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Report Number: IRB2403

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

## DATA QUALIFIERS AND DEFINITIONS

| | |
|---|---|
| **B** | Analyte was detected in the associated Method Blank. |
| **J** | Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability. |
| **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. |
| **RL1** | Reporting limit raised due to sample matrix effects. |
| **ND** | Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified. |
| **RPD** | Relative Percent Difference |

**TestAmerica Irvine**

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 018

Report Number: IRB2403

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

## Certification Summary

### TestAmerica Irvine

| Method | Matrix | Nelac | California |
|---|---|---|---|
| EPA 120.1 | Water | X | X |
| EPA 160.1 | Water | X | X |
| EPA 160.2 | Water | X | X |
| EPA 160.5 | Water | X | X |
| EPA 1664A | Water | | |
| EPA 180.1 | Water | X | X |
| EPA 200.8-Diss | Water | X | X |
| EPA 200.8 | Water | X | X |
| EPA 300.0 | Water | X | X |
| EPA 314.0 | Water | X | X |
| EPA 335.2 | Water | X | X |
| EPA 350.2 | Water | | X |
| EPA 405.1 | Water | X | X |
| EPA 425.1 | Water | X | X |
| EPA 608 | Water | X | X |
| EPA 624 | Water | X | X |
| EPA 625 | Water | X | X |
| Filtration | Water | N/A | N/A |

*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

**TestAmerica Irvine**

Joseph Doak
Project Manager

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Report Number: IRB2403

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

**Eberline Services - SUB**

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IRB2403-01

Analysis Performed: Gross Alpha
Samples: IRB2403-01

Analysis Performed: Gross Beta
Samples: IRB2403-01

Analysis Performed: Radium, Combined
Samples: IRB2403-01

Analysis Performed: Strontium 90
Samples: IRB2403-01

Analysis Performed: Tritium
Samples: IRB2403-01

Analysis Performed: Uranium, Combined
Samples: IRB2403-01

**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: IRB2403-01

**Weck Laboratories, Inc**

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

Method Performed: EPA 245.1
Samples: IRB2403-01

**TestAmerica Irvine**

Joseph Doak
Project Manager

Test America Version 12/20/07

# CHAIN OF CUSTODY FORM

JRB2403



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

| Sample Description | Sample Matrix | Container Type | # of Cont. | Sampling Date/Time | Preservative | Bottle # | Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn | Settleable Solids | TCDD (and all congeners) | Oil & Grease (1664-HEM) | Cyanide (total recoverable) | $BOD_5$ (20 degrees C) | Surfactants (MBAS) | $Cl^-$, $SO_4$, $NO_3$+$NO_2$-N, Perchlorate | Nitrate-N, Nitrite-N | Turbidity, TDS, TSS, Conductivity | Ammonia-N (350.2) | Alpha BHC (608) | 2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2- ethylhexyl)phthalate, NDMA, PCP (SVOCs 625) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Outfall 018 | W | 1L Poly | 1 | 2-24-08 12:45 | $HNO_3$ | 1A | X | | | | | | | | | | | | | |
| Outfall 018 Dup | W | 1L Poly | 1 | | $HNO_3$ | 1B | X | | | | | | | | | | | | | |
| Outfall 018 | W | 1L Poly | 1 | | None | 2 | | X | | | | | | | | | | | | |
| Outfall 018 | W | 1L Amber | 2 | | None | 3A, 3B | | | X | | | | | | | | | | | |
| Outfall 018 | W | 1L Amber | 2 | | HCl | 4A, 4B | | | | X | | | | | | | | | | |
| Outfall 018 | W | 500 ml Poly | 1 | | NaOH | 5 | | | | | X | | | | | | | | | |
| Outfall 018 | W | 1L Poly | 1 | | None | 6 | | | | | | X | | | | | | | | |
| Outfall 018 | W | 500 ml Poly | 2 | | None | 7A, 7B | | | | | | | X | | | | | | | |
| Outfall 018 | W | 500 ml Poly | 2 | | None | 8A, 8B | | | | | | | | X | | | | | | |
| Outfall 018 | W | 500 ml Poly | 1 | | None | 9 | | | | | | | | | X | | | | | |
| Outfall 018 | W | 500 ml Poly | 2 | | None | 10A, 10B | | | | | | | | | | X | | | | |
| Outfall 018 | W | 500 ml Poly | 1 | | $H_2SO_4$ | 11 | | | | | | | | | | | X | | | |
| Outfall 018 | W | 1L Amber | 2 | | None | 12A, 12B | | | | | | | | | | | | X | | |
| Outfall 018 | W | 1L Amber | 2 | 2-24-08 12:45 | None | 13A, 13B | | | | | | | | | | | | | X | |

