APPENDIX G

Section 25

Outfall 006 – March 8, 2010 Test America Analytical Laboratory Report THIS PAGE LEFT INTENTIONALLY BLANK

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: Annual Outfall 006

Sampled: 03/08/10 Received: 03/09/10 Issued: 04/27/10 11:27

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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

included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

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

ADDITIONAL INFORMATION:

WATER, 1613B, Dioxins/Furans with Totals

Sample: 1

Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

There are one or more analytes reported with a concentration less than the corresponding estimated detection limit (EDL). Even though the estimated concentration is less than the EDL it is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.

There are no other anomalies associated with this project.

Revised final report to include results for chlorpyrifos and diazinon-see corrective action report.

LABORATORY IDCLIENT IDMATRIXITC0989-01Outfall 006 (Grab)WaterITC0989-02Trip BlanksWaterITC0989-03Outfall 006 (Composite)Water

Reviewed By:

Debby Wilson

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager



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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

CORRECTIVE ACTION REPORT

Department: Project Management Method: EPA 525.2 OC Batch: 10D2353, 10D3000 Date: 04/27/2010 Matrix: Water

Identification and Definition of Problem:

The requested analyses for chlorpyrifos and diazinon by EPA 525.2 were not performed on sample ITC0989-03.

Determination of the Cause of the Problem:

The two compounds were listed on the chain of custody with the routine (EPA 608) pesticides and were overlooked at log-in. Insufficent project notes and project manager workorder review contributed to this error not being caught.

Corrective Action Taken:

In an effort to report chlorpyrifos and diazinon for this sample, the following steps were taken.

1) A spike mix containing these two compounds was extracted and analyzed following 625 protocols. Recoveries were approximately 50-60% for diazinon and 105-106% for chlorpyrifos.

2) The original 625 extracts for the sample and the method blank were analyzed following 525.2 protocol.

3) The sample, method blank, and LCS/LCSD test samples are reported.

NOTE: There are no surrogate recoveries, no spiked extract batch QC. In addition, the 625 extracts were analyzed 5 days beyond the 40-day holding time.

Project notes have been updated in LIMS to prevent a reoccurrance of this oversight.

Date: 04/27/2010 10:56 AM Quality Assurance Approval: Dave Dawes

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

Data

Qualifiers

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

| | | | MDL | Reporting | Sample | Dilution | Date | Date | |
|---|--------------|---------|-------|-----------|--------|----------|-----------|----------|---|
| Analyte | Method | Batch | Limit | Limit | Result | Factor | Extracted | Analyzed | • |
| Sample ID: ITC0989-01 (Outfall 006 (Gra | ıb) - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Benzene | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Bromodichloromethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Bromoform | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Bromomethane | EPA 624 | 10C1196 | 0.42 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 | |
| Carbon tetrachloride | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Chlorobenzene | EPA 624 | 10C1196 | 0.36 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |

PURGEABLES BY GC/MS (EPA 624)

| Diomoniculate | EI A 024 | 1001190 | 0.42 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 |
|---|----------|---------|------|------|-------|---|----------|----------|
| Carbon tetrachloride | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Chlorobenzene | EPA 624 | 10C1196 | 0.36 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Chloroethane | EPA 624 | 10C1196 | 0.40 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 |
| Chloroform | EPA 624 | 10C1196 | 0.33 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Chloromethane | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Dibromochloromethane | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,2-Dichlorobenzene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,3-Dichlorobenzene | EPA 624 | 10C1196 | 0.35 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,4-Dichlorobenzene | EPA 624 | 10C1196 | 0.37 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,1-Dichloroethane | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,2-Dichloroethane | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,1-Dichloroethene | EPA 624 | 10C1196 | 0.42 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| cis-1,2-Dichloroethene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| trans-1,2-Dichloroethene | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,2-Dichloropropane | EPA 624 | 10C1196 | 0.35 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| cis-1,3-Dichloropropene | EPA 624 | 10C1196 | 0.22 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| trans-1,3-Dichloropropene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Ethylbenzene | EPA 624 | 10C1196 | 0.25 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Methylene chloride | EPA 624 | 10C1196 | 0.95 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,1,2,2-Tetrachloroethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Tetrachloroethene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Toluene | EPA 624 | 10C1196 | 0.36 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,1,1-Trichloroethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| 1,1,2-Trichloroethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Trichloroethene | EPA 624 | 10C1196 | 0.26 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Trichlorofluoromethane | EPA 624 | 10C1196 | 0.34 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Trichlorotrifluoroethane (Freon 113) | EPA 624 | 10C1196 | 0.50 | 5.0 | ND | 1 | 03/10/10 | 03/10/10 |
| Vinyl chloride | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 |
| Xylenes, Total | EPA 624 | 10C1196 | 0.90 | 1.5 | ND | 1 | 03/10/10 | 03/10/10 |
| Surrogate: 4-Bromofluorobenzene (80-120 | 1%) | | | | 96 % | | | |
| Surrogate: Dibromofluoromethane (80-12) | 0%) | | | | 103 % | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 106 % | | | |
| | | | | | | | | |

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

Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| PURGEABLES BY GC/MS (EPA 624) | | | | | | | | | |
|--|---------|---------|-------|-----------|--------|----------|-----------|----------|------------|
| | | | MDL | Reporting | Sample | Dilution | Date | Date | Data |
| Analyte | Method | Batch | Limit | Limit | Result | Factor | Extracted | Analyzed | Qualifiers |
| Sample ID: ITC0989-02 (Trip Blanks - Wa | ter) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Benzene | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Bromodichloromethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Bromoform | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Bromomethane | EPA 624 | 10C1196 | 0.42 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 | |
| Carbon tetrachloride | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Chlorobenzene | EPA 624 | 10C1196 | 0.36 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Chloroethane | EPA 624 | 10C1196 | 0.40 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 | |
| Chloroform | EPA 624 | 10C1196 | 0.33 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Chloromethane | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Dibromochloromethane | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,2-Dichlorobenzene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,3-Dichlorobenzene | EPA 624 | 10C1196 | 0.35 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,4-Dichlorobenzene | EPA 624 | 10C1196 | 0.37 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,1-Dichloroethane | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,2-Dichloroethane | EPA 624 | 10C1196 | 0.28 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,1-Dichloroethene | EPA 624 | 10C1196 | 0.42 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| cis-1,2-Dichloroethene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| trans-1,2-Dichloroethene | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,2-Dichloropropane | EPA 624 | 10C1196 | 0.35 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| cis-1,3-Dichloropropene | EPA 624 | 10C1196 | 0.22 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| trans-1,3-Dichloropropene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Ethylbenzene | EPA 624 | 10C1196 | 0.25 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Methylene chloride | EPA 624 | 10C1196 | 0.95 | 1.0 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,1,2,2-Tetrachloroethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Tetrachloroethene | EPA 624 | 10C1196 | 0.32 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Toluene | EPA 624 | 10C1196 | 0.36 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,1,1-Trichloroethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| 1,1,2-Trichloroethane | EPA 624 | 10C1196 | 0.30 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Trichloroethene | EPA 624 | 10C1196 | 0.26 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Trichlorofluoromethane | EPA 624 | 10C1196 | 0.34 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Trichlorotrifluoroethane (Freon 113) | EPA 624 | 10C1196 | 0.50 | 5.0 | ND | 1 | 03/10/10 | 03/10/10 | |
| Vinyl chloride | EPA 624 | 10C1196 | 0.40 | 0.50 | ND | 1 | 03/10/10 | 03/10/10 | |
| Xylenes, Total | EPA 624 | 10C1196 | 0.90 | 1.5 | ND | 1 | 03/10/10 | 03/10/10 | |
| Surrogate: 4-Bromofluorobenzene (80-120% | | | | | 95 % | | | | |
| Surrogate: Dibromofluoromethane (80-120% | | | | | 100 % | | | | |
| Surrogate: Toluene-d8 (80-120%) | | | | | 106 % | | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

PURGEABLES-- GC/MS (EPA 624) MDL Reporting Sample Dilution Date Date Data Qualifiers Method Batch Limit Limit Result Factor Extracted Analyte Analyzed Sample ID: ITC0989-01 (Outfall 006 (Grab) - Water) Reporting Units: ug/l 10C1196 4.0 5.0 ND 03/10/10 03/10/10 Acrolein EPA 624 1 Acrylonitrile EPA 624 10C1196 1.2 2.0 ND 03/10/10 03/10/10 1 5.0 ND 2-Chloroethyl vinyl ether EPA 624 10C1196 1.8 1 03/10/10 03/10/10 Surrogate: 4-Bromofluorobenzene (80-120%) 96 % Surrogate: Dibromofluoromethane (80-120%) 103 % Surrogate: Toluene-d8 (80-120%) 106 % Sample ID: ITC0989-02 (Trip Blanks - Water) Reporting Units: ug/l Acrolein EPA 624 10C1196 4.0 5.0 ND 1 03/10/10 03/10/10 EPA 624 10C1196 1.2 2.0 ND 03/10/10 03/10/10 Acrylonitrile 1 2-Chloroethyl vinyl ether EPA 624 10C1196 1.8 5.0 ND 1 03/10/10 03/10/10 Surrogate: 4-Bromofluorobenzene (80-120%) 95 % Surrogate: Dibromofluoromethane (80-120%) 100 % Surrogate: Toluene-d8 (80-120%) 106 %

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Project ID: Annual Outfall 006

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

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| ACID & BASE/NEUTRALS BY GC/MS (EPA 625) | | | | | | | | | | | |
|---|--------------------|--------------------|------------|------------|----------|----------------|----------------------|----------------------|------------|--|--|
| | | | MDL | Reporting | - | Dilution | Date | Date | Data | | |
| Analyte | Method | Batch | Limit | Limit | Result | Factor | Extracted | Analyzed | Qualifiers | | |
| Sample ID: ITC0989-03 (Outfall 006 (| Composite) - Water |) | | | | | | | | | |
| Reporting Units: ug/l | EDA (25 | 1001554 | 2.0 | 0.(| ND | 0.0(2 | 02/12/10 | 02/17/10 | | | |
| Acenaphthene Acenaphthylene | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 2.9 | 9.6 9.6 | ND ND | 0.962 0.962 | 03/12/10 03/12/10 | 03/16/10 03/16/10 | | | |
| Aniline | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Anthracene | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzidine | EPA 625 | 10C1554 | 9.6 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | L6 | | |
| Benzo(a)anthracene | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzo(a)pyrene | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzo(b)fluoranthene | EPA 625 | 10C1554 | 1.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzo(g,h,i)perylene | EPA 625 | 10C1554 | 3.8 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzo(k)fluoranthene | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzoic acid | EPA 625 | 10C1554 | 9.6 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Benzyl alcohol | EPA 625 | 10C1554 | 3.4 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 4-Bromophenyl phenyl ether | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Butyl benzyl phthalate | EPA 625 | 10C1554 | 3.8 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 4-Chloro-3-methylphenol | EPA 625 | 10C1554 | 2.4 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 4-Chloroaniline | EPA 625 | 10C1554 | 1.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Bis(2-chloroethoxy)methane | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Bis(2-chloroethyl)ether | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Bis(2-chloroisopropyl)ether | EPA 625 | 10C1554 | 2.4 3.8 | 9.6 48 | ND ND | 0.962 0.962 | 03/12/10 03/12/10 | 03/16/10 03/16/10 | | | |
| Bis(2-ethylhexyl)phthalate 2-Chloronaphthalene | EPA 625 EPA 625 | 10C1554 10C1554 | 5.8 2.9 | 48 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 2-Chlorophenol | EPA 625 | 10C1554 | 2.9 | 9.0 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 4-Chlorophenyl phenyl ether | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Chrysene | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Dibenz(a,h)anthracene | EPA 625 | 10C1554 | 2.9 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Dibenzofuran | EPA 625 | 10C1554 | 3.8 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Di-n-butyl phthalate | EPA 625 | 10C1554 | 2.9 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 1,2-Dichlorobenzene | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 1,3-Dichlorobenzene | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 1,4-Dichlorobenzene | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 3,3'-Dichlorobenzidine | EPA 625 | 10C1554 | 7.2 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 2,4-Dichlorophenol | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Diethyl phthalate | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 2,4-Dimethylphenol | EPA 625 | 10C1554 | 3.4 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Dimethyl phthalate | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 4,6-Dinitro-2-methylphenol | EPA 625 | 10C1554 | 3.8 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 2,4-Dinitrophenol | EPA 625 | 10C1554 | 7.7 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 2,4-Dinitrotoluene | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| 2,6-Dinitrotoluene | EPA 625 | 10C1554 | 1.9 | 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | | |
| Di-n-octyl phthalate | EPA 625 | 10C1554 | 3.4 | 19 10 | ND ND | 0.962 | 03/12/10 03/12/10 | 03/16/10 | | | |
| 1,2-Diphenylhydrazine/Azobenzene | EPA 625 | 10C1554 | 2.4 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | | |

1,2-Diphenylhydrazine/Azobenzene

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Project ID: Annual Outfall 006

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

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| 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 | |
| - | | | | | | | | j | | |
| Sample ID: ITC0989-03 (Outfall 006 (Comp | oosite) - Water |) - cont. | | | | | | | | |
| Reporting Units: ug/l Fluoranthene | EPA 625 | 10C1554 | 2.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Fluorene | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 2.9 | 9.6 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Hexachlorobenzene | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 2.9 | 9.6 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Hexachlorobutadiene | EPA 625 EPA 625 | 10C1334 10C1554 | 2.9 3.8 | 9.6 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Hexachlorocyclopentadiene | EPA 625 EPA 625 | 10C1554 | 5.8 4.8 | 9.0 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Hexachloroethane | EPA 625 EPA 625 | 10C1554 | 4.8 3.4 | 19 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Indeno(1,2,3-cd)pyrene | EPA 625 EPA 625 | 10C1554 | 3.4 3.4 | 9.0 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Isophorone | EPA 625 EPA 625 | 10C1554 10C1554 | 5.4 2.9 | 19 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 2-Methylnaphthalene | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 1.9 | 9.6 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 2-Methylphenol | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 | 9.6 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 4-Methylphenol | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 2.9 | 9.6 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Naphthalene | EPA 625 EPA 625 | 10C1554 10C1554 | 2.9 2.9 | 9.6 9.6 | ND ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 2-Nitroaniline | | | | 9.0 19 | | | | | | |
| 3-Nitroaniline | EPA 625 | 10C1554 | 1.9 | 19 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| | EPA 625 | 10C1554 | 2.9 | | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 4-Nitroaniline | EPA 625 | 10C1554 | 3.8 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Nitrobenzene | EPA 625 | 10C1554 | 2.9 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 2-Nitrophenol | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 4-Nitrophenol | EPA 625 | 10C1554 | 5.3 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| N-Nitroso-di-n-propylamine | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| N-Nitrosodimethylamine | EPA 625 | 10C1554 | 2.4 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| N-Nitrosodiphenylamine | EPA 625 | 10C1554 | 1.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Pentachlorophenol | EPA 625 | 10C1554 | 3.4 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Phenanthrene | EPA 625 | 10C1554 | 3.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Phenol | EPA 625 | 10C1554 | 1.9 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Pyrene | EPA 625 | 10C1554 | 3.8 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 1,2,4-Trichlorobenzene | EPA 625 | 10C1554 | 2.4 | 9.6 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 2,4,5-Trichlorophenol | EPA 625 | 10C1554 | 2.9 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| 2,4,6-Trichlorophenol | EPA 625 | 10C1554 | 4.3 | 19 | ND | 0.962 | 03/12/10 | 03/16/10 | | |
| Surrogate: 2,4,6-Tribromophenol (40-120%) | | | | | 93 % | | | | | |
| Surrogate: 2-Fluorobiphenyl (50-120%) | | | | | 70~% | | | | | |
| Surrogate: 2-Fluorophenol (30-120%) | | | | | 51 % | | | | | |
| Surrogate: Nitrobenzene-d5 (45-120%) | | | | | 62 % | | | | | |
| Surrogate: Phenol-d6 (35-120%) | | | | | 56 % | | | | | |
| Surrogate: Terphenyl-d14 (50-125%) | | | | | 100 % | | | | | |

TestAmerica Irvine



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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

ACID & BASE/NEUTRALS BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|--|--------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: ITC0989-03 (Outfall 006 (Com Reporting Units: ug/l | posite) - Water) - | cont. | | | | | | | |
| Chlorpyrifos | EPA 625 | 10C1554 | N/A | 48 | ND | 0.962 | 03/12/10 | 03/16/10 | |
| Diazinon | EPA 625 | 10C1554 | N/A | 48 | ND | 0.962 | 03/12/10 | 03/16/10 | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2) MDL Reporting Sample Dilution Date Date Data Analyte Method Batch Limit Limit Result Factor Extracted Analyzed Qualifiers Sample ID: ITC0989-03RE1 (Outfall 006 (Composite) - Water) Н Reporting Units: ug/l EPA 525.2 0.96 0.962 Chlorpyrifos 10D3000 0.0096 ND 03/12/10 04/26/10 Diazinon EPA 525.2 10D3000 0.096 0.24 ND 0.962 03/12/10 04/26/10 L2

THE LEADER IN ENVIRONMENTAL TESTING

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Project ID: Annual Outfall 006

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

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

ORGANOCHLORINE PESTICIDES (EPA 608)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: ITC0989-03 (Outfall 006 (Comp | oosite) - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| 4,4'-DDD | EPA 608 | 10C1222 | 0.0019 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| 4,4'-DDE | EPA 608 | 10C1222 | 0.0028 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| 4,4'-DDT | EPA 608 | 10C1222 | 0.0038 | 0.0095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Aldrin | EPA 608 | 10C1222 | 0.0014 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| alpha-BHC | EPA 608 | 10C1222 | 0.0024 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| beta-BHC | EPA 608 | 10C1222 | 0.0038 | 0.0095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| delta-BHC | EPA 608 | 10C1222 | 0.0033 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Dieldrin | EPA 608 | 10C1222 | 0.0019 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Endosulfan I | EPA 608 | 10C1222 | 0.0019 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Endosulfan II | EPA 608 | 10C1222 | 0.0028 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Endosulfan sulfate | EPA 608 | 10C1222 | 0.0028 | 0.0095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Endrin | EPA 608 | 10C1222 | 0.0019 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Endrin aldehyde | EPA 608 | 10C1222 | 0.0019 | 0.0095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Endrin ketone | EPA 608 | 10C1222 | 0.0028 | 0.0095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| gamma-BHC (Lindane) | EPA 608 | 10C1222 | 0.0028 | 0.019 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Heptachlor | EPA 608 | 10C1222 | 0.0028 | 0.0095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Heptachlor epoxide | EPA 608 | 10C1222 | 0.0024 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Methoxychlor | EPA 608 | 10C1222 | 0.0033 | 0.0047 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Chlordane | EPA 608 | 10C1222 | 0.038 | 0.095 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Toxaphene | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/12/10 | |
| Surrogate: Decachlorobiphenyl (45-120%) | | | | | 91 % | | | | |
| Surrogate: Tetrachloro-m-xylene (35-115%) | | | | | 55 % | | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| TOTAL PCBS (EPA 608) | | | | | | | | | | | |
|---|-----------------|-----------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | |
| Sample ID: ITC0989-03 (Outfall 006 (Com | posite) - Water |) - cont. | | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | | |
| Aroclor 1016 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Aroclor 1221 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Aroclor 1232 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Aroclor 1242 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Aroclor 1248 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Aroclor 1254 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Aroclor 1260 | EPA 608 | 10C1222 | 0.24 | 0.47 | ND | 0.948 | 03/10/10 | 03/11/10 | | | |
| Surrogate: Decachlorobiphenyl (45-120%) | | | | | 88 % | | | | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| HEXANE EXTRACTABLE MATERIAL | | | | | | | | | | | | |
|---------------------------------------|----------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | | |
| Sample ID: ITC0989-01 (Outfall 006 (G | Frab) - Water) | | | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | | | |
| Hexane Extractable Material (Oil & | EPA 1664A | 10C2126 | 1.3 | 4.8 | ND | 1 | 03/17/10 | 03/17/10 | | | | |
| Grease) | | | | | | | | | | | | |

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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| METALS | | | | | | | | | |
|--|-------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITC0989-03 (Outfall 006 (Con Reporting Units: mg/l | nposite) - Water) | | | | | | | | |
| Hardness as CaCO3 | SM2340B | [CALC] | N/A | 0.33 | 150 | 1 | 03/15/10 | 03/19/10 | |
| Boron | EPA 200.7 | 10C1781 | 0.020 | 0.050 | 0.055 | 1 | 03/15/10 | 03/19/10 | |
| Calcium | EPA 200.7 | 10C1781 | 0.050 | 0.10 | 51 | 1 | 03/15/10 | 03/19/10 | |
| Iron | EPA 200.7 | 10C1781 | 0.015 | 0.040 | 0.14 | 1 | 03/15/10 | 03/19/10 | |
| Magnesium | EPA 200.7 | 10C1781 | 0.012 | 0.020 | 4.1 | 1 | 03/15/10 | 03/19/10 | |
| Sample ID: ITC0989-03 (Outfall 006 (Con | nposite) - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Aluminum | EPA 200.7 | 10C1781 | 40 | 50 | 200 | 1 | 03/15/10 | 03/19/10 | |
| Mercury | EPA 245.1 | 10C2010 | 0.10 | 0.20 | ND | 1 | 03/16/10 | 03/16/10 | |
| Arsenic | EPA 200.7 | 10C1781 | 7.0 | 10 | ND | 1 | 03/15/10 | 03/19/10 | |
| Antimony | EPA 200.8 | 10C1948 | 0.30 | 2.0 | 0.45 | 1 | 03/16/10 | 03/16/10 | J |
| Beryllium | EPA 200.7 | 10C1781 | 0.90 | 2.0 | ND | 1 | 03/15/10 | 03/19/10 | |
| Chromium | EPA 200.7 | 10D1079 | 2.0 | 5.0 | ND | 1 | 04/09/10 | 04/09/10 | |
| Nickel | EPA 200.7 | 10C1781 | 2.0 | 10 | ND | 1 | 03/15/10 | 03/19/10 | |
| Selenium | EPA 200.7 | 10C1781 | 8.0 | 10 | ND | 1 | 03/15/10 | 03/19/10 | |
| Silver | EPA 200.7 | 10D1079 | 6.0 | 10 | ND | 1 | 04/09/10 | 04/09/10 | |
| Cadmium | EPA 200.8 | 10C1948 | 0.10 | 1.0 | ND | 1 | 03/16/10 | 03/16/10 | |
| Vanadium | EPA 200.7 | 10C1781 | 3.0 | 10 | 3.7 | 1 | 03/15/10 | 03/19/10 | J |
| Zinc | EPA 200.7 | 10C1781 | 6.0 | 20 | 7.7 | 1 | 03/15/10 | 03/19/10 | J |
| Copper | EPA 200.8 | 10C1948 | 0.50 | 2.0 | 1.8 | 1 | 03/16/10 | 03/16/10 | J |
| Lead | EPA 200.8 | 10C1948 | 0.20 | 1.0 | 0.49 | 1 | 03/16/10 | 03/16/10 | J |
| Thallium | EPA 200.8 | 10C1948 | 0.20 | 1.0 | ND | 1 | 03/16/10 | 03/16/10 | |

THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Annual Outfall 006

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

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| DISSOLVED METALS | | | | | | | | | | | |
|------------------------------------|----------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | |
| Sample ID: ITC0989-03 (Outfall 006 | (Composite) - Water) | | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | | |
| Hardness as CaCO3 | SM2340B-Diss | [CALC] | N/A | 0.33 | 140 | 1 | 03/17/10 | 03/20/10 | | | |
| Boron | EPA 200.7-Diss | 10C2228 | 0.020 | 0.050 | 0.057 | 1 | 03/17/10 | 03/20/10 | | | |
| Calcium | EPA 200.7-Diss | 10C2228 | 0.050 | 0.10 | 51 | 1 | 03/17/10 | 03/20/10 | MHA | | |
| Iron | EPA 200.7-Diss | 10C2228 | 0.015 | 0.040 | 0.016 | 1 | 03/17/10 | 03/20/10 | J | | |
| Magnesium | EPA 200.7-Diss | 10C2228 | 0.012 | 0.020 | 4.1 | 1 | 03/17/10 | 03/20/10 | | | |
| Sample ID: ITC0989-03 (Outfall 006 | (Composite) - Water) | | | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | | |
| Aluminum | EPA 200.7-Diss | 10C2228 | 40 | 50 | ND | 1 | 03/17/10 | 03/20/10 | | | |
| Mercury | EPA 245.1-Diss | 10C2011 | 0.10 | 0.20 | ND | 1 | 03/16/10 | 03/16/10 | | | |
| Arsenic | EPA 200.7-Diss | 10C2228 | 7.0 | 10 | ND | 1 | 03/17/10 | 03/20/10 | | | |
| Antimony | EPA 200.8-Diss | 10C1953 | 0.30 | 2.0 | 0.46 | 1 | 03/16/10 | 03/17/10 | J | | |
| Beryllium | EPA 200.7-Diss | 10C2228 | 0.90 | 2.0 | ND | 1 | 03/17/10 | 03/20/10 | | | |
| Chromium | EPA 200.7-Diss | 10C2228 | 2.0 | 5.0 | 4.6 | 1 | 03/17/10 | 03/20/10 | J | | |
| Nickel | EPA 200.7-Diss | 10C2228 | 2.0 | 10 | 10 | 1 | 03/17/10 | 03/20/10 | | | |
| Selenium | EPA 200.7-Diss | 10C2228 | 8.0 | 10 | ND | 1 | 03/17/10 | 03/20/10 | | | |
| Silver | EPA 200.7-Diss | 10D1078 | 6.0 | 10 | ND | 1 | 04/09/10 | 04/09/10 | | | |
| Cadmium | EPA 200.8-Diss | 10C1953 | 0.10 | 1.0 | ND | 1 | 03/16/10 | 03/17/10 | | | |
| Vanadium | EPA 200.7-Diss | 10C2228 | 3.0 | 10 | 3.4 | 1 | 03/17/10 | 03/20/10 | J | | |
| Zinc | EPA 200.7-Diss | 10D1078 | 6.0 | 20 | ND | 1 | 04/09/10 | 04/09/10 | | | |
| Copper | EPA 200.8-Diss | 10C1953 | 0.50 | 2.0 | 1.4 | 1 | 03/16/10 | 03/17/10 | J | | |
| Lead | EPA 200.8-Diss | 10C1953 | 0.20 | 1.0 | ND | 1 | 03/16/10 | 03/17/10 | | | |
| Thallium | EPA 200.8-Diss | 10C1953 | 0.20 | 1.0 | ND | 1 | 03/16/10 | 03/17/10 | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| DISSOLVED INORGANICS | | | | | | | | | | | |
|------------------------------------|-----------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | | |
| Sample ID: ITC0989-01 (Outfall 006 | (Grab) - Water) | | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | | |
| Chromium VI | EPA 218.6 | 10C1119 | 0.00025 | 0.0010 | 0.00083 | 1 | 03/09/10 | 03/09/10 | J | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| INORGANICS | | | | | | | | | | |
|---|---------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
| Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) | | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | |
| Chloride | EPA 300.0 | 10C1057 | 0.25 | 0.50 | 7.3 | 1 | 03/09/10 | 03/09/10 | | |
| Total Cyanide | SM4500CN-E | 10C1460 | 0.0022 | 0.0050 | ND | 1 | 03/11/10 | 03/11/10 | | |
| Fluoride | SM 4500-F-C | 10C1344 | 0.020 | 0.10 | 0.14 | 1 | 03/11/10 | 03/11/10 | В | |
| Nitrate/Nitrite-N | EPA 300.0 | 10C1057 | 0.15 | 0.26 | 2.7 | 1 | 03/09/10 | 03/09/10 | | |
| Sulfate | EPA 300.0 | 10C1057 | 0.20 | 0.50 | 20 | 1 | 03/09/10 | 03/09/10 | | |
| Total Dissolved Solids | SM2540C | 10C1704 | 1.0 | 10 | 240 | 1 | 03/13/10 | 03/13/10 | | |
| Total Suspended Solids | SM 2540D | 10C1880 | 1.0 | 10 | 13 | 1 | 03/15/10 | 03/15/10 | | |
| Sample ID: ITC0989-03 (Outfall 006 (C | Composite) - Water) | | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | |
| Perchlorate | EPA 314.0 | 10C1095 | 0.90 | 4.0 | ND | 1 | 03/10/10 | 03/10/10 | | |

THE LEADER IN ENVIRONMENTAL TESTING

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Project ID: Annual Outfall 006

EPA-5 1613B

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

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| | | 1 | LFA-5 10 | 13D | | | | | |
|--|--------------------|-------|-----------|-----------|----------|----------|-----------|----------|------------|
| | | | MDL | Reporting | Sample | Dilution | Date | Date | Data |
| Analyte | Method | Batch | Limit | Limit | Result | Factor | Extracted | Analyzed | Qualifiers |
| Sample ID: ITC0989-03 (Outfall 006 (C | omposite) - Water) | | | | | | | | |
| Reporting Units: ug/L | • / / | | | | | | | | |
| 1,2,3,4,6,7,8-HpCDD | EPA-5 1613B | 70198 | 0.0000014 | 0.00005 | 2.6e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Ba |
| 1,2,3,4,6,7,8-HpCDF | EPA-5 1613B | 70198 | 0.0000004 | 1 0.00005 | 1.2e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| 1,2,3,4,7,8,9-HpCDF | EPA-5 1613B | 70198 | 0.0000007 | 2 0.00005 | 6.2e-007 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| 1,2,3,4,7,8-HxCDD | EPA-5 1613B | 70198 | 0.0000009 | 2 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 1,2,3,4,7,8-HxCDF | EPA-5 1613B | 70198 | 0.0000001 | 8 0.00005 | 4.1e-007 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| 1,2,3,6,7,8-HxCDD | EPA-5 1613B | 70198 | 0.000008 | 2 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 1,2,3,6,7,8-HxCDF | EPA-5 1613B | 70198 | 0.0000001 | 8 0.00005 | 6.5e-007 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| 1,2,3,7,8,9-HxCDD | EPA-5 1613B | 70198 | 0.0000007 | 2 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 1,2,3,7,8,9-HxCDF | EPA-5 1613B | 70198 | 0.0000002 | 3 0.00005 | 6.4e-007 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| 1,2,3,7,8-PeCDD | EPA-5 1613B | 70198 | 0.0000006 | 3 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 1,2,3,7,8-PeCDF | EPA-5 1613B | 70198 | 0.0000002 | 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 2,3,4,6,7,8-HxCDF | EPA-5 1613B | 70198 | 0.0000001 | 6 0.00005 | 4.4e-007 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| 2,3,4,7,8-PeCDF | EPA-5 1613B | 70198 | 0.0000002 | 2 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 2,3,7,8-TCDD | EPA-5 1613B | 70198 | 0.0000004 | 7 0.00001 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| 2,3,7,8-TCDF | EPA-5 1613B | 70198 | 0.0000004 | 1 0.00001 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| OCDD | EPA-5 1613B | 70198 | 0.0000027 | 0.0001 | 1.1e-005 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| OCDF | EPA-5 1613B | 70198 | | 9 0.0001 | 2.4e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| Total HpCDD | EPA-5 1613B | 70198 | 0.0000014 | 0.00005 | 6e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Ba |
| Total HpCDF | EPA-5 1613B | 70198 | 0.0000004 | 1 0.00005 | 3.3e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| Total HxCDD | EPA-5 1613B | | 0.0000007 | | ND | 0.95 | 03/11/10 | 03/16/10 | |
| Total HxCDF | EPA-5 1613B | | 0.0000001 | | 2.4e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Q, Ba |
| Total PeCDD | EPA-5 1613B | | 0.0000006 | | 1.1e-006 | 0.95 | 03/11/10 | 03/16/10 | J, Q |
| Total PeCDF | EPA-5 1613B | 70198 | 0.0000002 | 0.00005 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| Total TCDD | EPA-5 1613B | | | 7 0.00001 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| Total TCDF | EPA-5 1613B | 70198 | 0.0000004 | 1 0.00001 | ND | 0.95 | 03/11/10 | 03/16/10 | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (2. | | | | | 81 % | | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28 | | | | | 93 % | | | | |
| Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (20 | 5-138%) | | | | 80~% | | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDD (32- | 141%) | | | | 78 % | | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-1 | | | | | 78 % | | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDD (28- | 130%) | | | | 80 % | | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-1 | | | | | 77 % | | | | |
| Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-1 | | | | | 73 % | | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDD (25-18 | | | | | 79 % | | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDF (24-18. | | | | | 80 % | | | | |
| Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-1 | | | | | 80 % | | | | |
| Surrogate: 13C-2,3,4,7,8-PeCDF (21-176 | | | | | 79 % | | | | |
| Surrogate: 13C-2,3,7,8-TCDD (25-164% | | | | | 80 % | | | | |
| Surrogate: 13C-2,3,7,8-TCDF (24-169%) | | | | | 87 % | | | | |
| Surrogate: 13C-OCDD (17-157%) | | | | | 85 % | | | | |
| Surrogate: 37Cl4-2,3,7,8-TCDD (35-197 | %) | | | | 103 % | | | | |
| | | | | | | | | | |

TestAmerica Irvine



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| | Α | STM 5174-91 | | | |
|-----------------------------------|----------------|--------------------|-----------|----------|--|
| Attention: Bronwyn Kelly | Report Number. | 1100/07 | Received. | 03/07/10 | |
| Arcadia, CA 91007 | Report Number: | ITC0989 | Received: | | |
| 618 Michillinda Avenue, Suite 200 | | | Sampled: | 03/08/10 | |
| MWH-Pasadena/Boeing | Project ID: | Annual Outfall 006 | | | |

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|--------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) | | | | | | | | | |
| Reporting Units: pCi/L Total Uranium | ASTM 5174-91 | 83129 | 0.21 | 0.677 | 0.441 | 1 | 03/24/10 | 03/29/10 | Jb |



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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| EPA 900.0 MOD | | | | | | | | | | |
|------------------------------------|---|-------|--------------|--------------------|------------------|---|-------------------|------------------|--------------------|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers | |
| Sample ID: ITC0989-03 (Outfall 006 | Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) | | | | | | | | | |
| Reporting Units: pCi/L | | | | | | | | | | |
| Gross Alpha | EPA 900.0 MOD | 76134 | 2 | 3 | 0.7 | 1 | 03/17/10 | 03/20/10 | U | |
| Gross Beta | EPA 900.0 MOD | 76134 | 1.2 | 4 | 3.6 | 1 | 03/17/10 | 03/20/10 | Jb | |



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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

| EPA 901.1 MOD | | | | | | | | | | |
|--------------------------------------|---|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
| Sample ID: ITC0989-03 (Outfall 006 (| Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) | | | | | | | | | |
| Reporting Units: pCi/L | | | | | | | | | | |
| Cesium 137 | EPA 901.1 MOD | 74318 | 16 | 20 | -2.2 | 1 | 03/15/10 | 03/22/10 | U | |
| Potassium 40 | EPA 901.1 MOD | 74318 | 300 | NA | -80 | 1 | 03/15/10 | 03/22/10 | U | |



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 MWH-Pasadena/Boeing
 Project ID: Annual Outfall 006

 618 Michillinda Avenue, Suite 200
 Sampled: 03/08/10

 Arcadia, CA 91007
 Report Number: ITC0989
 Received: 03/09/10

 Attention: Bronwyn Kelly
 EPA 003 0 MOD

| EPA 903.0 MOD | | | | | | | | | |
|---|---------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) Reporting Units: pCi/L | | | | | | | | | |
| Radium (226) | EPA 903.0 MOD | 71128 | 0.05 | 1 | 0.07 | 1 | 03/12/10 | 04/05/10 | Jb |



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| | EPA 904 MOD | | |
|--|------------------------------|-----------|----------|
| Arcadia, CA 91007 Report Attention: Bronwyn Kelly | Number: ITC0989 | Received: | 03/09/10 |
| 618 Michillinda Avenue, Suite 200 | - | Sampled: | 03/08/10 |
| MWH-Pasadena/Boeing Pr | oject ID: Annual Outfall 006 | | |

| EI A 704 MOD | | | | | | | | | |
|---|-------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) Reporting Units: pCi/L | | | | | | | | | |
| Radium 228 | EPA 904 MOD | 71129 | 0.44 | 1 | 0.11 | 1 | 03/12/10 | 03/29/10 | U |



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| MWH-Pasadena/Boeing | Project ID: Annual Outfall 006 | |
|-----------------------------------|--------------------------------|--------------------|
| 618 Michillinda Avenue, Suite 200 | | Sampled: 03/08/10 |
| Arcadia, CA 91007 | Report Number: ITC0989 | Received: 03/09/10 |
| Attention: Bronwyn Kelly | | |
| | | |

| EPA 905 MOD | | | | | | | | | |
|---|-------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITC0989-03 (Outfall 006 (Composite) - Water) Reporting Units: pCi/L | | | | | | | | | |
| Strontium 90 | EPA 905 MOD | 71130 | 0.68 | 3 | -0.1 | 1 | 03/12/10 | 03/25/10 | U |



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 MWH-Pasadena/Boeing
 Project ID:
 Annual Outfall 006

 618 Michillinda Avenue, Suite 200
 Sampled:
 03/08/10

 Arcadia, CA 91007
 Report Number:
 ITC0989
 Received:
 03/09/10

 Attention:
 Bronwyn Kelly
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| EPA 906.0 MOD | | | | | | | | | |
|--|----------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITC0989-03 (Outfall 006 Reporting Units: pCi/L | (Composite) - Water) | | | | | | | | |
| Tritium | EPA 906.0 MOD | 77060 | 150 | 500 | 73 | 1 | 03/18/10 | 03/24/10 | U |

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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

SHORT HOLD TIME DETAIL REPORT

| | Hold Time (in days) | Date/Time Sampled | Date/Time Received | Date/Time Extracted | Date/Time Analyzed |
|---|------------------------|----------------------|-----------------------|------------------------|-----------------------|
| Sample ID: Outfall 006 (Grab) (ITC0989-01 |) - Water | | | | |
| EPA 218.6 | 1 | 03/08/2010 11:08 | 03/09/2010 17:20 | 03/09/2010 19:45 | 03/09/2010 19:53 |
| EPA 624 | 3 | 03/08/2010 11:08 | 03/09/2010 17:20 | 03/10/2010 00:00 | 03/10/2010 11:28 |
| Sample ID: Trip Blanks (ITC0989-02) - Wat | ter | | | | |
| EPA 624 | 3 | 03/08/2010 11:08 | 03/09/2010 17:20 | 03/10/2010 00:00 | 03/10/2010 10:58 |
| Sample ID: Outfall 006 (Composite) (ITC09 | 89-03) - Water | | | | |
| EPA 300.0 | 2 | 03/08/2010 11:08 | 03/09/2010 17:20 | 03/09/2010 21:30 | 03/09/2010 22:24 |
| Sample ID: Outfall 006 (Composite) (ITC09 | 89-03RE1) - Wa | iter | | | |
| EPA 525.2 | 1 | 03/08/2010 11:08 | 03/09/2010 17:20 | 03/12/2010 09:03 | 04/26/2010 16:59 |



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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|-----------------|--------------------|------|-------|----------------|--------|-------|--------|------|--------------|--------------------|
| · | | Linnt | MDL | Units | Level | Kesuit | /orec | Linns | KI D | Linnt | Quanners |
| Batch: 10C1196 Extracted: 03/10/10 | <u>0</u> | | | | | | | | | | |
| | DI 1 /1) | | | | | | | | | | |
| Blank Analyzed: 03/10/2010 (10C1196-F | , | 0.50 | | (1 | | | | | | | |
| Benzene | ND | 0.50 | 0.28 | ug/l | | | | | | | |
| Bromodichloromethane | ND | 0.50 | 0.30 | ug/l | | | | | | | |
| Bromoform | ND | 0.50 | 0.40 | ug/l | | | | | | | |
| Bromomethane | ND | 1.0 | 0.42 | ug/l | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | 0.28 | ug/l | | | | | | | |
| Chlorobenzene | ND | 0.50 | 0.36 | ug/l | | | | | | | |
| Chloroethane | ND | 1.0 | 0.40 | ug/l | | | | | | | |
| Chloroform | ND | 0.50 | 0.33 | ug/l | | | | | | | |
| Chloromethane | ND | 0.50 | 0.40 | ug/l | | | | | | | |
| Dibromochloromethane | ND | 0.50 | 0.40 | ug/l | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.50 | 0.32 | ug/l | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.50 | 0.35 | ug/l | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | 0.37 | ug/l | | | | | | | |
| 1,1-Dichloroethane | ND | 0.50 | 0.40 | ug/l | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | 0.28 | ug/l | | | | | | | |
| 1,1-Dichloroethene | ND | 0.50 | 0.42 | ug/l | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.50 | 0.32 | ug/l | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.50 | 0.30 | ug/l | | | | | | | |
| 1,2-Dichloropropane | ND | 0.50 | 0.35 | ug/l | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.22 | ug/l | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.32 | ug/l | | | | | | | |
| Ethylbenzene | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Methylene chloride | ND | 1.0 | 0.95 | ug/l | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.30 | ug/l | | | | | | | |
| Tetrachloroethene | ND | 0.50 | 0.32 | ug/l | | | | | | | |
| Toluene | ND | 0.50 | 0.36 | ug/l | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.50 | 0.30 | ug/l | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.50 | 0.30 | 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 | 0.40 | ug/l | | | | | | | |
| Xylenes, Total | ND | 1.5 | 0.90 | ug/l | | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 24.2 | | | ug/l | 25.0 | | 97 | 80-120 | | | |
| Surrogate: Dibromofluoromethane | 24.4 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| | | | | | . • • | | | | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1196 Extracted: 03/10/1 | 0 | | | | | | | | | | |
| | <u> </u> | | | | | | | | | | |
| Blank Analyzed: 03/10/2010 (10C1196-I | BLK1) | | | | | | | | | | |
| Surrogate: Toluene-d8 | 26.6 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| LCS Analyzed: 03/10/2010 (10C1196-BS | 51) | | | | | | | | | | |
| Benzene | 25.7 | 0.50 | 0.28 | ug/l | 25.0 | | 103 | 70-120 | | | |
| Bromodichloromethane | 28.0 | 0.50 | 0.30 | ug/l | 25.0 | | 112 | 70-135 | | | |
| Bromoform | 19.8 | 0.50 | 0.40 | ug/l | 25.0 | | 79 | 55-130 | | | |
| Bromomethane | 26.5 | 1.0 | 0.42 | ug/l | 25.0 | | 106 | 65-140 | | | |
| Carbon tetrachloride | 26.0 | 0.50 | 0.28 | ug/l | 25.0 | | 104 | 65-140 | | | |
| Chlorobenzene | 26.1 | 0.50 | 0.36 | ug/l | 25.0 | | 104 | 75-120 | | | |
| Chloroethane | 25.5 | 1.0 | 0.40 | ug/l | 25.0 | | 102 | 60-140 | | | |
| Chloroform | 27.1 | 0.50 | 0.33 | ug/l | 25.0 | | 108 | 70-130 | | | |
| Chloromethane | 25.2 | 0.50 | 0.40 | ug/l | 25.0 | | 101 | 50-140 | | | |
| Dibromochloromethane | 22.6 | 0.50 | 0.40 | ug/l | 25.0 | | 90 | 70-140 | | | |
| 1,2-Dichlorobenzene | 26.2 | 0.50 | 0.32 | ug/l | 25.0 | | 105 | 75-120 | | | |
| 1,3-Dichlorobenzene | 27.1 | 0.50 | 0.35 | ug/l | 25.0 | | 108 | 75-120 | | | |
| 1,4-Dichlorobenzene | 26.2 | 0.50 | 0.37 | ug/l | 25.0 | | 105 | 75-120 | | | |
| 1,1-Dichloroethane | 27.8 | 0.50 | 0.40 | ug/l | 25.0 | | 111 | 70-125 | | | |
| 1,2-Dichloroethane | 26.7 | 0.50 | 0.28 | ug/l | 25.0 | | 107 | 60-140 | | | |
| 1,1-Dichloroethene | 25.8 | 0.50 | 0.42 | ug/l | 25.0 | | 103 | 70-125 | | | |
| cis-1,2-Dichloroethene | 28.3 | 0.50 | 0.32 | ug/l | 25.0 | | 113 | 70-125 | | | |
| trans-1,2-Dichloroethene | 26.3 | 0.50 | 0.30 | ug/l | 25.0 | | 105 | 70-125 | | | |
| 1,2-Dichloropropane | 25.8 | 0.50 | 0.35 | ug/l | 25.0 | | 103 | 70-125 | | | |
| cis-1,3-Dichloropropene | 31.2 | 0.50 | 0.22 | ug/l | 25.0 | | 125 | 75-125 | | | |
| trans-1,3-Dichloropropene | 21.0 | 0.50 | 0.32 | ug/l | 25.0 | | 84 | 70-125 | | | |
| Ethylbenzene | 26.4 | 0.50 | 0.25 | ug/l | 25.0 | | 106 | 75-125 | | | |
| Methylene chloride | 23.6 | 1.0 | 0.95 | ug/l | 25.0 | | 94 | 55-130 | | | |
| 1,1,2,2-Tetrachloroethane | 24.6 | 0.50 | 0.30 | ug/l | 25.0 | | 98 | 55-130 | | | |
| Tetrachloroethene | 25.0 | 0.50 | 0.32 | ug/l | 25.0 | | 100 | 70-125 | | | |
| Toluene | 27.6 | 0.50 | 0.36 | ug/l | 25.0 | | 111 | 70-120 | | | |
| 1,1,1-Trichloroethane | 26.5 | 0.50 | 0.30 | ug/l | 25.0 | | 106 | 65-135 | | | |
| 1,1,2-Trichloroethane | 25.4 | 0.50 | 0.30 | ug/l | 25.0 | | 102 | 70-125 | | | |
| Trichloroethene | 26.2 | 0.50 | 0.26 | ug/l | 25.0 | | 105 | 70-125 | | | |
| Trichlorofluoromethane | 26.2 | 0.50 | 0.34 | ug/l | 25.0 | | 105 | 65-145 | | | |
| Vinyl chloride | 23.8 | 0.50 | 0.40 | ug/l | 25.0 | | 95 | 55-135 | | | |
| Xylenes, Total | 82.0 | 1.5 | 0.90 | ug/l | 75.0 | | 109 | 70-125 | | | |
| Surrogate: 4-Bromofluorobenzene | 26.6 | | | ug/l | 25.0 | | 106 | 80-120 | | | |

TestAmerica Irvine



MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007

Attention: Bronwyn Kelly

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

Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1196 Extracted: 03/10/10 |) | | | | | | | | | | |
| | <u> </u> | | | | | | | | | | |
| LCS Analyzed: 03/10/2010 (10C1196-BS | 1) | | | | | | | | | | |
| Surrogate: Dibromofluoromethane | 27.0 | | | ug/l | 25.0 | | 108 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Matrix Spike Analyzed: 03/10/2010 (100 | C1196-MS1) | | | | Sou | rce: ITC | 0989-01 | | | | |
| Benzene | 24.9 | 0.50 | 0.28 | ug/l | 25.0 | ND | 99 | 65-125 | | | |
| Bromodichloromethane | 27.5 | 0.50 | 0.30 | ug/l | 25.0 | ND | 110 | 70-135 | | | |
| Bromoform | 20.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 81 | 55-135 | | | |
| Bromomethane | 24.3 | 1.0 | 0.42 | ug/l | 25.0 | ND | 97 | 55-145 | | | |
| Carbon tetrachloride | 24.9 | 0.50 | 0.28 | ug/l | 25.0 | ND | 100 | 65-140 | | | |
| Chlorobenzene | 25.5 | 0.50 | 0.36 | ug/l | 25.0 | ND | 102 | 75-125 | | | |
| Chloroethane | 23.4 | 1.0 | 0.40 | ug/l | 25.0 | ND | 94 | 55-140 | | | |
| Chloroform | 26.0 | 0.50 | 0.33 | ug/l | 25.0 | ND | 104 | 65-135 | | | |
| Chloromethane | 21.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 85 | 45-145 | | | |
| Dibromochloromethane | 22.6 | 0.50 | 0.40 | ug/l | 25.0 | ND | 90 | 65-140 | | | |
| 1,2-Dichlorobenzene | 25.8 | 0.50 | 0.32 | ug/l | 25.0 | ND | 103 | 75-125 | | | |
| 1,3-Dichlorobenzene | 26.3 | 0.50 | 0.35 | ug/l | 25.0 | ND | 105 | 75-125 | | | |
| 1,4-Dichlorobenzene | 25.6 | 0.50 | 0.37 | ug/l | 25.0 | ND | 102 | 75-125 | | | |
| 1,1-Dichloroethane | 26.5 | 0.50 | 0.40 | ug/l | 25.0 | ND | 106 | 65-130 | | | |
| 1,2-Dichloroethane | 27.0 | 0.50 | 0.28 | ug/l | 25.0 | ND | 108 | 60-140 | | | |
| 1,1-Dichloroethene | 24.6 | 0.50 | 0.42 | ug/l | 25.0 | ND | 98 | 60-130 | | | |
| cis-1,2-Dichloroethene | 26.9 | 0.50 | 0.32 | ug/l | 25.0 | ND | 108 | 65-130 | | | |
| trans-1,2-Dichloroethene | 24.8 | 0.50 | 0.30 | ug/l | 25.0 | ND | 99 | 65-130 | | | |
| 1,2-Dichloropropane | 25.6 | 0.50 | 0.35 | ug/l | 25.0 | ND | 102 | 65-130 | | | |
| cis-1,3-Dichloropropene | 30.7 | 0.50 | 0.22 | ug/l | 25.0 | ND | 123 | 70-130 | | | |
| trans-1,3-Dichloropropene | 21.0 | 0.50 | 0.32 | ug/l | 25.0 | ND | 84 | 65-135 | | | |
| Ethylbenzene | 26.1 | 0.50 | 0.25 | ug/l | 25.0 | ND | 104 | 65-130 | | | |
| Methylene chloride | 22.5 | 1.0 | 0.95 | ug/l | 25.0 | ND | 90 | 50-135 | | | |
| 1,1,2,2-Tetrachloroethane | 24.3 | 0.50 | 0.30 | ug/l | 25.0 | ND | 97 | 55-135 | | | |
| Tetrachloroethene | 24.5 | 0.50 | 0.32 | ug/l | 25.0 | ND | 98 | 65-130 | | | |
| Toluene | 26.7 | 0.50 | 0.36 | ug/l | 25.0 | ND | 107 | 70-125 | | | |
| 1,1,1-Trichloroethane | 25.6 | 0.50 | 0.30 | ug/l | 25.0 | ND | 102 | 65-140 | | | |
| 1,1,2-Trichloroethane | 26.6 | 0.50 | 0.30 | ug/l | 25.0 | ND | 106 | 65-130 | | | |
| Trichloroethene | 25.9 | 0.50 | 0.26 | ug/l | 25.0 | ND | 103 | 65-125 | | | |
| Trichlorofluoromethane | 24.6 | 0.50 | 0.34 | ug/l | 25.0 | ND | 98 | 60-145 | | | |
| Vinyl chloride | 21.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 85 | 45-140 | | | |
| Xylenes, Total | 80.8 | 1.5 | 0.90 | ug/l | 75.0 | ND | 108 | 60-130 | | | |