ANALYSIS REQUIRED

Field readings:
Temp = 57.5°
pH = 7.8
Time of readings = 12:45

US. 2/25/08 09:05

| Relinquished By | Date/Time: | Received By | Date/Time: |
|---|---|---|---|
| Robin Barroso | 2-24-08 1430 | | 2/24/08 1430 |
| | 1745 | | |
| Fed Ex Rec. Fridge | 2/25/08 0520 | Elizabeth Chang | 2/25/08 0520 |

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

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

#130

NPDES - 4231

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

| Client Name/Address | Project: |
|---|---|
| MWH-Arcadia<br>618 Michillinda Avenue, Suite 200<br>Arcadia, CA 91007<br><br>Test America Contact. Joseph Doak | Boeing-SSFL NPDES<br>**Routine Outfall 018** |
| Project Manager: Bronwyn Kelly<br><br>Sampler: MARISCAL, J<br>Barrera, R. | Phone Number:<br>(626) 568-6691<br>Fax Number:<br>(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 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Outfall 018 | W | VOAs | 5 | 2-24-08 12:45 | HCl | 14A, 14B, 14C, 14D, 14E | X | | | | |
| Outfall 018 | W | 2.5 Gal Cube<br>500 ml Amber | 1<br>1 | | None<br>None | 15A<br>15B | | X | | | Unfiltered and unpreserved analysis |
| ~~Outfall 018~~ | ~~W~~ | 1 Gal Cube | 1 | | None | 16 | | | X | | ~~Only test if first and second run event of the year~~ |
| Outfall 018 | W | 1L Poly | 1 | 2.24.08 12:45 | None | 17 | | | | X | Filter w/in 24hrs of receipt at lab |
| Trip Blanks | W | VOAs | 3 | | HCl | 18A, 18B, 18C | X | | | | |

| Relinquished By | Date/Time: | Received By | Date/Time: |
|---|---|---|---|
| [signature] | 2.24.08 1430 | [signature] | 2/24/08 1430 |
| [signature] | 2/24/08 1745 | | |
| 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 - 4232

#130

**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**IRB2403** 8022634

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

Weck Laboratories, Inc-SUB
14859 E. Clark Avenue
City of Industry, CA 91745
Phone :(626) 336-2139
Fax: (626) 336-2634
Project Location: California
Receipt Temperature: 4.0 °C Ice: (Y) / N

| Analysis | Units | Due | Expires | Comments |
|---|---|---|---|---|
| **Sample ID: IRB2403-01** | **Water** | | Sampled: **02/24/08 12:45** | |
| Level 4 Data Package - Wec | N/A | 03/05/08 | 03/23/08 12:45 | |
| Mercury - 245.1, Diss -OUT | ug/l | 03/05/08 | 03/23/08 12:45 | Boeing, J flags |
| Mercury - 245.1-OUT | ug/l | 03/05/08 | 03/23/08 12:45 | Boeing, permit, J flags |
| *Containers Supplied:* | | | | |
| 250 mL Poly (AD) | 125 mL Poly w/HNO3 (AE) | | | |

Released By — Date/Time 2/25/8 1200 — Received By — Date/Time 2/26/8 915

Released By — Date/Time — Received By Jaime Gomez — Date/Time 2/26/08 1205

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

**Work Order #:** 8022634

**Client Project:** IRB2403

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: 8022634
Project ID: IRB2403

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

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Sampled by: | Sample Comments | Laboratory | Matrix | Date Sampled |
|---|---|---|---|---|---|
| IRB2403-01 | Client | | 8022634-01 | Water | 02/24/08 12:45 |

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

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

Report ID: 8022634
Project ID: IRB2403

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

**IRB2403-01 8022634-01 (Water)** Date Sampled: 02/24/08 12:45

## 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.*

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Report ID: 8022634
Project ID: IRB2403

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

# QUALITY CONTROL SECTION

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

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

Report ID: 8022634
Project ID: IRB2403

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

## 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.
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Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

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

Report ID: 8022634
Project ID: IRB2403

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

## Notes and Definitions

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

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

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

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

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

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 8616 | Client TA IRVINE
Work Order R802175-01 | Contract PR0JECT# IRB2403
Received Date 02/26/08 | Matrix WATER

| Client Sample ID | Lab Sample ID | Collected | Analyzed | Nuclide | Results ± 2σ | Units | MDA |
|---|---|---|---|---|---|---|---|
| IRB2403-01 | 8616-001 | 02/24/08 | 03/16/08 | GrossAlpha | 2.15 ± 1.1 | pCi/L | 1.3 |
| | | | 03/16/08 | Gross Beta | 4.36 ± 1.1 | pCi/L | 1.7 |
| | | | 03/10/08 | Ra-228 | -0.101 ± 0.15 | pCi/L | 0.45 |
| | | | 03/12/08 | K-40 (G) | U | pCi/L | 14 |
| | | | 03/12/08 | Cs-137 (G) | U | pCi/L | 0.94 |
| | | | 03/14/08 | H-3 | -58.7 ± 85 | pCi/L | 150 |
| | | | 03/14/08 | Ra-226 | 2.27 ± 0.71 | pCi/L | 0.78 |
| | | | 03/10/08 | Sr-90 | -0.106 ± 0.36 | pCi/L | 0.88 |
| | | | 03/05/08 | Total U | 0.533 ± 0.060 | pCi/L | 0.023 |

Certified by
Report Date 03/20/08

# Eberline Services

## QC RESULTS

SDG 8616 | Client TA IRVINE
Work Order R802175-01 | Contract PROJECT# IRB2403
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 8616
Work Order R802175-01
Received Date 02/26/08

Client TA IRVINE
Contract PR0JECT# IRB2403
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

86/10

# SUBCONTRACT ORDER - PROJECT # IRB2403

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

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

Project Location: California

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

| Analysis | Expiration | Comments |
|---|---|---|
| **Sample ID: IRB2403-01 Water** | **Sampled: 02/24/08 12:45** | |
| Gamma Spec-O | 02/23/09 12:45 | Boeing, J flags, K-40 and CS-137 only |
| Gross Alpha-O | 08/22/08 12:45 | Boeing, J flags |
| Gross Beta-O | 08/22/08 12:45 | Boeing, J flags |
| Level 4 Data Package - Out | 03/23/08 12:45 | |
| Radium, Combined-O | 02/23/09 12:45 | Boeing, J flags |
| Strontium 90-O | 02/23/09 12:45 | Boeing, J flags |
| Tritium-O | 02/23/09 12:45 | Boeing, J flags |
| Uranium, Combined-O | 02/23/09 12:45 | Boeing, J flags |

**Containers Supplied:**

2.5 gal Poly (IRB2403-01AA)
500 mL Amber (IRB2403-01AB)

**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 | 1700 | Fed-Ex | 2/25/08 | 1700 |
| FED EX | | | Alex Kellund | 2/26/08 | 13:20 |



NPDES - 4244

EBERLINE

# RICHMOND, CA LABORATORY

## SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 2/26/08 10:00 CoC No. IRB2403

Container I.D. No. N/A Requested TAT (Days) STAND 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 AK Date: 2/26/08 Time: 1320

| Customer Sample No. | Beta/Gamma cpm | Ion Chamber mR/hr | Wipe | Customer Sample No. | Beta/Gamma cpm | Ion Chamber mR/hr | wipe |
|---|---|---|---|---|---|---|---|
| IRB2403 | < 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.: 30305**

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 "IRB2403". 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

*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 |
|---|---|
| 30305-001 | IRB2403-01 |