TestAmerica Irvine



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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

| | D L | Reporting | MDI | T T •/ | Spike | Source | AV DEC | %REC | DDD | RPD | Data |
|--|--------------|-----------|------|---------------|--------------|-----------|---------|------------------|------|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 10C1196 Extracted: 03/10/1 | 0 | | | | | | | | | | |
| M-4 | 71107 MG1) | | | | S | | 000 01 | | | | |
| Matrix Spike Analyzed: 03/10/2010 (100 | | | | | | rce: ITC(| | 00 120 | | | |
| Surrogate: 4-Bromofluorobenzene | 27.0 26.7 | | | ug/l | 25.0 25.0 | | 108 | 80-120 80-120 | | | |
| Surrogate: Dibromofluoromethane | 26.7 26.5 | | | ug/l | 25.0 25.0 | | 107 | | | | |
| Surrogate: Toluene-d8 | 20.3 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 03/10/2010 |) (10C1196-N | ASD1) | | | Sou | rce: ITC(|)989-01 | | | | |
| Benzene | 25.1 | 0.50 | 0.28 | ug/l | 25.0 | ND | 100 | 65-125 | 0.9 | 20 | |
| Bromodichloromethane | 27.8 | 0.50 | 0.30 | ug/l | 25.0 | ND | 111 | 70-135 | 1 | 20 | |
| Bromoform | 20.8 | 0.50 | 0.40 | ug/l | 25.0 | ND | 83 | 55-135 | 2 | 25 | |
| Bromomethane | 24.3 | 1.0 | 0.42 | ug/l | 25.0 | ND | 97 | 55-145 | 0.1 | 25 | |
| Carbon tetrachloride | 25.2 | 0.50 | 0.28 | ug/l | 25.0 | ND | 101 | 65-140 | 1 | 25 | |
| Chlorobenzene | 25.3 | 0.50 | 0.36 | ug/l | 25.0 | ND | 101 | 75-125 | 0.6 | 20 | |
| Chloroethane | 23.6 | 1.0 | 0.40 | ug/l | 25.0 | ND | 95 | 55-140 | 0.9 | 25 | |
| Chloroform | 25.7 | 0.50 | 0.33 | ug/l | 25.0 | ND | 103 | 65-135 | 1 | 20 | |
| Chloromethane | 20.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 81 | 45-145 | 5 | 25 | |
| Dibromochloromethane | 23.2 | 0.50 | 0.40 | ug/l | 25.0 | ND | 93 | 65-140 | 2 | 25 | |
| 1,2-Dichlorobenzene | 26.1 | 0.50 | 0.32 | ug/l | 25.0 | ND | 104 | 75-125 | 1 | 20 | |
| 1,3-Dichlorobenzene | 26.6 | 0.50 | 0.35 | ug/l | 25.0 | ND | 106 | 75-125 | 1 | 20 | |
| 1,4-Dichlorobenzene | 25.9 | 0.50 | 0.37 | ug/l | 25.0 | ND | 104 | 75-125 | 1 | 20 | |
| 1,1-Dichloroethane | 26.5 | 0.50 | 0.40 | ug/l | 25.0 | ND | 106 | 65-130 | 0.08 | 20 | |
| 1,2-Dichloroethane | 27.1 | 0.50 | 0.28 | ug/l | 25.0 | ND | 108 | 60-140 | 0.4 | 20 | |
| 1,1-Dichloroethene | 24.4 | 0.50 | 0.42 | ug/l | 25.0 | ND | 98 | 60-130 | 0.9 | 20 | |
| cis-1,2-Dichloroethene | 27.3 | 0.50 | 0.32 | ug/l | 25.0 | ND | 109 | 65-130 | 2 | 20 | |
| trans-1,2-Dichloroethene | 25.3 | 0.50 | 0.30 | ug/l | 25.0 | ND | 101 | 65-130 | 2 | 20 | |
| 1,2-Dichloropropane | 25.5 | 0.50 | 0.35 | ug/l | 25.0 | ND | 102 | 65-130 | 0.4 | 20 | |
| cis-1,3-Dichloropropene | 30.9 | 0.50 | 0.22 | ug/l | 25.0 | ND | 124 | 70-130 | 0.8 | 20 | |
| trans-1,3-Dichloropropene | 21.6 | 0.50 | 0.32 | ug/l | 25.0 | ND | 86 | 65-135 | 3 | 25 | |
| Ethylbenzene | 25.9 | 0.50 | 0.25 | ug/l | 25.0 | ND | 104 | 65-130 | 0.8 | 20 | |
| Methylene chloride | 22.9 | 1.0 | 0.95 | ug/l | 25.0 | ND | 91 | 50-135 | 1 | 20 | |
| 1,1,2,2-Tetrachloroethane | 27.2 | 0.50 | 0.30 | ug/l | 25.0 | ND | 109 | 55-135 | 11 | 30 | |
| Tetrachloroethene | 24.7 | 0.50 | 0.32 | ug/l | 25.0 | ND | 99 | 65-130 | 0.9 | 20 | |
| Toluene | 27.1 | 0.50 | 0.36 | ug/l | 25.0 | ND | 108 | 70-125 | 1 | 20 | |
| 1,1,1-Trichloroethane | 25.1 | 0.50 | 0.30 | ug/l | 25.0 | ND | 100 | 65-140 | 2 | 20 | |
| 1,1,2-Trichloroethane | 26.5 | 0.50 | 0.30 | ug/l | 25.0 | ND | 106 | 65-130 | 0.5 | 25 | |
| Trichloroethene | 25.7 | 0.50 | 0.26 | ug/l | 25.0 | ND | 103 | 65-125 | 0.5 | 20 | |
| Trichlorofluoromethane | 24.8 | 0.50 | 0.34 | ug/l | 25.0 | ND | 99 | 60-145 | 1 | 25 | |
| Vinyl chloride | 19.9 | 0.50 | 0.40 | ug/l | 25.0 | ND | 80 | 45-140 | 7 | 30 | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1196 Extracted: 03/10/1 | <u>0</u> | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 03/10/2010 | (10C1196-M | SD1) | Source: ITC0989-01 | | | | | | | | |
| Xylenes, Total | 79.8 | 1.5 | 0.90 | ug/l | 75.0 | ND | 106 | 60-130 | 1 | 20 | |
| Surrogate: 4-Bromofluorobenzene | 26.4 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: Dibromofluoromethane | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

PURGEABLES-- GC/MS (EPA 624)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| · | | Linit | MIDL | emis | Lever | Result | /unde | Linits | ΜD | Linu | Quanners |
| Batch: 10C1196 Extracted: 03/10/10 | - | | | | | | | | | | |
| Blank Analyzed: 03/10/2010 (10C1196-B | LK1) | | | | | | | | | | |
| Acrolein | ND | 5.0 | 4.0 | ug/l | | | | | | | |
| Acrylonitrile | ND | 2.0 | 1.2 | ug/l | | | | | | | |
| 2-Chloroethyl vinyl ether | ND | 5.0 | 1.8 | ug/l | | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 24.2 | | | ug/l | 25.0 | | 97 | 80-120 | | | |
| Surrogate: Dibromofluoromethane | 24.4 | | | ug/l | 25.0 | | 98 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.6 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| LCS Analyzed: 03/10/2010 (10C1196-BS | 1) | | | | | | | | | | |
| 2-Chloroethyl vinyl ether | 19.5 | 5.0 | 1.8 | ug/l | 25.0 | | 78 | 25-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 26.6 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: Dibromofluoromethane | 27.0 | | | ug/l | 25.0 | | 108 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Matrix Spike Analyzed: 03/10/2010 (10C | 1196-MS1) | | | | Sou | rce: ITC(|)989-01 | | | | |
| 2-Chloroethyl vinyl ether | 19.6 | 5.0 | 1.8 | ug/l | 25.0 | ND | 78 | 25-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 27.0 | | | ug/l | 25.0 | | 108 | 80-120 | | | |
| Surrogate: Dibromofluoromethane | 26.7 | | | ug/l | 25.0 | | 107 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 03/10/2010 | (10C1196-M | SD1) | | | Sou | rce: ITC(|)989-01 | | | | |
| 2-Chloroethyl vinyl ether | 21.4 | 5.0 | 1.8 | ug/l | 25.0 | ND | 85 | 25-170 | 9 | 25 | |
| Surrogate: 4-Bromofluorobenzene | 26.4 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: Dibromofluoromethane | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |
| Surrogate: Toluene-d8 | 26.5 | | | ug/l | 25.0 | | 106 | 80-120 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

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

| | D L | Reporting | MDI | T T •4 | Spike | Source | AUDEC | %REC | DDD | RPD | Data |
|---------------------------------------|---------------------------------------|-----------|-----|---------------|-------|--------|-------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 10C1554 Extracted: 03/12/10 | 0 | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C1554-E | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | |
| Acenaphthene | ND | 10 | 3.0 | ug/l | | | | | | | |
| Acenaphthylene | ND | 10 | 3.0 | ug/l | | | | | | | |
| Aniline | ND | 10 | 3.5 | ug/l | | | | | | | |
| Anthracene | ND | 10 | 2.5 | ug/l | | | | | | | |
| Benzidine | ND | 20 | 10 | ug/l | | | | | | | |
| Benzo(a)anthracene | ND | 10 | 2.5 | ug/l | | | | | | | |
| Benzo(a)pyrene | ND | 10 | 3.0 | ug/l | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | 2.0 | ug/l | | | | | | | |
| Benzo(g,h,i)perylene | ND | 10 | 4.0 | ug/l | | | | | | | |
| Benzo(k)fluoranthene | ND | 10 | 2.5 | ug/l | | | | | | | |
| Benzoic acid | ND | 20 | 10 | ug/l | | | | | | | |
| Benzyl alcohol | ND | 20 | 3.5 | ug/l | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | 10 | 3.0 | ug/l | | | | | | | |
| Butyl benzyl phthalate | ND | 20 | 4.0 | ug/l | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 20 | 2.5 | ug/l | | | | | | | |
| 4-Chloroaniline | ND | 10 | 2.0 | ug/l | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 10 | 3.0 | ug/l | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 10 | 3.0 | ug/l | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 10 | 2.5 | ug/l | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 50 | 4.0 | ug/l | | | | | | | |
| 2-Chloronaphthalene | ND | 10 | 3.0 | ug/l | | | | | | | |
| 2-Chlorophenol | ND | 10 | 3.0 | ug/l | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | 10 | 2.5 | ug/l | | | | | | | |
| Chrysene | ND | 10 | 2.5 | ug/l | | | | | | | |
| Dibenz(a,h)anthracene | ND | 20 | 3.0 | ug/l | | | | | | | |
| Dibenzofuran | ND | 10 | 4.0 | ug/l | | | | | | | |
| Di-n-butyl phthalate | ND | 20 | 3.0 | ug/l | | | | | | | |
| 1,2-Dichlorobenzene | ND | 10 | 3.0 | ug/l | | | | | | | |
| 1,3-Dichlorobenzene | ND | 10 | 3.0 | ug/l | | | | | | | |
| 1,4-Dichlorobenzene | ND | 10 | 2.5 | ug/l | | | | | | | |
| 3,3'-Dichlorobenzidine | ND | 20 | 7.5 | ug/l | | | | | | | |
| 2,4-Dichlorophenol | ND | 10 | 3.5 | ug/l | | | | | | | |
| Diethyl phthalate | ND | 10 | 3.5 | ug/l | | | | | | | |
| 2,4-Dimethylphenol | ND | 20 | 3.5 | ug/l | | | | | | | |
| Dimethyl phthalate | ND | 10 | 2.5 | ug/l | | | | | | | |
| | | | | - | | | | | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1554 Extracted: 03/12/10 | D | | | | | | | | | | |
| Butchi Toeroor Entracticut oo, 12, 1 | | | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C1554-E | BLK1) | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 20 | 4.0 | ug/l | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | 8.0 | ug/l | | | | | | | |
| 2,4-Dinitrotoluene | ND | 10 | 3.5 | ug/l | | | | | | | |
| 2,6-Dinitrotoluene | ND | 10 | 2.0 | ug/l | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | 3.5 | ug/l | | | | | | | |
| 1,2-Diphenylhydrazine/Azobenzene | ND | 20 | 2.5 | ug/l | | | | | | | |
| Fluoranthene | ND | 10 | 3.0 | ug/l | | | | | | | |
| Fluorene | ND | 10 | 3.0 | ug/l | | | | | | | |
| Hexachlorobenzene | ND | 10 | 3.0 | ug/l | | | | | | | |
| Hexachlorobutadiene | ND | 10 | 4.0 | ug/l | | | | | | | |
| Hexachlorocyclopentadiene | ND | 20 | 5.0 | ug/l | | | | | | | |
| Hexachloroethane | ND | 10 | 3.5 | ug/l | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 20 | 3.5 | ug/l | | | | | | | |
| Isophorone | ND | 10 | 3.0 | ug/l | | | | | | | |
| 2-Methylnaphthalene | ND | 10 | 2.0 | ug/l | | | | | | | |
| 2-Methylphenol | ND | 10 | 3.0 | ug/l | | | | | | | |
| 4-Methylphenol | ND | 10 | 3.0 | ug/l | | | | | | | |
| Naphthalene | ND | 10 | 3.0 | ug/l | | | | | | | |
| 2-Nitroaniline | ND | 20 | 2.0 | ug/l | | | | | | | |
| 3-Nitroaniline | ND | 20 | 3.0 | ug/l | | | | | | | |
| 4-Nitroaniline | ND | 20 | 4.0 | ug/l | | | | | | | |
| Nitrobenzene | ND | 20 | 3.0 | ug/l | | | | | | | |
| 2-Nitrophenol | ND | 10 | 3.5 | ug/l | | | | | | | |
| 4-Nitrophenol | ND | 20 | 5.5 | ug/l | | | | | | | |
| N-Nitroso-di-n-propylamine | ND | 10 | 3.5 | ug/l | | | | | | | |
| N-Nitrosodimethylamine | ND | 20 | 2.5 | ug/l | | | | | | | |
| N-Nitrosodiphenylamine | ND | 10 | 2.0 | ug/l | | | | | | | |
| Pentachlorophenol | ND | 20 | 3.5 | ug/l | | | | | | | |
| Phenanthrene | ND | 10 | 3.5 | ug/l | | | | | | | |
| Phenol | ND | 10 | 2.0 | ug/l | | | | | | | |
| Pyrene | ND | 10 | 4.0 | ug/l | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 10 | 2.5 | ug/l | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 20 | 3.0 | ug/l | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 20 | 4.5 | ug/l | | | | | | | |
| Surrogate: 2,4,6-Tribromophenol | 182 | | | ug/l | 200 | | 91 | 40-120 | | | |
| | | | | | | | | | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1554 Extracted: 03/12/1 | 0 | | | | | | | | | | |
| | _ | | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C1554-I | BLK1) | | | | | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 72.3 | | | ug/l | 100 | | 72 | 50-120 | | | |
| Surrogate: 2-Fluorophenol | 124 | | | ug/l | 200 | | 62 | 30-120 | | | |
| Surrogate: Nitrobenzene-d5 | 68.4 | | | ug/l | 100 | | 68 | 45-120 | | | |
| Surrogate: Phenol-d6 | 122 | | | ug/l | 200 | | 61 | 35-120 | | | |
| Surrogate: Terphenyl-d14 | 91.6 | | | ug/l | 100 | | 92 | 50-125 | | | |
| LCS Analyzed: 03/16/2010 (10C1554-BS | 51) | | | | | | | | | | MNR1 |
| Acenaphthene | 78.2 | 10 | 3.0 | ug/l | 100 | | 78 | 60-120 | | | |
| Acenaphthylene | 76.2 | 10 | 3.0 | ug/l | 100 | | 76 | 60-120 | | | |
| Aniline | 61.3 | 10 | 3.5 | ug/l | 100 | | 61 | 35-120 | | | |
| Anthracene | 83.2 | 10 | 2.5 | ug/l | 100 | | 83 | 65-120 | | | |
| Benzidine | 19.9 | 20 | 10 | ug/l | 100 | | 20 | 30-160 | | | L6, J |
| Benzo(a)anthracene | 83.3 | 10 | 2.5 | ug/l | 100 | | 83 | 65-120 | | | |
| Benzo(a)pyrene | 84.1 | 10 | 3.0 | ug/l | 100 | | 84 | 55-130 | | | |
| Benzo(b)fluoranthene | 75.8 | 10 | 2.0 | ug/l | 100 | | 76 | 55-125 | | | |
| Benzo(g,h,i)perylene | 80.9 | 10 | 4.0 | ug/l | 100 | | 81 | 45-135 | | | |
| Benzo(k)fluoranthene | 81.3 | 10 | 2.5 | ug/l | 100 | | 81 | 50-125 | | | |
| Benzoic acid | 72.8 | 20 | 10 | ug/l | 100 | | 73 | 25-120 | | | |
| Benzyl alcohol | 72.1 | 20 | 3.5 | ug/l | 100 | | 72 | 50-120 | | | |
| 4-Bromophenyl phenyl ether | 84.7 | 10 | 3.0 | ug/l | 100 | | 85 | 60-120 | | | |
| Butyl benzyl phthalate | 97.0 | 20 | 4.0 | ug/l | 100 | | 97 | 55-130 | | | |
| 4-Chloro-3-methylphenol | 76.3 | 20 | 2.5 | ug/l | 100 | | 76 | 60-120 | | | |
| 4-Chloroaniline | 75.7 | 10 | 2.0 | ug/l | 100 | | 76 | 55-120 | | | |
| Bis(2-chloroethoxy)methane | 71.4 | 10 | 3.0 | ug/l | 100 | | 71 | 55-120 | | | |
| Bis(2-chloroethyl)ether | 64.1 | 10 | 3.0 | ug/l | 100 | | 64 | 50-120 | | | |
| Bis(2-chloroisopropyl)ether | 71.0 | 10 | 2.5 | ug/l | 100 | | 71 | 45-120 | | | |
| Bis(2-ethylhexyl)phthalate | 91.1 | 50 | 4.0 | ug/l | 100 | | 91 | 65-130 | | | |
| 2-Chloronaphthalene | 74.6 | 10 | 3.0 | ug/l | 100 | | 75 | 60-120 | | | |
| 2-Chlorophenol | 68.5 | 10 | 3.0 | ug/l | 100 | | 68 | 45-120 | | | |
| 4-Chlorophenyl phenyl ether | 82.6 | 10 | 2.5 | ug/l | 100 | | 83 | 65-120 | | | |
| Chrysene | 82.6 | 10 | 2.5 | ug/l | 100 | | 83 | 65-120 | | | |
| Dibenz(a,h)anthracene | 87.2 | 20 | 3.0 | ug/l | 100 | | 87 | 50-135 | | | |
| Dibenzofuran | 75.2 | 10 | 4.0 | ug/l | 100 | | 75 | 65-120 | | | |
| Di-n-butyl phthalate | 88.2 | 20 | 3.0 | ug/l | 100 | | 88 | 60-125 | | | |
| 1,2-Dichlorobenzene | 61.2 | 10 | 3.0 | ug/l | 100 | | 61 | 40-120 | | | |
| 1,3-Dichlorobenzene | 59.0 | 10 | 3.0 | ug/l | 100 | | 59 | 35-120 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1554 Extracted: 03/12/10 | n | | | | | | | | | | |
| Daten, 1001334 Extracted, 05/12/10 | <u>.</u> | | | | | | | | | | |
| LCS Analyzed: 03/16/2010 (10C1554-BS | 51) | | | | | | | | | | MNR1 |
| 1,4-Dichlorobenzene | 59.1 | 10 | 2.5 | ug/l | 100 | | 59 | 35-120 | | | |
| 3,3'-Dichlorobenzidine | 58.5 | 20 | 7.5 | ug/l | 100 | | 59 | 45-135 | | | |
| 2,4-Dichlorophenol | 80.2 | 10 | 3.5 | ug/l | 100 | | 80 | 55-120 | | | |
| Diethyl phthalate | 81.3 | 10 | 3.5 | ug/l | 100 | | 81 | 55-120 | | | |
| 2,4-Dimethylphenol | 68.3 | 20 | 3.5 | ug/l | 100 | | 68 | 40-120 | | | |
| Dimethyl phthalate | 81.4 | 10 | 2.5 | ug/l | 100 | | 81 | 30-120 | | | |
| 4,6-Dinitro-2-methylphenol | 80.0 | 20 | 4.0 | ug/l | 100 | | 80 | 45-120 | | | |
| 2,4-Dinitrophenol | 82.7 | 20 | 8.0 | ug/l | 100 | | 83 | 40-120 | | | |
| 2,4-Dinitrotoluene | 84.3 | 10 | 3.5 | ug/l | 100 | | 84 | 65-120 | | | |
| 2,6-Dinitrotoluene | 82.7 | 10 | 2.0 | ug/l | 100 | | 83 | 65-120 | | | |
| Di-n-octyl phthalate | 90.3 | 20 | 3.5 | ug/l | 100 | | 90 | 65-135 | | | |
| 1,2-Diphenylhydrazine/Azobenzene | 69.1 | 20 | 2.5 | ug/l | 100 | | 69 | 60-120 | | | |
| Fluoranthene | 87.8 | 10 | 3.0 | ug/l | 100 | | 88 | 60-120 | | | |
| Fluorene | 79.8 | 10 | 3.0 | ug/l | 100 | | 80 | 65-120 | | | |
| Hexachlorobenzene | 84.1 | 10 | 3.0 | ug/l | 100 | | 84 | 60-120 | | | |
| Hexachlorobutadiene | 68.5 | 10 | 4.0 | ug/l | 100 | | 68 | 40-120 | | | |
| Hexachlorocyclopentadiene | 70.3 | 20 | 5.0 | ug/l | 100 | | 70 | 25-120 | | | |
| Hexachloroethane | 54.9 | 10 | 3.5 | ug/l | 100 | | 55 | 35-120 | | | |
| Indeno(1,2,3-cd)pyrene | 85.5 | 20 | 3.5 | ug/l | 100 | | 85 | 45-135 | | | |
| Isophorone | 71.4 | 10 | 3.0 | ug/l | 100 | | 71 | 50-120 | | | |
| 2-Methylnaphthalene | 75.5 | 10 | 2.0 | ug/l | 100 | | 76 | 55-120 | | | |
| 2-Methylphenol | 66.0 | 10 | 3.0 | ug/l | 100 | | 66 | 50-120 | | | |
| 4-Methylphenol | 67.5 | 10 | 3.0 | ug/l | 100 | | 68 | 50-120 | | | |
| Naphthalene | 72.0 | 10 | 3.0 | ug/l | 100 | | 72 | 55-120 | | | |
| 2-Nitroaniline | 75.7 | 20 | 2.0 | ug/l | 100 | | 76 | 65-120 | | | |
| 3-Nitroaniline | 80.9 | 20 | 3.0 | ug/l | 100 | | 81 | 60-120 | | | |
| 4-Nitroaniline | 82.0 | 20 | 4.0 | ug/l | 100 | | 82 | 55-125 | | | |
| Nitrobenzene | 70.6 | 20 | 3.0 | ug/l | 100 | | 71 | 55-120 | | | |
| 2-Nitrophenol | 80.3 | 10 | 3.5 | ug/l | 100 | | 80 | 50-120 | | | |
| 4-Nitrophenol | 80.2 | 20 | 5.5 | ug/l | 100 | | 80 | 45-120 | | | |
| N-Nitroso-di-n-propylamine | 68.0 | 10 | 3.5 | ug/l | 100 | | 68 | 45-120 | | | |
| N-Nitrosodimethylamine | 66.3 | 20 | 2.5 | ug/l | 100 | | 66 | 45-120 | | | |
| N-Nitrosodiphenylamine | 78.4 | 10 | 2.0 | ug/l | 100 | | 78 | 60-120 | | | |
| Pentachlorophenol | 80.4 | 20 | 3.5 | ug/l | 100 | | 80 | 50-120 | | | |
| Phenanthrene | 82.9 | 10 | 3.5 | ug/l | 100 | | 83 | 65-120 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

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

| MNR1 Batch: 10C1554 Extracted: 03/12/10 LCS Analyzed: 03/16/2010 (10C1554-BS1) Phenol 58.3 10 2.0 ug/l 100 58 40-120 Pyrene 86.3 10 4.0 ug/l 100 86 55-125 1,2,4-Trichlorobenzene 68.5 10 2.5 ug/l 100 68 45-120 |
|--|
| MNR1 MNR1 Phenol 58.3 10 2.0 ug/l 100 58 40-120 Pyrene 86.3 10 4.0 ug/l 100 86 55-125 1,2,4-Trichlorobenzene 68.5 10 2.5 ug/l 100 68 45-120 |
| Phenol58.3102.0ug/l1005840-120Pyrene86.3104.0ug/l1008655-1251,2,4-Trichlorobenzene68.5102.5ug/l1006845-120 |
| Pyrene86.3104.0ug/l1008655-1251,2,4-Trichlorobenzene68.5102.5ug/l1006845-120 |
| 1,2,4-Trichlorobenzene 68.5 10 2.5 ug/l 100 68 45-120 |
| |
| |
| 2,4,5-Trichlorophenol 79.6 20 3.0 ug/l 100 80 55-120 |
| 2,4,6-Trichlorophenol 81.3 20 4.5 ug/l 100 81 55-120 |
| Surrogate: 2,4,6-Tribromophenol 192 ug/l 200 96 40-120 |
| Surrogate: 2-Fluorobiphenyl 75.9 ug/l 100 76 50-120 |
| Surrogate: 2-Fluorophenol 117 ug/l 200 58 30-120 |
| Surrogate: Nitrobenzene-d5 71.1 ug/l 100 71 45-120 |
| Surrogate: Phenol-d6 127 ug/l 200 63 35-120 |
| Surrogate: Terphenyl-d14 90.7 ug/l 100 91 50-125 |
| LCS Dup Analyzed: 03/16/2010 (10C1554-BSD1) |
| Acenaphthene 79.7 10 3.0 ug/l 100 80 60-120 2 20 |
| Acenaphthylene 77.2 10 3.0 ug/l 100 77 60-120 1 20 |
| Aniline 57.8 10 3.5 ug/l 100 58 35-120 6 30 |
| Anthracene 85.7 10 2.5 ug/l 100 86 65-120 3 20 |
| Benzidine 69.6 20 10 ug/l 100 70 30-160 111 35 R-2 |
| Benzo(a)anthracene 90.7 10 2.5 ug/l 100 91 65-120 9 20 |
| Benzo(a)pyrene 90.3 10 3.0 ug/l 100 90 55-130 7 25 |
| Benzo(b)fluoranthene 80.1 10 2.0 ug/l 100 80 55-125 5 25 |
| Benzo(g,h,i)perylene 87.9 10 4.0 ug/l 100 88 45-135 8 25 |
| Benzo(k)fluoranthene 90.3 10 2.5 ug/l 100 90 50-125 10 20 |
| Benzoic acid 63.6 20 10 ug/l 100 64 25-120 13 30 |
| Benzyl alcohol 67.1 20 3.5 ug/l 100 67 50-120 7 20 |
| 4-Bromophenyl phenyl ether 87.8 10 3.0 ug/l 100 88 60-120 4 25 |
| Butyl benzyl phthalate 105 20 4.0 ug/l 100 105 55-130 8 20 |
| 4-Chloro-3-methylphenol 76.7 20 2.5 ug/l 100 77 60-120 0.4 25 |
| 4-Chloroaniline 75.8 10 2.0 ug/l 100 76 55-120 0.1 25 |
| Bis(2-chloroethoxy)methane 70.2 10 3.0 ug/l 100 70 55-120 2 20 |
| Bis(2-chloroethyl)ether 61.1 10 3.0 ug/l 100 61 50-120 5 20 |
| Bis(2-chloroisopropyl)ether 67.9 10 2.5 ug/l 100 68 45-120 5 20 |
| Bis(2-ethylhexyl)phthalate 100 50 4.0 ug/l 100 100 65-130 9 20 |
| 2-Chloronaphthalene 73.7 10 3.0 ug/l 100 74 60-120 1 20 |
| 2-Chlorophenol 60.3 10 3.0 ug/l 100 60 45-120 13 25 |
| 4-Chlorophenyl phenyl ether 87.6 10 2.5 ug/l 100 88 65-120 6 20 |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1554 Extracted: 03/12/10 | 0 | | | | | | | | | | |
| | — | | | | | | | | | | |
| LCS Dup Analyzed: 03/16/2010 (10C155 | 54-BSD1) | | | | | | | | | | |
| Chrysene | 88.5 | 10 | 2.5 | ug/l | 100 | | 89 | 65-120 | 7 | 20 | |
| Dibenz(a,h)anthracene | 93.7 | 20 | 3.0 | ug/l | 100 | | 94 | 50-135 | 7 | 25 | |
| Dibenzofuran | 78.4 | 10 | 4.0 | ug/l | 100 | | 78 | 65-120 | 4 | 20 | |
| Di-n-butyl phthalate | 94.5 | 20 | 3.0 | ug/l | 100 | | 94 | 60-125 | 7 | 20 | |
| 1,2-Dichlorobenzene | 58.6 | 10 | 3.0 | ug/l | 100 | | 59 | 40-120 | 4 | 25 | |
| 1,3-Dichlorobenzene | 56.6 | 10 | 3.0 | ug/l | 100 | | 57 | 35-120 | 4 | 25 | |
| 1,4-Dichlorobenzene | 56.3 | 10 | 2.5 | ug/l | 100 | | 56 | 35-120 | 5 | 25 | |
| 3,3'-Dichlorobenzidine | 66.6 | 20 | 7.5 | ug/l | 100 | | 67 | 45-135 | 13 | 25 | |
| 2,4-Dichlorophenol | 73.2 | 10 | 3.5 | ug/l | 100 | | 73 | 55-120 | 9 | 20 | |
| Diethyl phthalate | 88.7 | 10 | 3.5 | ug/l | 100 | | 89 | 55-120 | 9 | 30 | |
| 2,4-Dimethylphenol | 65.8 | 20 | 3.5 | ug/l | 100 | | 66 | 40-120 | 4 | 25 | |
| Dimethyl phthalate | 86.9 | 10 | 2.5 | ug/l | 100 | | 87 | 30-120 | 7 | 30 | |
| 4,6-Dinitro-2-methylphenol | 81.5 | 20 | 4.0 | ug/l | 100 | | 81 | 45-120 | 2 | 25 | |
| 2,4-Dinitrophenol | 89.8 | 20 | 8.0 | ug/l | 100 | | 90 | 40-120 | 8 | 25 | |
| 2,4-Dinitrotoluene | 91.2 | 10 | 3.5 | ug/l | 100 | | 91 | 65-120 | 8 | 20 | |
| 2,6-Dinitrotoluene | 88.7 | 10 | 2.0 | ug/l | 100 | | 89 | 65-120 | 7 | 20 | |
| Di-n-octyl phthalate | 99.3 | 20 | 3.5 | ug/l | 100 | | 99 | 65-135 | 10 | 20 | |
| 1,2-Diphenylhydrazine/Azobenzene | 72.7 | 20 | 2.5 | ug/l | 100 | | 73 | 60-120 | 5 | 25 | |
| Fluoranthene | 93.0 | 10 | 3.0 | ug/l | 100 | | 93 | 60-120 | 6 | 20 | |
| Fluorene | 83.3 | 10 | 3.0 | ug/l | 100 | | 83 | 65-120 | 4 | 20 | |
| Hexachlorobenzene | 88.3 | 10 | 3.0 | ug/l | 100 | | 88 | 60-120 | 5 | 20 | |
| Hexachlorobutadiene | 68.3 | 10 | 4.0 | ug/l | 100 | | 68 | 40-120 | 0.2 | 25 | |
| Hexachlorocyclopentadiene | 67.4 | 20 | 5.0 | ug/l | 100 | | 67 | 25-120 | 4 | 30 | |
| Hexachloroethane | 53.5 | 10 | 3.5 | ug/l | 100 | | 54 | 35-120 | 3 | 25 | |
| Indeno(1,2,3-cd)pyrene | 94.2 | 20 | 3.5 | ug/l | 100 | | 94 | 45-135 | 10 | 25 | |
| Isophorone | 71.6 | 10 | 3.0 | ug/l | 100 | | 72 | 50-120 | 0.2 | 20 | |
| 2-Methylnaphthalene | 74.5 | 10 | 2.0 | ug/l | 100 | | 74 | 55-120 | 1 | 20 | |
| 2-Methylphenol | 59.7 | 10 | 3.0 | ug/l | 100 | | 60 | 50-120 | 10 | 20 | |
| 4-Methylphenol | 59.9 | 10 | 3.0 | ug/l | 100 | | 60 | 50-120 | 12 | 20 | |
| Naphthalene | 69.0 | 10 | 3.0 | ug/l | 100 | | 69 | 55-120 | 4 | 20 | |
| 2-Nitroaniline | 76.5 | 20 | 2.0 | ug/l | 100 | | 76 | 65-120 | 1 | 20 | |
| 3-Nitroaniline | 85.9 | 20 | 3.0 | ug/l | 100 | | 86 | 60-120 | 6 | 25 | |
| 4-Nitroaniline | 89.4 | 20 | 4.0 | ug/l | 100 | | 89 | 55-125 | 9 | 20 | |
| Nitrobenzene | 67.0 | 20 | 3.0 | ug/l | 100 | | 67 | 55-120 | 5 | 25 | |
| 2-Nitrophenol | 73.4 | 10 | 3.5 | ug/l | 100 | | 73 | 50-120 | 9 | 25 | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1554 Extracted: 03/12/10 | <u>)</u> | | | | | | | | | | |
| LCS Dup Analyzed: 03/16/2010 (10C155 | 4-BSD1) | | | | | | | | | | |
| 4-Nitrophenol | 83.4 | 20 | 5.5 | ug/l | 100 | | 83 | 45-120 | 4 | 30 | |
| N-Nitroso-di-n-propylamine | 66.6 | 10 | 3.5 | ug/l | 100 | | 67 | 45-120 | 2 | 20 | |
| N-Nitrosodimethylamine | 56.9 | 20 | 2.5 | ug/l | 100 | | 57 | 45-120 | 15 | 20 | |
| N-Nitrosodiphenylamine | 82.1 | 10 | 2.0 | ug/l | 100 | | 82 | 60-120 | 5 | 20 | |
| Pentachlorophenol | 83.3 | 20 | 3.5 | ug/l | 100 | | 83 | 50-120 | 4 | 25 | |
| Phenanthrene | 85.6 | 10 | 3.5 | ug/l | 100 | | 86 | 65-120 | 3 | 20 | |
| Phenol | 46.6 | 10 | 2.0 | ug/l | 100 | | 47 | 40-120 | 22 | 25 | |
| Pyrene | 92.4 | 10 | 4.0 | ug/l | 100 | | 92 | 55-125 | 7 | 25 | |
| 1,2,4-Trichlorobenzene | 66.7 | 10 | 2.5 | ug/l | 100 | | 67 | 45-120 | 3 | 20 | |
| 2,4,5-Trichlorophenol | 76.5 | 20 | 3.0 | ug/l | 100 | | 76 | 55-120 | 4 | 30 | |
| 2,4,6-Trichlorophenol | 77.9 | 20 | 4.5 | ug/l | 100 | | 78 | 55-120 | 4 | 30 | |
| Surrogate: 2,4,6-Tribromophenol | 193 | | | ug/l | 200 | | 96 | 40-120 | | | |
| Surrogate: 2-Fluorobiphenyl | 76.1 | | | ug/l | 100 | | 76 | 50-120 | | | |
| Surrogate: 2-Fluorophenol | 95.2 | | | ug/l | 200 | | 48 | 30-120 | | | |
| Surrogate: Nitrobenzene-d5 | 66.9 | | | ug/l | 100 | | 67 | 45-120 | | | |
| Surrogate: Phenol-d6 | 98.4 | | | ug/l | 200 | | 49 | 35-120 | | | |
| Surrogate: Terphenyl-d14 | 99.4 | | | ug/l | 100 | | 99 | 50-125 | | | |

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager



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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

| | | Reporting | | | Spike | Source | %REC | | RPD | Data |
|---------------------------------------|----------|-----------|-----|-------|-------|-------------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 10C1554 Extracted: 03/12/10 | <u>)</u> | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C1554-B | LK1) | | | | | | | | | |
| Chlorpyrifos | ND | 50 | N/A | ug/l | | | | | | |
| Diazinon | ND | 50 | N/A | ug/l | | | | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---------|--------------------|-------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 10D3000 Extracted: 03/12/10 |) | | | | | | | | | | |
| Blank Analyzed: 04/26/2010 (10D3000-B | LK1) | | | | | | | | | | |
| Chlorpyrifos | ND | 1.0 | 0.010 | ug/l | | | | | | | |
| Diazinon | ND | 0.25 | 0.10 | ug/l | | | | | | | |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene | ND | | | ug/l | | | | 70-130 | | | A-01 |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene | ND | | | ug/l | | | | 70-130 | | | A-01 |
| Surrogate: Triphenylphosphate | ND | | | ug/l | | | | 70-130 | | | A-01 |
| Surrogate: Triphenylphosphate | ND | | | ug/l | | | | 70-130 | | | A-01 |
| Surrogate: Perylene-d12 | ND | | | ug/l | | | | 70-130 | | | A-01 |
| Surrogate: Perylene-d12 | ND | | | ug/l | | | | 70-130 | | | A-01 |
| LCS Analyzed: 04/26/2010 (10D3000-BS | 1) | | | | | | | | | | |
| Chlorpyrifos | 4.65 | 1.0 | 0.010 | ug/l | 5.00 | | 93 | 70-130 | | | |
| Diazinon | 3.07 | 0.25 | 0.10 | ug/l | 5.00 | | 61 | 70-130 | | | L2 |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene | 5.00 | | | ug/l | 5.00 | | 100 | 70-130 | | | |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene | 5.00 | | | ug/l | 5.00 | | 100 | 70-130 | | | |
| Surrogate: Triphenylphosphate | 8.34 | | | ug/l | 5.00 | | 167 | 70-130 | | | Z1 |
| Surrogate: Triphenylphosphate | 8.34 | | | ug/l | 5.00 | | 167 | 70-130 | | | Z1 |
| Surrogate: Perylene-d12 | 4.88 | | | ug/l | 5.00 | | 98 | 70-130 | | | |
| Surrogate: Perylene-d12 | 4.88 | | | ug/l | 5.00 | | 98 | 70-130 | | | |
| LCS Dup Analyzed: 04/26/2010 (10D300 | 0-BSD1) | | | | | | | | | | |
| Chlorpyrifos | 4.60 | 1.0 | 0.010 | ug/l | 5.00 | | 92 | 70-130 | 1 | 30 | |
| Diazinon | 2.59 | 0.25 | 0.10 | ug/l | 5.00 | | 52 | 70-130 | 17 | 30 | L2 |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene | 4.42 | | | ug/l | 5.00 | | 88 | 70-130 | | | |
| Surrogate: 1,3-Dimethyl-2-nitrobenzene | 4.42 | | | ug/l | 5.00 | | 88 | 70-130 | | | |
| Surrogate: Triphenylphosphate | 7.19 | | | ug/l | 5.00 | | 144 | 70-130 | | | Z1 |
| Surrogate: Triphenylphosphate | 7.19 | | | ug/l | 5.00 | | 144 | 70-130 | | | Z1 |
| Surrogate: Perylene-d12 | 4.78 | | | ug/l | 5.00 | | 96 | 70-130 | | | |
| Surrogate: Perylene-d12 | 4.78 | | | ug/l | 5.00 | | 96 | 70-130 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

| | D L | Reporting | | T T •/ | Spike | Source | AV DEC | %REC | DDD | RPD | Data |
|---------------------------------------|--------|-----------|--------|---------------|-------|--------|----------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 10C1222 Extracted: 03/10/10 |) | | | | | | | | | | |
| Blank Analyzed: 03/11/2010 (10C1222-E | SLK1) | | | | | | | | | | |
| 4.4'-DDD | ND | 0.0050 | 0.0020 | ug/l | | | | | | | |
| 4,4'-DDE | ND | 0.0050 | 0.0030 | ug/l | | | | | | | |
| 4,4'-DDT | ND | 0.010 | 0.0040 | ug/l | | | | | | | |
| Aldrin | ND | 0.0050 | 0.0015 | ug/l | | | | | | | |
| alpha-BHC | ND | 0.0050 | 0.0025 | ug/l | | | | | | | |
| beta-BHC | ND | 0.010 | 0.0040 | ug/l | | | | | | | |
| delta-BHC | ND | 0.0050 | 0.0035 | ug/l | | | | | | | |
| Dieldrin | ND | 0.0050 | 0.0020 | ug/l | | | | | | | |
| Endosulfan I | ND | 0.0050 | 0.0020 | ug/l | | | | | | | |
| Endosulfan II | ND | 0.0050 | 0.0030 | ug/l | | | | | | | |
| Endosulfan sulfate | ND | 0.010 | 0.0030 | ug/l | | | | | | | |
| Endrin | ND | 0.0050 | 0.0020 | ug/l | | | | | | | |
| Endrin aldehyde | ND | 0.010 | 0.0020 | ug/l | | | | | | | |
| Endrin ketone | ND | 0.010 | 0.0030 | ug/l | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.020 | 0.0030 | ug/l | | | | | | | |
| Heptachlor | ND | 0.010 | 0.0030 | ug/l | | | | | | | |
| Heptachlor epoxide | ND | 0.0050 | 0.0025 | ug/l | | | | | | | |
| Methoxychlor | ND | 0.0050 | 0.0035 | ug/l | | | | | | | |
| Chlordane | ND | 0.10 | 0.040 | ug/l | | | | | | | |
| Toxaphene | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.447 | | | ug/l | 0.500 | | 89 | 45-120 | | | |
| Surrogate: Tetrachloro-m-xylene | 0.277 | | | ug/l | 0.500 | | 55 | 35-115 | | | |
| LCS Analyzed: 03/11/2010 (10C1222-BS | (1) | | | 0 | | | | | | | MNR1 |
| 4.4'-DDD | 0.507 | 0.0050 | 0.0020 | ug/l | 0.500 | | 101 | 55-120 | | | |
| 4,4'-DDE | 0.428 | 0.0050 | 0.0020 | ug/l | 0.500 | | 86 | 50-120 | | | |
| 4,4'-DDT | 0.428 | 0.0050 | 0.0030 | ug/l | 0.500 | | 86 | 55-120 | | | |
| Aldrin | 0.354 | 0.0050 | 0.0040 | ug/l | 0.500 | | 71 | 40-115 | | | |
| alpha-BHC | 0.342 | 0.0050 | 0.0015 | ug/l | 0.500 | | 68 | 45-115 | | | |
| beta-BHC | 0.351 | 0.0050 | 0.0023 | ug/l | 0.500 | | 70 | 55-115 | | | |
| delta-BHC | 0.387 | 0.0050 | 0.0040 | ug/l | 0.500 | | 70 | 55-115 | | | |
| Dieldrin | 0.387 | 0.0050 | 0.0033 | ug/l | 0.500 | | 86 | 55-115 | | | |
| Endosulfan I | 0.431 | 0.0050 | 0.0020 | ug/l | 0.500 | | 80 | 55-115 | | | |
| Endosulfan II | 0.411 | 0.0030 | 0.0020 | ug/l | 0.500 | | 82 95 | 55-115 | | | |
| Endosulfan sulfate | 0.473 | 0.0030 | 0.0030 | ug/l | 0.500 | | 93 98 | 60-120 | | | |
| Endosunan sunate | 0.491 | 0.0050 | 0.0030 | - | 0.500 | | 98 86 | 55-115 | | | |
| Engini | 0.432 | 0.0050 | 0.0020 | ug/l | 0.500 | | 00 | 55-115 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C1222 Extracted: 03/10/10 | <u> </u> | | | | | | | | | | |
| LCS Analyzed: 03/11/2010 (10C1222-BS | 1) | | | | | | | | | | MNR1 |
| Endrin aldehyde | 0.444 | 0.010 | 0.0020 | ug/l | 0.500 | | 89 | 50-120 | | | |
| Endrin ketone | 0.493 | 0.010 | 0.0030 | ug/l | 0.500 | | 99 | 55-120 | | | |
| gamma-BHC (Lindane) | 0.347 | 0.020 | 0.0030 | ug/l | 0.500 | | 69 | 45-115 | | | |
| Heptachlor | 0.357 | 0.010 | 0.0030 | ug/l | 0.500 | | 71 | 45-115 | | | |
| Heptachlor epoxide | 0.385 | 0.0050 | 0.0025 | ug/l | 0.500 | | 77 | 55-115 | | | |
| Methoxychlor | 0.460 | 0.0050 | 0.0035 | ug/l | 0.500 | | 92 | 60-120 | | | |
| Surrogate: Decachlorobiphenyl | 0.473 | | | ug/l | 0.500 | | 95 | 45-120 | | | |
| Surrogate: Tetrachloro-m-xylene | 0.331 | | | ug/l | 0.500 | | 66 | 35-115 | | | |
| LCS Dup Analyzed: 03/11/2010 (10C122 | 2-BSD1) | | | | | | | | | | |
| 4,4'-DDD | 0.483 | 0.0050 | 0.0020 | ug/l | 0.500 | | 97 | 55-120 | 5 | 30 | |
| 4,4'-DDE | 0.409 | 0.0050 | 0.0030 | ug/l | 0.500 | | 82 | 50-120 | 5 | 30 | |
| 4,4'-DDT | 0.414 | 0.010 | 0.0040 | ug/l | 0.500 | | 83 | 55-120 | 4 | 30 | |
| Aldrin | 0.310 | 0.0050 | 0.0015 | ug/l | 0.500 | | 62 | 40-115 | 13 | 30 | |
| alpha-BHC | 0.300 | 0.0050 | 0.0025 | ug/l | 0.500 | | 60 | 45-115 | 13 | 30 | |
| beta-BHC | 0.328 | 0.010 | 0.0040 | ug/l | 0.500 | | 66 | 55-115 | 7 | 30 | |
| delta-BHC | 0.363 | 0.0050 | 0.0035 | ug/l | 0.500 | | 73 | 55-115 | 6 | 30 | |
| Dieldrin | 0.414 | 0.0050 | 0.0020 | ug/l | 0.500 | | 83 | 55-115 | 4 | 30 | |
| Endosulfan I | 0.390 | 0.0050 | 0.0020 | ug/l | 0.500 | | 78 | 55-115 | 5 | 30 | |
| Endosulfan II | 0.458 | 0.0050 | 0.0030 | ug/l | 0.500 | | 92 | 55-120 | 4 | 30 | |
| Endosulfan sulfate | 0.471 | 0.010 | 0.0030 | ug/l | 0.500 | | 94 | 60-120 | 4 | 30 | |
| Endrin | 0.415 | 0.0050 | 0.0020 | ug/l | 0.500 | | 83 | 55-115 | 4 | 30 | |
| Endrin aldehyde | 0.421 | 0.010 | 0.0020 | ug/l | 0.500 | | 84 | 50-120 | 5 | 30 | |
| Endrin ketone | 0.470 | 0.010 | 0.0030 | ug/l | 0.500 | | 94 | 55-120 | 5 | 30 | |
| gamma-BHC (Lindane) | 0.308 | 0.020 | 0.0030 | ug/l | 0.500 | | 62 | 45-115 | 12 | 30 | |
| Heptachlor | 0.314 | 0.010 | 0.0030 | ug/l | 0.500 | | 63 | 45-115 | 13 | 30 | |
| Heptachlor epoxide | 0.360 | 0.0050 | 0.0025 | ug/l | 0.500 | | 72 | 55-115 | 7 | 30 | |
| Methoxychlor | 0.441 | 0.0050 | 0.0035 | ug/l | 0.500 | | 88 | 60-120 | 4 | 30 | |
| Surrogate: Decachlorobiphenyl | 0.456 | | | ug/l | 0.500 | | 91 | 45-120 | | | |
| Surrogate: Tetrachloro-m-xylene | 0.286 | | | ug/l | 0.500 | | 57 | 35-115 | | | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

TOTAL PCBS (EPA 608)

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|---------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 10C1222 Extracted: 03/10/10 | | | | | | | | | | | |
| | _ | | | | | | | | | | |
| Blank Analyzed: 03/11/2010 (10C1222-B | LK1) | | | | | | | | | | |
| Aroclor 1016 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Aroclor 1221 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Aroclor 1232 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Aroclor 1242 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Aroclor 1248 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Aroclor 1254 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Aroclor 1260 | ND | 0.50 | 0.25 | ug/l | | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.437 | | | ug/l | 0.500 | | 87 | 45-120 | | | |
| LCS Analyzed: 03/11/2010 (10C1222-BS | 2) | | | | | | | | | | MNR1 |
| Aroclor 1016 | 3.71 | 0.50 | 0.25 | ug/l | 4.00 | | 93 | 50-115 | | | |
| Aroclor 1260 | 4.04 | 0.50 | 0.25 | ug/l | 4.00 | | 101 | 60-120 | | | |
| Surrogate: Decachlorobiphenyl | 0.437 | | | ug/l | 0.500 | | 87 | 45-120 | | | |
| LCS Dup Analyzed: 03/11/2010 (10C122 | 2-BSD2) | | | | | | | | | | |
| Aroclor 1016 | 3.52 | 0.50 | 0.25 | ug/l | 4.00 | | 88 | 50-115 | 5 | 30 | |
| Aroclor 1260 | 3.90 | 0.50 | 0.25 | ug/l | 4.00 | | 97 | 60-120 | 3 | 25 | |
| Surrogate: Decachlorobiphenyl | 0.426 | | | ug/l | 0.500 | | 85 | 45-120 | | | |



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-----------|--------------------|-----|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C2126 Extracted: 03/17/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 03/17/2010 (10C2126-B | LK1) | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | ND | 5.0 | 1.4 | mg/l | | | | | | | |
| LCS Analyzed: 03/17/2010 (10C2126-BS | 1) | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | 20.4 | 5.0 | 1.4 | mg/l | 20.0 | | 102 | 78-114 | | | |
| LCS Dup Analyzed: 03/17/2010 (10C212 | 6-BSD1) | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | 20.7 | 5.0 | 1.4 | mg/l | 20.0 | | 104 | 78-114 | 1 | 11 | |
| Matrix Spike Analyzed: 03/17/2010 (100 | 2126-MS1) | | | | Sou | rce: ITC | 1021-02 | | | | |
| Hexane Extractable Material (Oil & Grease) | 18.9 | 5.0 | 1.4 | mg/l | 20.0 | ND | 94 | 78-114 | | | |
| Matrix Spike Analyzed: 03/17/2010 (100 | 2126-MS2) | | | | Sou | rce: ITC | 1685-01 | | | | |
| Hexane Extractable Material (Oil & Grease) | 23.8 | 4.8 | 1.3 | mg/l | 19.0 | 3.51 | 107 | 78-114 | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---|--------------------|-------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C1781 Extracted: 03/15/10 |) | | | | | | | | | | - |
| Butth. 1001701 Extracted. 00/15/10 | <u>, </u> | | | | | | | | | | |
| Blank Analyzed: 03/19/2010 (10C1781-E | BLK1) | | | | | | | | | | |
| Aluminum | ND | 50 | 40 | ug/l | | | | | | | |
| Arsenic | ND | 10 | 7.0 | ug/l | | | | | | | |
| Beryllium | ND | 2.0 | 0.90 | ug/l | | | | | | | |
| Boron | ND | 0.050 | 0.020 | mg/l | | | | | | | |
| Calcium | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Iron | ND | 0.040 | 0.015 | mg/l | | | | | | | |
| Magnesium | ND | 0.020 | 0.012 | mg/l | | | | | | | |
| Nickel | ND | 10 | 2.0 | ug/l | | | | | | | |
| Selenium | ND | 10 | 8.0 | ug/l | | | | | | | |
| Vanadium | ND | 10 | 3.0 | ug/l | | | | | | | |
| Zinc | ND | 20 | 6.0 | ug/l | | | | | | | |
| LCS Analyzed: 03/19/2010 (10C1781-BS | 51) | | | | | | | | | | |
| Aluminum | 498 | 50 | 40 | ug/l | 500 | | 100 | 85-115 | | | |
| Arsenic | 483 | 10 | 7.0 | ug/l | 500 | | 97 | 85-115 | | | |
| Beryllium | 498 | 2.0 | 0.90 | ug/l | 500 | | 100 | 85-115 | | | |
| Boron | 0.473 | 0.050 | 0.020 | mg/l | 0.500 | | 95 | 85-115 | | | |
| Calcium | 2.49 | 0.10 | 0.050 | mg/l | 2.50 | | 100 | 85-115 | | | |
| Iron | 0.490 | 0.040 | 0.015 | mg/l | 0.500 | | 98 | 85-115 | | | |
| Magnesium | 2.50 | 0.020 | 0.012 | mg/l | 2.50 | | 100 | 85-115 | | | |
| Nickel | 472 | 10 | 2.0 | ug/l | 500 | | 94 | 85-115 | | | |
| Selenium | 469 | 10 | 8.0 | ug/l | 500 | | 94 | 85-115 | | | |
| Vanadium | 488 | 10 | 3.0 | ug/l | 500 | | 98 | 85-115 | | | |
| Zinc | 445 | 20 | 6.0 | ug/l | 500 | | 89 | 85-115 | | | |
| Matrix Spike Analyzed: 03/19/2010 (100 | C1781-MS1) | | | | Sou | rce: ITC | 0989-03 | | | | |
| Aluminum | 719 | 50 | 40 | ug/l | 500 | 195 | 105 | 70-130 | | | |
| Arsenic | 501 | 10 | 7.0 | ug/l | 500 | ND | 100 | 70-130 | | | |
| Beryllium | 516 | 2.0 | 0.90 | ug/l | 500 | ND | 103 | 70-130 | | | |
| Boron | 0.555 | 0.050 | 0.020 | mg/l | 0.500 | 0.0551 | 100 | 70-130 | | | |
| Calcium | 54.4 | 0.10 | 0.050 | mg/l | 2.50 | 51.3 | 126 | 70-130 | | | |
| Iron | 0.616 | 0.040 | 0.015 | mg/l | 0.500 | 0.145 | 94 | 70-130 | | | |
| Magnesium | 6.65 | 0.020 | 0.012 | mg/l | 2.50 | 4.12 | 101 | 70-130 | | | |
| Nickel | 464 | 10 | 2.0 | ug/l | 500 | ND | 93 | 70-130 | | | |
| Selenium | 457 | 10 | 8.0 | ug/l | 500 | ND | 91 | 70-130 | | | |
| Vanadium | 502 | 10 | 3.0 | ug/l | 500 | 3.72 | 100 | 70-130 | | | |

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MWH-Pasadena/Boeing

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source | %REC | %REC | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|-------|-------|----------------|-----------|---------|--------|-----|--------------|--------------------|
| • | | LIMIU | MDL | Units | Level | Result | 70KEU | Limits | KPD | Limit | Quaimers |
| Batch: 10C1781 Extracted: 03/15/10 | <u>)</u> | | | | | | | | | | |
| Matrix Spike Analyzed: 03/19/2010 (100 | C1781-MS1) | | | | Sou | irce: ITC |)989-03 | | | | |
| Zinc | 455 | 20 | 6.0 | ug/l | 500 | 7.65 | 90 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 03/19/2010 | (10C1781-M | SD1) | | | Sou | irce: ITC |)989-03 | | | | |
| Aluminum | 699 | 50 | 40 | ug/l | 500 | 195 | 101 | 70-130 | 3 | 20 | |
| Arsenic | 486 | 10 | 7.0 | ug/l | 500 | ND | 97 | 70-130 | 3 | 20 | |
| Beryllium | 504 | 2.0 | 0.90 | ug/l | 500 | ND | 101 | 70-130 | 2 | 20 | |
| Boron | 0.541 | 0.050 | 0.020 | mg/l | 0.500 | 0.0551 | 97 | 70-130 | 3 | 20 | |
| Calcium | 53.5 | 0.10 | 0.050 | mg/l | 2.50 | 51.3 | 90 | 70-130 | 2 | 20 | |
| Iron | 0.601 | 0.040 | 0.015 | mg/l | 0.500 | 0.145 | 91 | 70-130 | 3 | 20 | |
| Magnesium | 6.50 | 0.020 | 0.012 | mg/l | 2.50 | 4.12 | 95 | 70-130 | 2 | 20 | |
| Nickel | 459 | 10 | 2.0 | ug/l | 500 | ND | 92 | 70-130 | 1 | 20 | |
| Selenium | 449 | 10 | 8.0 | ug/l | 500 | ND | 90 | 70-130 | 2 | 20 | |
| Vanadium | 493 | 10 | 3.0 | ug/l | 500 | 3.72 | 98 | 70-130 | 2 | 20 | |
| Zinc | 448 | 20 | 6.0 | ug/l | 500 | 7.65 | 88 | 70-130 | 2 | 20 | |
| Batch: 10C1948 Extracted: 03/16/10 | <u>)</u> | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C1948-E | - | | | | | | | | | | |
| Antimony | ND | 2.0 | 0.30 | ug/l | | | | | | | |
| Cadmium | ND | 1.0 | 0.10 | ug/l | | | | | | | |
| Copper | ND | 2.0 | 0.50 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| Thallium | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| LCS Analyzed: 03/16/2010 (10C1948-BS | 51) | | | | | | | | | | |
| Antimony | 80.2 | 2.0 | 0.30 | ug/l | 80.0 | | 100 | 85-115 | | | |
| Cadmium | 77.8 | 1.0 | 0.10 | ug/l | 80.0 | | 97 | 85-115 | | | |
| Copper | 78.7 | 2.0 | 0.50 | ug/l | 80.0 | | 98 | 85-115 | | | |
| Lead | 75.7 | 1.0 | 0.20 | ug/l | 80.0 | | 95 | 85-115 | | | |
| Thallium | 76.6 | 1.0 | 0.20 | ug/l | 80.0 | | 96 | 85-115 | | | |

TestAmerica Irvine



MWH-Pasadena/Boeing

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C1948 Extracted: 03/16/10 |) | | | | | | | | | | |
| Matrix Spike Analyzed: 03/16/2010 (10C | (1948-MS1) | | | | Sou | rce: ITC | 1476-01 | | | | |
| Antimony | 84.5 | 2.0 | 0.30 | ug/l | 80.0 | ND | 106 | 70-130 | | | |
| Cadmium | 80.3 | 1.0 | 0.10 | ug/l | 80.0 | ND | 100 | 70-130 | | | |
| Copper | 79.0 | 2.0 | 0.50 | ug/l | 80.0 | ND | 99 | 70-130 | | | |
| Lead | 76.0 | 1.0 | 0.20 | ug/l | 80.0 | 0.249 | 95 | 70-130 | | | |
| Thallium | 76.4 | 1.0 | 0.20 | ug/l | 80.0 | ND | 96 | 70-130 | | | |
| Matrix Spike Analyzed: 03/16/2010 (10C | C1948-MS2) | | | | Sou | rce: ITC | 1316-01 | | | | |
| Antimony | 83.7 | 2.0 | 0.30 | ug/l | 80.0 | ND | 105 | 70-130 | | | |
| Cadmium | 79.4 | 1.0 | 0.10 | ug/l | 80.0 | ND | 99 | 70-130 | | | |
| Copper | 85.5 | 2.0 | 0.50 | ug/l | 80.0 | 7.21 | 98 | 70-130 | | | |
| Lead | 74.4 | 1.0 | 0.20 | ug/l | 80.0 | 0.296 | 93 | 70-130 | | | |
| Thallium | 74.6 | 1.0 | 0.20 | ug/l | 80.0 | ND | 93 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 03/16/2010 | (10C1948-M | SD1) | | | Sou | rce: ITC | 476-01 | | | | |
| Antimony | 83.6 | 2.0 | 0.30 | ug/l | 80.0 | ND | 105 | 70-130 | 1 | 20 | |
| Cadmium | 78.9 | 1.0 | 0.10 | ug/l | 80.0 | ND | 99 | 70-130 | 2 | 20 | |
| Copper | 77.9 | 2.0 | 0.50 | ug/l | 80.0 | ND | 97 | 70-130 | 1 | 20 | |
| Lead | 75.0 | 1.0 | 0.20 | ug/l | 80.0 | 0.249 | 93 | 70-130 | 1 | 20 | |
| Thallium | 76.2 | 1.0 | 0.20 | ug/l | 80.0 | ND | 95 | 70-130 | 0.3 | 20 | |
| Batch: 10C2010 Extracted: 03/16/10 |) | | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C2010-B | SLK1) | | | | | | | | | | |
| Mercury | ND | 0.20 | 0.10 | ug/l | | | | | | | |
| LCS Analyzed: 03/16/2010 (10C2010-BS | 1) | | | | | | | | | | |
| Mercury | 8.36 | 0.20 | 0.10 | ug/l | 8.00 | | 105 | 85-115 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C2010 Extracted: 03/16/10 |) | | | | | | | | | | |
| Matrix Spike Analyzed: 03/16/2010 (10C | 2010-MS1) | | | | Sou | irce: ITC | 1476-01 | | | | |
| Mercury | 8.41 | 0.20 | 0.10 | ug/l | 8.00 | ND | 105 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 03/16/2010 | (10C2010-MS | D1) | | | Sou | rce: ITC | 1476-01 | | | | |
| Mercury | 8.38 | 0.20 | 0.10 | ug/l | 8.00 | ND | 105 | 70-130 | 0.5 | 20 | |
| Batch: 10D1079 Extracted: 04/09/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 04/09/2010 (10D1079-B | LK1) | | | | | | | | | | |
| Chromium | ND | 5.0 | 2.0 | ug/l | | | | | | | |
| Silver | ND | 10 | 6.0 | ug/l | | | | | | | |
| LCS Analyzed: 04/09/2010 (10D1079-BS | 1) | | | | | | | | | | |
| Chromium | 502 | 5.0 | 2.0 | ug/l | 500 | | 100 | 85-115 | | | |
| Silver | 256 | 10 | 6.0 | ug/l | 250 | | 102 | 85-115 | | | |
| Matrix Spike Analyzed: 04/09/2010 (10D | 01079-MS1) | | | | Sou | rce: ITC | 0989-03 | | | | |
| Chromium | 494 | 5.0 | 2.0 | ug/l | 500 | ND | 99 | 70-130 | | | |
| Silver | 252 | 10 | 6.0 | ug/l | 250 | ND | 101 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 04/09/2010 | (10D1079-MS | D1) | | | Sou | rce: ITC | 0989-03 | | | | |
| Chromium | 494 | 5.0 | 2.0 | ug/l | 500 | ND | 99 | 70-130 | 0.1 | 20 | |
| Silver | 248 | 10 | 6.0 | ug/l | 250 | ND | 99 | 70-130 | 1 | 20 | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

DISSOLVED METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|--------|----------------|------------------|---------|----------------|-------|--------------|--------------------|
| - | | 2 | | 0 1110 | 2000 | 11054110 | , und e | 2 | 111 2 | | Zummers |
| Batch: 10C1953 Extracted: 03/16/10 | - | | | | | | | | | | |
| Blank Analyzed: 03/17/2010 (10C1953-B | LK1) | | | | | | | | | | |
| Antimony | ND | 2.0 | 0.30 | ug/l | | | | | | | |
| Cadmium | ND | 1.0 | 0.10 | ug/l | | | | | | | |
| Copper | ND | 2.0 | 0.50 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| Thallium | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| LCS Analyzed: 03/17/2010 (10C1953-BS | 1) | | | | | | | | | | |
| Antimony | 83.9 | 2.0 | 0.30 | ug/l | 80.0 | | 105 | 85-115 | | | |
| Cadmium | 79.8 | 1.0 | 0.10 | ug/l | 80.0 | | 100 | 85-115 | | | |
| Copper | 73.8 | 2.0 | 0.50 | ug/l | 80.0 | | 92 | 85-115 | | | |
| Lead | 72.4 | 1.0 | 0.20 | ug/l | 80.0 | | 91 | 85-115 | | | |
| Thallium | 74.7 | 1.0 | 0.20 | ug/l | 80.0 | | 93 | 85-115 | | | |
| Matrix Spike Analyzed: 03/17/2010 (10C | 1953-MS1) | | | | Sou | rce: ITC | 1272-01 | | | | |
| Antimony | 88.9 | 2.0 | 0.30 | ug/l | 80.0 | ND | 111 | 70-130 | | | |
| Cadmium | 78.7 | 1.0 | 0.10 | ug/l | 80.0 | 0.143 | 98 | 70-130 | | | |
| Copper | 74.4 | 2.0 | 0.50 | ug/l | 80.0 | 3.13 | 89 | 70-130 | | | |
| Lead | 69.6 | 1.0 | 0.20 | ug/l | 80.0 | ND | 87 | 70-130 | | | |
| Thallium | 71.5 | 1.0 | 0.20 | ug/l | 80.0 | ND | 89 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 03/17/2010 | (10C1953-M | ISD1) | | | Sou | rce: ITC | 1272-01 | | | | |
| Antimony | 87.8 | 2.0 | 0.30 | ug/l | 80.0 | ND | 110 | 70-130 | 1 | 20 | |
| Cadmium | 77.3 | 1.0 | 0.10 | ug/l | 80.0 | 0.143 | 96 | 70-130 | 2 | 20 | |
| Copper | 73.4 | 2.0 | 0.50 | ug/l | 80.0 | 3.13 | 88 | 70-130 | 1 | 20 | |
| Lead | 66.8 | 1.0 | 0.20 | ug/l | 80.0 | ND | 84 | 70-130 | 4 | 20 | |
| Thallium | 68.6 | 1.0 | 0.20 | ug/l | 80.0 | ND | 86 | 70-130 | 4 | 20 | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C2011 Extracted: 03/16/10 | <u>)</u> | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 03/16/2010 (10C2011-F | - | | 0.10 | a | | | | | | | |
| Mercury | ND | 0.20 | 0.10 | ug/l | | | | | | | |
| LCS Analyzed: 03/16/2010 (10C2011-BS | 51) | | | | | | | | | | |
| Mercury | 8.65 | 0.20 | 0.10 | ug/l | 8.00 | | 108 | 85-115 | | | |
| Matrix Spike Analyzed: 03/16/2010 (100 | 72011-MS1) | | | | Sou | rce: ITC | 1128-01 | | | | |
| Mercury | 8.49 | 0.20 | 0.10 | ug/l | 8.00 | ND | 106 | 70-130 | | | |
| - | | | | 8 | | | | | | | |
| Matrix Spike Dup Analyzed: 03/16/2010 | | | | | | rce: ITC | | | | • • | |
| Mercury | 8.36 | 0.20 | 0.10 | ug/l | 8.00 | ND | 104 | 70-130 | 2 | 20 | |
| Batch: 10C2228 Extracted: 03/17/10 |) | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 03/20/2010 (10C2228-E | BLK1) | | | | | | | | | | |
| Aluminum | ND | 50 | 40 | ug/l | | | | | | | |
| Arsenic | ND | 10 | 7.0 | ug/l | | | | | | | |
| Beryllium | ND | 2.0 | 0.90 | ug/l | | | | | | | |
| Boron | ND | 0.050 | 0.020 | mg/l | | | | | | | |
| Calcium | ND | 0.10 | 0.050 | mg/l | | | | | | | |
| Chromium | ND | 5.0 | 2.0 | ug/l | | | | | | | |
| Iron | ND | 0.040 | 0.015 | mg/l | | | | | | | |
| Magnesium | ND | 0.020 | 0.012 | mg/l | | | | | | | |
| Nickel | ND | 10 | 2.0 | ug/l | | | | | | | |
| Selenium | ND | 10 | 8.0 | ug/l | | | | | | | |
| Vanadium | ND | 10 | 3.0 | ug/l | | | | | | | |
| LCS Analyzed: 03/20/2010 (10C2228-BS | 51) | | | | | | | | | | |
| Aluminum | 560 | 50 | 40 | ug/l | 500 | | 112 | 85-115 | | | |
| Arsenic | 541 | 10 | 7.0 | ug/l | 500 | | 108 | 85-115 | | | |
| Beryllium | 529 | 2.0 | 0.90 | ug/l | 500 | | 106 | 85-115 | | | |
| Boron | 0.522 | 0.050 | 0.020 | mg/l | 0.500 | | 104 | 85-115 | | | |
| Calcium | 2.66 | 0.10 | 0.050 | mg/l | 2.50 | | 107 | 85-115 | | | |
| Chromium | 513 | 5.0 | 2.0 | ug/l | 500 | | 103 | 85-115 | | | |
| Iron | 0.553 | 0.040 | 0.015 | mg/l | 0.500 | | 111 | 85-115 | | | |
| Magnesium | 2.69 | 0.020 | 0.012 | mg/l | 2.50 | | 107 | 85-115 | | | |
| Nickel | 522 | 10 | 2.0 | ug/l | 500 | | 104 | 85-115 | | | |
| Selenium | 514 | 10 | 8.0 | ug/l | 500 | | 103 | 85-115 | | | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10C2228 Extracted: 03/17/10 |) | | | | | | | | | | |
| LCS Analyzed: 03/20/2010 (10C2228-BS | 1) | | | | | | | | | | |
| Vanadium | 533 | 10 | 3.0 | ug/l | 500 | | 107 | 85-115 | | | |
| Matrix Spike Analyzed: 03/20/2010 (100 | 2228-MS1) | | | | Sou | rce: ITC |)989-03 | | | | |
| Aluminum | 563 | 50 | 40 | ug/l | 500 | ND | 113 | 70-130 | | | |
| Arsenic | 548 | 10 | 7.0 | ug/l | 500 | ND | 110 | 70-130 | | | |
| Beryllium | 538 | 2.0 | 0.90 | ug/l | 500 | ND | 108 | 70-130 | | | |
| Boron | 0.583 | 0.050 | 0.020 | mg/l | 0.500 | 0.0568 | 105 | 70-130 | | | |
| Calcium | 54.5 | 0.10 | 0.050 | mg/l | 2.50 | 51.2 | 131 | 70-130 | | | MHA |
| Chromium | 507 | 5.0 | 2.0 | ug/l | 500 | 4.61 | 100 | 70-130 | | | |
| Iron | 0.544 | 0.040 | 0.015 | mg/l | 0.500 | 0.0161 | 106 | 70-130 | | | |
| Magnesium | 6.79 | 0.020 | 0.012 | mg/l | 2.50 | 4.15 | 106 | 70-130 | | | |
| Nickel | 509 | 10 | 2.0 | ug/l | 500 | 10.3 | 100 | 70-130 | | | |
| Selenium | 501 | 10 | 8.0 | ug/l | 500 | ND | 100 | 70-130 | | | |
| Vanadium | 536 | 10 | 3.0 | ug/l | 500 | 3.43 | 107 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 03/20/2010 | (10C2228-M | ISD1) | | | Sou | rce: ITC(|)989-03 | | | | |
| Aluminum | 559 | 50 | 40 | ug/l | 500 | ND | 112 | 70-130 | 0.7 | 20 | |
| Arsenic | 546 | 10 | 7.0 | ug/l | 500 | ND | 109 | 70-130 | 0.3 | 20 | |
| Beryllium | 531 | 2.0 | 0.90 | ug/l | 500 | ND | 106 | 70-130 | 1 | 20 | |
| Boron | 0.582 | 0.050 | 0.020 | mg/l | 0.500 | 0.0568 | 105 | 70-130 | 0.1 | 20 | |
| Calcium | 54.0 | 0.10 | 0.050 | mg/l | 2.50 | 51.2 | 113 | 70-130 | 0.8 | 20 | MHA |
| Chromium | 502 | 5.0 | 2.0 | ug/l | 500 | 4.61 | 100 | 70-130 | 0.9 | 20 | |
| Iron | 0.551 | 0.040 | 0.015 | mg/l | 0.500 | 0.0161 | 107 | 70-130 | 1 | 20 | |
| Magnesium | 6.76 | 0.020 | 0.012 | mg/l | 2.50 | 4.15 | 105 | 70-130 | 0.4 | 20 | |
| Nickel | 505 | 10 | 2.0 | ug/l | 500 | 10.3 | 99 | 70-130 | 0.8 | 20 | |
| Selenium | 499 | 10 | 8.0 | ug/l | 500 | ND | 100 | 70-130 | 0.3 | 20 | |
| Vanadium | 535 | 10 | 3.0 | ug/l | 500 | 3.43 | 106 | 70-130 | 0.2 | 20 | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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: 10D1078 Extracted: 04/09/10 | - | | | | | | | | | | |
| Blank Analyzed: 04/09/2010 (10D1078-B | LK1) | | | | | | | | | | |
| Silver | ND | 10 | 6.0 | ug/l | | | | | | | |
| Zinc | ND | 20 | 6.0 | ug/l | | | | | | | |
| LCS Analyzed: 04/09/2010 (10D1078-BS | 1) | | | | | | | | | | |
| Silver | 262 | 10 | 6.0 | ug/l | 250 | | 105 | 85-115 | | | |
| Zinc | 514 | 20 | 6.0 | ug/l | 500 | | 103 | 85-115 | | | |
| Matrix Spike Analyzed: 04/09/2010 (10D | 1078-MS1) | | | | Sou | rce: ITC |)989-03 | | | | |
| Silver | 254 | 10 | 6.0 | ug/l | 250 | ND | 102 | 70-130 | | | |
| Zinc | 530 | 20 | 6.0 | ug/l | 500 | ND | 106 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 04/09/2010 | (10D1078-M | SD1) | | | Sou | rce: ITC |)989-03 | | | | |
| Silver | 249 | 10 | 6.0 | ug/l | 250 | ND | 100 | 70-130 | 2 | 20 | |
| Zinc | 505 | 20 | 6.0 | ug/l | 500 | ND | 101 | 70-130 | 5 | 20 | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

DISSOLVED INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|---------|-------|--------------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C1119 Extracted: 03/09/10 |) | | | | | | | | | | |
| Blank Analyzed: 03/09/2010 (10C1119-B | SLK1) | | | | | | | | | | |
| Chromium VI | ND | 0.0010 | 0.00025 | mg/l | | | | | | | |
| LCS Analyzed: 03/09/2010 (10C1119-BS | 1) | | | | | | | | | | |
| Chromium VI | 0.0525 | 0.0010 | 0.00025 | mg/l | 0.0500 | | 105 | 90-110 | | | |
| Matrix Spike Analyzed: 03/09/2010 (100 | C1119-MS1) | | | | Source: ITC0918-01 | | | | | | |
| Chromium VI | 0.0535 | 0.0010 | 0.00025 | mg/l | 0.0500 | 0.00397 | 99 | 90-110 | | | |
| Matrix Spike Dup Analyzed: 03/09/2010 (10C1119-MSD1) | | | | | Sou | rce: ITC(|)918-01 | | | | |
| Chromium VI | 0.0558 | 0.0010 | 0.00025 | mg/l | 0.0500 | 0.00397 | 104 | 90-110 | 4 | 10 | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C1057 Extracted: 03/09/10 | _ | | | | | | | | | | |
| Blank Analyzed: 03/09/2010 (10C1057-B | LK1) | | | | | | | | | | |
| Chloride | ND | 0.50 | 0.25 | mg/l | | | | | | | |
| Nitrate/Nitrite-N | ND | 0.26 | 0.15 | mg/l | | | | | | | |
| Sulfate | ND | 0.50 | 0.20 | mg/l | | | | | | | |
| LCS Analyzed: 03/09/2010 (10C1057-BS) | 1) | | | | | | | | | | |
| Chloride | 5.00 | 0.50 | 0.25 | mg/l | 5.00 | | 100 | 90-110 | | | <i>M-3</i> |
| Sulfate | 10.4 | 0.50 | 0.20 | mg/l | 10.0 | | 104 | 90-110 | | | |
| Matrix Spike Analyzed: 03/09/2010 (10C | 1057-MS1) | | | | Sou | rce: ITC | 0911-01 | | | | |
| Sulfate | 20.5 | 0.50 | 0.20 | mg/l | 10.0 | 10.7 | 98 | 80-120 | | | |
| Matrix Spike Analyzed: 03/09/2010 (10C | 1057-MS2) | | | | Sou | rce: ITC | 0929-02 | | | | |
| Chloride | 135 | 5.0 | 2.5 | mg/l | 50.0 | 85.1 | 100 | 80-120 | | | |
| Sulfate | 217 | 5.0 | 2.0 | mg/l | 100 | 114 | 102 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 03/09/2010 | (10C1057-M | SD1) | | | Sou | rce: ITC | 0911-01 | | | | |
| Sulfate | 20.5 | 0.50 | 0.20 | mg/l | 10.0 | 10.7 | 98 | 80-120 | 0.3 | 20 | |
| Batch: 10C1095 Extracted: 03/09/10 | _ | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 03/09/2010 (10C1095-B) | , | | | | | | | | | | |
| Perchlorate | ND | 4.0 | 0.90 | ug/l | | | | | | | |
| LCS Analyzed: 03/09/2010 (10C1095-BS) | 1) | | | | | | | | | | |
| Perchlorate | 24.2 | 4.0 | 0.90 | ug/l | 25.0 | | 97 | 85-115 | | | |
| Matrix Spike Analyzed: 03/09/2010 (10C | 1095-MS1) | | | | Sou | rce: ITC | 0793-02 | | | | |
| Perchlorate | 25.1 | 4.0 | 0.90 | ug/l | 25.0 | ND | 100 | 80-120 | | | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-------------|--------------------|--------|--------------------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C1095 Extracted: 03/09/10 | <u>)</u> | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 03/09/2010 | (10C1095-MS | 5D1) | | | Sou | rce: ITC | 0793-02 | | | | |
| Perchlorate | 24.7 | 4.0 | 0.90 | ug/l | 25.0 | ND | 99 | 80-120 | 1 | 20 | |
| Batch: 10C1344 Extracted: 03/11/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 03/11/2010 (10C1344-B | LK1) | | | | | | | | | | |
| Fluoride | 0.0273 | 0.10 | 0.020 | mg/l | | | | | | | J |
| LCS Analyzed: 03/11/2010 (10C1344-BS | 1) | | | | | | | | | | |
| Fluoride | 1.04 | 0.10 | 0.020 | mg/l | 1.00 | | 104 | 90-110 | | | |
| Matrix Spike Analyzed: 03/11/2010 (10C | 21344-MS1) | | | | Sou | rce: ITC | 0989-03 | | | | |
| Fluoride | 1.15 | 0.10 | 0.020 | mg/l | 1.00 | 0.135 | 101 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 03/11/2010 | (10C1344-MS | 5D1) | | Source: ITC0989-03 | | | | | | | |
| Fluoride | 1.16 | 0.10 | 0.020 | mg/l | 1.00 | 0.135 | 103 | 80-120 | 1 | 20 | |
| Batch: 10C1460 Extracted: 03/11/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 03/11/2010 (10C1460-B | LK1) | | | | | | | | | | |
| Total Cyanide | ND | 0.0050 | 0.0022 | mg/l | | | | | | | |
| LCS Analyzed: 03/11/2010 (10C1460-BS | 1) | | | | | | | | | | |
| Total Cyanide | 0.191 | 0.0050 | 0.0022 | mg/l | 0.200 | | 95 | 90-110 | | | |
| Matrix Spike Analyzed: 03/11/2010 (10C | | | | | | rce: ITC | | | | | |
| Total Cyanide | 0.186 | 0.0050 | 0.0022 | mg/l | 0.200 | ND | 93 | 70-115 | | | |

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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-------------|--------------------|--------|-------|--------------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10C1460 Extracted: 03/11/10 | <u>)</u> | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 03/11/2010 | (10C1460-MS | SD1) | | | Sou | rce: ITC | 0989-03 | | | | |
| Total Cyanide | 0.185 | 0.0050 | 0.0022 | mg/l | 0.200 | ND | 93 | 70-115 | 0.6 | 15 | |
| Batch: 10C1704 Extracted: 03/13/10 |) | | | | | | | | | | |
| Blank Analyzed: 03/13/2010 (10C1704-B | LK1) | | | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 1.0 | mg/l | | | | | | | |
| LCS Analyzed: 03/13/2010 (10C1704-BS | 1) | | | | | | | | | | |
| Total Dissolved Solids | 996 | 10 | 1.0 | mg/l | 1000 | | 100 | 90-110 | | | |
| Duplicate Analyzed: 03/13/2010 (10C170 | 4-DUP1) | | | | Sou | rce: ITC | 1040-13 | | | | |
| Total Dissolved Solids | 360 | 10 | 1.0 | mg/l | | 359 | | | 0.3 | 10 | |
| Batch: 10C1880 Extracted: 03/15/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 03/15/2010 (10C1880-B | LK1) | | | | | | | | | | |
| Total Suspended Solids | ND | 10 | 1.0 | mg/l | | | | | | | |
| LCS Analyzed: 03/15/2010 (10C1880-BS | 1) | | | | | | | | | | |
| Total Suspended Solids | 999 | 10 | 1.0 | mg/l | 1000 | | 100 | 85-115 | | | |
| Duplicate Analyzed: 03/15/2010 (10C188 | 880-DUP1) | | | | Source: ITC0875-01 | | | | | | |
| Total Suspended Solids | 19.0 | 10 | 1.0 | mg/l | | 19.0 | | | 0 | 10 | |

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA-5 1613B

| | D K | Reportin | 8 | ••• | Spike | Source | A/ DEC | %REC | DBD | RPD | Data |
|--|-----------|----------|------------|-------|----------|--------|--------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 70198 Extracted: 03/11/10 | i | | | | | | | | | | |
| Blassle Astalizza de 02/15/2010 (C0C110) | \0.0100D\ | | | | S | | | | | | |
| Blank Analyzed: 03/15/2010 (G0C1100 | | 0.00005 | 0.0000074 | /1 | Sou | rce: | | | | | |
| 1,2,3,4,6,7,8-HpCDD | 0.0000033 | 0.00005 | 0.00000074 | ug/L | | | | - | | | J, Q |
| 1,2,3,4,6,7,8-HpCDF | 0.0000024 | 0.00005 | 0.00000082 | ug/L | | | | - | | | J, Q |
| 1,2,3,4,7,8,9-HpCDF | 0.0000016 | 0.00005 | 0.000001 | ug/L | | | | - | | | J |
| 1,2,3,4,7,8-HxCDD | 0.0000011 | 0.00005 | 0.00000071 | ug/L | | | | - | | | J, Q |
| 1,2,3,4,7,8-HxCDF | 0.0000018 | 0.00005 | 0.00000021 | U | | | | - | | | J |
| 1,2,3,6,7,8-HxCDD | 0.0000015 | 0.00005 | 0.00000065 | ug/L | | | | - | | | J |
| 1,2,3,6,7,8-HxCDF | 0.000001 | 0.00005 | 0.0000002 | ug/L | | | | - | | | J, Q |
| 1,2,3,7,8,9-HxCDD | 0.0000012 | 0.00005 | 0.00000061 | ug/L | | | | - | | | J, Q |
| 1,2,3,7,8,9-HxCDF | 0.0000015 | 0.00005 | 0.00000022 | ug/L | | | | - | | | J, Q |
| 1,2,3,7,8-PeCDD | ND | 0.00005 | 0.0000032 | ug/L | | | | - | | | |
| 1,2,3,7,8-PeCDF | 0.0000012 | 0.00005 | 0.00000004 | ug/L | | | | - | | | J |
| 2,3,4,6,7,8-HxCDF | 0.0000016 | 0.00005 | 0.00000019 | ug/L | | | | - | | | J |
| 2,3,4,7,8-PeCDF | 0.000008 | 0.00005 | 0.00000004 | ug/L | | | | - | | | J, Q |
| 2,3,7,8-TCDD | ND | 0.00001 | 0.00000003 | ug/L | | | | - | | | |
| 2,3,7,8-TCDF | 0.0000086 | 0.00001 | 0.00000004 | ug/L | | | | - | | | J |
| OCDD | 0.000017 | 0.0001 | 0.0000084 | ug/L | | | | - | | | J |
| OCDF | 0.0000061 | 0.0001 | 0.00000067 | ug/L | | | | - | | | J |
| Total HpCDD | 0.000006 | 0.00005 | 0.00000074 | ug/L | | | | - | | | J, Q |
| Total HpCDF | 0.000004 | 0.00005 | 0.0000082 | ug/L | | | | - | | | J, Q |
| Total HxCDD | 0.0000039 | 0.00005 | 0.00000061 | ug/L | | | | - | | | J, Q |
| Total HxCDF | 0.0000063 | 0.00005 | 0.00000019 | ug/L | | | | - | | | J, Q |
| Total PeCDD | ND | 0.00005 | 0.0000032 | ug/L | | | | - | | | |
| Total PeCDF | 0.0000024 | 0.00005 | 0.00000004 | ug/L | | | | - | | | J, Q |
| Total TCDD | ND | 0.00001 | 0.00000003 | ug/L | | | | - | | | |
| Total TCDF | 0.0000086 | 0.00001 | 0.00000004 | ug/L | | | | - | | | J |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDD | 0.0015 | | | ug/L | 0.00200 | | 73 | 23-140 | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDF | 0.0014 | | | ug/L | 0.00200 | | 69 | 28-143 | | | |
| Surrogate: 13C-1,2,3,4,7,8,9-HpCDF | 0.0014 | | | ug/L | 0.00200 | | 69 | 26-138 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDD | 0.0015 | | | ug/L | 0.00200 | | 74 | 32-141 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDF | 0.0014 | | | ug/L | 0.00200 | | 70 | 26-152 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDD | 0.0014 | | | ug/L | 0.00200 | | 71 | 28-130 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDF | 0.0013 | | | ug/L | 0.00200 | | 67 | 26-123 | | | |
| Surrogate: 13C-1,2,3,7,8,9-HxCDF | 0.0013 | | | ug/L | 0.00200 | | 66 | 29-147 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDD | 0.0012 | | | ug/L | 0.00200 | | 61 | 25-181 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDF | 0.001 | | | ug/L | 0.00200 | | 52 | 24-185 | | | |

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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA-5 1613B

| | | Reportin | - | | Spike | Source | | %REC | | RPD | Data |
|-------------------------------------|------------------|----------|------------|-------|----------|--------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 70198 Extracted: 03/11/10 | | | | | | | | | | | |
| Blank Analyzed: 03/15/2010 (G0C1100 | 00198 R) | | | | Sou | rce: | | | | | |
| Surrogate: 13C-2,3,4,6,7,8-HxCDF | 0.0014 | | | ug/L | 0.00200 | 1 | 70 | 28-136 | | | |
| Surrogate: 13C-2,3,4,7,8-PeCDF | 0.0011 | | | ug/L | 0.00200 | | 53 | 21-178 | | | |
| Surrogate: 13C-2,3,7,8-TCDD | 0.0011 | | | ug/L | 0.00200 | | 57 | 25-164 | | | |
| Surrogate: 13C-2,3,7,8-TCDF | 0.001 | | | ug/L | 0.00200 | | 52 | 24-169 | | | |
| Surrogate: 13C-OCDD | 0.0029 | | | ug/L | 0.00400 | | 74 | 17-157 | | | |
| Surrogate: 37Cl4-2,3,7,8-TCDD | 0.00074 | | | ug/L | 0.000800 | | 92 | 35-197 | | | |
| LCS Analyzed: 03/15/2010 (G0C11000 | 0198C) | | | | Sou | rce: | | | | | |
| 1,2,3,4,6,7,8-HpCDD | 0.00106 | 0.00005 | 0.0000016 | ug/L | 0.00100 | | 106 | 70-140 | | | Ва |
| 1,2,3,4,6,7,8-HpCDF | 0.00106 | 0.00005 | 0.0000021 | ug/L | 0.00100 | | 106 | 82-122 | | | Ba |
| 1,2,3,4,7,8,9-HpCDF | 0.0011 | 0.00005 | 0.0000029 | ug/L | 0.00100 | | 110 | 78-138 | | | Ba |
| 1,2,3,4,7,8-HxCDD | 0.00104 | 0.00005 | 0.00000032 | ug/L | 0.00100 | | 104 | 70-164 | | | Ba |
| 1,2,3,4,7,8-HxCDF | 0.00108 | 0.00005 | 0.00000001 | ug/L | 0.00100 | | 108 | 72-134 | | | Ba |
| 1,2,3,6,7,8-HxCDD | 0.000997 | 0.00005 | 0.0000003 | ug/L | 0.00100 | | 100 | 76-134 | | | Ba |
| 1,2,3,6,7,8-HxCDF | 0.00109 | 0.00005 | 0.00000001 | ug/L | 0.00100 | | 109 | 84-130 | | | Ba |
| 1,2,3,7,8,9-HxCDD | 0.000993 | 0.00005 | 0.00000028 | ug/L | 0.00100 | | 99 | 64-162 | | | Ba |
| 1,2,3,7,8,9-HxCDF | 0.00108 | 0.00005 | 0.00000001 | ug/L | 0.00100 | | 108 | 78-130 | | | Ba |
| 1,2,3,7,8-PeCDD | 0.000957 | 0.00005 | 0.0000021 | ug/L | 0.00100 | | 96 | 70-142 | | | |
| 1,2,3,7,8-PeCDF | 0.00106 | 0.00005 | 0.0000011 | ug/L | 0.00100 | | 106 | 80-134 | | | Ba |
| 2,3,4,6,7,8-HxCDF | 0.00109 | 0.00005 | 0.00000001 | ug/L | 0.00100 | | 109 | 70-156 | | | Ba |
| 2,3,4,7,8-PeCDF | 0.00108 | 0.00005 | 0.0000012 | ug/L | 0.00100 | | 108 | 68-160 | | | Ba |
| 2,3,7,8-TCDD | 0.000201 | 0.00001 | 0.00000002 | ug/L | 0.000200 | | 100 | 67-158 | | | |
| 2,3,7,8-TCDF | 0.000195 | 0.00001 | 0.00000002 | ug/L | 0.000200 | | 98 | 75-158 | | | Ba |
| OCDD | 0.00204 | 0.0001 | 0.0000015 | ug/L | 0.00200 | | 102 | 78-144 | | | Ba |
| OCDF | 0.00194 | 0.0001 | 0.0000081 | ug/L | 0.00200 | | 97 | 63-170 | | | Ba |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDD | 0.00181 | | | ug/L | 0.00200 | | 91 | 26-166 | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDF | 0.00175 | | | ug/L | 0.00200 | | 88 | 21-158 | | | |
| Surrogate: 13C-1,2,3,4,7,8,9-HpCDF | 0.0017 | | | ug/L | 0.00200 | | 85 | 20-186 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDD | 0.00195 | | | ug/L | 0.00200 | | 98 | 21-193 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDF | 0.00182 | | | ug/L | 0.00200 | | 91 | 19-202 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDD | 0.00167 | | | ug/L | 0.00200 | | 84 | 25-163 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDF | 0.00164 | | | ug/L | 0.00200 | | 82 | 21-159 | | | |
| Surrogate: 13C-1,2,3,7,8,9-HxCDF | 0.00169 | | | ug/L | 0.00200 | | 85 | 17-205 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDD | 0.00151 | | | ug/L | 0.00200 | | 76 | 21-227 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDF | 0.00129 | | | ug/L | 0.00200 | | 65 | 21-192 | | | |
| Surrogate: 13C-2,3,4,6,7,8-HxCDF | 0.00174 | | | ug/L | 0.00200 | | 87 | 22-176 | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA-5 1613B

| | | Reporting | g | | Spike | Source | | %REC | | RPD | Data |
|--|-----------|-----------|-----------|-------|----------|--------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 70198 Extracted: 03/11/1 | 0 | | | | | | | | | | |
| LCS Analyzed: 03/15/2010 (G0C110 | 000198C) | | | | Sou | rce: | | | | | |
| Surrogate: 13C-2,3,4,7,8-PeCDF | 0.00132 | | | ug/L | 0.00200 | | 66 | 13-328 | | | |
| Surrogate: 13C-2,3,7,8-TCDD | 0.00145 | | | ug/L | 0.00200 | | 73 | 20-175 | | | |
| Surrogate: 13C-2,3,7,8-TCDF | 0.00137 | | | ug/L | 0.00200 | | 68 | 22-152 | | | |
| Surrogate: 13C-OCDD | 0.00375 | | | ug/L | 0.00400 | | 94 | 13-199 | | | |
| Surrogate: 37Cl4-2,3,7,8-TCDD | 0.000741 | | | ug/L | 0.000800 | | 93 | 31-191 | | | |
| Blank Analyzed: 03/16/2010 (G0C11 | 00098RE1) | | | | Sou | rce: | | | | | |
| 2,3,7,8-TCDF | ND | 0.00001 | 0.0000026 | ug/L | | | | - | | | |
| Surrogate: 13C-2,3,7,8-TCDF | 0.0012 | | | ug/L | 0.00200 | | 58 | 24-169 | | | |
| Surrogate: 37Cl4-2,3,7,8-TCDD | 0.0007 | | | ug/L | 0.000800 | | 87 | 35-197 | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

ASTM 5174-91

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|--------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 83129 Extracted: 03/24/10 | | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 03/29/2010 | (F0C11050800 |)1D) | | | Sou | rce: ITC | 0989-03 | | | | |
| Total Uranium | 28.4 | 0.7 | 0.2 | pCi/L | 27.1 | 0.441 | 103 | 62-150 | 2 | 20 | |
| Matrix Spike Analyzed: 03/29/2010 (F0C | C110508001S) | | | | Sou | rce: ITC | 0989-03 | | | | |
| Total Uranium | 27.9 | 0.7 | 0.2 | pCi/L | 27.1 | 0.441 | 101 | 62-150 | | | |
| Blank Analyzed: 03/29/2010 (F0C240000 |)129B) | | | | Sou | rce: | | | | | |
| Total Uranium | 0.269 | 0.677 | 0.21 | pCi/L | | | | - | | | Jb |
| LCS Analyzed: 03/29/2010 (F0C2400001 | 29C) | | | | Sou | rce: | | | | | |
| Total Uranium | 5.5 | 0.68 | 0.21 | pCi/L | 5.42 | | 102 | 90-120 | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|----------------|--------------------|------|-------|----------------|------------------|----------|----------------|-----|--------------|--------------------|
| Batch: 76134 Extracted: 03/17/10 | | | | | | | | | | | |
| Matrix Spike Analyzed: 03/20/2010 (F00 | C120530001S) | | | | Sou | irce: F0C | 12053000 | 1 | | | |
| Gross Alpha | 44 | 3 | 1.5 | pCi/L | 49.4 | 0.04 | 89 | 35-150 | | | |
| Gross Beta | 66.4 | 4 | 1.1 | pCi/L | 67.9 | 0.83 | 96 | 54-150 | | | |
| Duplicate Analyzed: 03/20/2010 (F0C12 | 0530001X) | | | | Sou | irce: F0C | 12053000 | 1 | | | |
| Gross Alpha | 1.2 | 3 | 1.5 | pCi/L | | 0.04 | | - | | | U |
| Gross Beta | -0.13 | 4 | 1 | pCi/L | | 0.83 | | - | | | U |
| Blank Analyzed: 03/21/2010 (F0C17000 | 0134B) | | | | Sou | irce: | | | | | |
| Gross Alpha | 0.16 | 2 | 0.71 | pCi/L | | | | - | | | U |
| Gross Beta | 0.66 | 4 | 1.1 | pCi/L | | | | - | | | U |
| LCS Analyzed: 03/21/2010 (F0C170000) | 1 34C) | | | | Sou | irce: | | | | | |
| Gross Alpha | 56.6 | 3 | 1 | pCi/L | 49.4 | | 114 | 62-134 | | | |
| Gross Beta | 71.7 | 4 | 1 | pCi/L | 67.9 | | 106 | 58-133 | | | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA 901.1 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|-----------|--------------------|-----|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 74318 Extracted: 03/15/10 | | | | | | | | | | | |
| Duplicate Analyzed: 03/22/2010 (F0C11 | 0508001X) | | | | Sou | rce: ITC(|)989-03 | | | | |
| Cesium 137 | ND | 20 | 20 | pCi/L | | -2.2 | | - | | | U |
| Potassium 40 | 5 | NA | 220 | pCi/L | | -80 | | - | | | U |
| Blank Analyzed: 03/22/2010 (F0C15000 | 0318B) | | | | Sou | rce: | | | | | |
| Cesium 137 | 3.6 | 20 | 14 | pCi/L | | | | - | | | U |
| Potassium 40 | -90 | NA | 200 | pCi/L | | | | - | | | U |
| LCS Analyzed: 03/22/2010 (F0C150000 | 318C) | | | | Sou | rce: | | | | | |
| Americium 241 | 140000 | NA | 500 | pCi/L | 141000 | | 99 | 87-110 | | | |
| Cobalt 60 | 86800 | NA | 200 | pCi/L | 87900 | | 99 | 89-110 | | | |
| Cesium 137 | 53200 | 20 | 200 | pCi/L | 53100 | | 100 | 90-110 | | | |



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Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA 903.0 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|-------------------|--------------------|-------|-------|--------------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 71128 Extracted: 03/12/10 | | | | | | | | | | | |
| Blank Analyzed: 04/05/2010 (F0C12000) Radium (226) | 0128B) 0.059 | 1 | 0.053 | pCi/L | Sou | rce: | | _ | | | Jb |
| LCS Analyzed: 04/05/2010 (F0C120000) | | 1 | 0.000 | pent | Sou | rce: | | | | | 00 |
| Radium (226) | 10.1 | 1 | 0.06 | pCi/L | 11.3 | | 90 | 68-136 | | | |
| LCS Dup Analyzed: 04/05/2010 (F0C120 Radium (226) | 0000128L) 10.2 | 1 | 0.06 | pCi/L | Sou 11.3 | rce: | 91 | 68-136 | 0.9 | 40 | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

METHOD BLANK/QC DATA

EPA 904 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--------------------------------------|------------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 71129 Extracted: 03/12/10 | | | | | | | | | | | |
| Blank Analyzed: 03/29/2010 (F0C12000 | 0129B) | | | | Sou | rce: | | | | | |
| Radium 228 | -0.06 | 1 | 0.41 | pCi/L | | | | - | | | U |
| LCS Analyzed: 03/29/2010 (F0C120000 | 129C) | | | | Sou | rce: | | | | | |
| Radium 228 | 6.25 | 1 | 0.41 | pCi/L | 6.35 | | 98 | 60-142 | | | |
| LCS Dup Analyzed: 03/29/2010 (F0C12 | 20000129L) | | | | Sou | rce: | | | | | |
| Radium 228 | 6.46 | 1 | 0.41 | pCi/L | 6.35 | | 102 | 60-142 | 3 | 40 | |



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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METHOD BLANK/QC DATA

EPA 905 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--------------------------------------|------------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 71130 Extracted: 03/12/10 | | | | | | | | | | | |
| Blank Analyzed: 03/25/2010 (F0C12000 | 0130B) | | | | Sou | rce: | | | | | |
| Strontium 90 | -0.04 | 3 | 0.54 | pCi/L | | | | - | | | U |
| LCS Analyzed: 03/25/2010 (F0C120000 | 130C) | | | | Sou | rce: | | | | | |
| Strontium 90 | 7.29 | 3 | 0.59 | pCi/L | 6.78 | | 107 | 80-130 | | | |
| LCS Dup Analyzed: 03/25/2010 (F0C12 | 20000130L) | | | | Sou | rce: | | | | | |
| Strontium 90 | 7.72 | 3 | 0.57 | pCi/L | 6.78 | | 114 | 80-130 | 6 | 40 | |



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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

Report Number: 11C0989

METHOD BLANK/QC DATA

EPA 906.0 MOD

| Analyte Batch: 77060 Extracted: 03/18/10 | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------------------------|--------------------|-----|-------|--------------------|-------------------|-----------------------|--------------------|-----|--------------|--------------------|
| Duplicate Analyzed: 03/23/2010 (F0C09 | 0509001X) -26 | 500 | 150 | pCi/L | Sou | rce: F0C09 34 | 9050900 | 1 | | | U |
| Matrix Spike Analyzed: 03/24/2010 (F0 Tritium | C 090512001S) 4170 | 500 | 150 | pCi/L | Sou 4510 | rce: F0C09 -17 | 9 051200 93 | 1 62-147 | | | |
| Blank Analyzed: 03/23/2010 (F0C18000 Tritium | 0060B) 83 | 500 | 150 | pCi/L | Sou | rce: | | - | | | U |
| LCS Analyzed: 03/23/2010 (F0C180000 Tritium | 060C) 4450 | 500 | 150 | pCi/L | Sou 4510 | rce: | 99 | 85-112 | | | |

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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.

| | | | | | | Compliance |
|------------|----------|--|-------|--------|-----|------------|
| LabNumber | Analysis | Analyte | Units | Result | MRL | Limit |
| ITC0989-01 | 1664-HEM | Hexane Extractable Material (Oil & Greas | mg/l | 0.096 | 4.8 | 15 |

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.

| | | | | | | Compliance |
|-----------|----------|---------|-------|--------|-----|------------|
| LabNumber | Analysis | Analyte | Units | Result | MRL | Limit |
| | | | | | | |

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.

| <u>LabNumber</u> | Analysis | Analyte | Units | Result | MRL | Compliance Limit |
|------------------|-----------------------------|------------------------|-------|--------|-------|---------------------|
| ITC0989-03 | Antimony-200.8 | Antimony | ug/l | 0.45 | 2.0 | 6 |
| ITC0989-03 | Boron-200.7 | Boron | mg/l | 0.055 | 0.050 | 1 |
| ITC0989-03 | Cadmium-200.8 | Cadmium | ug/l | 0.053 | 1.0 | 4 |
| ITC0989-03 | Chloride - 300.0 | Chloride | mg/l | 7.31 | 0.50 | 150 |
| ITC0989-03 | Copper-200.8 | Copper | ug/l | 1.79 | 2.0 | 14 |
| ITC0989-03 | Fluoride SM4500F,C | Fluoride | mg/l | 0.14 | 0.10 | 1.6 |
| ITC0989-03 | Lead-200.8 | Lead | ug/l | 0.49 | 1.0 | 5.2 |
| ITC0989-03 | Nickel-200.7 | Nickel | ug/l | 1.72 | 10 | 100 |
| ITC0989-03 | Nitrogen, NO3+NO2 -N EPA 30 | 0.0 Nitrate/Nitrite-N | mg/l | 2.74 | 0.26 | 10 |
| ITC0989-03 | Perchlorate 314.0 - Default | Perchlorate | ug/l | 0 | 4.0 | 6 |
| ITC0989-03 | Sulfate-300.0 | Sulfate | mg/l | 20 | 0.50 | 250 |
| ITC0989-03 | TDS - SM2540C | Total Dissolved Solids | mg/l | 243 | 10 | 850 |
| ITC0989-03 | Thallium-200.8 | Thallium | ug/l | 0.096 | 1.0 | 2 |

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 | Limit |
|---|---|--------------------------|---------|-----|-------|
| TestAmerica Irvine | | | | | |
| Debby Wilson For Heather Clark Project Manager | | | | | |
| | The results pertain only to the samples tested in the laboratory. This re | eport shall not be repro | oduced, | | |

Compliance

<u>TestAmerica</u>

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: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

DATA QUALIFIERS AND DEFINITIONS

- В Analyte was detected in the associated Method Blank. Ba Method blank contamination. The associated method blank contains the target analyte at a reportable level. Н Sample analysis performed past method-specified holding time. J Estimated result. Result is less than the reporting limit. .Jb Result is greater than sample detection limit but less than stated reporting limit. L2 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below acceptance limits. L6 Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration. M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS). MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS). MNR1 There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate. Q Estimated maximum possible concentration (EMPC). R-2 The RPD exceeded the acceptance limit. U Result is less than the sample detection limit.
- Z1 Surrogate recovery was above acceptance limits.
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

Surrogate was not added to sample due to sample preparation modification.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For TICs:

A-01

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library.

For 1,2-Diphenylhydrazine:

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.