**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 11:33

**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 11:33

**Sample ID:** **IRB2403-01** **EPA Method 1613**

| Client Data | | Sample Data | | Laboratory Data | | | |
|---|---|---|---|---|---|---|---|
| Name: | Test America-Irvine, CA | Matrix: | Aqueous | Lab Sample: | 30305-001 | Date Received: | 26-Feb-08 |
| Project: | IRB2403 | Sample Size: | 1.03 L | QC Batch No.: | 9997 | Date Extracted: | 9-Mar-08 |
| Date Collected: | 24-Feb-08 | | | Date Analyzed DB-5: | 10-Mar-08 | Date Analyzed DB-225: | NA |
| Time Collected: | 1245 | | | | | | |

| Analyte | Conc. (ug/L) | DL [a] | EMPC [b] | Qualifiers |
|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | 0.000000871 | | |
| 1,2,3,7,8-PeCDD | ND | 0.00000163 | | |
| 1,2,3,4,7,8-HxCDD | ND | 0.00000239 | | |
| 1,2,3,6,7,8-HxCDD | ND | 0.00000432 | | |
| 1,2,3,7,8,9-HxCDD | ND | 0.00000412 | | |
| 1,2,3,4,6,7,8-HpCDD | 0.0000401 | | | |
| OCDD | 0.000404 | | | |
| 2,3,7,8-TCDF | ND | 0.00000157 | | |
| 1,2,3,7,8-PeCDF | ND | 0.00000162 | | |
| 2,3,4,7,8-PeCDF | ND | 0.000000987 | | |
| 1,2,3,4,7,8-HxCDF | ND | 0.00000106 | | |
| 1,2,3,6,7,8-HxCDF | ND | 0.00000108 | | |
| 2,3,4,6,7,8-HxCDF | ND | 0.00000153 | | |
| 1,2,3,7,8,9-HxCDF | ND | 0.000000844 | | |
| 1,2,3,4,6,7,8-HpCDF | 0.00000916 | | | J |
| 1,2,3,4,7,8,9-HpCDF | ND | 0.00000120 | | |
| OCDF | 0.0000158 | | | J |

| | Labeled Standard | %R | LCL-UCL [d] | Qualifiers |
|---|---|---|---|---|
| IS | 13C-2,3,7,8-TCDD | 74.5 | 25 - 164 | |
| | 13C-1,2,3,7,8-PeCDD | 69.0 | 25 - 181 | |
| | 13C-1,2,3,4,7,8-HxCDD | 68.6 | 32 - 141 | |
| | 13C-1,2,3,6,7,8-HxCDD | 76.0 | 28 - 130 | |
| | 13C-1,2,3,4,6,7,8-HpCDD | 71.8 | 23 - 140 | |
| | 13C-OCDD | 64.2 | 17 - 157 | |
| | 13C-2,3,7,8-TCDF | 76.2 | 24 - 169 | |
| | 13C-1,2,3,7,8-PeCDF | 64.3 | 24 - 185 | |
| | 13C-2,3,4,7,8-PeCDF | 65.8 | 21 - 178 | |
| | 13C-1,2,3,4,7,8-HxCDF | 68.5 | 26 - 152 | |
| | 13C-1,2,3,6,7,8-HxCDF | 77.3 | 26 - 123 | |
| | 13C-2,3,4,6,7,8-HxCDF | 74.4 | 28 - 136 | |
| | 13C-1,2,3,7,8,9-HxCDF | 73.1 | 29 - 147 | |
| | 13C-1,2,3,4,6,7,8-HpCDF | 66.7 | 28 - 143 | |
| | 13C-1,2,3,4,7,8,9-HpCDF | 71.0 | 26 - 138 | |
| | 13C-OCDF | 65.9 | 17 - 157 | |
| CRS | 37Cl-2,3,7,8-TCDD | 109 | 35 - 197 | |

**Totals**

| | | | |
|---|---|---|---|
| Total TCDD | ND | 0.000000871 | |
| Total PeCDD | ND | 0.00000342 | |
| Total HxCDD | 0.00000968 | | |
| Total HpCDD | 0.0000812 | | |
| Total TCDF | ND | | 0.00000188 |
| Total PeCDF | ND | | 0.000000778 |
| Total HxCDF | 0.00000828 | | |
| Total HpCDF | 0.0000208 | | |