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Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

Certification Summary

TestAmerica Irvine

| Method | Matrix | Nelac | California |
|----------------|--------|-------|------------|
| EPA 1664A | Water | Х | Х |
| EPA 200.7-Diss | Water | Х | Х |
| EPA 200.7 | Water | Х | Х |
| EPA 200.8-Diss | Water | Х | Х |
| EPA 200.8 | Water | Х | Х |
| EPA 218.6 | Water | Х | Х |
| EPA 245.1-Diss | Water | Х | Х |
| EPA 245.1 | Water | Х | Х |
| EPA 300.0 | Water | Х | Х |
| EPA 314.0 | Water | Х | Х |
| EPA 525.2 | Water | | |
| EPA 608 | Water | Х | Х |
| EPA 624 | Water | Х | Х |
| EPA 625 | Water | Х | Х |
| SM 2540D | Water | Х | Х |
| SM 4500-F-C | Water | Х | Х |
| SM2340B-Diss | Water | | |
| SM2340B | Water | Х | Х |
| SM2540C | Water | Х | |
| SM4500CN-E | Water | Х | Х |

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

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

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

-

Project ID: Annual Outfall 006

Report Number: ITC0989

Sampled: 03/08/10 Received: 03/09/10

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

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045 Method Performed: ASTM 5174-91

Samples: ITC0989-03

- Method Performed: EPA 900.0 MOD Samples: ITC0989-03
- Method Performed: EPA 901.1 MOD Samples: ITC0989-03
- Method Performed: EPA 903.0 MOD Samples: ITC0989-03
- Method Performed: EPA 904 MOD Samples: ITC0989-03
- Method Performed: EPA 905 MOD Samples: ITC0989-03
- Method Performed: EPA 906.0 MOD Samples: ITC0989-03

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B Samples: ITC0989-03

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager

CHAIN OF CUSTODY FORM

Page 1 of 2

| | | | | | | | | | | | | | | | | | | 11 | rc | 09. | 89 | | |
|--|---------------------------------|-------------|-------|--|----------------------|------------------------|-------------------------|-------------------|-------------------|-----------|-----------------|----------------------|----------------------|---------|-------------|---------------------------------------|---|------------------|-----------------|---------------|-----------|----------|---|
| Client Name/ | | | | Proje | | | | | | | | | | | | A | VALYS | IS REC | UIRE | D | | | |
| MWH-Arca 518 Michillin Arcadia, CA Test America Project Mana | da Ave, S 91007 a Contact | : Joseph D | oak | Annu GRAI Storm | nwater at e Numbe | II 006 FSDF-2 r: | | Grease (1664-HEM) | enes + PP | +A+A+2CVE | | | | | | | | | | | | | Field readings: (Log in and include in report Temp and pH) Temp $F = 51.1$ pH = 7.6 |
| Sampler: S | Daws | ••• | | Fax N | 568-669 lumber: | | | ease (| VOCs 624, Xylenes | 624 +A+ | Cr (VI) (218.6) | Acute Toxicity | | | | | | | | | | | Time of readings = / 500 |
| Sample | Sample | Container | # of | <u>` </u> | 568-651 mpling | 5 | | ୍ଦ୍ର ଜ | Cs 6 | Cs 6 |) (j) | teT | | | | | | | | | | | Low Flow |
| Description | Matrix | Туре | Cont. | | te/Time | Preservative | Bottle # | ö | Š | vocs | 5 | Acu | | | | | | | | | | | Comments |
| Outfall 006 | w | 1L Amber | 2 | 3/8/ | 0-1108 | нсі | 1A, 1B | x | | | | | | | | | | | | | | | |
| Outfall 006 | w | VOAs | 3 | 1 | | HCI | 2A, 2B, 2C [*] | | x | | | | | | | | | | | | | | |
| Outfall 006 | w | VOAs | 3 | | | None | 3A, 3B, 3C 🕯 | | | X | ļ | | | | | | | | | | | | |
| Trip Blanks | w | VOAs | 3 | | | HCI | 4A, 4B, 4C | | х | | | | | | | | | | | | | | |
| Trip Blanks | w | VOAs | 3 | | | None | 5A, 5B, 5C | | | x | | | | | | | | | | | | | |
| Outfall 006 | w | 500 mL Poly | 1 | | | None | 6 | | | | × | | | | | | | | | | | | |
| Outfall 006 | w | 1 Gal Cube | 1 | | 7 | None | 7 | | | | | × | | | | | | | | | | | 20',10 3/9/10 NP |
| · · · · · · · · · · · · · · · · · · · | | | | | | | | <u> </u> | | | - | | | | | | | | | | | + | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | L | Ļ | | | <u> </u> | | | | | | <u> </u> | | | | | |
| elinguished By | | | | Time: | Grab Po | | Received By | r this | stor | m ev | | comp ite/Time | | sam | ples | | ollow a | | | adde | d to this | s work o | order. |
| Spar : Relinquished By | | 31 | '8/ | 10 - | 090 | | Lat | 6 | `^ | - | <u>م/ہ</u> | ha | - 1 | 900 | د | 24 Hou | r: | - | 72 | Hour: Day: | | | 10 Day: Normal: |
| Ent | h- | | | | | | Received By | H | / // N | W | | te fime | :: '. 4 | , 03 | 3-9 | Sarmale Intact: | Integrity: | (Check) | On | Ice: | X_ | | |
| elinquished By | u. | nul | baler | Time: 3 - 4 | ĵ-10 | 17:2 | Received By | Ч `n]: | 3 _A | Ne | Da Z | te/Time 3/9 | ; // c | 17 | 2.20 | Data R No Lev | equiremer el IV: | its: (Chec | k) Ali | Level IV: | | | NPDES Level IV: X |
| Relinquined By | h- | | | | | | | ff in 1: | <u>]</u> 3 A | | Da L | 11 te/Time 3/9 | /: 4/ :: :// = | , 17 | 3 9 2:20 | Samule Intact: Data R No Lev | r: Integrity: equiremer el IV: | (Check) - | On k) All | Ice: | × | | NPDES Level IV: |

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Test America Version 6/29/09

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CHAIN OF CUSTODY FORM

Page 2 of 2

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water the the

| Client Name/ | Address | • | | Projec | | | | <u> </u> | | | | | | | | | | | | | | 1 |
|-----------------------|------------------|-------------------|---------------|----------|-------------------|------------------|-----------------|--|---------------------|---|----------|--|---|-------------|------------------|---------|--|-----------|--------------------|----------|--|------|
| MWH-Arca | | • | | | g-SSFL | NPDES | | | <u> </u> | | | <u>1.</u> | | <u> </u> | T T | INL Y S | SIS REQI | JIKED | ····· | <u> </u> | | ł |
| 618 Michillind | | Suite 200 | | | al Outfa | | | Pb, | | | | + 5 | - <u>n</u> % | | | | Ĭ. | | | | | |
| Arcadia, CA | | | | | POSITE | | | Lesi Lesi | | fe | | IZING | 0.0) , To)3.1 | | | | , Pb as | | | | | |
| | . | | | Storm | water at | FSDF-2 | | als: Sb, Cd, Cu, Pb, + PP, Hardness as | | llora | | Ö | 5.0) 5.0) (908 (908 | | | | ess | | | | | |
| Test America | Contact | : Joseph Do | bak | | | | | Н. Н. | | erch | | ifos, |) (90) (90) (90) | | | | ug d | | | | | |
| | | | | | | | | isi + | <u>(</u> 2 | ď | | Dyn' | 555 -90 (903 1.1 | | | | Sb, Ha | | | | | |
| | | | | | | | | Metals: , Ni, + P | ene | z | | IO LLO | 9 L 8 S 8 | | | | PP PP | | | | Comments | |
| Project Mana | ger: Bro | onwyn Kelly | | Phone | e Numbe | er: | | Recoverable Mett , V, TI, Fe, AI, Ni,) ₃ | congeners) | ğ | | 0 | (0.0 m (0.0) | 4 4 + | | | Het: | | | | | |
| | | | | (626) | 568-669 | 1 | | Fe, | allo | 3+1 | | ğ | (900) (901) (901) (901) | + | <u>₹</u> | | AI, I | | | | | |
| Sampler: 5 | Dew | son | | 1 | lumber: | | | ğ F | (and | 2 | S | d's | Pha H-3) Pha 37 37 | (625 | Į∄ | | Fe, | | | | | |
| Grand | | | | | 568-651 | 5 | | မ်ိဳ မို | | 0 ⁴ | 13 | cide | s Al bine SS-1. | S | | lide | ic ⊢ ° | | | | | |
| Sample Description | Sample Matrix | Container Type | # of Cont. | Dat | mpling ie/Time | Preservative | Bottle # | Total R Hg, B, CaCO ₃ | TCDD (| Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N, F, Perchlorate | TDS, TSS | Pesticides/PCBs , Chlorpyrifos, Diazinon PP | 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) | SVOCs (625) | Chronio Toxicity | Cyanide | Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg. B, V, Tl, Fe, Al, Ni + PP, Hardness as CaCO ₃ | | | | Ion Flow | |
| Outfall 006 | w | 1L Poly | 1 | 3/2/10 | 0 - 1108 | HNO ₃ | 7A ⁴ | X | | | | | | | Π | | | | | | | 1 |
| Outfall 006 Dup | w | 1L Poly | 1 | | 1 | HNO ₃ | 7B | х | | | | 1 | | | \square | | | | | - | | 1 |
| Outfall 006 | w | 1L Amber | 2 | | | None | 8A, 8B | 1 | х | | | | | | ΗT | | | | | | | 1 |
| Outfall 006 | w | 500 mL Poly | 2 | | | None | 9A, 9B | 1 | | x | | | | | \square | | | | | | | 1 |
| Outfall 006 | w | 500 mL Poly | 2 | | | None | 10A, 10B | | | | x | | | | | | | | | | | 1 |
| Outfall 006 | w | 1L Amber | 2 | | | None | 11A, 11B | 1 | | | | x | | | Π | T | | | | | | 1 |
| Outfall 006 | w | 2.5 Gal Cube | 1. | | | None | 12A 🦿 | ' | | | | | | | Π | | | | | | Unfiltered and unpreserved | 1 |
| Outrail 006 | vv | 500 mL Amber | 1. | | | None | 12B | | | | | | × | | | | | | | | analysis | |
| Outfall 006 | w | 1L Amber | 2 | | | None | 13A, 13B | | | | | | | x | | | | | | | | |
| -Outfall 006- | | -1-Gal-Poly- | - 4- | -+ | | None | | | | | | | | | k | | | | | | | - 20 |
| Outfall 006 | w | 500 mL Poly | 1 | | | NaOH | 15 * | | | | | | | | | x | | | | | ······································ | 1 |
| Outfall 006 | w | 1L Poly | 1. | 4 | 7 | None | 16 | | | | | | | | | | x | | | | Filter w/in 24hrs of receipt at | 1 |
| | | | | | <u> </u> | | | | | | | | | | | | | | <u> </u> | | lab | 1 |
| | † | | | <u> </u> | | | | | | | | | | | | | | | | | | 1 |
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| | | | | | | | | | | | | | · · · · · · · · · | | | | | | | | | |
| | | | | | | | | | | | | | s for Outfall 00 | | | | | | | • | · · · · · · · · · · · · · · · · · · · |] |
| Delinguished Di | | | | | These | | | | wor | (ord | | | Page 1 of 2 fo | or Out | fall (| | | | ent. | | | ļ |
| Relinquished By | | | ate/Tir | | | | Received B | , | | | Date/ | | | | | 1 | round time: | | 70 Maur | | 10 Day: _ | |
| SDWS | on | 3/2 | 9/1 | 0 - | 0900 | 5 | 5 | JUL | | | | 318 | 110-09 | 00 | | 24 Ho | ur: | | 72 Hour: 5 Day: | | 10 Day: Normal: | |
| Relinquished By | | _ | ate/Tir | | ···· i | | Received # | | $\overline{\gamma}$ | | Date | fine: | | | | - | | , | | - | | |
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| Z | han | , 3/8 | 3/10 |) — | []: | 40 | 140 | W(/) | // | Ŵ | | | 3-8-10 | 1129 | W | Intact: | | • | On Ice: X | | | |
| Relinquisted By | | } | ate/Tir | me: | | | Received B | , Y | | | Date/ | Time: | -7-0- | ~ | <u></u> | 1 | | | | | | |
| 1/ 11-44 | HN | mill | 77 | | | 1 . | l | , n | 1 | / | · . | | / | - | _ | Data F | Requirement | : (Check) | | | | |
| VY WM | []/ | ung / | 5- | 9-10 | 2 | F.20 | \checkmark | n B. | Ðu | A | g | 79 | 10 17 | 7:2 | 0 | No Le | vel IV: | | All Level IV: | | | |
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M391 1.6

LABORATORY REPORT



March 15, 2010 Date: "dedicated to providing quality aquatic toxicity testing" **Client:** Test America – Irvine 4350 Transport Street, Unit 107 Ventura, CA 93003 17461 Derian Ave., Suite 100 (805) 650-0546 FAX (805) 650-0756 Irvine, CA 92614 Attn: Heather Clark CA DOHS ELAP Cert. No.: 1775 A-10030905-001 Laboratory No.: Sample ID.: ITC0989 (Outfall 006) The sample was received by ATL in a chilled state, within the recommended hold Sample Control: time and with the chain of custody record attached. 03/08/10 Date Sampled:

| 03/09/10 |
|----------------------|
| 4.1°C |
| 0.0 mg/l |
| 03/09/10 to 03/13/10 |
| |

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

Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).

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

Result Summary:

Sample ID. ITC0989 $\frac{\text{Results}}{100\%}$ Survival (TUa = 0.0)

Quality Control:

Reviewed and approved by:

Joseph A. I

Laboratory Director



Lab No.: A-10030905-001 Client/ID: TestAmerica Outfall 006 パモニ しゅ 89

Start Date: 03/09/2010

TEST SUMMARY

TEST DATA

Species: Pimephales promelas. Age: <u>/</u>(1-14) days. Regulations: NPDES. Test solution volume: 250 ml. Feeding: prior to renewal at 48 hrs. Number of replicates: 2. Dilution water: Moderately hard reconstituted water. Photoperiod: 16/8 hrs light/dark. Source: In-laboratory Culture. Test type: Static-Renewal. Test Protocol: EPA-821-R-02-012. Endpoints: Percent Survival at 96 hrs. Test chamber: 600 ml beakers. Temperature: 20 +/- 1°C. Number of fish per chamber: 10. QA/QC Batch No.: RT-100302.

| | | °C | DÖ | pН | # D A | ead B | Analyst & Time of Readings |
|--|--|---------------------------|--|------------|--|-----------------------------|-------------------------------|
| | Control | 19.4 | 9.0 | 7.7 | 0 | 0 | An |
| INITIAL | 100% | 19.8 | 11.2 | 7.2 | ρ | 0 | 150 |
| | Control | 19.2 | 7.7 | 7.5 | 0 | 0 | R |
| 24 Hr | 100% | 19.1 | 7.9 | 2.9 | 0_ | D | 1400 |
| | Control | 19.0 | 7.4 | 7.5 | 0 | 0 | pr |
| 48 Hr | 100% | 19.1 | 7.2 | 7.9 | 0 | 0 | 1400 |
| | Control | 19.6 | 9.2 | 7.8 | 0 | 0 | 1400 |
| Renewal | 100% | 20.2 | 11.3 | 7.3 | 0 | 0 | |
| | Control | 19.2 | 7.3 | 7.4 | 0 | D | 1500 |
| 72 Hr | 100% | 19.2 | 6.7 | 7.7 | 0 | 0 | 1500 |
| | Control | 20.3 | 6.8 | 7.3 | 0 | 0 | Rn 1400 |
| 96 Hr | 100% | 20.3 | 7.4 | 7.8 | 0 | 0 | 1400 |
| Comments: Sample as rec DO: //,2 | eived: Chlorine: 0.0 Lmg/l; Alkalinity: | mg/l; pH:_ {/_mg/l; Ha | <u>7.2</u> ; Con ardness: <u>/5</u> | ductivity: | <u>396</u> un 1 ₃ -N: <u>0</u> | nho; Ten <u>3_</u> mg/1. | np: 4.1ºC; |

RESULTS

| Percent Survival In: Control: // 100% Sample: // % | | |
|--|--|--|
|--|--|--|

Test America version 6/29/09

CHAIN OF CUSTODY FORM

Page 1 of 2

| Tests Project Project Analysis REGURED 00 00 Sales 200 GAS Anal Outsing Services at FSD-2 Analysis REGURED 01 Sommater at FSD-2 Anal Outsing Anal Outsing Anal Outsing Anal Outsing 01 Sommater at FSD-2 Borowyn fely Promyn fely Anal Outsing Anal Outsing 01 Sommater at FSD-2 Borowyn fely Promyn fely Promyn fely Promyn fely 02 Sommater at FSD-2 Borowyn fely Promyn fely Promyn fely Promyn fely 03 Mark Sommater at FSD-2 X Nonnes Promyn fely Promyn fely Promyn fely 03 Mark Sommater at FSD-2 X Nonnes X X X X X X 03 Mark Sommater at FSD-2 X X X X X X X X 03 Mark Sommater at FSD-2 X X X X X X X X 04 Code SA X X X X X X X X 03 Mark Sommater at FSD-2 X X X X X X X X | Γ | | | ~ | | | | | | | | | | | | | | | | | | | | | | |] |
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| Client Name/Add MWH-Arcadia d 618 Michillinda A Arcadia, CA 910 Test America Co Sampler: S Sampler: S Outfall 006 Outfall 006 | Alama A | ent Name/A | WH-Arcad 3 Michillinda adia, CA 9 | st America (| | | oject Manag | mpler: 57 | | Sample | Outfall 006 | Outfall 006 | Outfall 006 | Trip Blanks | Trip Blanks | Outfall 006 | Outfall 006 | | | | | Relinquished By | Spurs | Relinquished By | Mart | induished By | |



REFERENCE TOXICANT DATA

FATHEAD MINNOW ACUTE Method 2000.0 Reference Toxicant - SDS



QA/QC Batch No.: RT-100302

TEST SUMMARY

Species: Pimephales promelas. Age: //4 days old. Regulations: NPDES. Test chamber volume: 250 ml. Feeding: Prior to renewal at 48 hrs. Temperature: 20 +/- 1°C. Number of replicates: 2. Dilution water: MHSF. Source: In-lab culture. Test type: Static-Renewal. Test Protocol: EPA-821-R-02-012. Endpoints: LC50 at 96 hrs. Test chamber: 600 ml beakers. Aeration: None. Number of organisms per chamber: 10. Photoperiod: 16/8 hrs light/dark.

TEST DATA

| | | INITIAI | | | | 24 Hr | | | | | 48 Hr | | |
|---|--|------------------|--------------------|--------------|----------------------|------------------|--------------|----------------------|--------------------------|------------------------------|----------------|----------|-----|
| Date/Time: | 3-2- | 10 | 1400 | 3 | -3-10 | | / | Sau | 3-4 | -10 | | 13 | a |
| Analyst: | | R | { | | / | R | | | | / | en | | |
| | °C | DO | pН | °C | DO | pН | # D | Dead | °C | DO | pН | # D | ead |
| | Ŭ | 50 | pii | Ŭ | 20 | P | A | В | | | P | A | В |
| Control | 20.2 | 9.0 | 7.7 | 19.2 | 8.1 | 7.7 | 0 | 0 | 19.0 | 8.2 | 2.7 | 0 | 0 |
| 1.0 mg/l | 20.2 | 9.0 | 7.7 | 19.2 | 7.9 | 7.6 | 0 | 0 | 19.1 | 8.1 | 7.7 | 0 | 0 |
| 2.0 mg/l | 20.2 | 9.1 | 7.7 | 19.3 | 7.8 | 7.6 | 0 | U | 19.1 | 8.2 | 7.6 | 0 | 0 |
| 4.0 mg/l | 20.2 | 9.1 | 7.7 | 19.4 | 7.3 | 7.5 | 2 | 1 | 19.2 | 7.9 | 7.6 | 0 | 0 |
| 8.0 mg/l | 8.0 mg/1 20.2 9.1 7.7 19.5 5.2 7.3 10 10 | | | | | | | | | | | | - |
| RENEWAL 72 Hr 96 Hr | | | | | | | | | | | | | |
| Date/Time: 3-4-10 1300 3-5-10 1300 3-6-10 1400 | | | | | | | | | | | | | |
| Analyst: | | An | | | | <u>~</u> | | | | | en | | |
| | °C | DO | pН | °C | DO | pН | # D | Dead | °C | DO | pН | # D | ead |
| | | | P.1 | | | | A | В | | | | A | В |
| Control | 19.7 | 9.1 | 7.8 | 19.1 | 7.2 | 7.3 | U | 0 | 19.8 | 6.8 | 2.4 | 0 | 0 |
| 1.0 mg/l | 19.7 | 9.1 | 7.8 | 19.1 | 7.3 | 7.3 | 0 | 0 | 19.8 | 6.8 | 7.4 | 0 | D |
| 2.0 mg/l | 19.7 | 9.2 | 7.8 | 19.0 | 7.6 | 7.4 | 0 | 0 | 19.9 | 6.7 | 2.4 | 0 | 0 |
| 4.0 mg/1 19.7 9.2 7.8 19.0 7.1 7.3 0 0 20.0 7.0 7.5 0 0 | | | | | | | | | | | | | |
| 8.0 mg/l | | - | - | | - | - | - | - | | - | - | \frown | |
| Comments: | Contro SDS: | ol: Alka Alka | linity: linity: | 72 m 72 m | g/l; Har g/l; Har | dness: dness: | 97 r 98 r | ng/l; Co ng/l; Co | onductivit onductivit | y: <u>35</u> y: <u>34</u> | 2 umh 5 umh | 0. 0. | |
| Concent | ration-re | ¥e | s) respo | nse curv | e norma | | | | analysis): | : | | | |

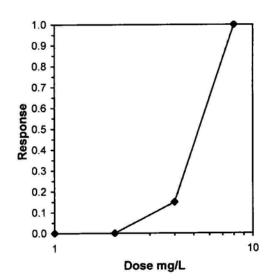
| | | | | Acute Fish Test-96 | Hr Survival | |
|--------------|----------|--------|-----------|----------------------------|----------------|----------------------------|
| Start Date: | 3/2/2010 | 14:00 | Test ID: | RT100302 | Sample ID: | REF-Ref Toxicant |
| End Date: | 3/6/2010 | 14:00 | Lab ID: | CAATL-Aquatic Testing Labs | s Sample Type: | SDS-Sodium dodecyl sulfate |
| Sample Date: | 3/2/2010 | | Protocol: | ACUTE-EPA-821-R-02-012 | Test Species: | PP-Pimephales promelas |
| Comments: | | | | | | |
| Conc-mg/L | 1 | 2 | | | | |
| D-Control | 1.0000 | 1.0000 | | | | |
| 1 | 1.0000 | 1.0000 | | | | |
| 2 | 1.0000 | 1.0000 | | | | |
| 4 | 0.8000 | 0.9000 | | | | -1 |
| 8 | 0.0000 | 0.0000 | | | | |

| | | | Number | Total | | | | | |
|-----------|--------|--------|--------|--------|--------|-------|---|------|--------|
| Conc-mg/L | Mean | N-Mean | Mean | Min | Max | CV% | N | Resp | Number |
| D-Control | 1.0000 | 1.0000 | 1.4120 | 1.4120 | 1.4120 | 0.000 | 2 | 0 | 20 |
| 1 | 1.0000 | 1.0000 | 1.4120 | 1.4120 | 1.4120 | 0.000 | 2 | 0 | 20 |
| 2 | 1.0000 | 1.0000 | 1.4120 | 1.4120 | 1.4120 | 0.000 | 2 | 0 | 20 |
| 4 | 0.8500 | 0.8500 | 1.1781 | 1.1071 | 1.2490 | 8.517 | 2 | 3 | 20 |
| 8 | 0.0000 | 0.0000 | 0.1588 | 0.1588 | 0.1588 | 0.000 | 2 | 20 | 20 |

Statistic

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

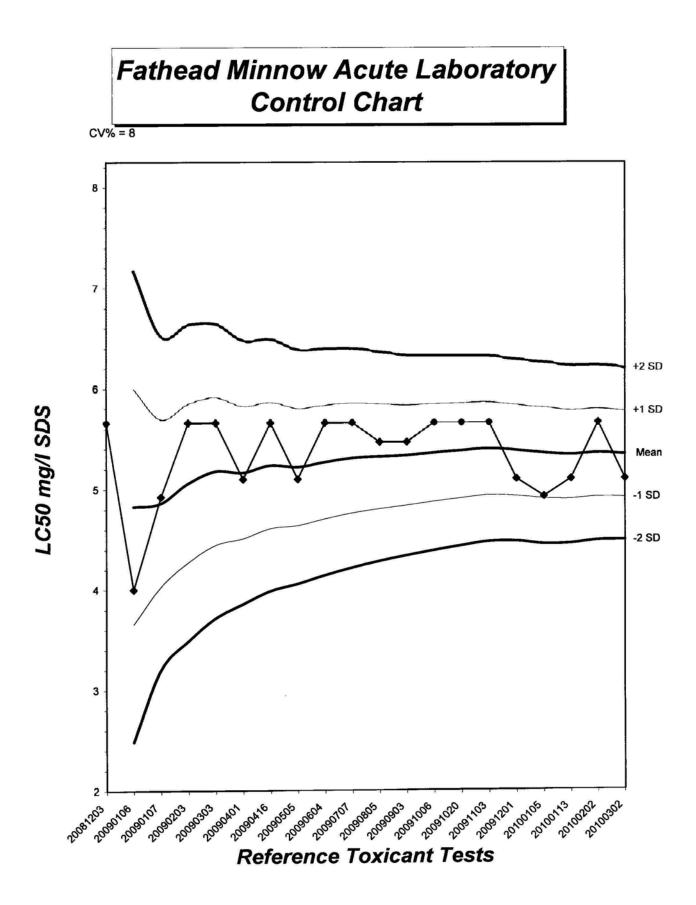
| Equality of Fail | | | | Trimmed Spearman-Karber |
|------------------|--------|--------|--------|-------------------------|
| Trim Level | EC50 | 95% | CL | - |
| 0.0% | 5.0982 | 4.5640 | 5.6950 | |
| 5.0% | 5.2099 | 4.5766 | 5.9309 | |
| 10.0% | 5.2897 | 4.4710 | 6.2583 | 1.0 — |
| 20.0% | 5.3212 | 4.9289 | 5.7449 | 0.9 |
| Auto-0.0% | 5.0982 | 4.5640 | 5.6950 | 0.9 |



Critical

Skew

Kurt



TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL (Pimephales promelas)

| QA/QC BATCH NO .: RT-100302 |
|---|
| SOURCE: In-Lab Culture |
| date hatched: $2 - 16 - 10$ |
| APPROXIMATE QUANTITY: $\mathcal{A}\mathcal{W}$ |
| GENERAL APPEARANCE: |
| # MORTALITIES 48 HOURS PRIOR TO TO USE IN TESTING: |
| DATE USED IN LAB: <u>31210</u> |
| AVERAGE FISH WEIGHT: <u>0-006</u> gm |

LOADING LIMITS: 0.65 gm/liter @ 20°C, 0.40 gm/liter @ 25°C

Approximately 1000 fish per 10 liters limit if held overnight for acclimation without filtration @ 20°C for fish with a mean weight of 0.006 gm.

Approximately 650 fish per 10 liters limit if held overnight for acclimation without filtration @ 25°C for fish with a mean weight of 0.006 gm.

200 ml test solution volume = 0.013 gm mean fish weight limit @ 20° C; 0.008 @ 25° C 250 ml test solution volume = 0.016 gm mean fish weight limit @ 20° C; 0.010 @ 25° C

ACCLIMATION WATER QUALITY:

| Temp.: <u>ZG. Z</u> °C | pH: <u>7-</u>) Am | monia: <u>∠0-/</u> mg/l NH ₃ -N |
|------------------------|----------------------|--|
| DO: <u>9.0</u> mg/l | Alkalinity: <u> </u> | Hardness: <u>97</u> mg/l |

| READINGS RECORDED BY: | m | DATE: | 3-3-10 |
|-----------------------|---|-------|--------|
| | V | | |

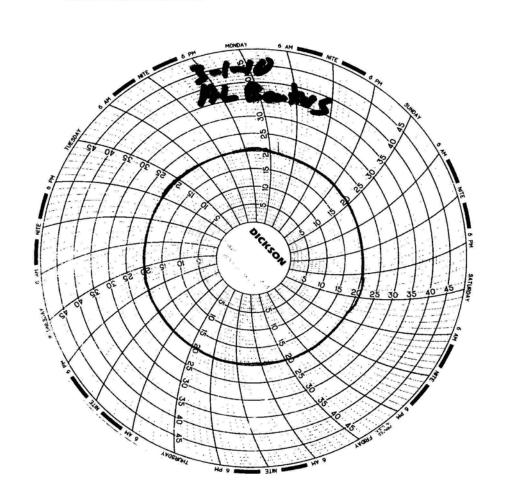


Test Temperature Chart

Test No: **RT-100302**

Date Tested: 03/02/10 to 03/06/10

Acceptable Range: 20+/- 1°C





TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITC0989

MWH-Pasadena Boeing

Lot #: F0C110508

Debbie Wilson

TestAmerica Irvine 17461 Derian Ave Suite 100 Irvine, CA 92614-5817

TESTAMERICA LABORATORIES, INC.

Lynn Fussner

Project Manager

April 5, 2010

Case Narrative LOT NUMBER: F0C110508

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 11, 2010. This sample is associated with your MWH-Pasadena Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements, except as noted below.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. **TestAmerica St. Louis' Florida certification number is E87689.** The case narrative is an integral part of this report.

This report shall not be reproduced, except in full, without the written approval of the laboratory.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Radium-226 by GFPC (EPA 903.0 MOD)

There was insufficient sample volume to perform MS/MSD analysis. A LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F0C110508 (1): ITC0989-03

Radium-228 by GFPC (EPA 904 MOD)

There was insufficient sample volume to perform MS/MSD analysis. A LCS/LCSD was performed to demonstrate accuracy and replicate precision.

Affected Samples:

F0C110508 (1): ITC0989-03

METHODS SUMMARY

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F0C110508

| PARAMETER | ANALYTICAL METHOD | PREPARATION METHOD |
|--|----------------------|-----------------------|
| Gamma Spectroscopy - Cesium-137 & Hits | EPA 901.1 MOD | |
| Gross Alpha/Beta EPA 900 | EPA 900.0 MOD | EPA 900.0 |
| H-3 by Distillation & LSC | EPA 906.0 MOD | |
| Radium-226 by GFPC | EPA 903.0 MOD | |
| Radium-228 by GFPC | EPA 904 MOD | |
| Strontium 90 by GFPC | EPA 905 MOD | |
| Total Uranium By Laser Ph osphorimetry | ASTM 5174-91 | |

References:

ASTM Annual Book Of ASTM Standards.

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

SAMPLE SUMMARY

F0C110508

| WO # SAMPLE# CLIENT SAMPLE ID | SAMPLED SAMP DATE TIME |
|---|---------------------------|
| LWJRQ 001 ITC0989-03 | 03/09/10 11:08 |
| NOTE (S) : | |
| - The analytical results of the samples listed above are presented on the following pages. | |
| - All calculations are performed before rounding to avoid round-off errors in calculated results. | |
| and the defendence of the second se | |

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- Results noted as "ND" were not detected at or above the stated limit.

- This report must not be reproduced, except in full, without the written approval of the laboratory.

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ITC0989-03

Radiochemistry

| Lab Sample ID: Work Order: Matrix: | FOC110508-00: LWJRQ WATER | 1 | | Date Collec Date Receiv | | /10 1108 /10 0930 | |
|--|---------------------------------|------------|------------------------------|----------------------------|-----------|----------------------|------------------|
| Parameter | Result | Qual | Total Uncert. (2 σ+/-) | RL | mdc | Prep Date | Analysis Date |
| Gamma Cs-137 & Hi | ts by EPA 901.1 | L MOD | | pCi/L | Batch # 0 | 074318 | Yld % |
| Cesium 137 | -2.2 | U | 9.0 | 20.0 | 16 | 03/15/10 | 03/22/10 |
| Potassium 40 | -80 | υ | 3300 | | 300 | 03/15/10 | 03/22/10 |
| Gross Alpha/Beta | EPA 900 | | | pCi/L | Batch # 0 | 076134 | Yld % |
| Gross Alpha | 0.7 | U | 1.2 | 3.0 | 2.0 | 03/17/10 | 03/20/10 |
| Gross Beta | 3.6 | J | 1.0 | 4.0 | 1.2 | 03/17/10 | 03/20/10 |
| SR-90 BY GFPC EE | PA-905 MOD | | | pCi/L | Batch # 0 | 071130 | Yld % 63 |
| Strontium 90 | -0.10 | U | 0.39 | 3.00 | 0.68 | 03/12/10 | 03/25/10 |
| TRITIUM (Distill) | by EPA 906.0 h | 10D | | pCi/L | Batch # 0 | 077060 | Yld % |
| Tritium | 73 | U | 92 | 500 | 150 | 03/18/10 | 03/24/10 |
| Total Uranium by | KPA ASTM 5174-9 |) 1 | | pCi/L | Batch # 0 | 083129 | Yld % |
| Total Uranium | 0.441 | J | 0.050 | 0.677 | 0,21 | 03/24/10 | 03/29/10 |
| Radium 226 by EF | PA 903.0 MOD | | | pCi/L | Batch # 0 | 071128 | Yld % 103 |
| Radium (226) | 0.070 | J | 0.041 | 1.00 | 0.050 | 03/12/10 | 04/05/10 |
| Radium 228 by GFF | C EPA 904 MOD | | | pCi/L | Batch # 0 | 071129 | ¥ld % 91 |
| Radium 228 | 0.11 | U | 0.26 | 1.00 | 0.44 | 03/12/10 | 03/29/10 |

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only. Bold results are greater than the MDC.

J Result is greater than sample detection limit but less than stated reporting limit.

U Result is less than the sample detection limit.

F0C110508

5 of 13

METHOD BLANK REPORT

Radiochemistry

| Matrix: | WATER | | | | | | | |
|-----------------|-----------------|---------|------------------------------|---------|---------|-------|--------------|-----------------------------------|
| Parameter | Result | Qual | Total Uncert. (2 σ+/-) | RL | MDC | | Prep Date | Lab Sample ID Analysis Date |
| Total Uranium k | DY KPA ASTM 517 | 4-91 | pCi/L | Batch # | 0083129 | Yld % | I | F0C240000-129B |
| Total Uranium | 0.269 | J | 0.033 | 0.677 | 0.21 | | 03/24/10 | 03/29/10 |
| Radium 226 by | EPA 903.0 MOD | | pCi/L | Batch # | 0071128 | Yld % | 106 H | F0C120000-128B |
| Radium (226) | 0.059 | J | 0.040 | 1.00 | 0.053 | | 03/12/10 | 04/05/10 |
| Radium 228 by G | SFPC EPA 904 MO | D | pCi/L | Batch # | 0071129 | Yld % | 90 I | F0C120000-129B |
| Radium 228 | -0.06 | σ | 0.23 | 1.00 | 0.41 | | 03/12/10 | 03/29/10 |
| SR-90 BY GFPC | EPA-905 MOD | | pCi/L | Batch # | 0071130 | Yld % | 78 H | 70C120000-130B |
| Strontium 90 | -0.04 | σ | 0.31 | 3.00 | 0.54 | | 03/12/10 | 03/25/10 |
| Gamma Cs-137 & | Hits by EPA 90 | 1.1 MOD | pCi/L | Batch # | 0074318 | Yld % | 1 | OC150000-318B |
| Cesium 137 | 3.6 | σ | 7.8 | 20.0 | 14 | | 03/15/10 | 03/22/10 |
| Potassium 40 | -90 | Ū | 3600 | | 200 | | 03/15/10 | 03/22/10 |
| Gross Alpha/Bet | ta EPA 900 | | pCi/L | Batch # | 0076134 | Yld % | I | r0c170000-134B |
| Gross Alpha | 0.16 | U | 0.39 | 2.00 | 0,71 | | 03/17/10 | 03/21/10 |
| Gross Beta | 0.66 | υ | 0.70 | 4.00 | 1.1 | | 03/17/10 | 03/21/10 |
| TRITIUM (Disti) | Ll) by EPA 906. | 0 MOD | pCi/L | Batch # | 0077060 | Yld % | 1 | TOC180000-060B |
| Tritium | 83 | U | 94 | 500 | 150 | | 03/18/10 | 03/23/10 |

NOTE (S)

Client Lot ID:

F0C110508

Data are incomplete without the case narrative.

MDC is determined using instrument performance only Bold results are greater than the MDC.

J Result is greater than sample detection limit but less than stated reporting limit. F0C110508

Laboratory Control Sample Report

Radiochemistry

| Client | Lot | ID: | F0C110508 |
|---------|-----|-----|-----------|
| Matrix: | : | | WATER |

| | | | Total | | | | Lab Sample ID | | | |
|----------------------|--------------|---------|-------|---------------------|-------|----------------|---------------|-------|----------------------|--|
| Parameter | Spike Amount | Result | | Uncert. (2 σ+/-) | | MDC | % Yld | % Rec | QC Control Limits | |
| Gamma Cs-137 & Hits | by EPA 901.1 | MOD | pCi/L | | 901.1 | MOD | | F0C1 | .50000-318C | |
| Americium 241 | 141000 | 140000 | | 11000 | | 500 | | 99 | (87 - 110) | |
| Cesium 137 | 53100 | 53200 | | 3100 | | 200 | | 100 | (90 - 110) | |
| Cobalt 60 | 87900 | 86800 | | 4900 | | 200 | | 99 | (89 - 110) | |
| | Batch #: | 0074318 | | | | Analysis Date: | 03/22 | 2/10 | | |
| Gross Alpha/Beta EPA | 900 | | pCi/L | | 900.0 | MOD | | F0C1 | .70000-134C | |
| Gross Beta | 67.9 | 71.7 | | 6.1 | | 1 | | 106 | (58 - 133) | |
| | Batch #: | 0076134 | | | | Analysis Date: | 03/2 | L/10 | | |
| Gross Alpha/Beta EPA | 900 | | pCi/L | | 900.0 | MOD | | FOCI | 70000-134C | |
| Gross Alpha | 49.4 | 56.6 | | 6.2 | | 1.0 | | 114 | (62 - 134) | |
| | Batch #: | 0076134 | | | | Analysis Date: | 03/2 | 1/10 | | |
| TRITIUM (Distill) by | EPA 906.0 M | מכ | pCi/L | | 906.0 | MOD | | FOCI | .80000-060C | |
| Tritium | 4510 | 4450 | | 470 | | 150 | | 99 | (85 - 112) | |
| | Batch #: | 0077060 | | | | Analysis Date: | 03/23 | 3/10 | | |
| Total Uranium by KPA | ASTM 5174-9 | 1 | pCi/L | | 5174- | 91 | | F0C2 | 240000-129C | |
| Total Uranium | 27.1 | 26.9 | | 3.2 | | 0.2 | | 99 | (90 - 120) | |
| | Batch #: | 0083129 | | | | Analysis Date: | 03/2 | 9/10 | | |
| Total Uranium by KPA | ASTM 5174-9 | 1 | pCi/L | | 5174- | 91 | | FOC | 240000-129C | |
| Total Uranium | 5.42 | 5,50 | | 0.57 | | 0.21 | | 102 | (90 - 120) | |
| | Batch #: | 0083129 | | | | Analysis Date: | 03/2 | ¤/1∩ | | |

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

| Client Lot ID: | F0C110508 |
|----------------|-----------|
| Matrix: | WATER |

| | | | | Total | | | Lab | Sample ID |
|-----------------------|--------------------------|-------------------------|-------|---------------------|-----------------------|-----------------------|--------------------------------------|------------|
| Parameter | Spike Amount | Result | | Uncert. (2 σ+/-) | % Yld | % Rec | QC Control Limits | Precision |
| Radium 226 by EPA | 903.0 MOD | | pCi/L | 903.0 | MOD | | F0C1 | 20000-128C |
| Radium (226) Spk 2 | 11.3 11.3 Batch #: | 10.1 10.2 0071128 | | 0.88 0.88 | 109 107 Analysi | 90 91 | (68 - 136) (68 - 136) 04/05/10 | 0.9 %RPD |
| Radium 228 by GFPC | | | pCi/L | 904 M | - | | | 20000-129C |
| Radium 228 Spk 2 | 6.35 6.35 Batch #: | 6.25 6.46 0071129 | | 0.76 0.78 | 99 95 Analysi | 98 102 s Date: | (60 - 142) (60 - 142) 03/29/10 | 3 %rpd |
| SR-90 BY GFPC EPA- | 905 MOD | | pCi/L | 905 M | IOD | | F0C1 | 20000-130C |
| Strontium 90 Spk 2 | 6.78 6.78 Batch #: | 7.29 7.72 0071130 | | 0.88 0.90 | 73 77 | 107 114 s Date: | (80 - 130) (80 - 130) 03/25/10 | 6 %RPD |

NOTE (S)

MATRIX SPIKE REPORT

Radiochemistry

| Client Lot Id: | F0C090512 | Date Sampled: | 03/07/10 |
|----------------|-----------|----------------|----------|
| Matrix: | WATER | Date Received: | 03/09/10 |

| | | | Total | | Total | QC Sampl | e ID |
|-------------------------|-----------------|-----------------|---------------------|-----------------------------|-----------|-----------|----------------------|
| Parameter | Spike Amount | Spike Result | Uncert. (2g +/-) | Spike Sample Yld. Result | € Uncert. | %YLD %REC | QC Control Limits |
| TRITIUM (Distill) by EF | A 906.0 MC | D | pCi/L | 906.0 MC | DD | F0C09051; | 2-001 |
| Tritium | 4510 | 4170 | 440 | -17 | 74 | 93 | (62 - 147) |
| | Batch #: | 0077060 | Ar | alysis Date: | 03/24/10 | | |
| Gross Alpha/Beta EPA 90 | 0 | | pCi/L | 900.0 MC | DD | F0C12053 | 0-001 |
| Gross Alpha | 49.4 | 44.0 | 5.5 | 0.04 | 0,75 | 89 | (35 - 150) |
| | Batch #: | 0076134 | Ar | alysis Date: | 03/20/10 | | |
| Gross Alpha/Beta EPA 90 | 0 | | pCi/L | 900.0 M | סכ | F0C12053 | 0-001 |
| Gross Beta | 67.9 | 66.4 | 5.7 | 0.83 | 0.70 | 96 | (54 ~ 150) |
| | Batch #: | 0076134 | Ar | alysis Date: | 03/20/10 | | |

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

| Client Lot ID Matrix: | - 1 | OC110508 MATER | | | | | | ampled: eceived: | 03/09 03/13 | | 1108 0930 |
|--------------------------|--------|-------------------|-------------------|------------------------------|--------------|------------------|------|------------------------------|----------------|------------------|-------------------------------|
| Parameter | | Spike Amount | SPIKE Result | Total Uncert. (2 g+/-) | Spike Yld | SAMPLE Result | | Total Uncert. (2g +/-) | % ¥ld | QC Samp: %Rec | le ID QC Control Limits |
| Total Uranium b | oy KPA | ASTM 5 | | pCi/L | 5 | 174-91 | | | F(| C1105 | 08-001 |
| Total Uranium | | 27.1 | 27.9 | 3.3 | | 0.441 | J | 0.050 | | 101 | (62 - 150) |
| | Spk2 | 27.1 | 28.4 | 3.4 | | 0.441 | J | 0.050 Preci | sion: | 103 2 | (62 - 150) %RPD |
| | | Batch | #: 0083129 | Ana | alysis da | ate: | 03/2 | 9/10 | | | |

Radiochemistry

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

DUPLICATE EVALUATION REPORT

Radiochemistry

| Client Lot ID: | F0C110508 | Date Sampled: | 03/07/10 |
|----------------|-----------|----------------|----------|
| Matrix: | WATER | Date Received: | 03/09/10 |

| | | | Total | | | | Total | | QC Sample ID | |
|-------------------|------------------|--------------|----------------------|----------|-------------------|---------|---------------------|-------|--------------|--------------|
| Parameter | SAMPLE Result | | Uncert. (2 g +/-) | % Yld | DUPLICA Result | TE | Uncert. (2 σ+/-) | % Yld | Precisio | on |
| TRITIUM (Distill) | by EPA 90 | 6.0 MC | מכ | pCi/L | 906. | 0 MOD | | F(| 0090509-00 | 1 |
| Tritium | 34 | U | 87 | | -26 | U | 72 | | 1480 | &RPD |
| | Bai | cch #: | 0077060 | (Sample) | 0077 | 060 (Di | uplicate) | | | |
| Gamma Cs-137 & Hi | ts by EPA | 901.1 | MOD | pCi/L | 901. | 1 MOD | | F(| C110508-00 | 1 |
| Cesium 137 | -2.2 | υ | 9.0 | | 0.0 | U | 11 | | 200 | % RPD |
| Potassium 40 | -80 | υ | 3300 | | 5 | U | 100 | | 228 | %RPD |
| | Bai | coh #: | 0074318 | (Sample) | 0074 | 318 (Di | uplicate} | | | |
| Gross Alpha/Beta | EPA 900 | | | pCi/L | 900. | 0 MOD | | E.(| 0C120530-00 | 1 |
| Gross Alpha | 0.04 | U | 0.75 | | 1.2 | U | 1.0 | | 187 | % RPD |
| Gross Beta | 0.83 | U | 0.70 | | -0.13 | U | 0.58 | | 274 | %RPD |
| | Bat | :ch #: | 0076134 | (Sample) | 0076 | 134 (Du | uplicate) | | | |

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

U Result is less than the sample detection limit.

2170 SUI

FOC110508

SUBCONTRACT ORDER TestAmerica Irvine

ITC0989

| SENDING LABORATORY: | RECEIVING LABORATORY: |
|--------------------------------|---|
| TestAmerica Irvine | TestAmerica St. Louis |
| 17461 Derian Avenue. Suite 100 | 13715 Rider Trail North |
| Irvine, CA 92614 | Earth City, MO 63045 |
| Phone: (949) 261-1022 | Phone :(314) 298-8566 |
| Fax: (949) 260-3297 | Fax: (314) 298-8757 |
| Project Manager: Joseph Doak | Project Location: CA - CALIFORNIA |
| Client: MWH-Pasadena/Boeing | Receipt Temperature: <u>°C</u> Ice: Y / N |

| Analysis | Units | Due | Expires | Interiab Price S | urch | Comments |
|--------------------------|-----------------|----------------|----------------|---|------|---|
| Sample ID: [TC0989-03 ((| Outfall 006 (Co | mposite) - Wai | ter) Sampled | i: 03/09/10 11:08 | 3 | |
| Gamma Spec-O | mg/kg | 03/18/10 | 03/09/11 11:08 | and the second se | 50% | Out St Louis, k-40 and cs-137 only, DC NOT FILTER! |
| Gross Alpha-O | pCi/L | 03/18/10 | 09/05/10 11:08 | \$90. 00 | 50% | Out St Louis, Boeing permit, DO NOT FILTERI |
| Gross Beta-O | pCi/L | 03/18/10 | 09/05/10 11:08 | \$90.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTERI |
| Radium, Combined-O | pCi/L | 03/18/10 | 03/09/11 11:08 | \$\$200.00 | 50% | |
| Strontium 90-O | pCi/L | 03/18/10 | 03/09/11 11:08 | \$140.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Tritlum-O | pCi/L | 03/18/10 | 03/09/11 11:08 | \$80.00 | 50% | Out St Louis, Boeing permit, DO NOT |
| Uranium, Combined-O | pCi/L | 03/18/10 | 03/09/11 11:08 | \$100.00 | 50% | |
| Containers Supplied: | | | | | | |
| 2.5 gal Poly (K) | 500 mL Aml | oer (L) | | | | |

Released By

3/10/10 17:00 Date/Time

Date/Time

Received By m Received By

012:00 Date/Time Page 1 of 1 Date/Time

Released By

F0C110508

12 of 13

| TestAme | erica | Lot #(s): | FOC 11057 | 9 | |
|--|---|---------------------------------------|--|---|--|
| THE CEADER IN ENVIRONM | ENTAL TESTING | | ****** | | |
| Client: Quote No: | | | , | | |
| | 100 | ·r | Date: <u>8</u> - | ニーク | |
| Initiated By: | HAD . | | nformation | | |
| Shipper: (Fe Shipping # (s):* | dex UPS DHL Courier | Client (| Other: | Sample Te | Multiple Packages: Y |
| | | | | | mbiut 6 |
| | | | Nyaka - 14 | | |
| | | | | | 9. |
| | | | | | 10. |
| *Numbered shipping lines | correspond to Numbered Sample Temp line for yes, "N" for no and "N/A" for not applic | **Sa vari: | ample must be receiv | ed at 4°C ± 2°C- II | not, note contents below. Temperature etals-Liquid or Rad tests- Liquid or Solids |
| 1. Ø N | Are there custody seals present on cooler? | | Y N) | Are there cu | stody seals present on bottles? |
| 2. Y N N/A | Do custody seals on cooler appear tampered with? | to be 9. | Y N NA | Do custody a tumpered wi | seals on bottles appear to be th? |
| 3. YN | Were contents of cooler frisked aft opening, but before unpacking? | :er 10 | YN NA | | received with proper pH'? (If not, |
| 4. Y N | Sample received with Chain of Custody? | 11 | Ŷ N | | ived in proper containers? |
| 5. (Y) N N/A | Does the Chain of Custody match sample ID's on the container(s)? | 12 | X N NA | Headspace in (If Yes, note sa | n VOA or TOX liquid samples? ample ID's below) |
| 6. Y 🕅 | Was sample received broken? | 13 | . (y) n n/a | and the second se | COC/Workshare received? |
| 7. Y N | Is sample volume sufficient for analysis? | 14 | . 🖉 N N/A | Was pH take | en by original TestAmerica lab? |
| ¹ For DOE-AL (Pantex, La Notes: | ANL, Sandia) sites, pH of ALL containers re | ceived must be | verified, EXCEPT | /OA, TOX and sol | 18. |
| 110103. | 1an St Day | 74-7 | ····· | | |
| | J. Cor alley | -10-1- | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ***** | ************************************** |
| r | | · · · · · · · · · · · · · · · · · · · | | | |
| | | | · · · · · · · · · · · · · · · · · · · | | |
| | ······································ | | | | |
| | | | | | · |
| • | | | | | ····· |
| Corrective Action; | τριπό το τριπότει στα δετορεία το το το το αποτολογία στο το τ | • | | | (fad yw an 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 |
| Client Contact N | | | Informed by: | | |
| Sample(s) process Sample(s) on hold Project Management | d until: | | leased, notify: _ Date: _ | 3-14-10 | |
| THIS FORM MUST BE O THE INITIATOR, THEN | COMPLETED AT THEIR INB THE ITEMS A THAT PERSON IS REQUIRED TO APPLY A | Y THEIR INI'I | 'IAL AND 'THE DA' | FB NEXT TO THA | IPLETED BY SOMEONE OTHER THAN AT ITEM. RMS/ST-LOUIS/ADMIN/Admin004 rey11.doc |

APPENDIX G

Section 26

Outfall 006 – BMP Effectiveness March 8, 2010 Test America Analytical Laboratory Report THIS PAGE LEFT INTENTIONALLY BLANK

<u>TestAmerica</u>

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 2009 Effectiveness Monitoring

Sampled: 03/08/10 Received: 03/10/10 Issued: 03/21/10 09:31

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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

ITC1151-01

CLIENT ID 006 EFF-1

MATRIX

Water

Reviewed By:

Debby Wilson

TestAmerica Irvine Debby Wilson For Heather Clark Project Manager



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

MWH-Pasadena/BoeingProject ID:BMP Effectiveness 2009618 Michillinda Avenue, Suite 200Effectiveness MonitoringSampled:03/08/10Arcadia, CA 91007Report Number:ITC1151Received:03/10/10Attention: Bronwyn KellySampled:03/10/1003/10/10

| | | INC | DRGA | NICS | | | | | |
|--|------------------------------|---------|--------------|--------------------|------------------|---|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITC1151-01 (006 EFF-1 - W Reporting Units: g/cc | ater) Displacement | 10C2375 | N/A | NA | 0.99 | 1 | 03/18/10 | 03/18/10 | |
| Density Sample ID: ITC1151-01 (006 EFF-1 - W Reporting Units: mg/l | 1 | 10C2373 | N/A | NA | 0.99 | 1 | 03/18/10 | 03/18/10 | |
| Sediment | ASTM D3977 | 10C2377 | 10 | 10 | ND | 1 | 03/08/10 | 03/08/10 | |



MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: BMP Effectiveness 2009 Effectiveness Monitoring Report Number: ITC1151

Sampled: 03/08/10 Received: 03/10/10

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

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|-----------|--------------------|-----|-------|------------------|-----------------------|----------------|------|--------------|--------------------|
| Batch: 10C2375 Extracted: 03/18/1 | 0 | | | | | | | | | |
| Duplicate Analyzed: 03/18/2010 (10C23 | 575-DUP1) | | | Sou | urce: ITC1151-01 | | | | | |
| Density | 0.992 | NA | N/A | g/cc | | 0.992 | | 0.05 | 20 | |



MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: BMP Effectiveness 2009 Effectiveness Monitoring Report Number: ITC1151

Sampled: 03/08/10 Received: 03/10/10

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

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 Debby Wilson For Heather Clark Project Manager



MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: BMP Effectiveness 2009 Effectiveness Monitoring Report Number: ITC1151

Sampled: 03/08/10 Received: 03/10/10

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

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

| Test Ame | | | | | | | | | Page 1 of 1 | | | | | | | |
|-------------------|----------|--|--|---------------|--------------|------------|----------------|--------|---------------|--------------|-----------|----------|-----|----------|---|---------------------------|
| Client Name/A | | | | | | | REQUI | RED | | | | | | | | |
| MWH-Arcad | | | | Effectivenes | ss Monitorin | g | | | | | | | T | | | |
| 618 Michillinda | Avenue, | Suite 200 | | Program | | | 4 | | | | | | | | | - CITI |
| Arcadia, CA 91 | 007 | | | | | | t ASTM- | | | | | | 1 | | | 77(15) |
| Test America C | Contact: | Joseph Doak | | | | | , A t | | | | | | | | | ITC115 |
| Project Manag | ger: Bro | nwyn Kelly | | Phone Numb | | | SSC | | | | | | | | | |
| | | | | (626) 568-66 | | | Sec (| | | | | | | | | Comments |
| Sampler: E Walker | | | Phone Number: (626) 568-6691 Fax Number: (626) 568-6515 Sampling Date/Time Preservative Bottle # of | | | led 997 | | | | | | | | | | |
| | | | | (020) 508-05 | 10 | | end ent | | | | | | | | | |
| Sample | Sample | Container | # of | Sampling | Preservative | Dattle # | anc 397 | | | | | | | | | |
| Description | Matrix | Туре | Cont. | Date/Time | | | | | | | | | | | | |
| 006 EFF-1 | W | 1 Gal Poly | 1 | 3/8/10 - 1108 | None | 1 | X | | | | | | | | | |
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APPENDIX G

Section 27

Outfall 008 – January 18, 2010 MEC^X Data Validation Report THIS PAGE LEFT INTENTIONALLY BLANK



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITA1358

Prepared by

MEC^X, LP 12269 East Vassar Drive Aurora, CO 80014

I. INTRODUCTION

| Task Order Title: Contract Task Order: | Boeing SSFL NPDES 1261.100D.00 |
|---|--------------------------------|
| Sample Delivery Group: | ITA1358 |
| Project Manager: | B. Kelly |
| Matrix: | Water |
| QC Level: | IV |
| No. of Samples: | 1 |
| No. of Reanalyses/Dilutions: | 1 |
| Laboratory: | TestAmerica-Irvine |

| Client ID | Laboratory ID | Sub- Laboratory ID | Matrix | Collected | Method |
|----------------------------|------------------|---|--------|-------------------------|---|
| Outfall 008 (Composite) | ITA1358-02 | F0A210532 -001, G0A210542 -001 | Water | 2:08:00 PM | ASTM 5174-91, 200.8, 200.8 (Diss), 245.1, 245.1-Diss, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD |
| | ITA1358- 02RE | F0A210532 -001, | Water | 1/18/2010 2:08:00 PM | 900.0 MOD |

Table 1. Sample Identification

II. Sample Management

No anomalies were observed regarding sample management. The sample receipt temperature was not noted by TestAmerica-St Louis; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were present upon receipt at TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were delivered to the remaining laboratories by courier, no custody seals were necessary. If necessary, the client ID was added to the sample result summary by the reviewer.

| Qualifie | or 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 or PCB congeners. | 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. |
| Ν | 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. |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|---|
| н | 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 |
| С | 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. |
| В | 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. |
| Е | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| А | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| Μ | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Т | 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

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. |
|-----------|---|---|
| Ρ | 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. |
| *11, *111 | 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: L. Calvin Date Reviewed: February 25, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^{\times} Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613, and the National Functional Guidelines Chlorinated Dioxin/Furan Data Review (9/05).

- 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 analyzed with the initial calibration sequence and at the beginning of each analytical sequence. 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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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 detects between the EDL and the RL for more than half of all compounds, including all of the HxCDD isomers and total HxCDD, 1,2,3,6,7,8-HpCDD and total HpCDD, OCDD, total HxCDF and all of the HxCDF isomers except 1,2,3,4,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF and total HpCDF, and OCDF. Any sample detects for individual target compound isomers present at concentrations less than five times the

method blank concentrations were qualified as nondetected, "U," at the RL. Several detects in the method blank did not meet ratio criteria and were reported as EMPCs; however, due to the extent of contamination present in the method blank, it was the reviewer's professional opinion that those results be utilized to qualify applicable sample results. Results for totals that included peaks meeting ratio criteria that were not present in the method blank were qualified as estimated, "J," as only a portion of the total was considered method blank contamination. Total HxCDF did not contain any of the same peaks as the method blank and was therefore not qualified. The concentrations of 1,2,3,4,6,7,8-HpCDD and 1,2,3,4,6,7,8-HpCDF in the method blank were insufficient to qualify the sample results or associated totals.

- Blank Spikes and Laboratory Control Samples: OPR 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 a representative number of reportable sample detects. The laboratory calculated and reported compound-specific detection limits. The result for OCDF was reported as an EMPC. As ratio criteria were not met, the result was qualified as an estimated nondetect, "UJ," at the reported concentration level. Any reported totals reported as EMPCs or that included EMPCs were qualified as estimated, "J." Any detects between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

Reviewed By: P. Meeks Date Reviewed: February 26, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC[×]* Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 6010B, 6020, 7470A/7471A, and the National Functional Guidelines for Inorganic Data Review (7/02).

- Holding Times: Analytical holding times, six months for ICP and ICP-MS 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 r² values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. CRDL recoveries were within the control limits of 70-130%.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Recoveries were within the method- (6010B) or laboratory-(6020) established control limits. Most analytes were detected in the ICSA solution; however, the reviewer was not able to determine if sample detects were due to matrix interference.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the dissolved fraction. Recoveries and RPDs were within laboratory-established QC limits. Mercury method accuracy was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration. Copper and zinc were not bracketed by internal

standards of a lower mass; therefore, copper and zinc detected in the sample were qualified as estimated, "J."

- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit 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 MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks Date Reviewed: February 26, 2010

The sample listed in Table 1 for these analyses 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 (10/04).

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquot for total uranium was prepared beyond 3x the five-day holding time for unpreserved samples; therefore, the detected result for this analyte was qualified as estimated, "J." The aliquots for gross alpha and gross beta were prepared beyond the five-day analytical holding time for unpreserved samples; therefore, the detected results for these analytes were qualified as estimated, "J." Aliquots for radium-226, radium-228, strontium-90, and gamma spectroscopy were prepared within the five-day holding time for unpreserved aqueous samples.
- Calibration: The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability.

The gross alpha detector efficiency was less than 20%; therefore, the detected result for gross alpha was qualified as estimated, "J." The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. 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: Tritium was detected in the method blank but was not detected in the site sample. There were no other analytes detected in the method blanks or KPA CCBs.
- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs (radium-226, radium-228, and strontium) were within laboratory-established control limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for the gamma spectroscopy analytes. There were no detects in either sample.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA limit 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 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.

Validated Sample Result Forms: ITA1358

Analysis Method ASTM 5174-91

| Sample Name | Outfall 008 (C | Matri | Matrix Type: WATER | | | Validation Level: IV | | |
|------------------|----------------|-----------------|--------------------|------|-----------------|----------------------|-------------------------|---------------------|
| Lab Sample Name: | ITA1358-02 | Sample 2 | | | 0 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Total Uranium | 7440-61-1 | 0.652 | 0.693 | 0.21 | pCi/L | Jb | J | H, DNQ |
| Analysis Method | d EPA 2 | 200.8 | | | | | | |

Sample NameOutfall 008 (Composite)Matrix Type:WaterValidation Level:IVLab Sample Name:ITA1358-02Sample Date:1/18/2010 2:08:00 PM

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|----------|-----------|-----------------|-----|------|-----------------|------------------|-------------------------|---------------------|
| Antimony | 7440-36-0 | ND | 2.0 | 0.30 | ug/l | | U | |
| Cadmium | 7440-43-9 | 0.25 | 1.0 | 0.10 | ug/l | Ja | 1 | DNQ |
| Copper | 7440-50-8 | 6.8 | 2.0 | 0.50 | ug/l | | J | *Ш |
| Lead | 7439-92-1 | 7.9 | 1.0 | 0.20 | ug/l | | | |
| Selenium | 7782-49-2 | ND | 2.0 | 0.50 | ug/l | | U | |
| Thallium | 7440-28-0 | ND | 1.0 | 0.20 | ug/l | | U | |
| Zinc | 7440-66-6 | 47 | 20 | 5.0 | ug/l | | J | *Ш |

Analysis Method EPA 200.8-Diss

Sample NameOutfall 008 (Composite)Matrix Type:WaterValidation Level:IVLab Sample Name:ITA1358-02Sample Date:1/18/2010 2:08:00 PM

| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---------------------|-----------|-----------------|-----|------|-----------------|------------------|-------------------------|---------------------|
| Antimony, dissolved | 7440-36-0 | ND | 2.0 | 0.30 | ug/l | | U | |
| Cadmium, dissolved | 7440-43-9 | 0.22 | 1.0 | 0.10 | ug/l | Ja | J | DNQ |
| Copper, dissolved | 7440-50-8 | 4.6 | 2.0 | 0.50 | ug/l | | J | *III |
| Lead, dissolved | 7439-92-1 | 5.2 | 1.0 | 0.20 | ug/l | | | |
| Selenium, dissolved | 7782-49-2 | ND | 2.0 | 0.50 | ug/l | | U | |
| Thallium, dissolved | 7440-28-0 | 0.29 | 1.0 | 0.20 | ug/l | Ja | J | DNQ |
| Zinc, dissolved | 7440-66-6 | 30 | 20 | 5.0 | ug/l | | J | *III |

| Sample Name | Outfall 008 (Co | omposite) | Matri | х Туре: | Water | ١ | alidation Le | vel: IV |
|--|---|---|-------------------------|-----------------------------|----------------------------------|-----------------------|-------------------------|---------------------|
| Lab Sample Name: | ITA1358-02 | Samp | ple Date: | 1/18/2010 | 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Mercury | 7439-97-6 | ND | 0.00020 | 0.00010 | mg/l | | U | |
| Analysis Metho | od EPA 2 | 45.1-D | iss | | | | | |
| Sample Name | Outfall 008 (Co | omposite) | Matri | x Type: | Water | V | alidation Le | vel: IV |
| Lab Sample Name: | ITA1358-02 | Samp | ole Date: | 1/18/2010 | 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Mercury | 7439-97-6 | ND | 0.00020 | 0.00010 | mg/l | С | U | |
| Analysis Metho | od EPA 9 | 00.0 M | !OD | | | | | |
| Sample Name | Outfall 008 (Co | omposite) | Matri | x Type: | WATER | V | alidation Le | vel: IV |
| Lab Sample Name: | ITA1358-02 | Samp | ole Date: | 1/18/2010 | 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Gross Alpha | 12587-46-1 | 25.8 | 3 | 3.8 | pCi/L | | J | H, C |
| Gross Beta | 12587-47-2 | 25.4 | 4 | 4.4 | pCi/L | | 1 | Н |
| Analysis Metho | od EPA 9 | 01.1 M | IOD | | | | | |
| Sample Name | Outfall 008 (Co | omposite) | Matri | x Type: | WATER | V | alidation Le | vel: IV |
| Lab Sample Name: | ITA1358-02 | Samp | ole Date: | 1/18/2010 | 2:08:00 PM | | | |
| | | | | MDL | Result | Lab | Validation | Validation |
| Analyte | CAS No | Result Value | RL | MDL | Units | Qualifier | Qualifier | Notes |
| | CAS No 10045-97-3 | | RL 20 | 17 | | Qualifier U | | Notes |
| Cesium 137 | | Value | | | Units | - | Qualifier | Notes |
| Cesium 137 Potassium 40 | 10045-97-3 13966-00-2 | Value -2.3 -30 | 20 0 | 17 | Units pCi/L | U | Qualifier U | Notes |
| Cesium 137 Potassium 40 | 10045-97-3 13966-00-2 | Value -2.3 -30 03.0 M | 20 0 IOD | 17 290 | Units pCi/L | U U | Qualifier U | |
| Cesium 137 Potassium 40 Analysis Metho Sample Name | 10045-97-3 13966-00-2 od EPA 9 | Value -2.3 -30 03.0 M omposite) | 20 0 IOD | 17 290 x Type: | Units pCi/L pCi/L | U U | Qualifier U U | |
| Analyte Cesium 137 Potassium 40 <i>Analysis Metho</i> Sample Name Lab Sample Name: Analyte | 10045-97-3 13966-00-2 od EPA 9 Outfall 008 (Co | Value -2.3 -30 03.0 M omposite) | 20 0 VOD Matri | 17 290 x Type: | Units pCi/L pCi/L WATER | U U | Qualifier U U | vel: IV |

Analysis Method EPA 245.1

| Sample Name | Outfall 008 (Co | omposite) | Matri | х Туре: | WATER | V | alidation Le | vel: IV |
|------------------|-----------------|-----------------|----------|----------|-----------------|------------------|-------------------------|---------------------|
| Lab Sample Name: | ITA1358-02 | Samp | le Date: | 1/18/201 | 0 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Radium 228 | 15262-20-1 | -1.92 | 1 | 1.7 | pCi/L | U | U | |
| Analysis Metho | od EPA 9 | 05 MO | D | | | | | |
| Sample Name | Outfall 008 (Co | omposite) | Matri | x Type: | WATER | V | Validation Le | vel: IV |
| Lab Sample Name: | ITA1358-02 | Samp | le Date: | 1/18/201 | 0 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Strontium-90 | 10098-97-2 | 0.26 | 3 | 0.77 | pCi/L | U | U | |
| Analysis Metho | od EPA 9 | 06.0 M | OD | | | | | |
| Sample Name | Outfall 008 (Co | omposite) | Matri | x Type: | WATER | V | Validation Le | vel: IV |
| Lab Sample Name: | ITA1358-02 | Samp | le Date: | 1/18/201 | 0 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation | Validation |
| | | value | | | Units | Quanner | Qualifier | Notes |

Analysis Method EPA 904 MOD

| Sample Name | Outfall 008 (Co | omposite) | Matri | x Type: | WATER | V | Validation Le | vel: IV |
|---------------------|-----------------|-----------------|-------------------------------|----------|-----------------|------------------|-------------------------|---------------------|
| Lab Sample Name: | ITA1358-02 | Samp | Sample Date: 1/18/2010 | | 2:08:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| 1,2,3,4,6,7,8-HpCDD | 35822-46-9 | 0.00016 | 0.00005 | 0.000026 | ug/L | В | | |
| 1,2,3,4,6,7,8-HpCDF | 67562-39-4 | 5.8e-005 | 0.00005 | 0.000013 | ug/L | В | | |
| 1,2,3,4,7,8,9-HpCDF | 55673-89-7 | ND | 0.00005 | 0.000019 | ug/L | | U | |
| 1,2,3,4,7,8-HxCDD | 39227-28-6 | ND | 0.00005 | 0.000011 | ug/L | | U | |
| 1,2,3,4,7,8-HxCDF | 70648-26-9 | ND | 0.00005 | 0.000011 | ug/L | | U | |
| 1,2,3,6,7,8-HxCDD | 57653-85-7 | ND | 1.2e-005 | 0.00001 | ug/L | J, Q, B | U | В |
| 1,2,3,6,7,8-HxCDF | 57117-44-9 | ND | 0.00005 | 0.000009 | ug/L | | U | |
| 1,2,3,7,8,9-HxCDD | 19408-74-3 | ND | 0.00005 | 0.000008 | ug/L | | U | |
| 1,2,3,7,8,9-HxCDF | 72918-21-9 | ND | 0.00005 | 0.000009 | ug/L | | U | |
| 1,2,3,7,8-PeCDD | 40321-76-4 | ND | 0.00005 | 0.000017 | ug/L | | U | |
| 1,2,3,7,8-PeCDF | 57117-41-6 | ND | 0.00005 | 0.000011 | ug/L | | U | |
| 2,3,4,6,7,8-HxCDF | 60851-34-5 | ND | 0.00005 | 0.000008 | ug/L | | U | |
| 2,3,4,7,8-PeCDF | 57117-31-4 | ND | 0.00005 | 0.000011 | ug/L | | U | |
| 2,3,7,8-TCDD | 1746-01-6 | ND | 0.00001 | 0.000004 | ug/L | | U | |
| 2,3,7,8-TCDF | 51207-31-9 | ND | 0.00001 | 0.000004 | ug/L | | U | |
| OCDD | 3268-87-9 | 0.0017 | 0.0001 | 0.000043 | ug/L | В | | |
| OCDF | 39001-02-0 | ND | 9.6e-005 | 0.000026 | ug/L | Q, J, B | UJ | *III |
| Total HpCDD | 37871-00-4 | 0.00038 | 0.00005 | 0.000026 | ug/L | В | | |
| Total HpCDF | 38998-75-3 | 0.00011 | 0.00005 | 0.000013 | ug/L | В | | |
| Total HxCDD | 34465-46-8 | 2.4e-005 | 2.4e-005 | 0.000008 | ug/L | J, Q, B | J | B, *III, DNQ |
| Total HxCDF | 55684-94-1 | 9.1e-006 | 9.1e-006 | 0.000008 | ug/L | J, Q, B | J | *III, DNQ |
| Total PeCDD | 36088-22-9 | ND | 0.00005 | 0.000017 | ug/L | | U | |
| Total PeCDF | 30402-15-4 | 2.2e-006 | 2.2e-006 | 0.000007 | ug/L | J, Q | J | *III, DNQ |
| Total TCDD | 41903-57-5 | ND | 0.00001 | 0.000004 | ug/L | | U | |
| Total TCDF | 55722-27-5 | ND | 0.00001 | 0.000004 | ug/L | | U | |

Analysis Method EPA-5 1613B

APPENDIX G

Section 28

Outfall 008 – January 18, 2010 Test America Analytical Laboratory Report THIS PAGE LEFT INTENTIONALLY BLANK

<u>TestAmerica</u>

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 008

Sampled: 01/18/10 Received: 01/18/10 Revised: 03/31/10 14:13

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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, 14 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 4°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 Te Sample Acceptance Policy unless otherwise noted in the report. | stAmerica |
| PRESERVATION: | Samples requiring preservation were verified prior to sample analysis. | |
| QA/QC CRITERIA: | All analyses met method criteria, except as noted in the report with data qualifiers. | |
| COMMENTS: | Results that fall between the MDL and RL are 'J' flagged. | |
| SUBCONTRACTED: | Refer to the last page for specific subcontract laboratory information included in this report. | |
| ADDITIONAL INFORMATION: | Final revised report to provide corrected units and merge .pdf for Radchem. | |
| LABORATORY I | D CLIENT ID | MATRIX |

| LABORATORY ID | CLIENT ID | MATRIX |
|---------------|-------------------------|--------|
| ITA1358-01 | Outfall 008 (Grab) | Water |
| ITA1358-02 | Outfall 008 (Composite) | Water |

Reviewed By:

606-Lathlee **TestAmerica** Irvine

Kathleen A. Robb For Heather Clark Project Manager



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

| HEXANE EXTRACTABLE MATERIAL | | | | | | | | | |
|--|--------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-01 (Outfall 008 (Gr | ab) - Water) | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | |
| Hexane Extractable Material (Oil & | EPA 1664A | 10A1786 | 1.3 | 4.8 | ND | 1 | 01/20/10 | 01/20/10 | |
| Grease) | | | | | | | | | |

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

| METALS | | | | | | | | | |
|--------------------------------------|---------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-02 (Outfall 008 (| Composite) - Water) | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | |
| Mercury | EPA 245.1 | 10A1830 | 0.10 | 0.20 | ND | 1 | 01/20/10 | 01/20/10 | |
| Antimony | EPA 200.8 | 10A1800 | 0.30 | 2.0 | ND | 1 | 01/20/10 | 01/25/10 | |
| Cadmium | EPA 200.8 | 10A1800 | 0.10 | 1.0 | 0.25 | 1 | 01/20/10 | 01/25/10 | Ja |
| Copper | EPA 200.8 | 10A1800 | 0.50 | 2.0 | 6.8 | 1 | 01/20/10 | 01/25/10 | |
| Lead | EPA 200.8 | 10A1800 | 0.20 | 1.0 | 7.9 | 1 | 01/20/10 | 01/25/10 | |
| Selenium | EPA 200.8 | 10A1800 | 0.50 | 2.0 | ND | 1 | 01/20/10 | 01/25/10 | |
| Thallium | EPA 200.8 | 10A1800 | 0.20 | 1.0 | ND | 1 | 01/20/10 | 01/25/10 | |
| Zinc | EPA 200.8 | 10A1800 | 5.0 | 20 | 47 | 1 | 01/20/10 | 01/25/10 | |

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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Arcadia, CA 91007

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

Project ID: Routine Outfall 008 618 Michillinda Avenue, Suite 200

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

DISSOLVED METALS MDL Reporting Sample Dilution Date Date Data Method Batch Limit Result Factor Extracted Qualifiers Analyte Limit Analyzed Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water) Reporting Units: ug/l 0.20 С EPA 245.1-Diss 10A2023 0.10 ND 01/21/10 01/21/10 Mercury 1 Antimony EPA 200.8-Diss 10A1999 0.30 2.0 ND 01/21/10 01/25/10 1 01/25/10 Cadmium EPA 200.8-Diss 10A1999 0.10 1.0 0.22 01/21/10 1 Ja EPA 200.8-Diss 10A1999 0.50 Copper 2.0 4.6 1 01/21/10 01/25/10 EPA 200.8-Diss 10A1999 0.20 5.2 01/21/10 01/27/10 Lead 1.0 1 0.50 Selenium EPA 200.8-Diss 10A1999 2.0 ND 1 01/21/10 01/25/10 Thallium EPA 200.8-Diss 10A1999 0.20 1.0 0.29 1 01/21/10 01/25/10 Ja Zinc EPA 200.8-Diss 10A1999 5.0 20 30 1 01/21/10 01/25/10

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

| INORGANICS | | | | | | | | | | |
|--------------------------------------|---------------------|---------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
| Sample ID: ITA1358-02 (Outfall 008 (| Composite) - Water) | | | | | | | | | |
| Reporting Units: mg/l | | | | | | | | | | |
| Ammonia-N (Distilled) | SM4500NH3-C | 10A1730 | 0.50 | 0.50 | ND | 1 | 01/19/10 | 01/20/10 | | |
| Chloride | EPA 300.0 | 10A1646 | 0.25 | 0.50 | 6.0 | 1 | 01/19/10 | 01/19/10 | | |
| Nitrate-N | EPA 300.0 | 10A1646 | 0.060 | 0.11 | 0.64 | 1 | 01/19/10 | 01/19/10 | | |
| Nitrite-N | EPA 300.0 | 10A1646 | 0.090 | 0.15 | ND | 1 | 01/19/10 | 01/19/10 | | |
| Nitrate/Nitrite-N | EPA 300.0 | 10A1646 | 0.15 | 0.26 | 0.64 | 1 | 01/19/10 | 01/19/10 | | |
| Sulfate | EPA 300.0 | 10A1646 | 0.20 | 0.50 | 7.2 | 1 | 01/19/10 | 01/19/10 | | |
| Total Dissolved Solids | SM2540C | 10A1751 | 1.0 | 10 | 240 | 1 | 01/20/10 | 01/20/10 | | |
| Total Suspended Solids | SM 2540D | 10C1775 | 4.0 | 40 | 780 | 1 | 03/15/10 | 03/15/10 | H-1 | |
| Sample ID: ITA1358-02 (Outfall 008 (| Composite) - Water) | | | | | | | | | |
| Reporting Units: ug/l | | | | | | | | | | |
| Perchlorate | EPA 314.0 | 10A2275 | 0.90 | 4.0 | ND | 1 | 01/25/10 | 01/25/10 | | |

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Project Manager



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

| Attention: Bronwyn Kelly | | STM 5174-91 | |
|--|----------------|---------------------|---|
| 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 | Report Number: | ITA1358 | Sampled: 01/18/10 Received: 01/18/10 |
| MWH-Pasadena/Boeing | Project ID: | Routine Outfall 008 | Samala da 01/19/10 |

| | | 110 | | | | | | | |
|---|---------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-02 (Outfall 008 (C | Composite) - Water) | | | | | | | | |
| Reporting Units: pCi/L Total Uranium | ASTM 5174-91 | 35029 | 0.21 | 0.693 | 0.652 | 1 | 02/04/10 | 02/08/10 | Jb |

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

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

| EPA 900.0 MOD | | | | | | | | | | |
|--------------------------------------|----------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
| Sample ID: ITA1358-02 (Outfall 008 (| (Composite) - Water) | | | | | | | | | |
| Reporting Units: pCi/L | | | | | | | | | | |
| Gross Alpha | EPA 900.0 MOD | 25415 | 3.8 | 3 | 25.8 | 1 | 01/25/10 | 01/29/10 | | |
| Gross Beta | EPA 900.0 MOD | 25415 | 4.4 | 4 | 25.4 | 1 | 01/25/10 | 01/29/10 | | |

Project ID: Routine Outfall 008



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

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

| EPA 901.1 MOD | | | | | | | | | |
|------------------------------------|----------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-02 (Outfall 008 | (Composite) - Water) | | | | | | | | |
| Reporting Units: pCi/L | | | | | | | | | |
| Cesium 137 | EPA 901.1 MOD | 23036 | 17 | 20 | -2.3 | 1 | 01/23/10 | 01/26/10 | U |
| Potassium 40 | EPA 901.1 MOD | 23036 | 290 | NA | -30 | 1 | 01/23/10 | 01/26/10 | U |

Project ID: Routine Outfall 008

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 MWH-Pasadena/Boeing
 Project ID:
 Routine Outfall 008

 618 Michillinda Avenue, Suite 200
 Sampled:
 01/18/10

 Arcadia, CA 91007
 Report Number:
 ITA1358
 Received:
 01/18/10

 Attention:
 Bronwyn Kelly
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| EPA 903.0 MOD | | | | | | | | | |
|--|----------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-02 (Outfall 008 Reporting Units: pCi/L | (Composite) - Water) | | | | | | | | |
| Radium (226) | EPA 903.0 MOD | 22145 | 0.29 | 1 | 0.11 | 1 | 01/22/10 | 02/08/10 | U |

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 Project ID:
 Routine Outfall 008

 618 Michillinda Avenue, Suite 200
 Sampled:
 01/18/10

 Arcadia, CA 91007
 Report Number:
 ITA1358
 Received:
 01/18/10

 Attention:
 Bronwyn Kelly
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| EPA 904 MOD | | | | | | | | | |
|--|-------------|--------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-02 (Outfall 008 Reporting Units: pCi/L | , , | 221.40 | 1.5 | | 1.00 | | 01/02/10 | 00/00/110 | |
| Radium 228 | EPA 904 MOD | 22148 | 1.7 | 1 | -1.92 | I | 01/22/10 | 02/08/10 | U |

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Project Manager



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| MWH-Pasadena/Boeing | Project ID: Routine Outfall 008 | |
|-----------------------------------|---------------------------------|--------------------|
| 618 Michillinda Avenue, Suite 200 | | Sampled: 01/18/10 |
| Arcadia, CA 91007 | Report Number: ITA1358 | Received: 01/18/10 |
| Attention: Bronwyn Kelly | | |
| | | |

| EPA 905 MOD | | | | | | | | | |
|--|---------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
| Sample ID: ITA1358-02 (Outfall 008 (Reporting Units: pCi/L | Composite) - Water) | | | | | | | | |
| Strontium 90 | EPA 905 MOD | 22149 | 0.77 | 3 | 0.26 | 1 | 01/22/10 | 02/01/10 | U |

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 MWH-Pasadena/Boeing
 Project ID:
 Routine Outfall 008

 618 Michillinda Avenue, Suite 200
 Sampled:
 01/18/10

 Arcadia, CA 91007
 Report Number:
 ITA1358
 Received:
 01/18/10

 Attention:
 Bronwyn Kelly
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| EPA 906.0 MOD | | | | | | | | | | |
|--|----------------------|-------|--------------|--------------------|------------------|--------------------|-------------------|------------------|--------------------|--|
| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers | |
| Sample ID: ITA1358-02 (Outfall 008 Reporting Units: pCi/L | (Composite) - Water) | | | | | | | | | |
| Tritium | EPA 906.0 MOD | 28080 | 140 | 500 | 81 | 1 | 01/28/10 | 01/29/10 | U | |

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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

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

Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

EPA-5 1613B MDL Reporting Sample Dilution Date Data Date Method **Oualifiers** Analyte Batch Limit Limit Result Factor Extracted Analyzed Sample ID: ITA1358-02 (Outfall 008 (Composite) - Water) Reporting Units: ug/L EPA-5 1613B 0.000026 0.00005 0.00016 01/26/10 В 1,2,3,4,6,7,8-HpCDD 26267 1 02/02/10 1,2,3,4,6,7,8-HpCDF EPA-5 1613B 26267 0.000013 0.00005 5.8e-005 в 1 01/26/10 02/02/10 ND 1,2,3,4,7,8,9-HpCDF EPA-5 1613B 26267 0.000019 0.00005 01/26/10 02/02/10 1 1,2,3,4,7,8-HxCDD EPA-5 1613B 26267 0.000011 0.00005 ND 1 01/26/10 02/02/10 0.00005 ND 1,2,3,4,7,8-HxCDF EPA-5 1613B 26267 0.000011 1 01/26/10 02/02/10 1,2,3,6,7,8-HxCDD EPA-5 1613B 26267 0.00001 0.00005 1.2e-005 1 01/26/10 02/02/10 J, Q, B 1,2,3,6,7,8-HxCDF EPA-5 1613B 26267 0.0000097 0.00005 ND 1 01/26/10 02/02/10 0.0000083 0.00005 ND 1 1,2,3,7,8,9-HxCDD EPA-5 1613B 26267 01/26/10 02/02/10 1,2,3,7,8,9-HxCDF EPA-5 1613B 26267 0.0000095 0.00005 ND 1 01/26/10 02/02/10 1,2,3,7,8-PeCDD EPA-5 1613B 26267 0.000017 0.00005 ND 1 01/26/10 02/02/10 1,2,3,7,8-PeCDF EPA-5 1613B 26267 0.000011 0.00005 ND 01/26/10 02/02/10 1 2,3,4,6,7,8-HxCDF 26267 0.0000086 0.00005 ND 02/02/10 EPA-5 1613B 1 01/26/10 ND 2,3,4,7,8-PeCDF EPA-5 1613B 26267 0.000011 0.00005 1 01/26/10 02/02/10 ND 2,3,7,8-TCDD EPA-5 1613B 26267 0.0000047 0.00001 1 01/26/10 02/02/10 2,3,7,8-TCDF EPA-5 1613B 26267 0.0000043 0.00001 ND 1 01/26/10 02/02/10 0.0001 OCDD EPA-5 1613B 26267 0.000043 0.0017 1 01/26/10 02/02/10 В OCDF EPA-5 1613B 26267 0.000026 0.0001 9.6e-005 1 01/26/10 02/02/10 Q, J, B **Total HpCDD** EPA-5 1613B 26267 0.000026 0.00005 0.00038 1 01/26/10 02/02/10 В **Total HpCDF** 26267 0.000013 0.00005 0.00011 02/02/10 В EPA-5 1613B 1 01/26/10 **Total HxCDD** EPA-5 1613B 26267 0.0000083 0.00005 2.4e-005 1 01/26/10 02/02/10 J, Q, B **Total HxCDF** EPA-5 1613B 26267 0.0000086 0.00005 9.1e-006 1 01/26/10 02/02/10 J, Q, B Total PeCDD EPA-5 1613B 26267 0.000017 0.00005 ND 1 01/26/10 02/02/10 0.0000076 0.00005 1 **Total PeCDF** EPA-5 1613B 26267 2.2e-006 01/26/10 02/02/10 J, Q Total TCDD 0.0000047 0.00001 ND EPA-5 1613B 26267 1 01/26/10 02/02/10 Total TCDF EPA-5 1613B 26267 0.0000043 0.00001 ND 1 01/26/10 02/02/10 Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%) 34 % Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%) 38% Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%) 35% Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%) 33% Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%) 31% Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%) 34% Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%) 33 % Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%) 36% Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%) 31% Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%) 31% Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%) 37% Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%) 33% 38% Surrogate: 13C-2,3,7,8-TCDD (25-164%) Surrogate: 13C-2,3,7,8-TCDF (24-169%) 36% Surrogate: 13C-OCDD (17-157%) 29% Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%) 92 %

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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

SHORT HOLD TIME DETAIL REPORT

| | Hold Time (in days) | Date/Time Sampled | Date/Time Received | Date/Time Extracted | Date/Time Analyzed |
|---|------------------------|----------------------|-----------------------|------------------------|-----------------------|
| Sample ID: Outfall 008 (Composite) (ITA13 | 58-02) - Water | | | | |
| EPA 300.0 | 2 | 01/18/2010 14:08 | 01/18/2010 19:00 | 01/19/2010 15:00 | 01/19/2010 17:25 |
| Filtration | 1 | 01/18/2010 14:08 | 01/18/2010 19:00 | 01/19/2010 17:40 | 01/19/2010 17:40 |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---------|--------------------|-----------|---------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 10A1786 Extracted: 01/20/10 | - | | | | | | | | | | |
| Blank Analyzed: 01/20/2010 (10A1786-B | LK1) | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | ND | 5.0 | 1.4 | mg/l | | | | | | | |
| LCS Analyzed: 01/20/2010 (10A1786-BS | 1) | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | 20.2 | 5.0 | 1.4 | mg/l | 20.0 | | 101 | 78-114 | | | |
| LCS Dup Analyzed: 01/20/2010 (10A178 | 6-BSD1) | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | 19.7 | 5.0 | 1.4 | mg/l | 20.0 | | 98 | 78-114 | 3 | 11 | |
| Matrix Spike Analyzed: 01/20/2010 (10A | | Sou | rce: ITA(|)996-01 | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | 19.6 | 4.8 | 1.3 | mg/l | 19.0 | ND | 103 | 78-114 | | | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

METALS

| Arrelate | D14 | Reporting | MDI | 11 | Spike | Source | 0/ DEC | %REC | DDD | RPD | Data |
|--|-------------|------------|------------|-------|--------------|---------------|---------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 10A1800 Extracted: 01/20/10 |) | | | | | | | | | | |
| | T T74\ | | | | | | | | | | |
| Blank Analyzed: 01/25/2010 (10A1800-E | - | • | 0.00 | a | | | | | | | |
| Antimony | ND | 2.0 | 0.30 | ug/l | | | | | | | |
| Cadmium | ND | 1.0 | 0.10 | ug/l | | | | | | | |
| Copper | ND | 2.0 | 0.50 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| Selenium | ND | 2.0 | 0.50 | ug/l | | | | | | | |
| Thallium | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| Zinc | ND | 20 | 5.0 | ug/l | | | | | | | |
| LCS Analyzed: 01/25/2010 (10A1800-BS | 1) | | | | | | | | | | |
| Antimony | 73.9 | 2.0 | 0.30 | ug/l | 80.0 | | 92 | 85-115 | | | |
| Cadmium | 74.1 | 1.0 | 0.10 | ug/l | 80.0 | | 93 | 85-115 | | | |
| Copper | 73.8 | 2.0 | 0.50 | ug/l | 80.0 | | 92 | 85-115 | | | |
| Lead | 74.3 | 1.0 | 0.20 | ug/l | 80.0 | | 93 | 85-115 | | | |
| Selenium | 73.9 | 2.0 | 0.50 | ug/l | 80.0 | | 92 | 85-115 | | | |
| Thallium | 73.9 | 1.0 | 0.20 | ug/l | 80.0 | | 92 | 85-115 | | | |
| Zinc | 74.3 | 20 | 5.0 | ug/l | 80.0 | | 93 | 85-115 | | | |
| Matrix Spike Analyzed: 01/25/2010 (10A | (1800-MS1) | | | | Sou | irce: ITA | 1401-01 | | | | |
| Antimony | 81.2 | 2.0 | 0.30 | ug/l | 80.0 | 2.44 | 98 | 70-130 | | | |
| Cadmium | 77.9 | 1.0 | 0.10 | ug/l | 80.0 | ND | 97 | 70-130 | | | |
| Copper | 86.3 | 2.0 | 0.50 | ug/l | 80.0 | 6.94 | 99 | 70-130 | | | |
| Lead | 118 | 1.0 | 0.20 | ug/l | 80.0 | 39.4 | 98 | 70-130 | | | |
| Selenium | 77.8 | 2.0 | 0.50 | ug/l | 80.0 | ND | 97 | 70-130 | | | |
| Thallium | 78.6 | 1.0 | 0.20 | ug/l | 80.0 | 0.228 | 98 | 70-130 | | | |
| Zinc | 150 | 20 | 5.0 | ug/l | 80.0 | 72.4 | 97 | 70-130 | | | |
| Matrix Spike Analyzed: 01/25/2010 (10A | 1800-MS2) | | | | Sou | irce: ITA | 1478_01 | | | | |
| Antimony | 73.2 | 4.0 | 0.60 | ug/l | 80.0 | 0.938 | 90 | 70-130 | | | |
| Cadmium | 80.5 | 2.0 | 0.20 | ug/l | 80.0 | 0.938 | 100 | 70-130 | | | |
| Copper | 101 | 2.0 4.0 | 1.0 | ug/l | 80.0 80.0 | 19.2 | 100 | 70-130 | | | |
| Lead | 130 | 2.0 | 0.40 | ug/l | 80.0 | 47.6 | 102 | 70-130 | | | |
| Selenium | 81.5 | 2.0 4.0 | 1.0 | ug/l | 80.0 | | 105 | 70-130 | | | |
| Thallium | 81.5 | 4.0 2.0 | 0.40 | | 80.0 80.0 | 1.61 0.594 | 100 | 70-130 | | | |
| | 81.9 186 | 2.0 40 | 0.40 10 | ug/l | | | 102 | | | | |
| Zinc | 180 | 40 | 10 | ug/l | 80.0 | 93.9 | 110 | 70-130 | | | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---|--------------------|------|----------|----------------|------------------|---------|----------------|------|--------------|--------------------|
| Batch: 10A1800 Extracted: 01/20/10 | <u>)</u> | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 01/25/2010 | | | Sou | rce: ITA | 1401-01 | | | | | | |
| Antimony | 81.3 | 2.0 | 0.30 | ug/l | 80.0 | 2.44 | 99 | 70-130 | 0.2 | 20 | |
| Cadmium | 79.0 | 1.0 | 0.10 | ug/l | 80.0 | ND | 99 | 70-130 | 1 | 20 | |
| Copper | 87.7 | 2.0 | 0.50 | ug/l | 80.0 | 6.94 | 101 | 70-130 | 2 | 20 | |
| Lead | 120 | 1.0 | 0.20 | ug/l | 80.0 | 39.4 | 101 | 70-130 | 2 | 20 | |
| Selenium | 79.9 | 2.0 | 0.50 | ug/l | 80.0 | ND | 100 | 70-130 | 3 | 20 | |
| Thallium | 81.2 | 1.0 | 0.20 | ug/l | 80.0 | 0.228 | 101 | 70-130 | 3 | 20 | |
| Zinc | 153 | 20 | 5.0 | ug/l | 80.0 | 72.4 | 101 | 70-130 | 2 | 20 | |
| Batch: 10A1830 Extracted: 01/20/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 01/20/2010 (10A1830-B | LK1) | | | | | | | | | | |
| Mercury | ND | 0.20 | 0.10 | ug/l | | | | | | | |
| LCS Analyzed: 01/20/2010 (10A1830-BS | 1) | | | | | | | | | | |
| Mercury | 8.22 | 0.20 | 0.10 | ug/l | 8.00 | | 103 | 85-115 | | | |
| Matrix Spike Analyzed: 01/20/2010 (10A | Matrix Spike Analyzed: 01/20/2010 (10A1830-MS1) | | | | Sou | rce: ITA | 1359-01 | | | | |
| Mercury | 8.18 | 0.20 | 0.10 | ug/l | 8.00 | ND | 102 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 01/20/2010 | (10A1830-MS | SD1) | | | Sou | rce: ITA | 1359-01 | | | | |
| Mercury | 8.18 | 0.20 | 0.10 | ug/l | 8.00 | ND | 102 | 70-130 | 0.08 | 20 | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

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: 10A1999 Extracted: 01/21/10 |) | | | | | | | | | | |
| | _ | | | | | | | | | | |
| Blank Analyzed: 01/25/2010 (10A1999-B | BLK1) | | | | | | | | | | |
| Antimony | ND | 2.0 | 0.30 | ug/l | | | | | | | |
| Cadmium | ND | 1.0 | 0.10 | ug/l | | | | | | | |
| Copper | ND | 2.0 | 0.50 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| Selenium | ND | 2.0 | 0.50 | ug/l | | | | | | | |
| Thallium | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| Zinc | ND | 20 | 5.0 | ug/l | | | | | | | |
| LCS Analyzed: 01/25/2010 (10A1999-BS | 51) | | | | | | | | | | |
| Antimony | 80.9 | 2.0 | 0.30 | ug/l | 80.0 | | 101 | 85-115 | | | |
| Cadmium | 79.9 | 1.0 | 0.10 | ug/l | 80.0 | | 100 | 85-115 | | | |
| Copper | 84.4 | 2.0 | 0.50 | ug/l | 80.0 | | 106 | 85-115 | | | |
| Lead | 88.1 | 1.0 | 0.20 | ug/l | 80.0 | | 110 | 85-115 | | | |
| Selenium | 84.8 | 2.0 | 0.50 | ug/l | 80.0 | | 106 | 85-115 | | | |
| Thallium | 86.6 | 1.0 | 0.20 | ug/l | 80.0 | | 108 | 85-115 | | | |
| Zinc | 84.1 | 20 | 5.0 | ug/l | 80.0 | | 105 | 85-115 | | | |
| Matrix Spike Analyzed: 01/25/2010 (10A | (1999-MS1) | | | | Sou | irce: ITA | 1358-02 | | | | |
| Antimony | 79.8 | 2.0 | 0.30 | ug/l | 80.0 | ND | 100 | 70-130 | | | |
| Cadmium | 78.2 | 1.0 | 0.10 | ug/l | 80.0 | 0.217 | 98 | 70-130 | | | |
| Copper | 86.7 | 2.0 | 0.50 | ug/l | 80.0 | 4.63 | 103 | 70-130 | | | |
| Lead | 91.4 | 1.0 | 0.20 | ug/l | 80.0 | 5.21 | 108 | 70-130 | | | |
| Selenium | 79.8 | 2.0 | 0.50 | ug/l | 80.0 | ND | 100 | 70-130 | | | |
| Thallium | 85.9 | 1.0 | 0.20 | ug/l | 80.0 | 0.290 | 107 | 70-130 | | | |
| Zinc | 110 | 20 | 5.0 | ug/l | 80.0 | 29.7 | 100 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 01/25/2010 | (10A1999-N | ISD1) | | | Sou | irce: ITA | 1358-02 | | | | |
| Antimony | 80.7 | 2.0 | 0.30 | ug/l | 80.0 | ND | 101 | 70-130 | 1 | 20 | |
| Cadmium | 79.1 | 1.0 | 0.10 | ug/l | 80.0 | 0.217 | 99 | 70-130 | 1 | 20 | |
| Copper | 85.7 | 2.0 | 0.50 | ug/l | 80.0 | 4.63 | 101 | 70-130 | 1 | 20 | |
| Lead | 91.0 | 1.0 | 0.20 | ug/l | 80.0 | 5.21 | 107 | 70-130 | 0.5 | 20 | |
| Selenium | 80.6 | 2.0 | 0.50 | ug/l | 80.0 | ND | 101 | 70-130 | 1 | 20 | |
| Thallium | 86.1 | 1.0 | 0.20 | ug/l | 80.0 | 0.290 | 107 | 70-130 | 0.3 | 20 | |
| Zinc | 109 | 20 | 5.0 | ug/l | 80.0 | 29.7 | 99 | 70-130 | 1 | 20 | |
| | | | | | | | | | | | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

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: 10A2023 Extracted: 01/21/10 | _ | | | | | | | | | | |
| Blank Analyzed: 01/21/2010 (10A2023-B | LK1) | | | | | | | | | | |
| Mercury | ND | 0.20 | 0.10 | ug/l | | | | | | | |
| LCS Analyzed: 01/21/2010 (10A2023-BS | 1) | | | | | | | | | | |
| Mercury | 8.84 | 0.20 | 0.10 | ug/l | 8.00 | | 110 | 85-115 | | | |
| Matrix Spike Analyzed: 01/21/2010 (10A | 2023-MS1) | | | | Source: ITA1481-02 | | | | | | |
| Mercury | 8.85 | 0.20 | 0.10 | ug/l | 8.00 | ND | 111 | 70-130 | | | |
| Matrix Spike Dup Analyzed: 01/21/2010 (10A2023-MSD1) | | | | | Sou | rce: ITA | 1481-02 | | | | |
| Mercury | 8.92 | 0.20 | 0.10 | ug/l | 8.00 | ND | 111 | 70-130 | 0.8 | 20 | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|--|--------------------|----------------|--------------|----------------|------------------|------------|------------------|--------|--------------|--------------------|
| Batch: 10A1646 Extracted: 01/19/10 | | | | | | | | | | | |
| Disale Assistant d. 01/10/2010 /10 / 17 / 0 | I Z1) | | | | | | | | | | |
| Blank Analyzed: 01/19/2010 (10A1646-BI | , | 0.50 | 0.25 | Л | | | | | | | |
| Chloride | ND | 0.50 | 0.25 | mg/l | | | | | | | |
| Nitrate-N Nitrite-N | ND ND | 0.11 | 0.060 | mg/l | | | | | | | |
| Nitrate/Nitrite-N | ND ND | 0.15 0.26 | 0.090 0.15 | mg/l | | | | | | | |
| Sulfate | ND ND | 0.26 | 0.15 | mg/l | | | | | | | |
| Sunate | ND | 0.50 | 0.20 | mg/l | | | | | | | |
| LCS Analyzed: 01/19/2010 (10A1646-BS1 |) | | | | | | | | | | |
| Chloride | 4.86 | 0.50 | 0.25 | mg/l | 5.00 | | 97 | 90-110 | | | |
| Nitrate-N | 1.14 | 0.11 | 0.060 | mg/l | 1.13 | | 101 | 90-110 | | | |
| Nitrite-N | 1.51 | 0.15 | 0.090 | mg/l | 1.52 | | 100 | 90-110 | | | |
| Sulfate | 9.85 | 0.50 | 0.20 | mg/l | 10.0 | | 98 | 90-110 | | | |
| Matrix Spike Analyzed: 01/19/2010 (10A1 | 646-MS1) | | | | Sou | rce: ITA | 359-01 | | | | |
| Chloride | 13.5 | 0.50 | 0.25 | mg/l | 5.00 | 8.18 | 107 | 80-120 | | | |
| Nitrate-N | 2.77 | 0.11 | 0.060 | mg/l | 1.13 | 1.48 | 114 | 80-120 | | | |
| Nitrite-N | 1.63 | 0.15 | 0.090 | mg/l | 1.52 | ND | 107 | 80-120 | | | |
| Sulfate | 35.5 | 0.50 | 0.20 | mg/l | 10.0 | 24.6 | 108 | 80-120 | | | |
| Matrix Spike Analyzed: 01/19/2010 (10A1 | 646-MS2) | | | | Sou | rce: ITA | 466-01 | | | | |
| Chloride | 6.34 | 0.50 | 0.25 | mg/l | 5.00 | 1.60 | 95 | 80-120 | | | |
| Nitrate-N | 1.23 | 0.11 | 0.060 | mg/l | 1.13 | 0.0658 | 103 | 80-120 | | | |
| Nitrite-N | 1.57 | 0.15 | 0.090 | mg/l | 1.52 | ND | 103 | 80-120 | | | |
| Sulfate | 11.6 | 0.50 | 0.20 | mg/l | 10.0 | 1.27 | 103 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 01/19/2010 (| Matrix Spike Dup Analyzed: 01/19/2010 (10A1646-MSD1) | | | | | | 359-01 | | | | |
| Chloride | 13.4 | 0.50 | 0.25 | mg/l | 5.00 | 8.18 | 105 | 80-120 | 0.6 | 20 | |
| Nitrate-N | | | | | | | | | | | |
| | 2.74 | 0.11 | 0.060 | mg/l | 1.13 | 1.48 | 111 | 80-120 | 1 | 20 | |
| Nitrite-N | 2.74 1.65 | 0.11 0.15 | 0.060 0.090 | mg/l mg/l | 1.13 1.52 | 1.48 ND | 111 109 | 80-120 80-120 | 1 1 | 20 20 | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|------------|--------------------|------|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10A1730 Extracted: 01/19/10 | _ | | | | | | | | | | |
| Blank Analyzed: 01/20/2010 (10A1730-B | LK1) | | | | | | | | | | |
| Ammonia-N (Distilled) | ND | 0.50 | 0.50 | mg/l | | | | | | | |
| LCS Analyzed: 01/20/2010 (10A1730-BS | 1) | | | | | | | | | | |
| Ammonia-N (Distilled) | 10.4 | 0.50 | 0.50 | mg/l | 10.0 | | 104 | 80-115 | | | |
| Matrix Spike Analyzed: 01/20/2010 (10A | 1730-MS1) | | | | Sou | rce: ITA | 1289-05 | | | | |
| Ammonia-N (Distilled) | 10.4 | 0.50 | 0.50 | mg/l | 10.0 | ND | 104 | 70-120 | | | |
| Matrix Spike Dup Analyzed: 01/20/2010 (10A1730-MSD1) | | | | | | rce: ITA | 1289-05 | | | | |
| Ammonia-N (Distilled) | 10.4 | 0.50 | 0.50 | mg/l | 10.0 | ND | 104 | 70-120 | 0 | 15 | |
| Batch: 10A1751 Extracted: 01/20/10 | - | | | | | | | | | | |
| Blank Analyzed: 01/20/2010 (10A1751-B | LK1) | | | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 1.0 | mg/l | | | | | | | |
| LCS Analyzed: 01/20/2010 (10A1751-BS | 1) | | | | | | | | | | |
| Total Dissolved Solids | 998 | 10 | 1.0 | mg/l | 1000 | | 100 | 90-110 | | | |
| Duplicate Analyzed: 01/20/2010 (10A175 | 1-DUP1) | | | | Sou | rce: ITA | 1458-01 | | | | |
| Total Dissolved Solids | 1020 | 10 | 1.0 | mg/l | | 1020 | | | 0.8 | 10 | |
| Batch: 10A2275 Extracted: 01/25/10 | _ | | | | | | | | | | |
| | | | | | | | | | | | |
| Blank Analyzed: 01/25/2010 (10A2275-B Perchlorate | LKI) ND | 4.0 | 0.90 | ug/l | | | | | | | |
| 1 cromorado | 112 | ч.ч | 0.70 | ug/1 | | | | | | | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-----------|--------------------|----------|---------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 10A2275 Extracted: 01/25/10 | <u>)</u> | | | | | | | | | | |
| LCS Analyzed: 01/25/2010 (10A2275-BS | 1) | | | | | | | | | | |
| Perchlorate | 23.8 | 4.0 | 0.90 | ug/l | 25.0 | | 95 | 85-115 | | | |
| Matrix Spike Analyzed: 01/25/2010 (10A | 2275-MS1) | | | | Sou | rce: ITA | 1654-13 | | | | |
| Perchlorate | 28.7 | 4.0 | 0.90 | ug/l | 25.0 | 6.12 | 90 | 80-120 | | | |
| Matrix Spike Dup Analyzed: 01/25/2010 | | Sou | rce: ITA | 1654-13 | | | | | | | |
| Perchlorate | 29.6 | 4.0 | 0.90 | ug/l | 25.0 | 6.12 | 94 | 80-120 | 3 | 20 | |
| Batch: 10C1775 Extracted: 03/15/10 | <u>)</u> | | | | | | | | | | |
| Blank Analyzed: 03/15/2010 (10C1775-B | LK1) | | | | | | | | | | |
| Total Suspended Solids | ND | 10 | 1.0 | mg/l | | | | | | | |
| LCS Analyzed: 03/15/2010 (10C1775-BS | 1) | | | | | | | | | | |
| Total Suspended Solids | 982 | 10 | 1.0 | mg/l | 1000 | | 98 | 85-115 | | | |
| Duplicate Analyzed: 03/15/2010 (10C177 | 75-DUP1) | | | | Sou | rce: ITA | 1358-02 | | | | |
| Total Suspended Solids | 768 | 40 | 4.0 | mg/l | | 776 | | | 1 | 10 | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