**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 11:33

# 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 |

TestAmerica
ANALYTICAL TESTING CORPORATION

30305 1.3°

# SUBCONTRACT ORDER - PROJECT # IRB2403

**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

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

| Analysis | Expiration | Comments |
|---|---|---|
| **Sample ID: IRB2403-01 Water** | **Sampled: 02/24/08 12:45** | |
| 1613-Dioxin-HR-Alta | 03/02/08 12:45 | J flags,17 congeners,no TEQ,ug/L,sub=Vista |
| EDD + Level 4 | 03/23/08 12:45 | Excel EDD email to pm,Include Std logs for Lvl IV |

**Containers Supplied:**
1 L Amber (IRB2403-01D)
1 L Amber (IRB2403-01E)

**SAMPLE INTEGRITY:**

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

| Released By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| Margaret Finley | 2/25/08 | 1700 | FedEx | 2/25/08 | 1700 |
| FedEx | 2/27/08 | | Bethna Benedict | 2/27/08 | 0812 |

## SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

**Vista Project #:** 30305 **TAT** unspecified

| | | | |
|---|---|---|---|
| **Samples Arrival:** | **Date/Time** 2/26/08 0910 | **Initials:** JSB | **Location:** WR-2 **Shelf/Rack:** N/A |
| **Logged In:** | **Date/Time** 2/27/08 0812 | **Initials:** JSB | **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 108

Outfall 018 – BMP Effectiveness, February 24-25, 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: BMP Effectiveness
Monitoring Program

Sampled: 02/24/08-02/25/08
Received: 02/26/08
Issued: 03/06/08 13:45

NELAP #01108CA California ELAP#1197 CSDLAC #10256



## SAMPLE CROSS REFERENCE

| LABORATORY ID | CLIENT ID | MATRIX |
|---|---|---|
| IRB2514-01 | 018 EFF-1 | Water |
| IRB2514-02 | 018 EFF-2 | Water |
| IRB2514-03 | 018 EFF-3 | Water |
| IRB2514-04 | 018 EFF-4 | Water |
| IRB2514-05 | 018 EFF-5 | Water |
| IRB2514-06 | 018 EFF-6 | Water |
| IRB2514-07 | 018 EFF-7 | Water |
| IRB2514-08 | 018 EFF-8 | Water |
| IRB2514-09 | 018 EFF-9 | Water |
| IRB2514-10 | 018 EFF-10 | Water |
| IRB2514-11 | 018 EFF-11 | Water |
| IRB2514-12 | 018 EFF-12 | Water |
| IRB2514-13 | 018 EFF-13 | Water |
| IRB2514-14 | 018 EFF-14 | Water |
| IRB2514-15 | 018 EFF-15 | Water |
| IRB2514-16 | 018 EFF-16 | Water |
| IRB2514-17 | 018 EFF-17 | Water |
| IRB2514-18 | 018 EFF-18 | Water |
| IRB2514-19 | 018 EFF-19 | Water |
| IRB2514-20 | 018 EFF-20 | Water |
| IRB2514-21 | 018 EFF-21 | Water |
| IRB2514-22 | 018 EFF-22 | Water |
| IRB2514-23 | 018 EFF-23 | Water |

**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

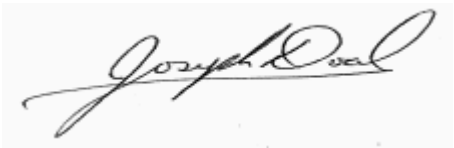
MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

| LABORATORY ID | CLIENT ID | MATRIX |
|---|---|---|
| IRB2514-24 | 018 EFF-24 | Water |

Reviewed By:



**TestAmerica Irvine**

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB2514-01 (018 EFF-1 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-02 (018 EFF-2 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-03 (018 EFF-3 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-04 (018 EFF-4 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **1.0** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-05 (018 EFF-5 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-06 (018 EFF-6 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-07 (018 EFF-7 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-08 (018 EFF-8 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-09 (018 EFF-9 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **1.0** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-10 (018 EFF-10 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **1.0** | 1 | 03/04/08 | 03/04/08 | |

**TestAmerica Irvine**

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB2514-11 (018 EFF-11 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-12 (018 EFF-12 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-13 (018 EFF-13 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-14 (018 EFF-14 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-15 (018 EFF-15 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-16 (018 EFF-16 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-17 (018 EFF-17 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-18 (018 EFF-18 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04033 | N/A | NA | **1.0** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-19 (018 EFF-19 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04034 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-20 (018 EFF-20 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04034 | N/A | NA | **1.0** | 1 | 03/04/08 | 03/04/08 | |