ASTM 5174-91

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|--------------|--------------------|------|-------|----------------|------------------|----------|----------------|-----|--------------|--------------------|
| Batch: 35029 Extracted: 02/04/10 | | | | | | | | | | | |
| Matrix Spike Dup Analyzed: 02/08/2010 | (F0A20048600 |)1D) | | | Sou | rce: F0A2 | 20048600 | 1 | | | |
| Total Uranium | 29.2 | 0.7 | 0.2 | pCi/L | 27.7 | -0.0334 | 105 | 62-150 | 2 | 20 | |
| Matrix Spike Analyzed: 02/08/2010 (F0A | 200486001S) | | | | Sou | rce: F0A2 | 20048600 | 1 | | | |
| Total Uranium | 28.8 | 0.7 | 0.2 | pCi/L | 27.7 | -0.0334 | 104 | 62-150 | | | |
| Blank Analyzed: 02/08/2010 (F0B040000 | 029B) | | | | Sou | rce: | | | | | |
| Total Uranium | -0.0623 | 0.693 | 0.21 | pCi/L | | | | - | | | U |
| LCS Analyzed: 02/08/2010 (F0B0400000 | 29C) | | | | Sou | rce: | | | | | |
| Total Uranium | 29.2 | 0.7 | 0.2 | pCi/L | 27.7 | | 105 | 90-120 | | | |
| LCS Dup Analyzed: 02/08/2010 (F0B040 | 000029D) | | | | Sou | rce: | | | | | |
| Total Uranium | 5.67 | 0.69 | 0.21 | pCi/L | 5.54 | | 102 | 90-120 | | | |



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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA 900.0 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---------------------|--------------------|------|-------|----------------|------------------|----------|----------------|-----|--------------|--------------------|
| Batch: 25415 Extracted: 01/25/10 | | | | | | | | | | | |
| Matrix Spike Analyzed: 01/29/2010 (F0A | \200486001S) | | | | Sou | rce: F0A2 | 20048600 | 1 | | | |
| Gross Alpha | 6.9 | 3 | 1 | pCi/L | 49.4 | 0.98 | 12 | 35-150 | | | а |
| Gross Beta | 10 | 4 | 1.6 | pCi/L | 68.1 | 0.83 | 14 | 54-150 | | | а |
| Duplicate Analyzed: 01/29/2010 (F0A200 | 0486001X) | | | | Sou | rce: F0A2 | 20048600 | 1 | | | |
| Gross Alpha | 0.71 | 3 | 1.4 | pCi/L | | 0.98 | | - | | | Jb |
| Gross Beta | 1.6 | 4 | 1.6 | pCi/L | | 0.83 | | - | | | Јb |
| Blank Analyzed: 01/29/2010 (F0A250000 |)415B) | | | | Sou | rce: | | | | | |
| Gross Alpha | -0.03 | 3 | 0.71 | pCi/L | | | | - | | | U |
| Gross Beta | -0.26 | 4 | 1.5 | pCi/L | | | | - | | | U |
| LCS Analyzed: 01/29/2010 (F0A2500004 | 15C) | | | | Sou | rce: | | | | | |
| Gross Alpha | 45.4 | 3 | 0.9 | pCi/L | 49.4 | | 92 | 62-134 | | | |
| Gross Beta | 73.4 | 4 | 1.6 | pCi/L | 68.1 | | 108 | 58-133 | | | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA 901.1 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---------------------------------------|-----------|--------------------|-----|-------|----------------|------------------|---------|----------------|-----|--------------|--------------------|
| Batch: 23036 Extracted: 01/23/10 | | | | | | | | | | | |
| Duplicate Analyzed: 01/26/2010 (F0A21 | 0532001X) | | | | Sou | rce: ITA | 1358-02 | | | | |
| Cesium 137 | -1.4 | 20 | 18 | pCi/L | | -2.3 | | - | | | U |
| Potassium 40 | -60 | NA | 250 | pCi/L | | -30 | | - | | | U |
| Blank Analyzed: 01/26/2010 (F0A23000 | 0036B) | | | | Sou | rce: | | | | | |
| Cesium 137 | -0.4 | 20 | 12 | pCi/L | | | | - | | | U |
| Potassium 40 | -70 | NA | 210 | pCi/L | | | | - | | | U |
| LCS Analyzed: 01/26/2010 (F0A230000 | 036C) | | | | Sou | rce: | | | | | |
| Americium 241 | 132000 | NA | 500 | pCi/L | 141000 | | 93 | 87-110 | | | |
| Cobalt 60 | 79000 | NA | 200 | pCi/L | 87900 | | 90 | 89-110 | | | |
| Cesium 137 | 48200 | 20 | 200 | pCi/L | 53100 | | 91 | 90-110 | | | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA 903.0 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--------------------------------------|-----------|--------------------|------|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 22145 Extracted: 01/22/10 | | | | | | | | | | | |
| Blank Analyzed: 02/08/2010 (F0A22000 | 0145B) | | | | Sou | rce: | | | | | |
| Radium (226) | 0.111 | 1 | 0.13 | pCi/L | | | | - | | | U |
| LCS Analyzed: 02/08/2010 (F0A220000 | 145C) | | | | Sou | rce: | | | | | |
| Radium (226) | 10.7 | 1 | 0.1 | pCi/L | 11.3 | | 95 | 68-136 | | | |
| LCS Dup Analyzed: 02/08/2010 (F0A22 | 0000145L) | | | | Sou | rce: | | | | | |
| Radium (226) | 11.2 | 1 | 0.2 | pCi/L | 11.3 | | 100 | 68-136 | 5 | 40 | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA 904 MOD

| Analyte Batch: 22148 Extracted: 01/22/10 | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|---------------------------|--------------------|------|-------|--------------------|------------------|------|----------------|-----|--------------|--------------------|
| Blank Analyzed: 02/08/2010 (F0A22000 Radium 228 | 0148B) 0.22 | 1 | 0.59 | pCi/L | Sou | rce: | | - | | | U |
| LCS Analyzed: 02/08/2010 (F0A220000) Radium 228 | 8.22 | 1 | 0.61 | pCi/L | Sou 6.45 | rce: | 127 | 60-142 | | | |
| LCS Dup Analyzed: 02/08/2010 (F0A22) Radium 228 | 0 000148L) 7.58 | 1 | 0.57 | pCi/L | Sou 6.45 | rce: | 118 | 60-142 | 8 | 40 | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA 905 MOD

| Analyte Batch: 22149 Extracted: 01/22/10 | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|--------------------------|--------------------|------|-------|--------------------|------------------|------|----------------|-----|--------------|--------------------|
| Blank Analyzed: 02/01/2010 (F0A22000 Strontium 90 | 0149B) -0.01 | 3 | 0.38 | pCi/L | Sou | rce: | | - | | | U |
| LCS Analyzed: 02/01/2010 (F0A220000 Strontium 90 | 149C) 6.74 | 3 | 0.39 | pCi/L | Sou 6.81 | rce: | 99 | 80-130 | | | |
| LCS Dup Analyzed: 02/01/2010 (F0A22 Strontium 90 | 0000149L) 6.99 | 3 | 0.38 | pCi/L | Sou 6.81 | rce: | 103 | 80-130 | 4 | 40 | |



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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA 906.0 MOD

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|--|-------------|--------------------|-----|-------|----------------|------------------|----------|----------------|-----|--------------|--------------------|
| Batch: 28080 Extracted: 01/28/10 | | | | | | | | | | | |
| Duplicate Analyzed: 01/29/2010 (F0A20 |)486001X) | | | | Sou | rce: F0A2 | 20048600 | 1 | | | |
| Tritium | -49 | 500 | 140 | pCi/L | | 99 | | - | | | U |
| Matrix Spike Analyzed: 01/29/2010 (F0A | 200494001S) | | | | Sou | rce: F0A2 | 20049400 | 1 | | | |
| Tritium | 4350 | 500 | 140 | pCi/L | 4540 | 64 | 94 | 62-147 | | | |
| Blank Analyzed: 01/28/2010 (F0A280000 | 0080B) | | | | Sou | rce: | | | | | |
| Tritium | 250 | 500 | 140 | pCi/L | | | | - | | | Jb |
| LCS Analyzed: 01/28/2010 (F0A2800000 | 80C) | | | | Sou | rce: | | | | | |
| Tritium | 4680 | 500 | 140 | pCi/L | 4540 | | 103 | 85-112 | | | |

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Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA-5 1613B

| | | Reporting | g | | Spike | Source | | %REC | | RPD | Data |
|-------------------------------------|----------|-----------|-----------|-------|-------|--------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 26267 Extracted: 01/26/10 | | | | | | | | | | | |
| Blank Analyzed: 02/02/2010 (G0A2600 | 00267B) | | | | Sou | rce: | | | | | |
| 1,2,3,4,6,7,8-HpCDD | 7.9e-006 | 0.00005 | 0.0000056 | ug/L | | | | - | | | J |
| 1,2,3,4,6,7,8-HpCDF | 6.9e-006 | 0.00005 | 0.0000044 | ug/L | | | | - | | | J |
| 1,2,3,4,7,8,9-HpCDF | ND | 0.00005 | 0.0000071 | ug/L | | | | - | | | |
| 1,2,3,4,7,8-HxCDD | 4.6e-006 | 0.00005 | 0.0000048 | ug/L | | | | - | | | J |
| 1,2,3,4,7,8-HxCDF | ND | 0.00005 | 0.0000039 | ug/L | | | | - | | | |
| 1,2,3,6,7,8-HxCDD | 6.5e-006 | 0.00005 | 0.0000041 | ug/L | | | | - | | | J |
| 1,2,3,6,7,8-HxCDF | 5.7e-006 | 0.00005 | 0.0000034 | ug/L | | | | - | | | J |
| 1,2,3,7,8,9-HxCDD | 2.7e-006 | 0.00005 | 0.0000033 | ug/L | | | | - | | | J, Q |
| 1,2,3,7,8,9-HxCDF | 2.2e-006 | 0.00005 | 0.0000036 | ug/L | | | | - | | | J, Q |
| 1,2,3,7,8-PeCDD | ND | 0.00005 | 0.0000067 | ug/L | | | | - | | | |
| 1,2,3,7,8-PeCDF | ND | 0.00005 | 0.0000038 | ug/L | | | | - | | | |
| 2,3,4,6,7,8-HxCDF | 6e-006 | 0.00005 | 0.0000031 | ug/L | | | | - | | | J, Q |
| 2,3,4,7,8-PeCDF | ND | 0.00005 | 0.0000042 | ug/L | | | | - | | | |
| 2,3,7,8-TCDD | ND | 0.00001 | 0.0000027 | ug/L | | | | - | | | |
| 2,3,7,8-TCDF | ND | 0.00001 | 0.000002 | ug/L | | | | - | | | |
| OCDD | 2e-005 | 0.0001 | 0.0000089 | ug/L | | | | - | | | J, Q |
| OCDF | 1.6e-005 | 0.0001 | 0.0000089 | ug/L | | | | - | | | J |
| Total HpCDD | 7.9e-006 | 0.00005 | 0.0000056 | ug/L | | | | - | | | J |
| Total HpCDF | 6.9e-006 | 0.00005 | 0.0000044 | ug/L | | | | - | | | J |
| Total HxCDD | 1.4e-005 | 0.00005 | 0.0000035 | ug/L | | | | - | | | J, Q |
| Total HxCDF | 1.4e-005 | 0.00005 | 0.0000031 | ug/L | | | | - | | | J, Q |
| Total PeCDD | ND | 0.00005 | 0.0000067 | ug/L | | | | - | | | |
| Total PeCDF | ND | 0.00005 | 0.0000026 | ug/L | | | | - | | | |
| Total TCDD | ND | 0.00001 | 0.0000027 | ug/L | | | | - | | | |
| Total TCDF | ND | 0.00001 | 0.000002 | ug/L | | | | - | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDD | 0.0018 | | | ug/L | 0.002 | | 91 | 23-140 | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDF | 0.0021 | | | ug/L | 0.002 | | 104 | 28-143 | | | |
| Surrogate: 13C-1,2,3,4,7,8,9-HpCDF | 0.0019 | | | ug/L | 0.002 | | 93 | 26-138 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDD | 0.0017 | | | ug/L | 0.002 | | 83 | 32-141 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDF | 0.0015 | | | ug/L | 0.002 | | 77 | 26-152 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDD | 0.0018 | | | ug/L | 0.002 | | 88 | 28-130 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDF | 0.0017 | | | ug/L | 0.002 | | 85 | 26-123 | | | |
| Surrogate: 13C-1,2,3,7,8,9-HxCDF | 0.0017 | | | ug/L | 0.002 | | 85 | 29-147 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDD | 0.0013 | | | ug/L | 0.002 | | 65 | 25-181 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDF | 0.0013 | | | ug/L | 0.002 | | 66 | 24-185 | | | |

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Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA-5 1613B

| | | Reporting | | | Spike | Source | | %REC | | RPD | Data |
|--------------------------------------|----------|-----------|-----------|-------|--------|--------|------|--------|-----|-------|------------|
| Analyte | Result | Limit | MDL | Units | Level | Result | %REC | Limits | RPD | Limit | Qualifiers |
| Batch: 26267 Extracted: 01/26/10 | | | | | | | | | | | |
| | | | | | ~ | | | | | | |
| Blank Analyzed: 02/02/2010 (G0A26000 | , | | | _ | Sou | rce: | | | | | |
| Surrogate: 13C-2,3,4,6,7,8-HxCDF | 0.0019 | | | ug/L | 0.002 | | 93 | 28-136 | | | |
| Surrogate: 13C-2,3,4,7,8-PeCDF | 0.0014 | | | ug/L | 0.002 | | 69 | 21-178 | | | |
| Surrogate: 13C-2,3,7,8-TCDD | 0.0012 | | | ug/L | 0.002 | | 61 | 25-164 | | | |
| Surrogate: 13C-2,3,7,8-TCDF | 0.0012 | | | ug/L | 0.002 | | 60 | 24-169 | | | |
| Surrogate: 13C-OCDD | 0.0036 | | | ug/L | 0.004 | | 89 | 17-157 | | | |
| Surrogate: 37Cl4-2,3,7,8-TCDD | 0.00077 | | | ug/L | 0.0008 | | 96 | 35-197 | | | |
| LCS Analyzed: 02/02/2010 (G0A2600002 | 267C) | | | | Sou | rce: | | | | | |
| 1,2,3,4,6,7,8-HpCDD | 0.00102 | 0.00005 | 0.0000092 | ug/L | 0.001 | | 102 | 70-140 | | | |
| 1,2,3,4,6,7,8-HpCDF | 0.00108 | 0.00005 | 0.0000073 | ug/L | 0.001 | | 108 | 82-122 | | | |
| 1,2,3,4,7,8,9-HpCDF | 0.00111 | 0.00005 | 0.0000012 | ug/L | 0.001 | | 111 | 78-138 | | | |
| 1,2,3,4,7,8-HxCDD | 0.00103 | 0.00005 | 0.0000078 | ug/L | 0.001 | | 103 | 70-164 | | | |
| 1,2,3,4,7,8-HxCDF | 0.00114 | 0.00005 | 0.0000051 | ug/L | 0.001 | | 114 | 72-134 | | | |
| 1,2,3,6,7,8-HxCDD | 0.000964 | 0.00005 | 0.0000063 | ug/L | 0.001 | | 96 | 76-134 | | | |
| 1,2,3,6,7,8-HxCDF | 0.00102 | 0.00005 | 0.0000045 | ug/L | 0.001 | | 102 | 84-130 | | | |
| 1,2,3,7,8,9-HxCDD | 0.000912 | 0.00005 | 0.0000055 | ug/L | 0.001 | | 91 | 64-162 | | | |
| 1,2,3,7,8,9-HxCDF | 0.00102 | 0.00005 | 0.0000046 | ug/L | 0.001 | | 102 | 78-130 | | | |
| 1,2,3,7,8-PeCDD | 0.000999 | 0.00005 | 0.0000085 | ug/L | 0.001 | | 100 | 70-142 | | | |
| 1,2,3,7,8-PeCDF | 0.00104 | 0.00005 | 0.0000054 | ug/L | 0.001 | | 104 | 80-134 | | | |
| 2,3,4,6,7,8-HxCDF | 0.00104 | 0.00005 | 0.000004 | ug/L | 0.001 | | 104 | 70-156 | | | |
| 2,3,4,7,8-PeCDF | 0.00106 | 0.00005 | 0.000006 | ug/L | 0.001 | | 106 | 68-160 | | | |
| 2,3,7,8-TCDD | 0.000175 | 0.00001 | 0.0000038 | ug/L | 0.0002 | | 88 | 67-158 | | | |
| 2,3,7,8-TCDF | 0.0002 | 0.00001 | 0.0000027 | ug/L | 0.0002 | | 100 | 75-158 | | | |
| OCDD | 0.002 | 0.0001 | 0.0000021 | ug/L | 0.002 | | 100 | 78-144 | | | |
| OCDF | 0.00214 | 0.0001 | 0.000001 | ug/L | 0.002 | | 107 | 63-170 | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDD | 0.00169 | | | ug/L | 0.002 | | 84 | 23-140 | | | |
| Surrogate: 13C-1,2,3,4,6,7,8-HpCDF | 0.00191 | | | ug/L | 0.002 | | 96 | 28-143 | | | |
| Surrogate: 13C-1,2,3,4,7,8,9-HpCDF | 0.00165 | | | ug/L | 0.002 | | 83 | 26-138 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDD | 0.00133 | | | ug/L | 0.002 | | 66 | 32-141 | | | |
| Surrogate: 13C-1,2,3,4,7,8-HxCDF | 0.00139 | | | ug/L | 0.002 | | 69 | 26-152 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDD | 0.00175 | | | ug/L | 0.002 | | 88 | 28-130 | | | |
| Surrogate: 13C-1,2,3,6,7,8-HxCDF | 0.00162 | | | ug/L | 0.002 | | 81 | 26-123 | | | |
| Surrogate: 13C-1,2,3,7,8,9-HxCDF | 0.00161 | | | ug/L | 0.002 | | 80 | 29-147 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDD | 0.00124 | | | ug/L | 0.002 | | 62 | 25-181 | | | |
| Surrogate: 13C-1,2,3,7,8-PeCDF | 0.00123 | | | ug/L | 0.002 | | 62 | 24-185 | | | |
| Surrogate: 13C-2,3,4,6,7,8-HxCDF | 0.00171 | | | ug/L | 0.002 | | 86 | 28-136 | | | |
| | | | | | | | | | | | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

METHOD BLANK/QC DATA

EPA-5 1613B

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|-------------------------------------|----------|--------------------|-----|-------|----------------|------------------|------|----------------|-----|--------------|--------------------|
| Batch: 26267 Extracted: 01/26/10 | | | | | | | | | | | |
| LCS Analyzed: 02/02/2010 (G0A260000 | 267C) | | | | Sou | rce: | | | | | |
| Surrogate: 13C-2,3,4,7,8-PeCDF | 0.00127 | | | ug/L | 0.002 | | 63 | 21-178 | | | |
| Surrogate: 13C-2,3,7,8-TCDD | 0.00116 | | | ug/L | 0.002 | | 58 | 25-164 | | | |
| Surrogate: 13C-2,3,7,8-TCDF | 0.00112 | | | ug/L | 0.002 | | 56 | 24-169 | | | |
| Surrogate: 13C-OCDD | 0.00318 | | | ug/L | 0.004 | | 80 | 17-157 | | | |
| Surrogate: 37Cl4-2,3,7,8-TCDD | 0.000752 | | | ug/L | 0.0008 | | 94 | 35-197 | | | |

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Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

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.

| | | | | | | Compliance |
|------------------|----------|--|-------|--------|-----|------------|
| <u>LabNumber</u> | Analysis | Analyte | Units | Result | MRL | Limit |
| ITA1358-01 | 1664-HEM | Hexane Extractable Material (Oil & Greas | mg/l | 0.095 | 4.8 | 15 |

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 |
|------------|------------------------------|------------------------|-------|--------|------|---------------------|
| ITA1358-02 | Antimony-200.8 | Antimony | ug/l | 0.062 | 2.0 | 6 |
| ITA1358-02 | Cadmium-200.8 | Cadmium | ug/l | 0.25 | 1.0 | 3.1 |
| ITA1358-02 | Chloride - 300.0 | Chloride | mg/l | 6.05 | 0.50 | 150 |
| ITA1358-02 | Copper-200.8 | Copper | ug/l | 6.75 | 2.0 | 14 |
| ITA1358-02 | Lead-200.8 | Lead | ug/l | 7.94 | 1.0 | 5.2 |
| ITA1358-02 | Nitrate-N, 300.0 | Nitrate-N | mg/l | 0.64 | 0.11 | 8 |
| ITA1358-02 | Nitrite-N, 300.0 | Nitrite-N | mg/l | 0 | 0.15 | 1 |
| ITA1358-02 | Nitrogen, NO3+NO2 -N EPA 300 | 0.0 Nitrate/Nitrite-N | mg/l | 0.64 | 0.26 | 8 |
| ITA1358-02 | Perchlorate 314.0 - Default | Perchlorate | ug/l | 0.54 | 4.0 | 6 |
| ITA1358-02 | Selenium-200.8 | Selenium | ug/l | 0.35 | 2.0 | 5 |
| ITA1358-02 | Sulfate-300.0 | Sulfate | mg/l | 7.22 | 0.50 | 300 |
| ITA1358-02 | TDS - SM2540C | Total Dissolved Solids | mg/l | 237 | 10 | 950 |
| ITA1358-02 | Thallium-200.8 | Thallium | ug/l | 0 | 1.0 | 2 |
| ITA1358-02 | Zinc-200.8 | Zinc | ug/l | 47 | 20 | 160 |

TestAmerica Irvine

Kathleen A. Robb For Heather Clark Project Manager



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

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

DATA QUALIFIERS AND DEFINITIONS

- **a** Spiked analyte outside of stated QC limits.
- **B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- C Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- H-1 Sample analysis performed past the method-specified holding time per client's approval.
- J Estimated result. Result is less than the reporting limit.
- Ja 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.
- **Jb** Result is greater than sample detection limit but less than stated reporting limit.
- **Q** Estimated maximum possible concentration (EMPC).
- U Result is less than the sample detection limit.
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- **RPD** Relative Percent Difference



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MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 008

Report Number: ITA1358

Sampled: 01/18/10 Received: 01/18/10

Certification Summary

TestAmerica Irvine

| Method | Matrix | Nelac | California |
|----------------|--------|-------|------------|
| EDD + Level 4 | Water | N/A | N/A |
| EPA 1664A | Water | Х | Х |
| EPA 200.8-Diss | Water | Х | Х |
| EPA 200.8 | Water | Х | Х |
| EPA 245.1-Diss | Water | Х | Х |
| EPA 245.1 | Water | Х | Х |
| EPA 300.0 | Water | Х | Х |
| EPA 314.0 | Water | Х | Х |
| Filtration | Water | N/A | N/A |
| SM 2540D | Water | Х | Х |
| SM2540C | Water | Х | |
| SM4500NH3-C | Water | Х | Х |

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

Subcontracted Laboratories

Aquatic Testing Laboratories-SUB California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnic Samples: ITA1358-02

tAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Routine Outfall 008

Sampled: 01/18/10 Received: 01/18/10

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

Report Number: ITA1358

TestAmerica St. Louis

13715 Rider Trail North - Earth City, MO 63045 ASTM 5174-91 Method Performed: Samples: ITA1358-02

- Method Performed: EPA 900.0 MOD Samples: ITA1358-02
- Method Performed: EPA 901.1 MOD Samples: ITA1358-02
- Method Performed: EPA 903.0 MOD Samples: ITA1358-02
- Method Performed: EPA 904 MOD Samples: ITA1358-02
- Method Performed: EPA 905 MOD Samples: ITA1358-02
- Method Performed: EPA 906.0 MOD Samples: ITA1358-02

TestAmerica West Sacramento

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B Samples: ITA1358-02

| | | | | | | (بيام | • | | | | | | | | / | 3 | | | 0 | 1.0/10 | | |
|------------------------------|----------------------|---|---|---|----------------------------|----------------|-----------------|-------------|-------------|-------------|----------------------------|--------------|---|-------------------------------------|-------------|--------------|--------------|--|---------------------------|----------------------|--|---|
| Page 2 of 2 | | | Comments | | | Hold Clow Flow | | | | | Unfiltered and unpreserved | analysis | Only test if first or second rain events of the year | Filter with 24hrs of receipt at lab | \. ا | Hold (LEWFI | | | Ć | 10 Day: | 6 | NPDES Level IV: |
| | (durred) | | | (2.025) V-sin | | | | | | - | | | | - | | × | | same event. | ime: (Check) | 72 Hour5 Day: | rty. (Check) On Ice: | Data Requirements: (Check) No Level IV:All Level IV: |
| | ANALYSIS REQUIRED |) > | | -N, Nitrite-N | | <u> </u> | | | | | | | | | × | Â | | 10rm even | Turn-around time: (Check) | 24 Hour: 48 Hour: | Sample Integrity: (Check) Intact: | Data Requirer No Level IV: |
| M | ANA | Cn' bp' |) ,bD ,dS :sla | ic Toxicity Dissolved Meta Se, Zn |] letoT | | | | | | | | × | × | | | 0 for this a | r Outfall 00 | | 16:20 | | (A;D) |
| IN OF CUSTODY FORM | | اهtoT ,(0. & (۲.٤09) کي | , Sr-90 (905.) 226 (903.0 or 9), Uranium (9 | (0.009)srlqlA (0.309) (5-H) S mulbsЯ ban (0.409) 822 n 0.109) 751-4 | Tritium Combi Radiur | | | | | | × | < | | | | | | COC rage 2 of 2 are the composite samples for Outlan 000 for this storm event. st be added to the same work order for COC Page 1 of 2 for Outfall 008 for the same event. | Bate/Time: | 1-16-48 | Date/Time: | Date/Time: UUCR/10 |
| | \vdash | ate V | -N, Perchlora | -20N+EON (*(| LDS CI-' 20 | | | | × | × | | | | | | | | r for CO | | X | | |
| N 9F | | > | euers) | (and all conge | | L | | × | | | | | | | | | | ork order for | | di la | | |
| CHAI | | d, Cu, Pb, | Aetals: Sb, C | Secoverable M Secoverable M | T Total F | × | × | 9 | 6 | | | | | | | | | ame w | d B | let l | d By | d By |
| 0 | | lev | | | Bottle # | 2A | 2B | 3A, 3B | 4A, 4B | 5 | 6A | 6B | 2 | 80 | 6 | 10 | | to the s | Received B | Þ | Received By | Received By |
| | : | NPDES I II 008 Happy Val | - | ы ы ы | Preservative | HNO3 | HNO3 | None | None | None | None | None | None | None | None | H₂SO₄ | | be added | | 6:0 | 19:00 | |
| | Project: | Boeing-SSFL NPDES Routine Outfall 008 COMPOSITE Stormwater at Happy Valley | | Phone Number: (626) 568-6691 Fax Number: (626) 568-6515 | Sampling Date/Time | 1/14/10 inters | - | | | | | | | | ≯ | 1/15/10 140% | Ċ | These must be added to the same work | | | 2 | |
| 60/6 | Ъ. | <u>ଇੱਟੱ ਨੂੰ</u> ਨੂੰ | | PT (0) FT (0) | # of Cont. | 1 1 | + | 2 | 2 | 1 | 1 | 1 | - | - | - | - | | | Date/Time: | 9-21- | Date/Time: | Date/Time: |
| Test America version 6/29/09 | | ite 200 | Joseph Doa | wyn Kelly | ontainer Type | 1L Poly | 1L Poly | 1L Amber | 500 mL Poly | 500 mL Poly | 2.5 Gal Cube | 500 ml Amber | 1 Gal Poly | 1L Poly | 500 mL Poly | 500 mL Poly | | | ן ק ן | r | , where the second s | |
| neric | ddress: | ia Ave, Su 1007 | contact: | ager: Bronwy | Sample Matrix | 3 | N | W | N | M | ~ | : | 8 | 3 | 3 | 3 | | | 1 | / | and the second s | |
| Test Ar | Client Name/Address: | MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 | Test America Contact: Joseph Doak | Project Manager: Bronwyn Kelly Sampler: | Sample Description | | Outfall 008 Dup | Outfall 008 | Outfall 008 | Outfali 008 | Outfall 008 | | Outfall 008 | Outfall 008 | Outfall 008 | Outfall 008 | | | Relinquished By | 5 WWY | Relinquished By | Relifiquished By |

• 7 • •

| Test America version 6/29/09 | Jeric | a Version 6 | 5/29/05 | | | CH | AIN (| Ъ, | CUS. | CHAIN OF CUSTODY FORM | ORM | | 4 | ₹L | TTA 1356 | $\sqrt{2}$ | Page 1 of 2 | of 2 |
|--|----------------------|-------------------|-----------------|---|------------------|-------------|-----------------|------------------|------|---|--------------|----------|--|------------------------|------------|------------|-------------------------|------|
| Client Name/Address: | dress: | | | Project: | | | | | | | A | NALYS | ANALYSIS REQUIRED | ËD | | | | Γ |
| MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 | ia Ave, Su 007 | lite 200 | | Boeing-SSFL NPDES Routine Outfall 008 GRAB | NPDES all 008 | - | | | | | | | | | | Fiel | Field readings: | |
| Test America Contact: Joseph Doak | ontact: | Joseph E | Joak | Stormwater at Happy Valley | nappy valie | Å | | | | | | | | | | Ten | ¢ ۲ Temp ک⊄= ۲٤,00 ۲ | ň |
| | | | | | | _ | (MBH | | | | | | | | | Ha | pH = 4.5 | L |
| Project Manager: Bronwyn Kelly | ar: Bron | wyn Kelly | | Phone Number: (626) 568-6691 | L | | - # 99L) | | | | <u> </u> | | | | | Tim | Time of readings = | |
| Sampler: 5 Del wyw |)el wyw | 6. | | Fax Number: (626) 568-6515 | <u>د</u> | | Grease | | | | <u> </u> | | | | | | (HOQ | |
| Sample Description | Sample Matrix | Container Type | r # of Cont. | | Preservative | Bottle # |) <u>8</u> IiO | | | | | | | | | | Comments | |
| | 3 | 1L Amber | ~ | - | ЧC | 1A, 1B | × | | | | | | | | | | | |
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| | Ī | e. | | | | | | | | | | | | | | | | |
| Relinguished By | É | ese Sam | Dies | These Samples are the Grab Portion of Outfall 008 for this storm event. | rtion of Out | Pacalved B | this | torm e | | Composite samples will follow and are to be added to this work order. | mples will f | ollow al | v and are to be ad | added | to this wo | ork orde | | |
| 501 hFt | Z | 7 | 1 | 0 | 16:00 | 1 ac | H - |) U | | 0-1-1 C-10 | 12 - 11 | | | 72 Hour: _ 5 Day: | | 10 Day: | ا بر | |
| Relinquished By | | | Date | | Γ | Received By | 7 | | Å. | Date/Time: | | | | | | | | |
| MANC |) da | | 7 | 0 | 9:00 | | | | | | | Intact: | sample Integrity: (Check) Intact: | sck) On Ice: | × | | +.1 | |
| Religquished By | ~ . | 2 | Date | Date/Time: | | Received By | | $\left \right $ | Da | Date/Time: \\(\{_\\ | QV1 b1 | | Data Requirements: (Check) No Level IV [.] | Check) All evel IV· | | UdN | | |
| | | | | | | 7 | |) | | | | | | | | | | |

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LABORATORY REPORT



| Date: | Janua | ary 28, 2010 | "dedic | ated to providing quality aquatic toxicity testing" |
|-------------------------|---------------|---|---|---|
| Client: | 1746 Irvin | America, Irvine 1 Derian Ave., Suite 1 e, CA 92614 Joseph Doak | 00 | 50 Transport Street, Unit 107 Ventura, CA 93003 650-0546 FAX (805) 650-0756 CA DOHS ELAP Cert. No.: 1775 |
| Laborator Sample I.I | - | A-10012006-001 ITA1358-02 (Outfai | 1 008) | |
| Sample Co | ontrol: | | ceived by ATL chilled and with the onducted on only one sample per clie | |
| | | Date Sampled: Date Received: | 01/18/10 (composite) 01/20/10 | |
| | | Temp. Received: | 3.9°C | |
| | | Chlorine (TRC): | 0.0 mg/l | |
| | | Date Tested: | 01/20/10 to 01/27/10 | |
| Sample A | nalysis: | The following analy | vses were performed on your sample | |

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

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

Result Summary:

| | NOEC | TUc |
|----------------------------|------|-----|
| Ceriodaphnia Survival: | 100% | 1.0 |
| Ceriodaphnia Reproduction: | 100% | 1.0 |

Quality Control:

Reviewed and approved by:

Joseph A. LeMay

Laboratory Director

CERIODAPHNIA CHRONIC BIOASSAY EPA METHOD 1002.0



Lab No.: A-10012006-001 Client/ID: Test America – ITA1358-02 (Outfall 008)

Date Tested: 01/20/10 to 01/27/10

TEST SUMMARY

Test type: Daily static-renewal. Species: *Ceriodaphnia dubia*. Age: < 24 hrs; all released within 8 hrs. Test vessel size: 30 ml. Number of test organisms per vessel: 1. Temperature: 25 +/- 1°C. Dilution water: Mod. hard reconstituted (MHRW). QA/QC Batch No.: RT-100119.

Endpoints: Survival and Reproduction. Source: In-laboratory culture. Food: .1 ml YTC, algae per day. Test solution volume: 15 ml. Number of replicates: 10. Photoperiod: 16/8 hrs. light/dark cycle. Test duration: 7 days. Statistics: ToxCalc computer program.

RESULTS SUMMARY

| Sample Concentration | Percent Survival | Mean Number of Young Per Female |
|----------------------|------------------|------------------------------------|
| Control | 100% | 23.5 |
| 100% Sample | 100% | 29.3 |

* Sample not statistically significantly less than Control.

CHRONIC TOXICITY

| Survival NOEC | 100% |
|-------------------|------|
| Survival TUc | 1.0 |
| Reproduction NOEC | 100% |
| Reproduction TUc | 1.0 |

QA/QC TEST ACCEPTABILITY

| Parameter | Result |
|--|--|
| Control survival ≥80% | Pass (100% survival) |
| ≥15 young per surviving control female | Pass (23.5 young) |
| ≥60% surviving controls had 3 broods | Pass (100% with 3 broods) |
| PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated | Pass (PMSD = 9.5%) |
| Statistically significantly different concentrations relative difference > 13 % | Pass (no concentration significantly different) |
| Concentration response relationship acceptable | Pass (no significant response at concentration tested) |

| | | | Cerioda | phnia Sur | vival and | | | | Survival | |
|--|-------------------------------------|--------|---------|----------------------------------|------------|-----------|-------------------------------------|--------|---------------------------------------|--------|
| Start Date: End Date: Sample Date: | 1/20/2010 1/27/2010 1/19/2010 | 14:30 | Lab ID: | 100120060 CAATL-Aq FWCH EP | uatic Test | ting Labs | Sample ID Sample Ty Test Spec | /pe: | Outfall 008 EFF2-Indu CD-Ceriod | |
| Comments: Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| B-Control | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| B-Control 100 | | 1.0000 | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

| | | | | Not | | | Fisher's | 1-Tailed | Isot | onic |
|-----------|--------|--------|------|------|-------|----|----------|----------|--------|--------|
| Conc-% | Mean | N-Mean | Resp | Resp | Total | N | Exact P | Critical | Mean | N-Mean |
| B-Control | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | | | 1.0000 | 1.0000 |
| 100 | 1.0000 | | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 1.0000 | 1.0000 |

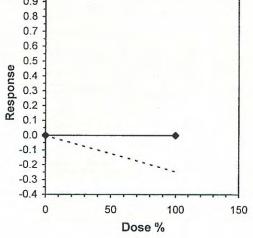
| Hypothesis | Test (1-tail, | 0.05) | NOEC | LOEC | ChV | TU | | | | |
|--------------|---------------|-------|------|------|------|-------------|--------------------------|------------------------|------|-----|
| Fisher's Exa | ct Test | | 100 | >100 | | 1 | | | | |
| Treatments v | vs B-Control | | | | | | | | | |
| | | | | | | plation (2) | 00 Resamples) | | | |
| Point | % | SD | 95% | 6 CL | Skew | | | | | |
| C05 | >100 | | | | | | | | | |
| IC10 | >100 | | | | | | | | | |
| IC15 | >100 | | | | | | 1.0 | an card and the second | | |
| IC20 | >100 | | | | | | 0.9 | | | |
| IC25 | >100 | | | | | | - | | | |
| IC40 | >100 | | | | | | 0.8 - | | | |
| IC50 | >100 | | | | | - | 0.7 - | | | |
| | | | | | | | 0.6 | | | |
| | | | | | | | US US | | | |
| | | | | | | | 0.5 - | | | |
| | | | | | | | esuods 0.5 - 0.4 - | | | |
| | | | | | | | - | | | |
| | | | | | | | 0.3 - | | | |
| | | | | | | | 0.2 - | | | |
| | | | | | | | 0.1 | | | |
| | | | | | | | - | | | |
| | | | | | | | 0.0 | | | |
| | | | | | | | 0 | 50 | 100 | 150 |
| | | | | | | | | Dos | se % | |

| | | | Ceriod | aphnia Su | rvival and | Reprod | uction Tes | st-Repro | duction | | , |
|---|-------------------------------------|--------|---------|---------------------------------|------------|-----------|-------------------------------------|----------|---------------------------------------|--------|---|
| Start Date: End Date: Sample Date: Comments: | 1/20/2010 1/27/2010 1/19/2010 | 14:30 | Lab ID: | 10012006 CAATL-Ac FWCH EP | quatic Tes | ting Labs | Sample ID Sample Ty Test Spec | ype: | Outfall 008 EFF2-Indu CD-Cerioo | | |
| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| B-Control | 27.000 | 21.000 | 24.000 | 23.000 | 26.000 | 25.000 | 19.000 | 25.000 | 24.000 | 21.000 | |
| 100 | 27.000 | 34.000 | 25.000 | 24.000 | 32.000 | 30.000 | 31.000 | 30.000 | 28.000 | 32.000 | |

| | | | | Transform | n: Untran | sformed | 1-Tailed | | | Isotonic | | |
|-----------|--------|--------|--------|-----------|-----------|---------|----------|--------|----------|----------|--------|--------|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD | Mean | N-Mean |
| B-Control | 23.500 | 1.0000 | 23.500 | 19.000 | 27.000 | 10.662 | 10 | | | | 26.400 | 1.0000 |
| 100 | 29.300 | 1.2468 | 29.300 | 24.000 | 34.000 | 11.036 | 10 | -4.484 | 1.734 | 2.243 | 26.400 | 1.0000 |

| Statistic | | Critical | | Skew | Kurt |
|-----------|------------------------------------|---------------------------------|---|---|--|
| 0.95557 | | 0.905 | | -0.3956 | -0.7193 |
| 1.66549 | | 6.54109 | | | |
| MSDu | MSDp | MSB | MSE | F-Prob | df |
| 2.24314 | 0.09545 | 168.2 | 8.36667 | 2.9E-04 | 1, 18 |
| | 0.95557 1.66549 MSD u | 0.95557 1.66549 MSDu MSDp | 0.95557 0.905 1.66549 6.54109 MSDu MSDp MSB | 0.95557 0.905 1.66549 6.54109 MSDu MSDp MSB MSE | 0.95557 0.905 -0.3956 1.66549 6.54109 MSDu MSDp MSB MSE F-Prob |

| Point | % | SD | 95% CL | Skew | | |
|-------|------|----|--------|------|--|--|
| IC05 | >100 | | | | and a second | |
| IC10 | >100 | | | | | |
| IC15 | >100 | | | | 1.0 | |
| IC20 | >100 | | | | 0.9 | |
| IC25 | >100 | | | | 0.8 | |
| IC40 | >100 | | | | 0.7 | |
| IC50 | >100 | | | | 0.6 - | |



Reviewed by:

CERIODAPHNIA DUBIA CHRONIC BIOASSAY EPA METHOD 1002.0 Raw Data Sheet



Start Date: 01/20/2010

Lab No.: A-10012006-001

Client ID: TestAmerica - ITA1358-02 Outfall 008

DAY 1 DAY 2 DAY 3 DAY 4 DAY 5 DAY 6 DAY 7 0 hr 24hr m a Analyst Initials: 0 Ron 0 D 2 0 1330 1430 142 431 Time of Readings: 1230 1330 1300 121 200 Uni 40 42 1431 9.0 DO 29 8.7 9.3 8.2 8:2 8 2 8.1 7.7 pH 8.0 7.7 7. 28 2 2 Control 26 1.7 24 25.0 24.2 240 24.9 -1.5 Temp 25.4 0 4-8 24.8 DO 8. 90 8:3 7.7 7.2 9 8 24 100% pH 7. 7.4 7. 3 -7.0 2. 2 7.4 4 24.6 2 4,5 0.3 . 1 244 Temp 24.4 25.024.4 **Additional Parameters** Control 100% Sample Conductivity (umohms) 345 128 Alkalinity (mg/l CaCO₃) 36 72 Hardness (mg/l CaCO₃) 92 38 Ammonia (mg/l NH₃-N) 40. 0.3 Source of Neonates Replicate: A В С D E F G Н T I IF A 2B 10 30 F Brood ID: 3 2 G 3H1 H 2 Number of Young Produced **Total Live** No. Live Analyst Sample Day Young Adults Initials B С A D E F G H I J 1 0 0 17 D \cap 0 0 0 2 0 17 D 0 1) D D D 0 0 0 1) 2 3 () 4 3 0 0 0 10 () 5 4 3 4 0 4 3 4 28 17 (U 0 Control 5 0 7 9 5 O 7 5 9 0 D 8 0 6 7 0 0 0 0 U 0 6 ζ 0 14 7 12 11 15 17 10 12 13 11 127 0 D 24 23 26 27 21 Total 19 24 0 25 25 21 235 U 1 0 1) () 0 $\hat{}$ 0 2 U 0 0 D 0 0 1) D 0 0 1) 3 3 0 3 0 0 0 1 U 5 3 U 4 U 0 2 6 32 5 1) 100% 9 P 5 7 14 6 0 () 0 8 G 6 19 0 1 () 7 7 Total 2 34 25 24 37 7 2 29 1 7 3

Circled fourth brood not used in statistical analysis.

7th day only used if <60% of the surviving control females have produced their third brood.

SUBCONTRACT ORDER **TestAmerica** Irvine

ITA1358

| | <u>/:</u> | RECEIVING LAB | BORATORY: | | | | | |
|--------------------------------------|-----------------------------|---|--|--|--|--|--|--|
| TestAmerica Irvine | | Aquatic Testin | g Laboratories-SUB | | | | | |
| 17461 Derian Avenue. | Suite 100 | | t Street, Unit 107 | | | | | |
| Irvine, CA 92614 | | Ventura, CA 93 | | | | | | |
| Phone: (949) 261-1022 | | | | | | | | |
| Fax: (949) 260-3297 | | Phone :(805) 650-0546 | | | | | | |
| Project Manager: Josep | Doak | Fax: (805) 650-0756 | | | | | | |
| rojoormanager. Josep | IDUAK | Project Location: CA - CALIFORNIA Receipt Temperature: 3-9 °C Ice: Y N | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Standard TAT is request | ed unless specific d | ue date is requested. => Due Date: | Initials: | | | | | |
| Standard TAT is request Analysis | ed unless specific d | ue date is requested. => Due Date: Expires | Initials: Comments | | | | | |
| Analysis | Units | Expires | | | | | | |
| Analysis Sample ID: ITA1358-02 (C | Units utfall 008 (Compos | Expires | Comments | | | | | |
| Analysis | Units | Expires | Comments 4:08 Cerio, EPA/821-R02-013, Sub to | | | | | |
| Analysis Sample ID: ITA1358-02 (C | Units utfall 008 (Compos | Expires ite) - Water) Sampled: 01/18/10 1 | Comments | | | | | |

THE COS Released By Released By

:30 10 Date/Time 1-0 R

1.30 Date/Time

20 Received Date/Time 11-23 J Page 1 of 1 Received By Date/Time



Ceriodaphnia dubia Chronic Toxicity Test Reference Toxicant Data

CERIODAPHNIA CHRONIC BIOASSAY EPA METHOD 1002.0 REFERENCE TOXICANT - NaCl



QA/QC Batch No.: RT-100119

Date Tested: 01/19/10 to 01/26/10

TEST SUMMARY

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

Endpoints: Survival and Reproduction. Source: In-laboratory culture. Food: .1 ml YTC, algae per day. Test solution volume: 20 ml. Number of replicates: 10. Photoperiod: 16/8 hrs. light/dark cycle. Test duration: 7 days. Statistics: ToxCalc computer program.

| Sample Concentration | Percent Sur | rvival | | Mean Number of Young Per Female | | | |
|---|---|-----------|----------------|------------------------------------|--|--|--|
| Control | 100% | | 23.4 | | | | |
| 0.25 g/l | 100% | | 25.0 | | | | |
| 0.5 g/l | 100% | | 24.3 | | | | |
| 1.0 g/l | 100% | | 13.7 | * | | | |
| 2.0 g/l | 100% | | 2.7 | * | | | |
| 4.0 g/l | 0% | * | 0 | ** | | | |
| * Statistically signifi ** Reproduction data from exclude | cantly less than concentrations ed from statistic | greater t | han survival N | vel ŒC are | | | |

RESULTS SUMMARY

CHRONIC TOXICITY

| Survival LC50 | 2.8 g/l |
|-------------------|----------|
| Reproduction IC25 | 0.79 g/l |

QA/QC TEST ACCEPTABILITY

| Parameter | Result | | | | | |
|---|---|--|--|--|--|--|
| Control survival ≥80% | Pass (100% Survival) | | | | | |
| ≥15 young per surviving control female | Pass (23.4 young) | | | | | |
| ≥60% surviving controls had 3 broods | Pass (100% with 3 broods) | | | | | |
| PMSD $<47\%$ for reproduction | Pass (PMSD = 9.5%) | | | | | |
| Stat. sig. diff. conc. relative difference >13% | Pass (Stat. sig. diff. conc. Relative difference = 41.5%) | | | | | |
| Concentration response relationship acceptable | Pass (Response curve normal) | | | | | |

| Start Date: | 1/19/2010 | 14:00 | | RT100119 | and the state of t | Reprodu | Sample ID | | REF-Ref 1 | oxicant | |
|---------------------------|-----------|--------|--------|----------|--|---------|---------------|--------|-----------|---------------|--|
| | 1/26/2010 | | | | | | Sample Ty | | | lium chloride | |
| Sample Date: Comments: | 1/19/2010 | | | FWCH EP | | | Test Species: | | CD-Cerioo | • | |
| Conc-gm/L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| D-Control | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 0.25 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 0.5 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 1 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 2 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| 4 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |

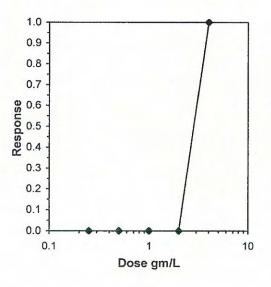
| | | | | Not | | | Fisher's | 1-Tailed | Number | Total |
|-----------|--------|--------|------|------|-------|----|----------|----------|--------|--------|
| Conc-gm/L | Mean | N-Mean | Resp | Resp | Total | N | Exact P | Critical | Resp | Number |
| D-Control | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 |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

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

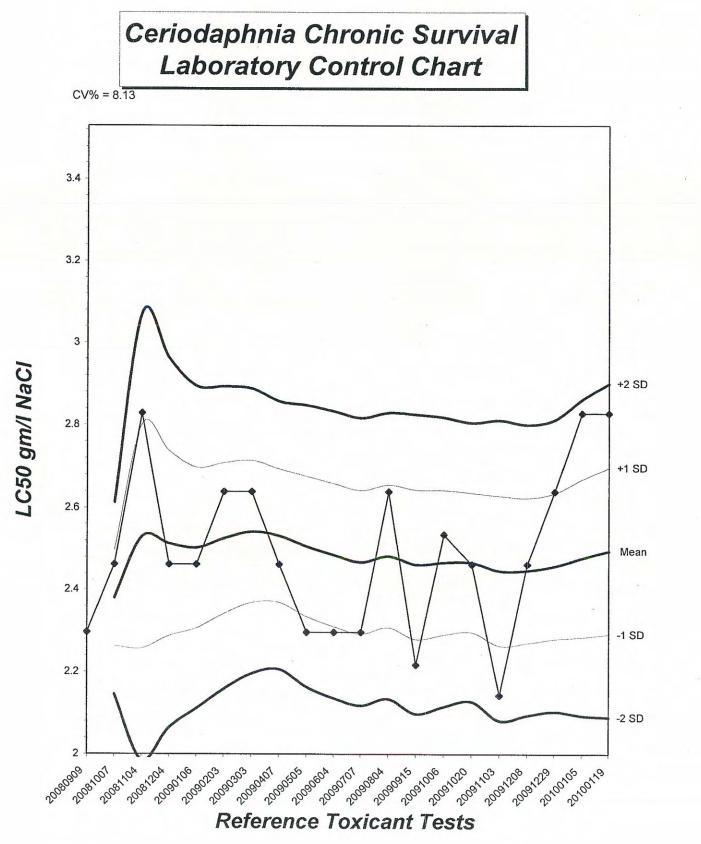
 Trim Level
 EC50

 0.0%
 2.8284

2.8284



Reviewed by:_____

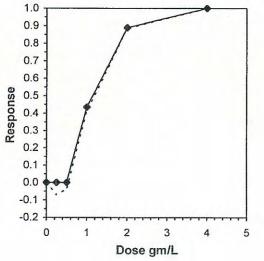


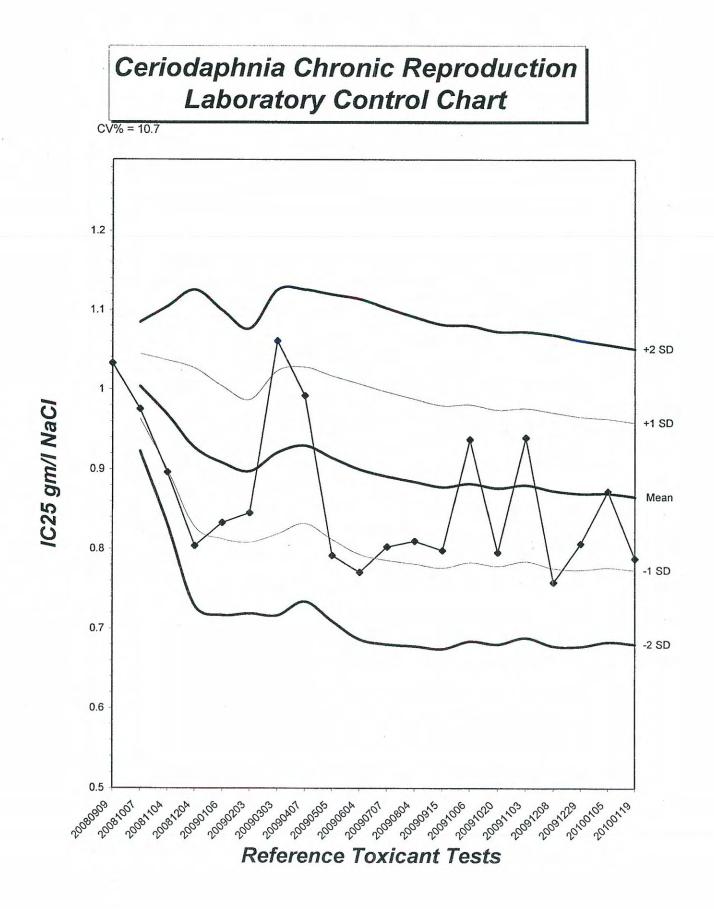
| Start Date: | 1/19/2010 | 14:00 | | RT100119 | | Reprodu | : | REF-Ref 1 | | | | |
|---------------------------|-----------|--------|---------|--|-----------|---------|--------|-----------|----------|--------|--|--|
| End Date: | 1/26/2010 | 14:00 | Lab ID: | CAATL-Ad | uatic Tes | | | | NACL-Soc | | | |
| Sample Date: Comments: | 1/19/2010 | | | ol: FWCH EPA Test Species: CD-Ceriodaphnia dubia | | | | | | | | |
| Conc-gm/L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| D-Control | 23.000 | 25.000 | 21.000 | 24.000 | 23.000 | 25.000 | 25.000 | 21.000 | 22.000 | 25.000 | | |
| 0.25 | 23.000 | 26.000 | 27.000 | 24.000 | 24.000 | 25.000 | 27.000 | 22.000 | 28.000 | 24.000 | | |
| 0.5 | 22.000 | 26.000 | 25.000 | 26.000 | 24.000 | 22.000 | 26.000 | 23.000 | 25.000 | 24.000 | | |
| 1 | 17.000 | 14.000 | 10.000 | 14.000 | 14.000 | 12.000 | 8.000 | 20.000 | 13.000 | 15.000 | | |
| 2 | 0.000 | 2.000 | 3.000 | 5.000 | 3.000 | 3.000 | 7.000 | 0.000 | 2.000 | 2.000 | | |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | |

| | Mean | N-Mean | | Transform | n: Untran | sformed | | 1-Tailed | | | Isotonic | |
|-----------|--------|--------|--------|-----------|-----------|---------|----|----------|----------|-------|----------|--------|
| Conc-gm/L | | | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD | Mean | N-Mean |
| D-Control | 23.400 | 1.0000 | 23.400 | 21.000 | 25.000 | 7.037 | 10 | | | | 24.233 | 1.0000 |
| 0.25 | 25.000 | 1.0684 | 25.000 | 22.000 | 28.000 | 7.775 | 10 | -1.608 | 2.223 | 2.212 | 24.233 | 1.0000 |
| 0.5 | 24.300 | 1.0385 | 24.300 | 22.000 | 26.000 | 6.449 | 10 | -0.905 | 2.223 | 2.212 | 24.233 | 1.0000 |
| *1 | 13.700 | 0.5855 | 13.700 | 8.000 | 20.000 | 24.585 | 10 | 9.750 | 2.223 | 2.212 | 13.700 | 0.5653 |
| *2 | 2.700 | 0.1154 | 2.700 | 0.000 | 7.000 | 78.178 | 10 | 20.807 | 2.223 | 2.212 | 2.700 | 0.1114 |
| 4 | 0.000 | 0.0000 | 0.000 | 0.000 | 0.000 | 0.000 | 10 | | | | 0.000 | 0.0000 |

| Auxiliary Tests | | | | | Statistic | | Critical | | Skew | Kurt |
|---|--------------|------------|---------|----|-----------|---------|----------|---------|---------|---------|
| Shapiro-Wilk's Test indicates nor | mal distribu | ution (p > | 0.05) | | 0.98781 | Withten | 0.947 | | 0.1743 | 1.07344 |
| Bartlett's Test indicates equal var | | | | | 7.30799 | | 13.2767 | | | |
| Hypothesis Test (1-tail, 0.05) | NOEC | LOEC | ChV | TU | MSDu | MSDp | MSB | MSE | F-Prob | df |
| Dunnett's Test Treatments vs D-Control | 0.5 | 1 | 0.70711 | | 2.21194 | 0.09453 | 925.67 | 4.94889 | 2.0E-27 | 4, 45 |

| Dalat | | 00 | 0 = 0/ | | | n (200 Resamples) | | |
|-------|--------|--------|--------|--------|---------|-------------------|----------------------------|--|
| Point | gm/L | SD | 95% | CL | Skew | | | |
| C05 | 0.5575 | 0.0143 | 0.5110 | 0.5655 | -2.0775 | | A CONTRACTOR OF CONTRACTOR | and the second |
| C10 | 0.6150 | 0.0146 | 0.5755 | 0.6311 | -0.4724 | | | |
| C15 | 0.6725 | 0.0178 | 0.6297 | 0.6978 | 0.1744 | 1.0 | | |
| C20 | 0.7301 | 0.0222 | 0.6808 | 0.7720 | 0.4277 | 0.9 | | |
| C25 | 0.7876 | 0.0272 | 0.7293 | 0.8440 | 0.5197 | - | 1 | |
| C40 | 0.9601 | 0.0466 | 0.8758 | 1.0814 | 0.8653 | 0.8 - | / | |
| C50 | 1.1439 | 0.0763 | 0.9761 | 1.2715 | -0.1589 | 0.7 | 1 | |





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

QA/QC No.: RT-100119

Start Date:01/19/2010

| Sample | Der | | | Nu | mbe | r of Y | oung | Prod | uced | | | Total | No. | Analyst |
|---|--------------------------------|----------------------|-------------------|-------------------|-----------------|--------|--------|--------|-------|-------|---------|---------------|----------------|----------|
| Sampie | Day | A | B | C | D | E | F | G | H | I | J | Live Young | Live Adults | Initials |
| | 1 | 0 | \dot{O} | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | R |
| | 2 | 0 | D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | h |
| | 3 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 10 | R |
| Control | 4 | 3 | 4 | 3 | 5 | 3 | 1 | 1 (| 3 | 3 | 4 | 36 | 10 | n |
| control | 5 | 6 | 9 | 0 | 0 | 0 | 0 | 8 | 7 | 9 | 8 | 47 | 10 | 1/2 |
| | 6 | 14 | 0 | 8 | 7 | 8 | 7 | 13 | 0 | 0 | 0 | 57 | 10 | 1/2 |
| | 7 | 0 | 17 | 10 | 12 | 12 | 14 | 0 | 11 | 10 | 13 | 94 | 10 | 1 |
| | Total | 23 | 25 | 21 | 24 | 23 | 25 | 25 | ai | 22 | 25 | 234 | 10 | 12- |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \circ | 10 | R |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0. | 10 | A |
| | 3 | 0 | 0 | 0 | 0 | 0 | C | 0 | 0 | 4 | 0 | U a | _10 | R |
| 0.25 g/l | 4 | 3 | 4 | 5 | 5 | 3 | 4 | 21 | 3 | 0 | 4 | +t35 | 10 | h |
| 0.25 g/1 | 5 | 8 | 0 | C | C | 0 | 7 | 8 | 7 | 9 | 8 | 47 | 10 | h |
| | 6 | 0 | 8 | 10 | 2 | 8 | 0 | 0 | 0 | 15 | 0 | 48 | 10 | In |
| | 7 | 12 | 14 | 12 | 12 | 13 | 14 | 15 | 12 | 0 | 12 | 116 | 0.10 | n |
| | Total | 23 | 26 | 27 | 24 | 29 | 25 | 27 | 2 | 28 | 24 | 2261 | 10 | 1/- |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | U | 10 | R |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | R |
| | 3 | 0 | 0 | C | 0 | 0 | 0 | 0 | 0 | 0 | C | 0 | 10 | R |
| 0.5 g/l | 4 | 3 | Ц | 5 | L | 3 | 3 | 4 | 3 | 3 | 4 | 36 | 10 | h |
| 0.5 g/1 | 5 | 7 | 8 | C | 0 | 0 | 0 | 0 | 8 | 9 | 9 | 41 | 10 | a |
| | 6 | 0 | 14 | 2 | 8 | 9 | 9 | 10 | 12 | 0 | 0 | 69 | 10 | P |
| | 7 | 12 | 0 | 13 | 14 | 12 | 10 | 12 | 0 | 13 | 11 | 97 | 10 | 0 |
| | Total | 22 | 261 | 25 | 26 | 24 | 22 | | 23 | 25 | 24 | 243 | 10 | m |
| Circled fourth 7 th day only us | brood not us sed if <60% of | ed in st of the s | atistic urvivi | cal and ing co | alysis ntrol | femal | es hav | ve pro | duced | their | third b | prood. | | |

Aquatic Testing Laboratories

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

Aquatic Testing Laboratories

QA/QC No.: RT-100119

Start Date:01/19/2010

| Sample | Derr | | | N | umbe | r of Y | oung | Produ | ced | | | Total | No. | Analyst |
|---|-------------------------------|------------|-------------------|-------------------|-----------------|--------|--------|--------|--------|---------|---------------|---------------|----------------|----------------------|
| Sampie | Day | A | B | C | D | E | F | G | H | I | J | Live Young | Live Adults | Initials |
| | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | A |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | h |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 5 | 10 | ha |
| 1.0 g/l | 4 | 3 | Z | 4 | 3 | 3 | 2 | 3 | 0 | 4 | 0 | 24 | 10 | p |
| 1.0 g/1 | 5 | 6 | 0 | C | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 19 | 10 | 12 |
| | 6 | 0 | 5 | 6 | 4 | 3 | 4 | 5 | 0 | 0 | 0 | 27 | 10 | 0 |
| | 7 | 8 | 7 | 0 | 2 | 8 | 6 | 0 | 10 | 9 | 7 | 62 | 10 | M |
| | Total | 17 | 14 | 10 | 14 | 14 | 12 | 8 | 20 | 13 | 15 | 137 | 10 | N |
| | 1 | 0 | 0 | 0 | 0 | 0 | Ü | 0 | 0 | 0 | 0 | 0 | 10 | R |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | h |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | h |
| 2.0 g/l | 4 | C | 0 | C | 0 | 0 | U | 0 | 0 | 0 | \mathcal{O} | 0 | 10 | V |
| 2.0 g/1 | 5 | 0 | 2 | 3 | Z | 0 | 3 | 0 | 0 | 0 | 2 | 12 | IU | 1 |
| - | 6 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 6 | 10 | N |
| | 7 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 2 | 0 | a | 10 | N |
| | Total | \cup | 2 | 3 | 5 | 3 | 3 | 7 | 0 | 2 | 2 | 27 | 10 | 02 |
| | 1 | X | X | X | × | X | X | X | X | X | X | 0 | 0 | â |
| | 2 | - | - | - | - | - | - | - | - | | - | 1 | | |
| | 3 | - | - | 1 | - | - | | - | - | - | - | 1 | _ | _ |
| 10~1 | 4 | - | - | - | - | - | - | - | - | - | - | | | |
| 4.0 g/l | 5 | _ | - | - | - | - | - | - | - | - | - | | - | مستستعمد |
| | 6 | - | - | ~ | - | - | - | | - | - | - | - | | |
| | 7 | - | - | | - | - | | - | | - | guina | | | galacia internationa |
| | Total | \bigcirc | 0 | 0 | 0 | 0 | 0 | C | C | C | 0 | \mathcal{O} | 0 | 7 |
| Circled fourth 7 th day only us | brood not use ed if <60% o | ed in st | atistic urvivi | cal and ing co | alysis ntrol | femal | es hav | e prod | uced t | heir th | ird br | ood. | | |

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

QA/QC No.: RT-100119

Start Date:01/19/2010

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Aquatic Testing Laboratories

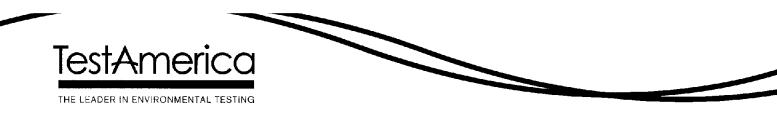
| | | DA | AY 1 | DA | XY 2 | DA | AY 3 | DA | Y 4 | DA | Y 5 | DA | AY 6 | DA | AY 7 |
|-----------|---------------|-----------|------------------|----------|---------|----------|-----------|-----------------------|---------|----------|---------|-----------|----------|---------|-------|
| | | Initial | Final | Initial | Final | Initial | Final | Initial | Final | Initial | Final | Initial | Final | Initial | Final |
| Analyst | Initials: | hm | h | Ru | h | R | An | Rom | Ru | han | h | ~ | 12 | r | L |
| Time of R | eadings: | 1400 | 1400 | 1400 | 1430 | 1430 | 1330 | 1330 | 1500 | 1900 | 1330 | 810 | Ma | 1-10 | Har |
| | DO | 9.1 | 8.3 | 8.0 | 8:1 | 9.0 | 8.0 | 9.3 | 8.0 | 8.3 | 8.0 | 83 | 8.2 | 8:2 | 8.0 |
| Control | pH | 7.8 | 8.0 | 8.0 | 7.8 | 7.7 | 7.9 | 7.7 | 7.9 | 7.7 | 80 | 26 | 8.0 | 7.7 | 7-6 |
| | Temp | 25.3 | 25.3 | 25.4 | 25.0 | 25.0 | 25.0 | 25.4 | 24.8 | 25.7 | 247 | 25.0 | 24.4 | 249 | 24.2 |
| | DO | 9.1 | 8.3 | 8.0 | 8.0 | 9.0 | 8.0 | 9.2 | 8.0 | 8,3 | 8.1 | 85 | 8-0 | 8.2 | 8-2 |
| 0.25 g/l | рН | 7.8 | 8.0 | 8.0 | 7.8 | 7.7 | 7.9 | 7.7 | 7.9 | 7.7 | 80 | 7.7 | 8.0 | 25 | 79 |
| | Temp | 25:3 | 25.4 | 25.4 | 25.1 | 25.0 | | 252.4 | 25.1 | 25.7 | 24,2 | 25-2 | 24.7 | 25.0 | 243 |
| | DO | 9.0 | 8.2 | 8.0 | 8.0 | 8.9 | 8.1 | 9.2 | 8.0 | 8.3 | 62 | 8-5 | 8.3 | 8:3 | 83 |
| 0.5 g/l | pН | 2.7 | 8.0 | 8.0 | 7.8 | 7.7 | 7.9 | 2.7 | 7.9 | 7.7 | TI | 7.8 | 8.0 | 2-9 | 80 |
| | Temp | 25.3 | 25.4 | 25.5 | 25.2 | 25.0 | 25.1 | 25.4 | 25.3 | 25.7 | 24.3 | 29.9 | 24.5 | 24.9 | 245 |
| | DO | 9.0 | 8.3 | 8.0 | 8.0 | 8.7 | 8.1 | 9.3 | 8.0 | 8:3 | 81 | 8.6 | 81 | 8.3 | 5:8 |
| 1.0 g/l | pH | 2.7 | 8.1 | 8.0 | 7.8 | 7.7 | 7.9 | 7.7 | 7.9 | 7.7 | 80 | 29 | 7-9 | 7-8 | 7.9 |
| | Temp | 25.3 | 25.5 | 25.5 | 25.1 | 25.1 | 25.1 | 25.5 | 25.3 | 25.8 | 24.5 | 24.8 | 24.7 | 25.0 | 243 |
| | DO | 8.9 | 8.3 | 7.9 | 8.1 | 8.5 | 8.3 | 9.3 | 8.0 | 8.2 | 81 | 8.6 | 8.0 | 8.2 | 85 |
| 2.0 g/l | pH | 7.7 | 8.1 | 8.0 | 7.8 | 7.7 | 7.9 | 7.7 | 7.9 | 7.6 | 7.5 | 7:7 | 7-5 | 7.8 | 29 |
| | Temp | 25.2 | 25.5 | 25.6 | 25.1 | 25.1 | 25.2 | 25.5 | 25.3 | 25.9 | 242 | 24.7 | 24.2 | 251 | 24.5 |
| | DO | 8.7 | 8.4 | - | | 1 | - | - | - | - | - | - | | - | |
| 4.0 g/l | pН | 7.7 | 8.1 | - | - | - | | - | - | ~ | - | (| (| - | |
| | Temp | 25.2 | 25.5 | | _ | ~ | _ | | | - | - | - | | | - |
| | Dis | solved | Oxyger | n (DO) i | reading | s are in | mg/l C | D ₂ ; Temp | erature | (Temp) | reading | gs are in | °C. | | |
| 1 | dditional I | Paramet | ers | | | | Contro | 01 | | |] | High Co | ncentrat | ion | |
| | | - Alland | | | Day 1 | | Day 3 | | Day 5 | | Day 1 | II | Day 3 | D | ay 5 |
| | Conductiv | | | | 345 | · | 340 | | 330 | 6 | 800 | 3 | 210 | 36 | SU |
| | Alkalinity (r | | | | 72 | | 72 | | 24 | | 72 | 7 | 3 | 20 | |
| | Hardness (m | ng/I CaCC |) ₃) | | 92 | | 93 | | 89 | | 92 | 9 | 12 | 9 | 0 |
| | | | | | T | | rce of No | | 1 | <u> </u> | | | | | |
| Repl | | 1 | A | B 70 | C | 1 | D | E 20 | F | 0 | | H | 1 | | J |
| Broo | | _ d | A | 3A | 113 | 2 | B | 30 | IC | 2 | C 6 | 20 | 1E | 2 | F |



Re. 415

Test Temperature Chart

Test No: RT-100122 Date Tested: 01/19/10 to 01/26/10 Acceptable Range: 25+/- 1°C



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

REVISED

PROJECT NO. ITA1358

MWH-Pasadena Boeing

Lot #: F0A210532

Joseph Doak

TestAmerica Irvine 17461 Derian Ave Suite 100 Irvine, CA 92614-5817

TESTAMERICA LABORATORIES, INC.

KayClay

Project Manager

March 17, 2010

Case Narrative LOT NUMBER: F0A210532 Revised 03-17-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on January 21, 2010. This sample is associated with your MWH-Pasadena Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. **TestAmerica St. Louis' Florida certification number is E87689.** The case narrative is an integral part of this report.

This report shall not be reproduced, except in full, without the written approval of the laboratory.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Report revised to report the KPA uranium results in pCi/L.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Radium-228 by GFPC (EPA 904 MOD)

The Radium 228 reporting limit wasvnot met due to reduced barium and yttrium carrier recovery. The carrier recovery is within acceptance criteria. Analytical results are reported.

Affected Samples:

F0A210532 (1): ITA1358-02

Gross Alpha/Beta (EPA 900.0 MOD)

The Gross Alpha and Beta reporting limit was not met due to a reduction of sample size attributed to the sample's high residual mass or activity of the sample. The analytical results are reported.

The gross alpha and beta matrix spike for batch QC are outside lower control limits due to possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F0A210532 (1): ITA1358-02

TestAmerica Irvine

ITA1358

SENDING LABORATORY:

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

RECEIVING LABORATORY:

TestAmerica St. Louis 13715 Rider Trail North Earth City, MO 63045 Phone: (314) 298-8566 Fax: (314) 298-8757 Project Location: CA - CALIFORNIA Receipt Temperature: °C Ice: Y / N

| Analysis | Units | Due | Expires | Interlab Price S | urch | Comments |
|---------------------------|---------------|----------------|----------------------|------------------|------|---|
| Sample ID: ITA1358-02 (Ou | tfall 008 (Co | mposite) - Wat | t er) Sampled | : 01/18/10 14:08 | 8 | |
| Gamma Spec-O - | mg/kg | 01/27/10 | 01/18/11 14:08 | | 0% | Out St Louis, K-40 and CS-137 only, DO NOT FILTER! |
| Gross Alpha-O . | pCi/L | 01/27/10 | 07/17/10 14:08 | \$100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Gross Beta-O | pCi/L | 01/27/10 | 07/17/10 14:08 | \$100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Level 4 Data Package - Ou | t N/A | 01/27/10 | 02/15/10 14:08 | \$0.00 | 0% | |
| Radium, Combined-O | pCi/L | 01/27/10 | 01/18/11 14:08 | \$238.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Strontium 90-O / | pCi/L | 01/27/10 | 01/18/11 14:08 | \$155.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Uranium, Combined-O | pCi/L | 01/27/10 | 01/18/11 14:08 | \$120.00 | 0% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Containers Supplied: | | | | | | |
| 2.5 gal Poly (H) | 500 mL Aml | per (I) | | | | |

meas 1/20/10 17:00 Released By

7100

1.21.11

F0A210532

3 of 15

| est / | Name/ | I-Arca |
|--------|-------|--------|
| F0A210 | 53 | 2 |

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| it An | neric | est America version 6/29/09 | 60/62 | | | | CH | AIN | 9F (| Snc | CHAIN OF CUSTODY FORM | RM | | | | Page 2 of 2 | |
|---|---------------|---|------------|---|-------------------------------|----------------------|---------------------|------------------------|---------------|-----------------------|---|--|--------------------|--|-----------------------|---|-------------|
| e/Adu | Name/Address: | e I | | Project: | | | | 1 | + | \uparrow | \downarrow | AN | | ANKLYSIG REQUIRED | | | Г |
| I-Arcadia ichillinda A ia, CA 910 | 04 ¢ | Suite 200 | | Boeing-SSFL NPDES Routine Outfall 008 COMPOSITE Stormwater at Happy Valley | SFL NPDI Dutfall 00 ITE | ES 8 3y Valley | | p, Cu, Pb, | | | 1stoT ,(0. \$ (1.509) | Cri' Ep' | > | | | | 1 |
| ica C | ontact: | merica Contact: Joseph Doak | oak | | | | | D ,dZ :sisisi | | -יא, רפוכחוסו | , Sr-90 (903.0 o) 226 (903.0 o) 7 Uranium (| | | | | Comments | |
| nage A | ager: Bronwy | はManager: Bronwyn Kelly ler: こころないとうろう | | Phone Number (626) 568-6691 Fax Number: | mber: 6691 er: | | | ecoverable M Se, Zn | end all conge | | ,(0.009)shqlf (0.809) (5-H) 2 muibsЯ bэг (0.409) 822 r (0.109) 721- | ic Toxicity issolved Meta Se, Zn | -N, Nitrite-N | (2.036) N-sir | | | |
| mple 5 | Sample | Container Type | and Cont. | Sampling Date/Time | | Preservative | Bottle # | I otal R Hg, TI, | | LDS CI-' 20 | v ssorð muithT nidmoO nuibeA | Dision | | | | | |
| | 3 | 1L Paly | - | 1/19/10 14103 | | HNO ₃ | e vz | × | ╂ | | - |) | ļ | | | Hold Clou | A Flan |
| 008 Dup | 3 | 1L Poly | - | | | - EONH | 2 8 4 | × | | | | | | | | | |
| all 008 | 3 | 1L Amber | ы | | z | None | CONTRB- | | × | | - | | | | | | |
| all 003 | × | 500 mL Poly | 2 | | Z | None | ARREN: | | | × | | | | | | - | |
| all 008 | 3 | 500 mL Poly | | | z | None | | | | × | | | | | | | |
| | 3 | 2.5 Gal Cube | - | | | None | C EAP | | | | × | | | | | Unfiltered and unpreserved | |
| 0 | ^^ | 500 ml Amber | | | ~ | None | ¶ĝ₿≫. | | | | < | | | | | analysis | |
| (all 008 | N | 1 Gal Poly | + | | 2 | None | | | | | | × | | | | Only test if first or second rain events of the year | ain |
| fall 008 | N | 1L Poly | - | | ~ | None | (B) | | | | | × | | | | Fitter w/h 24hrs of receipt at lab | ę |
| fall 008 | 3 | 500 mL Poly | + | ≯ | | None | 1831 | | | | | | × | | | ~ | |
| fall 008 | M | 500 mL Poly | + | 1/16/10 (40% | | H₂SO₄ | 103 | | | | | | | × | | Hold (LIWF(| ک م ل |
| | | | | | | | | | | | community for Outfall ANR for this starm avant | 08 for this | | event | | | <u> </u> |
| | | | | These n | nust be a | dded to | the same | a vork | order | for CC | DC Page 1 of 2 | for Outfall (| 008 fo | r the same ev | /ent. | | ŕ |
| iished By | 1 | 7 | Date/Time: | lime: | | <u> </u> | e: Received B | | k | $\left \right\rangle$ | Bate/Time: Turn-around time: (Check) | | цп Т | around time: (Check | () | | 5 |
| Z. | 1 | , l | Fr | 9-31- | 16:20 | | N/CH | Ð | M | Ŵ | 1-15-18 | 16 23 | 24 Hour 48 Hour | ur. | 72 Hour: | to Day: Normal: | 10 |
| aisped By | la a | Mr | Date/Time: | Date/Time: 1-1,8-7,0 | 19:00 | | Received By | | 2 | | Date/Time: | | Sample Intact: | Sample Integrity: (Check) Intact: | a Isi X | 61 | |
| lished By | | 5 | Date/Time: | Time: | | | Received By | $ \zeta_{0} $ | | | Date/Time: UUS(CUO | (A [D | | Data Requirements: (Check) No Level IV: | sck) All Level IV: | NPDES Level IV: X | |

4 of 15

| ∋st An | nerica | ∋st America version 6/29/09 | 60/6 | | | | CHJ | AIN | CHAIN OF CUSTODY FORM | | TTT | TA 1358 | Page 1 of 2 |
|--|--------------------------|------------------------------|---------------|--|-----------------|--------------|---------------|----------|--|---------------|---|---------------------|---------------------------|
| Name/Address: 4-Arcadia tichillinda Ave. S | ldress: a Ave. Sur | te 200 | | Project: Boeing-SSFL NPDES Routine Outfall 008 | SFL NPI | DES 108 | | | | | ANALYSIS REQUIRED | | Field readings: |
| lia, CA 91007 | 1007 | | | GRAB Stormwater at Happy Valley | sr at Ha | ppy Valle | ž | | | | | |) \ @ |
| America C | contact: | America Contact: Joseph Doak | <u>ل</u> م | | | | | (V | | | | | emp אב = 56.0°ך |
| | : | | | | | | | N3H-1 | | | | | pH = +,5 |
| ct Manager. Bronwyn Kelly | er. Bron | wyn Kelly | | Phone Number: (626) 568-6691 | imber: -6691 | | | +991) a | | | | | Time of readings = (U/)C) |
| sler: 5 Da WW |)a wyw | , | | Fax Number: (626) 568-6515 | oer: -6515 | | | Greas | | | | | |
| ample scrintion | Sample Matrix | Container Type | # of Cont. | Sampling Date/Time | | Preservative | Bottle # | 8 IIO | | | | | Comments |
| | 3 | 1L Amber | 2 | ahi oi/sair | 41 | Ρ | | × | | | | | |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | | iese Samp | les ar | e the Gra | tb Port | ion of Ou | itfall 008 fo | r this | These Samples are the Grab Portion of Outfall 008 for this storm event. Composite sample | es will follo | Composite samples will follow and are to be added to this Work order. | d to this work | order. |
| quished By | -1 | | Date/Time: | ime: | - | | Received | | | | 24 Hour. 72 H | 72 Hour: | 1 |
| FUM | JV M | 7 | 07-8/-1 | 2-40 | 16:0 | 8 | NB | <i>E</i> | 1 1000 1-18-10 16: W | $\langle $ | 4 | 5 Day: | Normal: X |
| iquished By | | | Date/Time: | ime: | | | Keceived by | | | | Sample Integrity: (Check) | ý | |
| / MA | t) d | (MAR) | 1/1g | 1-18-10 | 19:0 | 3 | | | ····· | | Intact: On | On Ice: | Ĺ Ĺ |
| quished By | | | Date/Time: | Lime: | | | Received By | | 1/(8/10 1 | 8 | Data Requirements: (Check) No Level IV: All | t) All Level IV: | NPDES Level IV: |
| | | | | | | | 7 | | 1 | | | | |

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|--|--|---|---|--|
| THE LEADER IN ENVIRORMENT | ALTESTING | 54 | δ | |
| | ON RECEIPT FORM | 54 | | |
| Client: | TA Source | | | |
| Quote No: | 85044 | | | |
| COC/RFA No: | TA 1330,31,28,58) | | | |
| Initiated By: M | | Dat 2:20 1.2 | 1.18 Time: | 1215 |
| | <u>Shippi</u> | ng Information | | ······································ |
| Shipper: FedI | EX UPS DHL Courier Clien | nt Other: | Multiple Pa | ackages: $(Y)N$ |
| Shipping # (s):* | | | Sample Temperature | (s):** |
| 1. 4289 2 | 132 9059 6. | | 1. anlier | 6. |
| 2. | | | 1 | |
| 3. | | | | |
| | | | | |
| | | | 5. | |
| | | **Sample must be receive | d at 4°C ± 2°C- If not, note cor | |
| | rrespond to Numbered Sample Temp lines | variance does NOT affect | the following: Metals-Liquid | or Radvests- Liquid or Solids |
| | yes, "N" for no and "N/A" for not applicable): | | · · · · · · · · · · · · · · · · · · · | |
| | Are there custody seals present on the cooler? | 8. Y N | Are there custody seals | present on bottles? |
| 2. $\mathbf{Y} \cap \mathbf{N} \mathbf{A}$ ta | Do custody seals on cooler appear to be ampered with? | 9. Y N NA | Do custody seals on bo tampered with? | |
| | Vere contents of cooler frisked after opening, but before unpacking? | 10. Y N N/A | Was sample received w make note below) | vith proper pH ¹ ? (If not, |
| 4. (<u>)</u> N (| Sample received with Chain of Custody? | 11. 🖓 N | Sample received in pro | per containers? |
| | Does the Chain of Custody match ample ID's on the container(s)? | 12. Y N NA | Headspace in VOA or (If Yes, note sample ID's be | |
| | Was sample received broken? | 13. Y N 🕅 | Was Internal COC/Wor | rkshare received? |
| | s sample volume sufficient for nalysis? | 14. Y N N/A | • • • | al TestAmerica lab? |
| | L, Sandia) sites, pH of ALL containers received m | | OA, TOX and soils. | |
| Notes: Log + | tritium for ITA1358 p | or KC por | 1/1/10 | |
| | <u>_</u> | | | |
| ····· | <u></u> | | | |
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| <u></u> | | | | |
| Corrective Action: | | | | · · · · · · · · · · · · · · · · · · · |
| Client Contact Nam | | Informed by: | <u> </u> | ······································ |
| | | If released notify | | |
| | | Date: | 01-22-10 | |
| • | | | | |
| Client Contact Nan Sample(s) processe Sample(s) on hold to Project Management Re THIS FORM MUST BE COM | ed "as is" until: eview: MPLETED AT THE TIME THE ITEMS ARE BEI IAT PERSON IS REQUIRED TO APPLY THEIR | If released, notify: Date: ING CHECKED IN. IF AN NITIAL AND THE DATI | CI-22-1D IY ITEM IS COMPLETED BY E NEXT TO THAT ITEM. \SIsvr01\QA\FORMS\ST-LOU | |

METHODS SUMMARY

F0A210532

| PARAMETER | ANALYTICAL METHOD | PREPARATION METHOD |
|--|----------------------|-----------------------|
| Gamma Spectroscopy - Cesium-137 & Hits | EPA 901.1 MOD | |
| Gross Alpha/Beta EPA 900 | EPA 900.0 MOD | EPA 900.0 |
| H-3 by Distillation & LSC | EPA 906.0 MOD | |
| Radium-226 by GFPC | EPA 903.0 MOD | |
| Radium-228 by GFPC | EPA 904 MOD | |
| Strontium 90 by GFPC | EPA 905 MOD | |
| Total Uranium By Laser Ph osphorimetry | ASTM 5174-91 | |

References:

ASTM Annual Book Of ASTM Standards.

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

SAMPLE SUMMARY

F0A210532

| WO # SAMPLE# CLIENT SAMPLE ID | SAMPLED DATE | SAMP TIME |
|--|-----------------|--------------|
| LTH7V 001 ITA1358-02 | 01/18/10 | 14:08 |
| NOTE (S) : - The analytical results of the samples listed above are presented on the following pages. | | |

- All calculations are performed before rounding to avoid round-off errors in calculated results.

- Results noted as "ND" were not detected at or above the stated limit.

- This report must not be reproduced, except in full, without the written approval of the laboratory.

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Irvine

Client Sample ID: ITA1358-02

Radiochemistry

| Lab Sample ID: Work Order: Matrix: | F0A210532-003 LTH7V WATER | L | | Date Collect Date Receive | |)1/18/10)1/21/10 | | |
|--|---------------------------------|------|------------------------------|------------------------------|------|----------------------|------------|------------------|
| Parameter | Result | Qual | Total Uncert. (2 g+/-) | RL | mdc | | rep ate | Analysis Date |
| Gamma Cs-137 & H | its by EPA 901. | LMOD | | pCi/L | Bato | h # 0023 | | Yld % |
| Cesium 137 | -2.3 | U | 9.2 | 20.0 | 17 | 0 | 1/23/10 | 01/26/10 |
| Potassium 40 | -30 | U | 240 | | 290 | 0 | 1/23/10 | 01/26/10 |
| Gross Alpha/Beta | EPA 900 | | | pCi/L | Bato | h # 0025 | 415 | Yld % |
| Gross Alpha | 25.8 | | 5.5 | 3.0 | 3.8 | 0 | 1/25/10 | 01/29/10 |
| Gross Beta | 25.4 | | 4.3 | 4.0 | 4.4 | 0 | 1/25/10 | 01/29/10 |
| SR-90 BY GFPC E | PA-905 MOD | | | pCi/L | Bato | h # 0022 | | ¥ld % 61 |
| Strontium 90 | 0.26 | υ | 0.46 | 3.00 | 0.77 | 0 | 01/22/10 | 02/01/10 |
| Total Uranium by | KPA ASTM 5174- | 91 | | pCi/L | Bato | ch # 0035 | 029 | Yld % |
| Total Uranium | 0.652 | J | 0.070 | 0.693 | 0.21 | C | 2/04/10 | 02/08/10 |
| Radium 226 by E | PA 903.0 MOD | | | pCi/L | Bato | ch # 0022 | 145 | Yld % 47 |
| Radium (226) | 0.11 | U | 0.17 | 1.00 | 0.29 | (| 01/22/10 | 02/08/10 |
| Radium 228 by GF | PC EPA 904 MOD | | | pCi/L | Bato | ch # 0022 | 148 | ¥1d % 38 |
| Radium 228 | -1.92 | U | 0.88 | 1.00 | 1.7 | (|)1/22/10 | 02/08/10 |
| TRITIUM (Distill |) by EPA 906.0 | MOD | | pCi/L | Bate | ch # 0028 | 080 | Yld % |
| Tritium | 81 | U | 90 | 500 | 140 | (| 01/28/10 | 01/29/10 |

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only.

METHOD BLANK REPORT

Radiochemistry

Client Lot ID: F0A210532 Matrix:

| 1011210337 | |
|------------|--|
| WATER | |

| Parameter | Result | Qual | Total Uncert. (2 g+/-) | RL | MDC | | Prep Date | Lab Sample ID Analysis Date |
|-----------------|-----------------|---------|------------------------------|---------|---------|-------|--------------|-----------------------------------|
| Total Uranium b | y KPA ASTM 517 | 4-91 | pCi/L | Batch # | 0035029 | Yld % | 1 | F0B040000-029B |
| Total Uranium | -0.0623 | U | 0.0075 | 0.693 | 0.21 | | 02/04/10 | 02/08/10 |
| Radium 226 by | EPA 903.0 MOD | | pCi/L | Batch # | 0022145 | Yld % | 108 1 | F0A220000-145B |
| Radium (226) | 0.111 | U | 0.094 | 1.00 | 0,13 | | 01/22/10 | 02/08/10 |
| Radium 228 by G | FPC EPA 904 MC | מ | pCi/L | Batch # | 0022148 | Yld % | 92 I | 70A220000-148B |
| Radium 228 | 0.22 | U | 0.35 | 1.00 | 0.59 | | 01/22/10 | 02/08/10 |
| SR-90 BY GFPC | EPA-905 MOD | | pCi/L | Batch # | 0022149 | Yld % | 79 1 | F0A220000-149B |
| Strontium 90 | -0.01 | U | 0.22 | 3.00 | 0.38 | | 01/22/10 | 02/01/10 |
| Gamma Cs-137 & | Hits by EPA 90 | 1.1 MOD | pCi/L | Batch # | 0023036 | Yld % | I | 70A230000-036B |
| Cesium 137 | -0.4 | U | 6.7 | 20.0 | 12 | | 01/23/10 | 01/26/10 |
| Potassium 40 | -70 | υ | 240 | | 210 | | 01/23/10 | 01/26/10 |
| Gross Alpha/Bet | a EPA 900 | | pCi/L | Batch # | 0025415 | ¥ld % | I | 70A250000-415B |
| Gross Alpha | -0.03 | U | 0.34 | 3.00 | 0.71 | | 01/25/10 | 01/29/10 |
| Gross Beta | -0.26 | U | 0.86 | 4.00 | 1.5 | | 01/25/10 | 01/29/10 |
| TRITIUM (Distil | .1) by EPA 906. | 0 MOD | pCi/L | Batch # | 0028080 | Yld % | I | 70A280000-080B |
| Tritium | 250 | J | 120 | 500 | 140 | | 01/28/10 | 01/28/10 |

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

Laboratory Control Sample Report

Radiochemistry

| Client Lot | ID: | F0A210532 |
|------------|-----|-----------|
| Matrix: | | WATER |

| | | | Total | | | | Lab | Sample ID |
|-----------------------------------|-----------------|---------|-------------------|-------|----------------|-------|-------|----------------------|
| Parameter | Spike Amount | Result | Uncert (2 σ+/- | | MDC | % Yld | % Rec | QC Control Limits |
| Gamma Cs-137 & Hi | ts by EPA 901.1 | MOD | pCi/L | 901.1 | MOD | - | F0A2 | 30000-036C |
| Americium 241 | 141000 | 132000 | 10000 | | 500 | | 93 | (87 - 110) |
| Cesium 137 | 53100 | 48200 | 2800 | | 200 | | 91 | (90 - 110) |
| Cobalt 60 | 87900 | 79000 | 4400 | | 200 | | 90 | (89 - 110) |
| | Batch #: | 0023036 | | | Analysis Date: | 01/20 | 5/10 | |
| Gross Alpha/Beta | EPA 900 | | pCi/L | 900.0 | MOD | | F0A2 | 50000-415C |
| Gross Beta | 68.1 | 73.4 | 6.2 | | 1.6 | | 108 | (58 - 133) |
| | Batch #: | 0025415 | | | Analysis Date: | 01/29 | 9/10 | |
| Gross Alpha/Beta | EPA 900 | | pCi/L | 900.0 | MOD | | F0A2 | 50000-415C |
| Gross Alpha | 49.4 | 45.4 | 5.0 | | 0.9 | | 92 | (62 - 134) |
| | Batch #: | 0025415 | | | Analysis Date: | 01/29 | 9/10 | |
| TRITIUM (Distill) | by EPA 906.0 M | OD | pCi/L | 906.0 | MOD | | F0A2 | 80000-080C |
| Tritium | 4540 | 4680 | 480 | | 140 | | 103 | (85 - 112) |
| | Batch #: | 0028080 | | | Analysis Date: | 01/28 | 8/10 | |
| Total Uranium by KPA ASTM 5174-91 | | pCi/L | L 5174-91 | | F0B040000-029C | | | |
| Total Uranium | 27.7 | 29.2 | 3.5 | | 0.2 | | 105 | (90 - 120) |
| | Batch #: | 0035029 | | | Analysis Date: | 02/08 | 3/10 | |
| Total Uranium by | KPA ASTM 5174-9 | 1 | pCi/L | 5174- | 91 | | F0B0 | 40000-029C |
| Total Uranium | 5.54 | 5.67 | 0.59 | | 0.21 | | 102 | (90 - 120) |
| | Batch #: | 0035029 | | | Analysis Date: | 02/08 | 3/10 | |

Laboratory Control Sample/LCS Duplicate Report

Radiochemistry

| Client | Lot | ID: | F0A210532 |
|--------|-----|-----|-----------|
| Matrix | : | | WATER |

| | | | | | Total | | | Lab | Sample | ID |
|---------------------|------|--------------|--------------|-------|------------------------------|------------|------------|--------------------------|--------|-------|
| Parameter | | Spike Amount | Result | | Uncert . (2 σ +/-) | % Yld | % Rec | QC Control Limits | Prec. | ision |
| Radium 226 by EP | PA 9 | 03.0 MOD | | pCi/L | 903. | 0 MOD | | F0A2 | 20000- | -145C |
| Radium (226) Spk | 2 | 11.3 11.3 | 10.7 11.2 | | 1.1 1.1 | 108 110 | 95 100 | (68 - 136) (68 - 136) | 5 | %RPD |
| | | Batch #: | 0022145 | | | Analysi | s Date: | 02/08/10 | | |
| Radium 228 by GFP | PC E | PA 904 MOD | | pCi/L | 904 | MOD | | F0A2 | 20000- | -148C |
| Radium 228 Spk | 2 | 6.45 6.45 | 8.22 7.58 | | 0.95 0.88 | 93 99 | 127 118 | (60 - 142) (60 - 142) | 8 | %RPD |
| | | Batch #: | 0022148 | | | Analysi | s Date: | 02/08/10 | | |
| SR-90 BY GFPC EF | PA-9 | 05 MOD | | pCi/L | 905 | MOD | | F0A2 | 20000- | -149C |
| Strontium 90 Spk | 2 | 6.81 6.81 | 6.74 6.99 | | 0.79 0.81 | 77 80 | 99 103 | (80 - 130) (80 - 130) | 4 | %RPD |
| | | Batch #: | 0022149 | | | Analysi | s Date: | 02/01/10 | | |

MATRIX SPIKE REPORT

Radiochemistry

| Client Lot Id: | F0A200486 | Date Sampled: | 01/18/10 |
|----------------|-----------|----------------|----------|
| Matrix: | WATER | Date Received: | 01/20/10 |

| | | | | | m 1 | QC Samp | le ID |
|--------------------------|-----------------|-----------------|------------------------------|-----------------------------|------------|-----------|----------------------|
| Parameter | Spike Amount | Spike Result | Total Uncert. (2g +/-) | Spike Sample Yld. Result | UNCELC. | %YLD %REC | QC Control Limits |
| Gross Alpha/Beta EPA 900 |) | | pCi/L | 900.0 MC | D | F0A20048 | 36-001 |
| Gross Beta | 68.1 | 10.0 | 1.6 | 0.83 | 0.99 | 14 | a (54 - 150) |
| | Batch #: | 0025415 | An | alysis Date: | 01/29/10 | | - |
| Gross Alpha/Beta EPA 900 |) | | pCi/L | 900.0 MC | a | F0A20048 | 36-001 |
| Gross Alpha | 49.4 | 6.9 | 1.6 | 0.98 | 0.70 | 12 | a (35 - 150) |
| | Batch #: | 0025415 | An | alysis Date: | 01/29/10 | | |
| TRITIUM (Distill) by EPA | A 906.0 MC | D | pCi/L | 906.0 MC | מפ | F0A20049 | 94-001 |
| Tritium | 4540 | 4350 | 460 | 64 | 88 | 94 | (62 - 147) |
| | Batch #: | 0028080 | An | alysis Date: | 01/29/10 | | |

NOTE (S)

Data are incomplete without the case narrative. Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

Radiochemistry

| Client Lot I Matrix: | - | 0A200486 IATER | | | | | | ampled: eceived: | 01/18 01/20 | ., | 0730 0915 |
|-------------------------|--------|-------------------|-------------------|------------------------------|--------------|------------------|------|------------------------------|----------------|------------------|-------------------------------|
| Parameter | | Spike Amount | SPIKE Result | Total Uncert. (2 s+/-) | Spike Yld | SAMPLE Result | | Total Uncert. (2σ +/-) | % Yld | QC Sampl %Rec | le ID QC Control Limits |
| Total Uranium | by KPA | ASTM 5 | | pCi/L | Į | 5174-91 | | | F(| A20048 | 36-001 |
| Total Uranium | | 27.7 | 28.8 | 3.4 | | -0.0334 | U | 0.0040 | | 104 | (62 - 150) |
| | Spk2 | 27.7 | 29.2 | 3.5 | | -0.0334 | U | 0.0040 Preci : | sion: | 105 2 | (62 - 150) %RPD |
| | | Batch | #: 0035029 | Ana | alysis d | ate: | 02/0 | 8/10 | | | |

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DUPLICATE EVALUATION REPORT

Radiochemistry

| Client Lot ID: | F0A210532 | Date Sampled: | 01/18/10 |
|----------------|-----------|----------------|----------|
| Matrix: | WATER | Date Received: | 01/20/10 |

| | | | Total | | | Total | ç | C Sample ID | |
|---------------------|------------------|--------|----------------------------|----------|---------------------|---------------------|-------|-------------|------|
| Parameter | SAMPLE Result | | Uncert . (2σ+/-) | % Yld | DUPLICATE Result | Uncert. (2 σ+/-) | % Yld | Precisi | on |
| Gross Alpha/Beta E | PA 900 | | | pCi/L | 900.0 MOD | | F0 | A200486-00 | 1 |
| Gross Alpha | 0.98 | J | 0.70 | | 0.71 J | 0.85 | | 32 | %RPD |
| Gross Beta | 0.83 | U | 0.99 | | 1.6 J | 1.0 | | 62 | %RPD |
| | Bat | ch #: | 0025415 | (Sample) | 0025415 (D | uplicate) | | | |
| TRITIUM (Distill) | by EPA 90 | 6.0 MC | מו | pCi/L | 906.0 MOD | | F0 | A200486-00 | 1 |
| Tritium | 99 | U | 94 | | - 49 U | 64 | | 586 | %RPD |
| | Bat | :ch #: | 0028080 | (Sample) | 0028080 (D | uplicate) | | | |
| Gamma Cs-137 & Hit: | s by EPA | 901.1 | MOD | pCi/L | 901.1 MOD | | FO | A210532-00 | 1 |
| Cesium 137 | -2.3 | U | 9.2 | | -1.4 U | 9.8 | | 47 | %RPD |
| Potassium 40 | -30 | U | 240 | | -60 U | 440 | | 69 | %RPD |
| | Bat | ch #: | 0023036 | (Sample) | 0023036 (D | uplicate) | | | |

NOTE (S)

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Analytical Data Package Prepared For

TestAmerica - Irvine, CA

ITA1358

Radiochemical Analysis By

TestAmerica

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131. Assigned Laboratory Code: TARL Data Package Contains <u>18</u> Pages

Report No.: 43800

Results in this report relate only to the sample(s) analyzed.

| SDG No. | Order No. | Client Sample ID (List Order) |) Lot-Sa No. | Work Order | Report DB ID | Batch No. |
|---------|-----------|-------------------------------|--------------|------------|--------------|-----------|
| 41277 | | ITA1358-02 | J0D280537-2 | L0NP71AC | 9L0NP710 | 0118345 |
| | | ITA1358-02 | J0D280537-2 | L0NP71AA | 9L0NP710 | 0118346 |
| | | ITA1358-02 | J0D280537-2 | L0NP71AD | 9L0NP710 | 0118347 |
| | | ITA1358-02 | J0D280537-2 | L0NP71AE | 9L0NP710 | 0118349 |



THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

May 10, 2010

TestAmerica – Irvine, CA 17461 Derian Avenue Suite# 100 Irvine, California 92614

| Attention: Debby Wilson | | | |
|-------------------------|---|---------------------|--|
| Date Received by Lab | : | April 28, 2010 | |
| Sample Number/Matrix | : | One (1) Water | |
| SDG Number | : | 41277 | |
| Project | : | MWH-Pasadena Boeing | |
| Project Number | : | ITA1358 | |

CASE NARRATIVE

I. Introduction

On April 28, 2010, one water sample was received at the TestAmerica Richland laboratory for radiochemical analysis. Upon receipt, the sample was assigned the TestAmerica identification number as described on the cover page of the Analytical Data Package. The sample was assigned to Lot Number J0D280537.

II. Sample Receipt

The sample was received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical uncertainties.

The analyses requested were:

Alpha Spectroscopy Americium by method RL-ALP-010 (RICH-RC-5080)* Plutonium by method RL-ALP-001 (RICH-RC-5087)* Thorium by method RL-ALP-005 (RICH-RC-5084)* Uranium by method RL-ALP-009 (RICH-RC-5079)*

* SOP Id#'s changed effective 7-01-2008. Attached is a cross reference until SOP Id#'s are changed in all systems.

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

V. Comments

The information to complete the State of California form was not provided and requested. The WSA was received.

Alpha Spectroscopy

<u>Americium by method RL-ALP-010 (RICH-RC-5080):</u> The LCS, batch blank, and sample results are within acceptance limits.

<u>Plutonium by method RL-ALP-001 (RICH-RC-5087)</u>: The LCS, batch blank, and sample results are within acceptance limits.

<u>Thorium by method RL-ALP-005 (RICH-RC-5084):</u> The LCS, batch blank, and sample results are within acceptance limits.