**TestAmerica Irvine**

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Project Manager

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

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB2514-21 (018 EFF-21 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04034 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-22 (018 EFF-22 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04034 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-23 (018 EFF-23 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04034 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-24 (018 EFF-24 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: g/cc** | | | | | | | | | |
| **Density** | Displacement | 8C04034 | N/A | NA | **0.99** | 1 | 03/04/08 | 03/04/08 | |
| **Sample ID: IRB2514-01 (018 EFF-1 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **11** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-02 (018 EFF-2 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **12** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-03 (018 EFF-3 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **10** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-04 (018 EFF-4 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| Sediment | ASTM D3977 | 8C05050 | 10 | 10 | ND | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-05 (018 EFF-5 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **15** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-06 (018 EFF-6 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **16** | 1 | 03/05/08 | 03/05/08 | |

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Attention: Bronwyn Kelly

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB2514-07 (018 EFF-7 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **11** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-08 (018 EFF-8 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **11** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-09 (018 EFF-9 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **24** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-10 (018 EFF-10 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **24** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-11 (018 EFF-11 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **23** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-12 (018 EFF-12 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **20** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-13 (018 EFF-13 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **19** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-14 (018 EFF-14 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **15** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-15 (018 EFF-15 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **13** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-16 (018 EFF-16 - Water)** | | | | | **Sampled: 02/24/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **12** | 1 | 03/05/08 | 03/05/08 | |

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Attention: Bronwyn Kelly

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: IRB2514-17 (018 EFF-17 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| Sediment | ASTM D3977 | 8C05050 | 10 | 10 | ND | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-18 (018 EFF-18 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **13** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-19 (018 EFF-19 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05050 | 10 | 10 | **14** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-20 (018 EFF-20 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| Sediment | ASTM D3977 | 8C05051 | 10 | 10 | ND | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-21 (018 EFF-21 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05051 | 10 | 10 | **11** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-22 (018 EFF-22 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05051 | 10 | 10 | **11** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-23 (018 EFF-23 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05051 | 10 | 10 | **17** | 1 | 03/05/08 | 03/05/08 | |
| **Sample ID: IRB2514-24 (018 EFF-24 - Water)** | | | | | **Sampled: 02/25/08** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Sediment** | ASTM D3977 | 8C05051 | 10 | 10 | **12** | 1 | 03/05/08 | 03/05/08 | |

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Attention: Bronwyn Kelly

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 8C04033 Extracted: 03/04/08** | | | | | | | | | | | |
| **Duplicate Analyzed: 03/04/2008 (8C04033-DUP1)** | | | | | | **Source: IRB2355-12** | | | | | |
| Density | 0.996 | NA | N/A | g/cc | | 0.999 | | | 0 | 20 | |
| **Batch: 8C04034 Extracted: 03/04/08** | | | | | | | | | | | |
| **Duplicate Analyzed: 03/04/2008 (8C04034-DUP1)** | | | | | | **Source: IRB2514-19** | | | | | |
| Density | 0.994 | NA | N/A | g/cc | | 0.992 | | | 0 | 20 | |

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| | | |
|---|---|---|
| MWH-Pasadena/Boeing | Project ID: BMP Effectiveness Monitoring Program | |
| 618 Michillinda Avenue, Suite 200 | | Sampled: 02/24/08-02/25/08 |
| Arcadia, CA 91007 | Report Number: IRB2514 | Received: 02/26/08 |
| Attention: Bronwyn Kelly | | |

## DATA QUALIFIERS AND DEFINITIONS

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

**RPD** Relative Percent Difference

**TestAmerica Irvine**

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Attention: Bronwyn Kelly

Project ID: BMP Effectiveness Monitoring Program
Report Number: IRB2514

Sampled: 02/24/08-02/25/08
Received: 02/26/08

## Certification Summary

**TestAmerica Irvine**

| Method | Matrix | Nelac | California |
|---|---|---|---|
| ASTM D3977 | Water | | |
| Displacement | Water | | |

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

**TestAmerica Irvine**

Joseph Doak
Project Manager

Test America Version 12/20/07

# CHAIN OF CUSTODY FORM IRB2514



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

Test America Contact: Joseph Doak

Project Manager: Bronwyn Kelly

Sampler: Barraza, R.

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

Project: **Boeing BMP Effectiveness Monitoring Program**

ANALYSIS REQUIRED

IRB2514

**Comments**

RT 2/26/08 1425

| Sample Description | Sample Matrix | Container Type | # of Cont. | Sampling Date/Time | Preservative | Bottle # | Suspended Sediment Concentration (SSC, ASTM-D3977-1997) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 018 EFF-1 | W | 500 mL Poly | 1 | 2/24/08-0800 | None | 1 | X | | | | | | | | |
| 018 EFF-2 | W | 500 mL Poly | 1 | 2/24/08-0900 | None | 2 | X | | | | | | | | |
| 018 EFF-3 | W | 500 mL Poly | 1 | 2/24/08-1000 | None | 3 | X | | | | | | | | |
| 018 EFF-4 | W | 500 mL Poly | 1 | 2/24/08-1100 | None | 4 | X | | | | | | | | |
| 018 EFF-5 | W | 500 mL Poly | 1 | 2/24/08-1200 | None | 5 | X | | | | | | | | |
| 018 EFF-6 | W | 500 mL Poly | 1 | 2/24/08-1300 | None | 6 | X | | | | | | | | |
| 018 EFF-7 | W | 500 mL Poly | 1 | 2/24/08-1400 | None | 7 | X | | | | | | | | |
| 018 EFF-8 | W | 500 mL Poly | 1 | 2/24/08-1500 | None | 8 | X | | | | | | | | |
| 018 EFF-9 | W | 500 mL Poly | 1 | 2/24/08-1600 | None | 9 | X | | | | | | | | |
| 018 EFF-10 | W | 500 mL Poly | 1 | 2/24/08-1700 | None | 10 | X | | | | | | | | |
| 018 EFF-11 | W | 500 mL Poly | 1 | 2/24/08-1800 | None | 11 | X | | | | | | | | |
| 018 EFF-12 | W | 500 mL Poly | 1 | 2/24/08-1900 | None | 12 | X | | | | | | | | |
| 018 EFF-13 | W | 500 mL Poly | 1 | 2/24/08-2000 | None | 13 | X | | | | | | | | |
| 018 EFF-14 | W | 500 mL Poly | 1 | 2/24/08-2100 | None | 14 | X | | | | | | | | |
| 018 EFF-15 | W | 500 mL Poly | 1 | 2/24/08-2200 | None | 15 | X | | | | | | | | |
| 018 EFF-16 | W | 500 mL Poly | 1 | 2/24/08-2300 | None | 16 | X | | | | | | | | |
| 018 EFF-17 | W | 500 mL Poly | 1 | 2/25/08-0000 | None | 17 | X | | | | | | | | |
| 018 EFF-18 | W | 500 mL Poly | 1 | 2/25/08-0100 | None | 18 | X | | | | | | | | |
| 018 EFF-19 | W | 500 mL Poly | 1 | 2/25/08-0200 | None | 19 | X | | | | | | | | |
| 018 EFF-20 | W | 500 mL Poly | 1 | 2/25/08-0300 | None | 20 | X | | | | | | | | |
| 018 EFF-21 | W | 500 mL Poly | 1 | 2/25/08-0400 | None | 21 | X | | | | | | | | |
| 018 EFF-22 | W | 500 mL Poly | 1 | 2/25/08-0500 | None | 22 | X | | | | | | | | |
| 018 EFF-23 | W | 500 mL Poly | 1 | 2/25/08-0600 | None | 23 | X | | | | | | | | |
| 018 EFF-24 | W | 500 mL Poly | 1 | 2/25/08-0700 | None | 24 | X | | | | | | | | |

| Relinquished By | Date/Time: | Received By | Date/Time: |
|---|---|---|---|
| Ruben Barraza | 2-25-08 1510 | TAE | 2/25/08 1510 |
| TAE | 2/25/08 1730 | | |
| | | Vu Banh | 2/25/08 1730 |

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

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

52/32

#138

NPDES - 4268