<u>Uranium by method RL-ALP-009 (RICH-RC-5079)</u>: The LCS, batch blank, and sample results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW and/or NELAC, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

Hayes

Christi Hayes Project Manager

| Isotope | Richland SOP # | Old Richland SOP # | Method Reference | Title |
|---------------|-------------------|-----------------------|---|---|
| Asbestos | RL-ASB-001 | N/A | NIOSH 7400 | Fiber Counting by Phase Contrast Microscopy based on NIOSH 7400 |
| Asbestos | RL-ASB-002 | N/A | NIOSH 9002 | Sample Prep and Analysis for Asbestos (bulk) by Polarized Light Microsopy based on NIOSH 9002 |
| Alpha - Gross | ARCHIVED | RICH-RB-5035 | Liquid Scintillation Anal/ Packard | DETERMINATION OF GROSS ALPHA IN NASAL SMEARS BY LIQUID SCINTILLATION COUNTING |
| Alpha - Gross | RL-GPC-001 | RICH-RC-5014 | 9310 / EPA SW846 900.0 / EPA 600 | DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310 |
| Alpha - Gross | RL-GPC-007 | RICH-RC-5020 | SM 7110B EPA 680 | DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION |
| Alpha - Gross | RL-GPC-002 | RICH-RC-5021 | 00-02 EPA 520 | DETERMINATION OF GROSS ALPHA ACTIVITY IN WATER BY COPRECIPITATION |
| Alpha - Gross | RL-GPC-008 | RICH-RC-5036 | ER100 / LANL | PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS |
| Am | RL-ALP-003 | RICH-RC-5072 | Mod RP 725 / DOE0089T EXT Chromatography | SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY |
| Am | RL-ALP-010 | RICH-RC-5080 | Am03/Pu11HASL 300 NAS-NS-3006 | SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM |
| Beta - Gross | RL-GPC-001 | RICH-RC-5014 | 9310 / EPA SW846 900.0 / EPA 600 | DETERMINATION OF GROSS ALPHA AND GROSS BETA IN WATER BY METHOD 9310 |
| Beta - Gross | RL-GPC-007 | RICH-RC-5020 | SM 7110B EPA 680 | DETERMINATION OF GROSS ALPHA AND GROSS BETA IN SOIL, SHORELINE SOIL, FOOD AND VEGETATION |
| Beta - Gross | RL-GPC-008 | RICH-RC-5036 | ER100 / LANL | PREPARATION OF AIR FILTERS FOR GROSS ALPHA/BETA AND COMPOSITING AIR FILTERS |
| C14 | RL-LSC-001 | RICH-RB-5013 | Mod H-02 / EPA 520 | TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE |
| C14 | RL-LSC-008 | RICH-RC-5022 | EPA C-01 / EPA 520 | CARBON 14 BY DIGESTION METHOD |
| C14 | RL-LSC-009 | RICH-RC-5040 | Mod C14 / EPA 680 | DETERMINATION OF CARBON-14 BY BENZENE SYNTHESIS |
| C14 | RL-LSC-010 | RICH-RC-5046 | EPA C-01 / EPA 520 | DETERMINATION OF CARBON-14 IN GRAPHITE AND SOIL |
| C14 | RL-LSC-011 | RICH-RC-5047 | Mod H-02 / EPA 520 | DETERMINATION OF CARBON-14 IN WATER BY DIRECT COUNTING |
| Cm | RL-ALP-003 | RICH-RC-5072 | Mod RP 725 / DOE0089T EXT Chromatography | SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY |
| Coliform | RL-WC-001 | RICH-WC-5001 | 9222B | DETERMINATION OF TOTAL COLIFORM: MULTIPLE TUBE FERMENTATION TECHNIQUE |
| Coliform | RL-WC-002 | RICH-WC-5002 | 9131 | TOTAL COLIFORMS BY MEMBRANE FILTRATION |
| Coliform | RL-WC-005 | RICH-WC-5007 | 9223 | TOTAL COLIFORM BY THE COLILERT METHOD |
| Cr6+ | RL-WC-003 | RICH-WC-5003 | 7196A, SW846 | DETERMINATION OF HEXAVALENT CHROMIUM [Cr(VI)] IN WATER, SOIL, AND SIMILAR MATRICES |
| Cr6+ | RL-WC-004 | RICH-WC-5005 | 3060 / SW846 | DETERMINATION OF HEXAVALENT CHROMIUM (CrVI) IN SOLID MATRICES WITH ALKALINE DIGESTION |
| Fe | RL-LSC-015 | RICH-RC-5074 | EXT Chromatography ModFe55/PNL-ALO-435 | SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY |
| Fe55 | RL-LSC-016 | RICH-RC-5023 | R4-73-014 / EPA HASL 300 | DETERMINATION OF IRON-55 AND IRON-59 IN WATER |
| Fe59 | RL-LSC-016 | RICH-RC-5023 | R4-73-014 / EPA HASL 300 | DETERMINATION OF IRON-55 AND IRON-59 IN WATER |
| Gamma | RL-GAM-001 | RICH-RC-5017 | 901.0 / HASL 300 ASTM D3649 | PREPARATION OF ALL MATRICES FOR ANALYSIS BY GAMMA SPECTROSCOPY |
| H3 | RL-LSC-001 | RICH-RB-5013 | Mod H-02 / EPA 520 | TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE |
| H3 | RL-LSC-003 | RICH-RB-5034 | 7500-3 / SM | DETERMINATION OF TRITIUM IN URINE BY DISTILLATION |
| H3 | RL-LSC-004 | RICH-RC-5004 | H3 / EPA LV539 | DETERMINATION OF TRITIUM IN AIR |
| H3 | RL-LSC-005 | RICH-RC-5007 | Mod '906.0 / EPA 600 | SEPARATION OF TRITIUM IN WATER AND AQUEOUS COMPONENT OF WINE |
| H3 | RL-LSC-007 | RICH-RC-5024 | H-3 by EE EPA LV539 / HASL 300 | DETERMINATION OF LOW LEVEL TRITIUM IN WATER BY ELECTROLYTIC ENRICHMENT |
| H3 | RL-LSC-002 | RICH-RC-5037 | H-3 in Water/Tissue / LV 539 | DETERMINATION OF TRITIUM BY CRYOGENIC DISTILLATION |

Update 7/01/08

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| T . | Richland SOP # | Old Richland SOP # | | |
|-----------------|-------------------|-----------------------|---|--|
| Isotope | SOP # | SOF # | Method Reference | Title |
| H3 | RL-LSC-006 | RICH-RC-5048 | H-3 in Water/Tissue / LV 539 | TRITIUM PREPARATION IN MILK SAMPLES |
| I129 | RL-GAM-002 | RICH-RC-5025 | R4-73-014I/EPA ASTM D2334 (Discontinued) | DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD |
| I131 | RL-GAM-002 | RICH-RC-5025 | R4-73-014I/EPA ASTM D2334 (Discontinued) | DETERMINATION OF IODINE-131 AND 129 IN WATER BY SOLVENT EXTRACTION METHOD |
| I131 | ARCHIVED | RICH-RC-5049 | HASL 300 (1983) | DETERMINATION OF IODINE-131 IN MILK BY BATCH ION-EXCHANGE |
| Metals | ARCHIVED | BHI-MT-0001 | 6010 | ICP-AE SPECTROSCOPY, SPECTROMETRIC METHOD FOR TRACE ELEMENT ANALYSIS, METHOD 6010A FOR Bechtel |
| Metals | RL-MT-001 | RICH-MT-0001 | 6010B | ICP-AES for TRACE ELEMENT ANALYSIS, METHOD 6010B |
| Metals | RL-MT-002 | RICH-MT-0002 | SW486 3050B | ACID DIGESTION FOR ICP ANALYSIS |
| Metals | RL-MT-003 | RICH-MT-0003 | NIOSH 7300 | DIGESTION PREP based on METHOD NIOSH 7300 |
| Ni | RL-LSC-015 | RICH-RC-5074 | EXT Chromatography ModFe55/PNL-ALO-435 | SEPARATION OF IRON AND NICKEL BY EXTRACTION CHROMATOGRAPHY |
| Ni63 | RL-LSC-001 | RICH-RB-5013 | Mod H-02 / EPA 520 | TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE |
| Ni63 | RL-LSC-017 | RICH-RC-5069 | EXT Chromatography Mod RP300 / DOE0089T | SEPARATION OF Ni-63 BY EXTRACTION CHROMATOGRAPHY |
| Np | RL-ALP-013 | RICH-RC-5009 | NAS-NS-3060 | DETERMINATION OF NEPTUNIUM-237 BY LIQUID-LIQUID EXTRACTION IN ALL MATRICES |
| Np | RL-ALP-006 | RICH-RC-5064 | EXT Chromatography | SEPARATION OF NEPTUNIUM BY EXTRACTION CHROMATOGRAPHY |
| P32 | RL-LSC-001 | RICH-RB-5013 | Mod H-02 / EPA 520 | TRITIUM, CARBON-14, NICKEL-63 OR PHOSPHORUS-32 ANALYSIS IN URINE |
| Pb | RL-ALP-011 | RICH-RC-5076 | EXT Chromatography | DETERMINATION OF LEAD-210 BY EXTRACTION CHROMATOGRAPHY |
| Ро | RL-ALP-007 | RICH-RB-5001 | NAS-NS-3037 HASL 300 | DETERMINATION OF POLONIUM-210 IN URINE |
| Ро | RL-ALP-012 | RICH-RC-5012 | Po-01 / HASL 300 Mod U01 HASL 300 | SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS |
| Prep - Bioassay | ARCHIVED | RICH-RB-0001 | | PREPARATION FOR RAPID BIOASSAY ANALYSES |
| Prep - Bioassay | RL-PRP-001 | RICH-RB-5002 | Mod Pu06 / HASL 300 | PREPARATION OF URINE AND BLOOD SAMPLES |
| Prep - Bioassay | ARCHIVED | RICH-RB-5004 | ASTM D1429-95 | DETERMINATION OF SPECIFIC GRAVITY OF URINE |
| Prep - Bioassay | RL-RPL-002 | RICH-RB-5036 | Pub 6490,6601 / PNL | PREPARATION OF SYNTHETIC URINE AND FECES USING RECIPES FROM HPS N13.30 PREFORMANCE TESTING |
| Prep - Bioassay | RL-PRP-002 | RICH-RB-5037 | LA-10300-M R200 ASTM D3865 | PREPARATION OF FECAL SAMPLES USING HYDROFLUORIC ACID DIGESTION |
| Prep - Bioassay | RL-RPL-003 | RICH-RC-5028 | ICRP Publication 23 | PREPARATION OF SYNTHETIC URINE AND FECES |
| Prep - Count | RL-ALP-016 | RICH-RC-5003 | G-03 / HASL 300 | COPRECIPITATION OF SOME ACTINIDES ON NEODYMIUM FLUORIDE FOR ALPHA-PARTICLE SPECTROMETRY |
| Prep - Count | RL-ALP-015 | RICH-RC-5039 | G-03 / HASL 300 Anal Chem 1972 | ELECTRODEPOSITION OF ACTINIDES |
| Prep - Count | RL-ALP-014 | RICH-RC-5085 | Morrison & Freiser NAS-NS-3050 | ANHYDROUS ETHER EXTRACTION OF URANIUM |
| Prep - Env | RL-KPA-001 | RICH-RC-5015 | ASTM / D5174-97 | ENVIRONMENTAL SAMPLE PREPARATION FOR URANIUM BY LASER-INDUCED PHOSPHORESCENCE |
| Prep - Env | RL-PRP-004 | RICH-RC-5016 | Sr02 / HASL 300 | PREPARATION OF ENVIRONMENTAL MATRICES |
| Prep - Env | RL-PRP-007 | RICH-RC-5045 | Mod Pu02 / HASL 300 | PREPARATION OF MIXED BED RESINS AND PRE-FILTERS |
| Prep - Env | RL-PRP-008 | RICH-RC-5068 | Mod ER100 / LA10300 | PREPARATION OF SOIL, VEGETATION AND AIR FILTERS BY MIXED STRONG ACID LEACHING |
| Prep - Resin | RL-ALP-017 | RICH-RC-5018 | Mod Pu11 / Mod 300 | ION-EXCHANGE PREPARATION |
| Prep - Soil | RL-PRP-003 | RICH-RC-5013 | Pu02A / HASL 300 | PREPARATION OF SOIL SAMPLES |
| Prep - Soil | RL-PRP-005 | RICH-RC-5019 | D5259 / ASTM SW 846/3015/3051/3052 | PREPARATION AND DISSOLUTION OF SEDIMENTS AND SOIL BY MICROWAVE BOMB DIGESTION |

Update 7/01/08

TestAmerica Laboratories, Inc.

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| Isotope | Richland SOP # | Old Richland SOP # | Method Reference | Title |
|--------------|-------------------|-----------------------|---|---|
| Prep - Soil | RL-PRP-006 | RICH-RC-5032 | Pu02A / HASL 300 | COMPLETE DISSOLUTION BY MIXED ACIDS IN A TEFLON BEAKER |
| Prep - Soil | RL-PRP-009 | RICH-RC-5077 | Mod ER100 / LA10300 | PREPARATION OF SMALL SOIL SAMPLES FOR GAMMA SPEC AND/OR RADIOCHEM ANAL BY ACID DIGESTION |
| Prep - Urine | RL-PRP-010 | RICH-RC-5086 | AnalyticaChemActa1992 RP800 / DOE00089T | URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION |
| Prep - Water | RL-PRP-010 | RICH-RC-5086 | AnalyticaChemActa1992 RP800 / DOE00089T | URINE AND WATER SAMPLE PREPARATION BY CALCIUM PHOSPHATE PRECIPITATION |
| Pu | ARCHIVED | RICH-RB-5015 | Pu11 / HASL 300 | RAPID DETERMINATION OF PLUTONIUM IN FECES |
| Pu | RL-ALP-002 | RICH-RC-5010 | Pu11 / HASL 300 | DETERMINATION OF ISOTOPIC PLUTONIUM IN ALL MATRICES |
| Pu | RL-ALP-010 | RICH-RC-5080 | Am03 HASL 300 Pu11 / HASL 300 | SEQUENTIAL SEPARATION OF PLUTONIUM AND AMERICIUM |
| Pu | RL-ALP-001 | RICH-RC-5087 | AnalyticaChemActa1992 RP800 / DOE00089T | DETERMINATION OF PLUTONIUM BY EXTRACTION CHROMATOGRAPHY |
| Ra | RL-RA-001 | RICH-RC-5005 | 903.1 / EPA 600 | RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0 |
| Ra | RL-RA-001 | RICH-RC-5005 | 904.0 / EPA 600 | RADIUM-226 AND RADIUM-228 SEPARATION IN RADIOCHEMICAL MATRICES - ADAPTED FROM EPA 903.1 AND 904.0 |
| Ra | RL-RA-002 | RICH-RC-5027 | Mod D2460/ ASTM 903.0 / EPA 600 | DETERMINATION OF TOTAL RADIUM |
| Rn | RL-LSC-019 | RICH-RC-5082 | 913.0 / EPA | DETERMINATION OF RADON-222 - ADAPTED FROM METHOD 913.0 |
| S35 | ARCHIVED | RICH-RB-5020 | Hillebrand, Lundeell, Bright, Hoffman 1953 | DETERMINATION OF SULFUR-35 IN URINE |
| Se79 | RL-LSC-012 | RICH-RC-5043 | Selenium / NAS-NS-3030 | RADIOCHEMICAL DETERMINATION OF SELENIUM-79 |
| Solubility | ARCHIVED | RICH-RC-5035 | | DETERMINATION OF SOLUBILITY OF RADIOACTIVE PARTICLE CONSTITUENTS |
| Sr | RL-GPC-005 | RICH-RB-5007 | Mod Sr02 / HASL 300 Mod 905.0 / EPA 600 | DETERMINATION OF TOTAL STRONTIUM IN URINE |
| Sr | RL-GPC-006 | RICH-RB-5021 | Mod Sr02 / HASL300 Mod 905.0 / EPA 600 | DETERMINATION OF STRONTIUM IN FECES |
| Sr | ARCHIVED | RICH-RB-5022 | Mod Sr02 / HASL300 Mod 905.0 / EPA 600 | DETERMINATION OF TOTAL STRONTIUM IN URINE FOR RAPID ANALYSIS |
| Sr | ARCHIVED | RICH-RB-5031 | Mod Sr02 / HASL300 Mod 905.0 / EPA 600 | RAPID DETERMINATION OF TOTAL STRONTIUM IN FECES |
| Sr | RL-GPC-003 | RICH-RC-5006 | Mod Sr02 / HASL300 Mod 905.0 / EPA 600 | STRONTIUM SEPARATION IN ENVIROMENTAL MATRICES |
| Sr - Yt | RL-GPC-004 | RICH-RC-5071 | Mod Sr02 / HASL300 Mod 905.0 / EPA 600 | YTTRIUM-90 SEPARATION FOR STRONTIUM-90 DETERMINATION IN ALL MATRICES |
| Tc | RL-LSC-014 | RICH-RC-5065 | EXT Chromatography Mod RP550 / DOE0089T | DETERMINATION OF TECHNETIUM-99 BY EXTRACTION CHROMATOGRAPHY |
| Tc | RL-LSC-013 | RICH-RC-5078 | Tc01 / HASL 300 | SEPARATION OF TECHNETIUM-99 IN ALL MATRICES |
| Th | RL-ALP-008 | RICH-RB-5006 | Mod Th01 / HASL 300 | SEPARATION OF THORIUM FROM URINE AND FECAL SAMPLES |
| Th | RL-ALP-005 | RICH-RC-5084 | Mod Th01 / HASL 300 Anal Chim Acta 1982 | DETERMINATION OF THORIUM ISOTOPIC IN ENVIRONMENTAL MATRICES |
| U | RL-ALP-012 | RICH-RC-5012 | Po-01 / HASL 300 Mod U01 / HASL 300 | SEPARATION OF ISOTOPIC URANIUM AND POLONIUM-210 IN WATER, SOIL AND FILTERS |
| U | RL-KPA-002 | RICH-RC-5031 | Mod U01 / HASL 300 | SEPARATION OF TOTAL URANIUM IN WATER AND URINE |
| U | RL-KPA-003 | RICH-RC-5058 | D5174 / ASTM | DETERMINATION OF URANIUM BY PHOSPHORESCENCE ANALYSIS |
| U | RL-ALP-004 | RICH-RC-5067 | EXT Chromatography Mod RP725 / DOE0089T | SEPARATION OF URANIUM BY EXTRACTION CHROMATOGRAPHY |
| U | RL-ALP-003 | RICH-RC-5072 | EXT Chrom Mod RP725 & 800 / DOE0089T | SEPARATION OF AMERICIUM, CURIUM, AND URANIUM BY EXTRACTION CHROMATOGRAPHY |
| U | RL-ALP-009 | RICH-RC-5079 | EXT Chromatography Mod RP725 / DOE0089T | DETERMINATION OF ISOTOPIC URANIUM IN ALL MATRICES |

Update 7/01/08

| | DRINKING WATER ASTM METHOD CROSS REFERENCES | | | | | | |
|-------------------|---|-------------------------------|--|--|--|--|--|
| Referenced Method | Isotope(s) | TestAmerica Richland's SOP No | | | | | |
| EPA 901.1 | Cs-134, I-131 | RL-GAM-001 | | | | | |
| EPA 900.0 | Alpha & Beta | RL-GPC-001 | | | | | |
| EPA 00-02 | Gross Alpha (Coprecipita | ation) RL-GPC-002 | | | | | |
| EPA 903.0 | Total Alpha Radium (Ra-2 | 226) RL-RA-002 | | | | | |
| EPA 903.1 | Ra-226 | RL-RA-001 | | | | | |
| EPA 904.0 | Ra-228 | RL-RA-001 | | | | | |
| EPA 905.0 | Sr-89/90 | RL-GPC-003 | | | | | |
| ASTM D5174 | Uranium | RL-KPA-003 | | | | | |
| EPA 906.0 | Tritium | RL-LSC-005 | | | | | |

Drinking Water Method Cross References

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants* f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_e) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/? n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

| Action Lev | An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit. |
|--|--|
| Batch | The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together. |
| Bias | Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30. |
| COC No | Chain of Custody Number assigned by the Client or TestAmerica. |
| Count Error (#s) | Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background. |
| Total Uncert (#s) u _{e -} Combined Uncertainty. | All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result. |
| (#s), Coverage Factor | The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations. |
| CRDL (RL) | Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL) |
| Lc | Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero. |
| Lot-Sample No | The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot. |
| MDC MDA | Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. |
| Primary Detector | The instrument identifier associated with the analysis of the sample aliquot. |
| Ratio U-234/U-238 | The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038. |
| Rst/MDC | Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result. |
| Rst/TotUcert | Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result. |
| Report DB No | Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number. |
| RER | The equation Replicate Error Ratio = $(S-D)/[sqrt(TPUs^2 + TPUd^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample. |
| SDG | Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt. |
| Sum Rpt Alpha Spec Rst(s) | The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units. |
| Work Order | The LIMS software assign test specific identifier. |
| Yield | The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method. |

TestAmerica rptGeneralInfo v3.72 TestAmerica Laboratories, Inc.

Sample Results Summary

Date: 10-May-10

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 43800

SDG No: 41277

| Client Id Batch Work Ord | der Parameter | Result +- Uncertainty(2s) | Qual | Units | Tracer Yield | MDC or MDA | CRDL | RER2 |
|---|---------------|---------------------------|------|-------|-----------------|---------------|----------|------|
| 0118345 RL-ALP-00 | 02 | | | | | | | |
| ITA1358-02 | | | | | | | | |
| L0NP71AC | Pu-238 | 6.43E-02 +- 2.8E-02 | U | pCi/g | 56% | 6.43E-02 | 1.00E+00 | |
| | Pu-239/40 | 5.09E-02 +- 4.0E-02 | U | pCi/g | 56% | 5.09E-02 | 1.00E+00 | |
| 0118347 RL-ALP-0 ⁻ ITA1358-02 | 10 | | | | | | | |
| L0NP71AD | Am-241 | 4.25E-02 +- 2.3E-02 | U | pCi/g | 91% | 4.25E-02 | 1.00E+00 | |
| 0118349 RAD-TH IS ITA1358-02 | SO BY ALPHA | | | | | | | |
| L0NP71AE | Th-228 | 1.93E+01 +- 3.0E+00 | | pCi/g | 108% | 8.41E-02 | 1.00E+00 | |
| | Th-230 | 1.25E+01 +- 2.0E+00 | | pCi/g | 108% | 7.71E-02 | 1.00E+00 | |
| | Th-232 | 1.65E+01 +- 2.6E+00 | | pCi/g | 108% | 6.91E-02 | 1.00E+00 | |
| 0118346 RL-ALP-00 ITA1358-02 | 99 | | | | | | | |
| L0NP71AA | U-233/234 | 7.60E+00 +- 1.2E+00 | | pCi/g | 89% | 8.17E-02 | 5.00E-01 | |
| | U-235/236 | 4.15E-01 +- 1.1E-01 | | pCi/g | 89% | 3.90E-02 | 5.00E-01 | |
| | U-238 | 9.00E+00 +- 1.4E+00 | | pCi/g | 89% | 7.61E-02 | 5.00E-01 | |
| No. of Results: | 9 | | | | | | | |

 TestAmerica
 RER2
 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

 rptSTLRchSaSum
 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

 A2002
 A2002

QC Results Summary

TestAmerica TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 43800

SDG No.: 41277

| Batch Work Order | Parameter | Result +- Uncertainty (2s) | Qual | Units | Tracer Yield | LCS Recovery | Bias | MDC MDA |
|-------------------------------|----------------|-----------------------------|------|-------|-----------------|-----------------|------|----------|
| RL-ALP-002 | | | | | | | | |
| 0118345 BLANK (| C, | | | | | | | |
| L0NTH1AA | Pu-238 | 7.77E-05 +- 4.1E-05 | U | pCi/g | 78% | | | 7.77E-05 |
| | Pu-239/40 | 6.15E-05 +- 3.8E-05 | U | pCi/g | 78% | | | 6.15E-05 |
| 0118345 LCS, | | | | | | | | |
| L0NTH1AC | Pu-239/40 | 3.05E-02 +- 4.3E-03 | | pCi/g | 83% | 91% | -0.1 | 9.22E-05 |
| RL-ALP-010 0118347 BLANK (| | | | | | | | |
| LONTM1AA | Am-241 | 6.28E-05 +- 2.4E-05 | U | pCi/g | 98% | | | 6.28E-05 |
| 0118347 LCS, | | | U | P0%9 | 00,0 | | | |
| LONTM1AC | Am-241 | 3.90E-02 +- 5.5E-03 | | pCi/g | 110% | 91% | -0.1 | 5.01E-05 |
| RAD-TH ISO BY ALL | | | | | | | | |
| 0118349 BLANK (| JC, Th-228 | 5.93E-04 +- 2.2E-04 | | pCi/g | 108% | | | 1.15E-04 |
| LONTN1AA | | | | | | | | |
| | Th-230 | 1.05E-04 +- 7.6E-05 | U | pCi/g | 108% | | | 1.05E-04 |
| | Th-232 | 1.05E-04 +- 5.8E-05 | U | pCi/g | 108% | | | 1.05E-04 |
| 0118349 LCS, | T 1 000 | | | | 1000/ | 95% | -0.1 | 1.10E-04 |
| L0NTN1AC | Th-230 | 1.09E-02 +- 1.8E-03 | | pCi/g | 103% | 95% | -0.1 | 1.10E-04 |
| RL-ALP-009 | 20 | | | | | | | |
| 0118346 BLANK (LONTK1AA | U-233/234 | 6.61E-05 +- 5.0E-05 | U | pCi/q | 94% | | | 6.61E-05 |
| LUNITRIAR | U-235/236 | 6.61E-05 +- 2.5E-05 | Ŭ | pCi/g | 94% | | | 6.61E-05 |
| | | | - | • • | | | | |
| 0110010 1 00 | U-238 | 7.38E-05 +- 4.1E-05 | U | pCi/g | 94% | | | 7.38E-05 |
| 0118346 LCS, LONTK1AC | U-233/234 | 9.30E-03 +- 1.5E-03 | | pCi/g | 86% | 109% | 0.1 | 5.90E-05 |
| LUNTRIAU | | 9.20E-03 +- 1.5E-03 | | | 86% | 103% | 0.0 | 6.84E-05 |
| | U-238 | 9.20E-03 +- 1.5E-03 | | pCi/g | 0070 | 10370 | 0.0 | 0,04⊏-00 |
| No. of Results: | 14 | | | | | | | |

| Name: TestAmerica SAMPLE RESULTS 0.6mane: TestAmerica SDC 42000 Feedord Date: 25/2010 00000000 Mathica 0.6mane/ample ID: Traitages-ac SDC Allocitica 42000 Feedord Date: 42020010 00000000 Mathica 42020010 00000000 Mathica Mathica <t< th=""><th>SMPLE RESULTS I. In Name: TestAmerica SDG: 177 Collection Date: 25/2010 902:00 PMI Lot-Sample ID: ITAI356-02 Report No.: 43800 Report No.: 43800 Report No.: 43800 ACCOD 0000 AMI Lot-Sample ID: ITAI356-02 Report No.: 400236057-2 Report No.: 43800 Report No.: 43800 Addition Date: 25/2010 902:00 PMI Parameter Paula Montrix: Collection Date: 25/2010 902:00 PMI Report No.: 43800 Addition: 4282010 1000000 AMI Paula RuALP-002 Report No. Function Report No.: 43800 RuALP-006 RuALP-006</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>_</th><th>Date: 10-May-10</th><th>av-10</th></t<> | SMPLE RESULTS I. In Name: TestAmerica SDG: 177 Collection Date: 25/2010 902:00 PMI Lot-Sample ID: ITAI356-02 Report No.: 43800 Report No.: 43800 Report No.: 43800 ACCOD 0000 AMI Lot-Sample ID: ITAI356-02 Report No.: 400236057-2 Report No.: 43800 Report No.: 43800 Addition Date: 25/2010 902:00 PMI Parameter Paula Montrix: Collection Date: 25/2010 902:00 PMI Report No.: 43800 Addition: 4282010 1000000 AMI Paula RuALP-002 Report No. Function Report No.: 43800 RuALP-006 | | | | | | | | | | | _ | Date: 10-May-10 | av-10 | |
|---|---|---|-----------------------|-------------|-----------------|-----------------------|------------------------|------------------|-------------------|--------------------------|-------------------------|------------------|-----------------|---------------------|---|
| Lab Name:Jeak Name:Sector Sector Data:Sector Data | Lab Name:TestAmericaSDG: 41277 Collection Date: 252010 20000 MA:Lot-Sample No:JOD280537-2Report No:: 41277 Received Date: 252010 20000 MA:Lot-Sample No:JOD280537-2CC No:: 41277 Received Date: 252010 20000 MA:Lot-Sample No:JOD280537-2CC No:: 41277 Matrix 428000 428000 4280000 Lot-Sample No:JonaEvolContJonaMatrix 41200000 412000000 $412000000000000000000000000000000000000$ | | | | | | SA | MPLE RES | ULTS | | | | | | |
| Indext Hole JODE20057-2 Report No.: JODE 20057-2 Report No.: JODE 20057-10: COCOD A Cleant Sample ID: ITAJ38. Control 11 Markt: Amarktic | LorSample No: JOD280637-2 Report No: JABOR Al28/2010 Floce:00.00 AM Client Sample ID: ITAI38- Control Al28/2010 | | | erica | | | SDG: | 412 | 77 | | Collection Date: | | :02:00 PM | | |
| Client Sample II: TA1355-Q: CORR Sample II: TA1355-Q: Correct View TA Amatrix Matrix Matrix Matrix Matrix Matrix Matrix Ta1368 Correct View TA Amatrix Matrix Correct View TA Amatrix Matrix Parameter Realt Jail Enviro Amatrix Matrix Correct View TA Amatrix Matrix Correct View TA Amatrix Matrix Correct View TA Amatrix Amatrix Matrix Correct View TA Amatrix Amatrix Correct View TA Amatrix Correct View TA Amatrix Amatrix Correct View TA Amatrix Amatrix Correct View TA Correct View TA Amatrix Correct View TA Correct View TA Correct View TA Amatrix Correct View TA Correct View TA <th <="" colspa="5" td=""><td>Client Sample ID: ITA/355-02 COC No.: Matrix WATCH ITA/356 Rauti Join Control Site Matrix Matrix ITA/356 Rauti Join Toin Control Site Ambria Control Site Ambria Control Site Ambria Ambria</td><td></td><td></td><td>37-2</td><td></td><td></td><td>Repor</td><td>P .</td><td>00</td><td></td><td>Received Date:</td><td>4/28/2010</td><td>10:00:00 AN</td><td>V</td></th> | <td>Client Sample ID: ITA/355-02 COC No.: Matrix WATCH ITA/356 Rauti Join Control Site Matrix Matrix ITA/356 Rauti Join Toin Control Site Ambria Control Site Ambria Control Site Ambria Ambria</td> <td></td> <td></td> <td>37-2</td> <td></td> <td></td> <td>Repor</td> <td>P .</td> <td>00</td> <td></td> <td>Received Date:</td> <td>4/28/2010</td> <td>10:00:00 AN</td> <td>V</td> | Client Sample ID: ITA/355-02 COC No.: Matrix WATCH ITA/356 Rauti Join Control Site Matrix Matrix ITA/356 Rauti Join Toin Control Site Ambria Control Site Ambria Control Site Ambria Ambria | | | 37-2 | | | Repor | P . | 00 | | Received Date: | 4/28/2010 | 10:00:00 AN | V |
| ITA136 Ordered by Client Sample ID, Ball Analysis Analysis <t< td=""><td>ITAJ38 Raunti Ordenectory Client Sample (D) Rel Parameter Raunti Ordenectory Client Sample (D) Rel Amony Rel</td><td></td><td>ample ID: ITÄ1358-</td><td>62</td><td></td><td></td><td>COC</td><td>Vo. :</td><td></td><td></td><td>Matrix:</td><td>WATER</td><td></td><td></td></t<> | ITAJ38 Raunti Ordenectory Client Sample (D) Rel Parameter Raunti Ordenectory Client Sample (D) Rel Amony Rel | | ample ID: ITÄ1358- | 62 | | | COC | Vo. : | | | Matrix: | WATER | | | |
| Harding from the field Result Council or for a list of the field Result Council or field Result Council or field Result | Parameter Result Total Total Total Total Total Total Station Law Total Station Law </td <td></td> <td></td> <td></td> <td></td> <td>:</td> <td></td> <td></td> <td></td> <td></td> <td>Ord</td> <td>lered by Clien:</td> <td>t Sample ID,</td> <td>Batch No.</td> | | | | | : | | | | | Ord | lered by Clien: | t Sample ID, | Batch No. | |
| SHG RL-ALIP-ODE Work Onder: LUNFTLAC Report DB ID: SLABE-OD D. SUB1111 ID D. D. <thd.< th=""> D. D. <</thd.<> | RL-ALP-002 Work Order: Low TrAL Report DB ID: SLUNPTO 0 SUMPTO 6.435-02 U 2.85-02 6.435-02 0.85% 0. 5/5/1011:11 p 10 0.3341 5.096-02 U 3.85-02 4.05-02 5.087-02 0.256 0.0 0 <td< th=""><th></th><th></th><th></th><th>ount r (2s)</th><th>Total Uncert(2 s)</th><th>MDC MDA, Action Lev</th><th>Rpt Unit, Lc</th><th>Yield CRDL(RL)</th><th>Rst/MDC, Rst/TotUcert</th><th>Analysis, Prep Date</th><th>Total Sa Size</th><th>Aliquot Size</th><th>Primary Detector</th></td<> | | | | ount r (2s) | Total Uncert(2 s) | MDC MDA, Action Lev | Rpt Unit, Lc | Yield CRDL(RL) | Rst/MDC, Rst/TotUcert | Analysis, Prep Date | Total Sa Size | Aliquot Size | Primary Detector | |
| 238 6.43E-02 0 2.8E-02 0.43E-02 0.43E-02 0.43E-02 0.0540 0.0 55/1011111 10 0.03441 339-0 5.09E-02 1.61E-02 5.09E-02 5.09E-02 0.06E-00 0. 0.0 0.0 0.03441 334-0 1.31E-01 3.35E-01 1.21E+00 8.35 0.00E-01 (7.27) 5.65/10.02:44 10 0.33471 335 7.60E-01 3.35E-02 5.00E-01 (7.27) 5.65/10.02:44 10 0.32712 335 4.15E-01 3.35E-02 0.01 (7.27) 5.65/10.02:44 10 0.32712 335 4.15E-01 3.35E-02 0.01 (7.27) 5.65/10.02:44 10 0.32712 335 5.55/10.02:44 1.34E-01 3.35E-02 5.00E-01 (7.27) 5.65/10.02:44 10 0.32712 335 5.55/10.02:44 0 3.355/10.02:44 10 0.32712 0.32712 0.32712 0.32712 0.32712 0.32712 0.32712 < | 6.43E-02 2.8E-02 6.43E-02 6.43E-02 6.43E-02 6.43E-02 6.43E-02 6.43E-02 6.43E-02 6.03.01111 10 0.03.441 5.09E-02 1 3.9E-02 5.09E-02 5.09E-02 1.61E-02 | Batch: 0118345 | RL-ALP-002 | | | Work Order: | LONP71AC | Report | DB ID: 9FON | P710 | | | | | |
| 3840 5.08E-02 U 33E-02 1.5TE-02 1.0CE+00 0.2 555/10 1.1 1 0 03341 385 RL-MEP-005 3.6E-01 3.3E-02 1.6TE-02 1.0EF-00 (2.1) 2.0 9 9 9 3854 7.60E+00 3.6E-01 1.2E+00 8.17E-02 8.00E-01 (7.2) 5.65/10 0.244 10 0.32712 3828 4.15E-01 8.5E-02 1.1E+00 8.17E-02 500E-01 (7.2) 5.65/10 0.244 10 0.32712 3828 4.15E-01 8.5E-02 1.1E+01 3.90C-01 (7.2) 5.65/10 0.244 10 0.32712 383 8.15E-01 1.36E-01 7.31E-02 5.00E-01 (7.2) 5.65/10 0.244 10 0.32712 384 HALP-010 3.95E-01 7.31E-02 5.00E-01 (7.2) 5.65/10 0.244 10 0.32712 384 HALP-010 3.95E-02 2.06E-01 (7.2) 5.65/10 0.0244 10 0.32712 284 <td>Lotten Concision C Concision C <thc< th=""> C <thc< th=""> C</thc<></thc<></td> <td>Pu-238</td> <td></td> <td></td> <td>iE-02</td> <td>2.8E-02</td> <td></td> <td>pCi/g</td> <td>56%</td> <td>0.</td> <td>5/5/10 11:11 p</td> <td>1.0</td> <td>0.33441</td> <td>ALP38</td> | Lotten Concision C Concision C <thc< th=""> C <thc< th=""> C</thc<></thc<> | Pu-238 | | | iE-02 | 2.8E-02 | | pCi/g | 56% | 0. | 5/5/10 11:11 p | 1.0 | 0.33441 | ALP38 | |
| 8940 5.09E-02 J 3.9E-02 J 3.6E-01 161E-02 7.06E+00 2(3) 56% 0.82 5/101111 p 10 0.33441 1.61E-02 1.00E+00 (2.1) 20 (2.1) 2 (0.0244 a) 10 0.32712 2624 3.5E-02 1.1E-01 3.9E-02 p0/9 83% (32) 5/5/10.0244 a 10 0.32712 2628 4.15E-01 3.5E-02 p0/9 83% (70.7) 5/5/10.0244 a 10 0.32712 2628 4.15E-01 3.9E-02 p0/9 83% (70.7) 5/5/10.0244 a 10 0.32712 2628 4.15E-01 3.9E-02 p0/9 83% (70.7) 5/5/10.0244 a 10 0.32712 2628 4.15E-01 3.9E-02 p0/9 83% (70.7) 5/5/10.0244 a 10 0.32712 2628 4.15E-01 3.9E-02 p0/9 83% (70.7) 5/5/10.0244 a 10 0.32712 264 A.15E-01 2.5E-02 p0/9 83% (70.7) 5/5/10.0244 a 10 0.32712 264 A.15E-01 2.5E-02 p0/9 83% (70.7) 7.9 264 A.15E-01 2.5E-02 p0/9 83% (70.7) 7.9 264 A.25E-02 1.4E-01 7.51E-02 p0/9 83% (70.7) 7.9 264 A.25E-02 0.09 7.13E-01 (7.2) 7.7E-01 7.3 264 A.25E-02 1.00E+00 (7.1) 7.9 264 A.25E-02 0.09 7.13E-01 7.3 264 A.25E-02 0.09 7.13E-01 7.13 264 A.25E-02 0.09 7.13E-01 7.129 1.0 0.3344 267 A.25E-02 0.09 7.13E-01 7.139 268 A.25E-02 0.09 7.13E-01 7.159 1.0 0.3344 268 A.25E-02 0.09 7.13E-01 7.159 1.0 0.3344 269 A.25E-02 0.09 7.13E-01 7.150 | 5.095-02 1 3.25-02 1.051E-02 1.051E-02 1.051E-02 1.051E-02 1.051E-02 0.82 5571011111 1.0 0.33441 RL-ALF-008 1.25E-01 3.17E-02 1.051E-02 1.051E-02 1.051E-02 0.82 55510 01:111 1.0 0.33441 RL-ALF-008 1.12E-00 8.17E-02 8.17E-02 8.00E-01 7.12 0.0244 1.0 0.32712 ALALF-010 8.5E-02 1.1E-01 3.90E-01 7.51E-02 8.00E-01 7.27 9 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>2.28E-02</td><td>1.00E+00</td><td>0.</td><td></td><td>D</td><td>ŋ</td><td></td></t<> | | | | | | | 2.28E-02 | 1.00E+00 | 0. | | D | ŋ | | |
| 348 RLAUP-049 S.6E-01 1.2E+00 8.17E-02 1.00E+00 (2.1) 9 9 3528-0 Nork Order: 1.0NP71AA Report ID: 3.0.0E+00 (2.1) 9 9 3528-0 3.5E-02 1.1E-01 3.5E-02 5.00E-01 (12.7) 5.51/10.02:44.a 10 0.32712 3528-0 3.5E-02 1.1E-01 3.30E-02 0.01 (12.7) 5.51/10.02:44.a 10 0.32712 358-0 1.38E-01 1.4E+00 7.51E-02 5.00E-01 (7.2) 5.51/10.02:44.a 10 0.32712 358-0 3.5E-02 1.38E-02 1.38E-02 1.38E-01 (7.27) 5.51/10.02:44.a 10 0.32712 358-0 3.5E-02 0.01 (7.2) 5.51/10.02:44.a 10 0.32712 358-0 3.5E-02 2.019 1.38E-01 (7.07) 5.51/10.02:44.a 10 0.32712 261 4.25E-02 5.00E-01 (7.2.9) 5.51/10.02:44.a 10 0.32714 261 4.25E-02 5.00E-01 (7.2.9) 5.51/10.02:41.a 10 | 1.0E+00 (2.1) 9 9 RL-ALP-005 St.E-01 1.2E+00 8.17E-02 1.0E+00 (2.1) 9 9 9 T.SOE+00 St.E-01 1.2E+00 8.17E-02 D.SOE+01 (7.2) S.Si/10 0.02:44 1.0 0.032712 T.SOE+00 8.17E-02 1.1E-01 3.98E-02 5.00E-01 (7.2) 5.55/10 0.2:44 1.0 0.032712 4.15E-01 8.5E-02 1.1E-01 3.98E-01 (7.2) 5.55/10 0.2:44 1.0 0.32712 9.00E+00 3.9E-01 1.4E+00 7.61E-02 D.SOE-01 (7.2) 5.55/10 0.2:44 1.0 0.32712 9.00E+00 3.9E-01 1.4E+00 7.61E-02 D.SOE-01 (7.2) 5.55/10 0.2:44 1.0 0.32712 9.00E+00 3.9E-01 1.4E+00 7.61E-02 D.SOE-01 (7.2) 5.57/10 0.2:44 1.0 0.32712 9.00E-01 1.18.3 5.57/10 0.2:44 1.0 0.33741 1.0 0.33441 1.35E-02 2.36E-02 1.06 | Pu-239/40 | | |)E-02 | 4.0E-02 | 5.09E-02 | pCi/g | 56% | 0.82 | 5/5/10 11:11 p | 1.0 | 0.33441 | ALP38 | |
| 846 RL-ALP-009 Work Order: LONP71A Report DB L5: SLONP710 S/5/10 02:44 a 10 0.32712 3/2012 3.6E-01 1.2E+00 8.17E-02 5.00E-01 (12.7) 5/5/10 02:44 a 10 0.32712 5/2012 5.00E-01 (12.7) 5/5/10 02:44 a 10 0.32712 5/2012 1.1E-01 3.90E-02 7.90 89% (10.7) 5/5/10 02:44 a 10 0.32712 5/2012 3.9E-01 1.4E+00 7.61E-02 2.00E-01 (12.7) 5/5/10 02:44 a 10 0.32712 5/2012 3.9E-01 1.4E+00 7.61E-02 89% (17.3) 5/5/10 02:44 a 10 0.32712 284 HL-ALP-010 3.9E-01 7.4E-02 5.00E-01 (12.2) 5/5/10 02:41 a 10 0.32712 284 HL-ALP-010 3.9E-02 9.99% 0.91 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 | RL-ALP-008 Work Order: LONPTIA Report DB ID: SLUNPTIO 7.60E+00 $3.6E-01$ $1.2E+00$ $8.17E-02$ $5.00E-01$ (12.7) $5.501-02.44$ 10 0.32712 4.15E-01 $8.17E-02$ $5.00E-01$ (12.7) $5.5610-02.44$ 10 0.32712 4.15E-01 $8.5E-02$ $1.1E-01$ $3.30E-02$ $5.00E-01$ (7.2) $5.610-02.44$ 10 0.32712 9.00E+00 $3.9E-01$ $1.4E+00$ $7.51E-02$ $5.00E-01$ (7.2) $5.610-02.44$ 10 0.32712 9.00E+00 $3.9E-01$ $1.4E+00$ $7.51E-02$ $5.00E-01$ (7.2) $5.610-02.44$ 10 0.32712 9.00E+00 $3.9E-01$ $1.4E+00$ $7.51E-02$ $2.016-01$ (12.2) $5.610-02.44$ 10 0.32712 9.00E+01 (12.8) $8.041-02$ (12.8) 0.41 (0.7) $5.610-02.44$ 10 0.3274 1.4.1.2.1.2.1.2.1.2.2.2.2.2.2.2.2.2.2.2. | | | | | | | 1.61E-02 | 1.00E+00 | (2.1) | | D | ŋ | | |
| 3.28-4 7.50E+00 3.6E-01 1.2E+00 8.17E-02 6.00E-01 (12.7) 5.510 0.2-44 10 0.32712 5.282-02 0.11-10 3.36E-02 0.11-10 3.36E-02 5.00E-01 (7.9) 9 9 5.282-02 1.15-01 3.36E-02 0.11-10 3.36E-02 0.1380 10.7) 5.510 0.2-44 10 0.32712 283 9.00E+00 3.950 1.14E+00 7.61E-02 0.2021 (7.9) 9 9 9 283 9.00E+00 3.950 1.4E+00 7.61E-02 0.2021 10.7) 5.510 0.2-44 10 0.32712 283 9.00E+00 3.950 1.4E+00 7.61E-02 2.092 5.00E-01 (7.9) 9 9 9 283 9.00E+010 3.950 1.062-44 1.0 7.610 2.18 9 | 7.60E+00 3.6E-01 1.2E+00 8.17E-02 5.00E-01 (12.7) 5.65/10 0.023712 0 | 1 | RL-ALP-009 | | | | LONP71AA | Report | DB ID: 9LON | P710 | | | | | |
| 5/256-02 5.00E-01 (12.7) 5/5/10 0 0 0 2385 4.15E-01 8.5E-02 1.1E-01 3.90E-02 5.00E-01 (7.2) 5/5/10 0.02714 10 0.02712 2387 9.00E+00 3.9E-01 1.4E+00 7.61E-02 5.00E-01 (7.9) 5/5/10 0.0 | 4.15E-01 8.5E-02 1.1E-01 3.30E-02 PCIIP 12.71 9 9 4.15E-01 8.5E-02 1.1E-01 3.30E-02 PCIIP 3.38E-01 (10.7) 5/5/10 02:44 a 1.0 0.32712 9.00E+00 3.9E-01 7.51E-02 PCIIP 7.51E-02 PCIIP (17.8) 5/5/10 02:44 a 1.0 0.32712 RL-ALP-010 3.9E-01 7.51E-02 PCIIP 89% (17.8) 5/5/10 02:44 a 1.0 0.32712 RL-ALP-010 3.9E-02 PCIIP 89% (17.8) 5/5/10 02:44 a 1.0 0.32712 RL-ALP-010 Work Order: LONP71AD Report DB ID: 9LONP710 1.1840 9 9 RL-ALP-010 Nork Order: LONP71AD Report DB ID: 9LONP710 1.365/10 11:29 p 1.0 0.33441 RL-ALP-010 7.4E-02 0.1 1.34E-02 1.00 0.41 5/5/10 02:41 a 1.0 0.33441 RAD-TH ISO BY ALPHA 7.4E-01 3.0E+00 7.34E-02 1.00 1.5 0 0 0 0 0 0 0 0 0 0 | U-233/234 | 7.60E+00 | 3.6 | iE-01 | 1.2E+00 | | pCi/g | 89% | (93.) | 5/5/10 02:44 a | 1.0 | 0.32712 | ALP3 | |
| 5/236 4.15E-01 8.5E-02 1.1E-01 3.90E-00 1.38E-02 5.00E-01 (7.9) 5.57/10 02:44 a 10 0.327/2 238 9.00E+00 3.9E-01 1.4E+00 7.51E-02 DC/9 89% (118.3) 5.57/10 02:44 a 10 0.327/2 238 9.00E+00 3.9E-01 1.4E+00 7.51E-02 DC/9 89% (118.3) 5/5/10 02:44 a 10 0.327/2 8547 RL-AD-010 3.9E-01 1.4E+00 7.51E-02 DC/9 89% (118.3) 5/5/10 02:44 a 10 0.327/2 8547 RL-AD-010 3.9E-01 1.4E+00 7.61E-02 DC/9 89% 0.41 5/5/10 02:44 a 10 0.327/2 8549 RL-AD-010 2.3E-02 2.3E-02 DC/9 91% 0.41 5/5/10 02:41 a 10 0.3344 8549 RAD-TH ISO RY LPHA Nork Order: 1.34E-02 1.00E+00 (1.5) 0.41 5/5/10 02:41 a 10 0.3344 828 1.33E+01 7.4E-01 3.0E+02 DC/9 1.00E+00 (1.5) 5/5/10 02:41 a | 4.15E-01 8.5E-02 1.1E-01 3.30E-02 5.00E-01 (7.9) 5.510 02:44 a 1.0 0.32712 9.00E+00 3.9E-01 1.4E+00 7.61E-02 5.00E-01 (7.9) 5.510 02:44 a 1.0 0.32712 9.00E+00 3.9E-01 1.4E+00 7.61E-02 p0ig 89% (16.3) 5.510 02:44 a 1.0 0.32712 RL-LD-010 Work Order: 1.0NP71A Ratio u.234238 = 0.8 1.0 0.32710 9 9 RL-LD-010 Work Order: LONP71AD Report DB ID: 9.06 0.41 5.510 02:44 a 1.0 0.32743 RL-DD10 Work Order: LONP71AD Report DB ID: 9.041 5.510 02:44 a 1.0 0.33441 RL-DD10 Work Order: LONP71AD Report DB ID: 9.041 5.510 02:41 a 1.0 0.33441 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9.041 9.0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 1.00E+00 1.551 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3.52E-02</td> <td>5.00E-01</td> <td>(12.7)</td> <td></td> <td>თ</td> <td>6</td> <td></td> | | | | | | | 3.52E-02 | 5.00E-01 | (12.7) | | თ | 6 | | |
| 238 9.00E+00 3.9E-01 1.4E+00 7.61E-02 PC/Y 89% (118.3) 5/5/10 02.44 10 0.32712 237 RL-ALP-010 3.9E-01 1.4E+00 7.61E-02 PC/Y 89% (118.3) 5/5/10 02.44 10 0.32712 2347 RL-ALP-010 Work Order: LONP71AD Report IDB ID: 9LONP710 0.41 5/5/10 0.3441 10 0.33441 241 4.25E-02 V 2.3E-02 2.3E-02 1.34E-02 1.00E+00 (11.5) 9 9 9 241 4.25E-02 V 2.3E-02 V 1.34E-02 1.00E+00 (11.5) 9 9 9 9 2384 RAD-THISO BY ALPHA Mork Order: LONP71AE Report IDB ID: 9LONP710 1.10 0.33441 1.0 0.33441 2384 J J J J J 0 9 < | 1.38E-02 5.00E-01 (7.9) 9 9 9 9.00E+00 3.9E-01 1.4E+00 7.61E-02 p0/g 89% (118.3) 5/5/10 02:44.a 10 0.32712 RL-ALP-010 Work Order: LONP71AD Ratio L234238 = 0.8 9% (118.3) 5/5/10 02:44.a 10 0.32712 RL-ALP-010 Work Order: LONP71AD Report DB1D: 9L0NP710 9 9 9 9 9 ALD-TH D10 Work Order: LONP71AD Report DB1D: 9L0NP710 0.41 0.41 0.33441 10 0.33441 AD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9L0NP710 1.0 | U-235/236 | 4.15E-01 | 3.8 | 5E-02 | 1.1E-01 | | pCi/g | 89% | (10.7) | 5/5/10 02:44 a | 1.0 | 0.32712 | ALP3 | |
| 238 9.00E+00 $3.9E-01$ $1.4E+00$ $7.61E-02$ $C0E-01$ (12.8) $55/10\ 02.44\ a$ 10 0.32712 $3.24E-02$ $5.00E-01$ (12.8) $55/10\ 02.44\ a$ 10 0.32712 $3.24E-02$ $5.00E-01$ (12.8) 9 9 9 $3.24E-02$ $Work Order:$ $LNNP71A$ $Report DS 1D:$ 9.047 $55/10\ 02.44\ a$ 10 0.32742 241 $4.25E-02$ V_1 $Report DS 1D:$ 9.047 $55/10\ 02.41\ a$ 10 0.3341 241 $4.25E-02$ $POE+00$ $1.34E-02$ $1.00E+00$ (1.5) 9 9 9 234 $RAD-THISO BY ALPHA$ $Work Order:$ $LNNP71A$ $RAD-THISO BY ALPHA$ $10.0E+00$ (1.5) 9 9 9 9 234 $RAD-THISO BY ALPHA$ $Nork Order:$ $LNNP71A$ $Report DS 10$ (1.5) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 | 9.00E+00 3.9E-01 1.4E+00 7.61E-02 DCME-01 (18.3) 5/5/10 02:44 a 1.0 0.32712 RLALP-010 RLALP-010 Work Order: 2.324E-02 5.00E-01 (12.8) 9 | | | | | | | 1.38E-02 | 5.00E-01 | (6.7) | | ŋ | 6 | | |
| 3.24E-02 5.00E-01 (12.8) 9 9 8347 RI-ALP-010 Work Order: LONP71AD Ratio U-234238 = 0.8 33441 -241 4.25E-02 U 2.3E-02 4.25E-02 91% 0.41 5/5/10 11:29 p 10 0.33441 248 RAD-THISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 9 | RL-ALP-010 Nork Order: LONP71AD Ratio U-234238 = 0.8 9 9 9 RL-ALP-010 Work Order: LONP71AD Report DB ID: 9L0NP710 10 0.33441 4.25E-02 U 2.3E-02 4.25E-02 pCV/9 91% 0.47 5/5/10 11:29 p 10 0.33441 A.25E-02 U 2.3E-02 4.25E-02 pCV/9 91% 0.47 5/5/10 11:29 p 10 0.33441 RD-THISO BY ALPHA Work Order: LONP71AE Report DB ID: 9L00F+00 (1.5) 9 <td>U-238</td> <td>9.00E+00</td> <td>3.6</td> <td>)E-01</td> <td>1.4E+00</td> <td></td> <td>pCi/g</td> <td>89%</td> <td>(118.3)</td> <td>5/5/10 02:44 a</td> <td>1.0</td> <td>0.32712</td> <td>ALP3</td> | U-238 | 9.00E+00 | 3.6 |)E-01 | 1.4E+00 | | pCi/g | 89% | (118.3) | 5/5/10 02:44 a | 1.0 | 0.32712 | ALP3 | |
| Ratio U-234/238 = 0.8 Ratio U-234/238 = 0.8 3347 RL-ALP-010 Work Order: LONP71AD Report DB ID: 9LONP710 -241 4.25E-02 U 2.3E-02 4.25E-02 4.25E-02 0.41 5/5/10 11:29 p 1.0 0.33441 249 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 9 <td>Ratio U-234/238 = 0.8 Ratio U-234/238 = 0.8 RL-ALP-010 Work Order: LONP71AD Report DB ID: 9LONP710 4.25E-02 U 2.3E-02 4.26E-02 pC/0 91% 0.41 5/5/10 11:29 p 1.0 0.33441 A.25E-02 U 2.3E-02 4.26E-02 pC/0 91% 0.41 5/5/10 11:29 p 1.0 0.33441 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 1.36E-02 0.306 91% 9.41 9 9 9 1.335+01 7.4E-01 3.0E+00 8.41E-02 pC/0 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pC/0 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pC/0 1.00E+00 (13.3) 9 9 9 9 9 9 9 9 9 9 10 0.33384 1.00E+00 (12.8) 9 9 9 9 9 9 9 9 9 <</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3.24E-02</td> <td>5.00E-01</td> <td>(12.8)</td> <td></td> <td>δ</td> <td>6</td> <td></td> | Ratio U-234/238 = 0.8 Ratio U-234/238 = 0.8 RL-ALP-010 Work Order: LONP71AD Report DB ID: 9LONP710 4.25E-02 U 2.3E-02 4.26E-02 pC/0 91% 0.41 5/5/10 11:29 p 1.0 0.33441 A.25E-02 U 2.3E-02 4.26E-02 pC/0 91% 0.41 5/5/10 11:29 p 1.0 0.33441 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 1.36E-02 0.306 91% 9.41 9 9 9 1.335+01 7.4E-01 3.0E+00 8.41E-02 pC/0 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pC/0 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pC/0 1.00E+00 (13.3) 9 9 9 9 9 9 9 9 9 9 10 0.33384 1.00E+00 (12.8) 9 9 9 9 9 9 9 9 9 < | | | | | | | 3.24E-02 | 5.00E-01 | (12.8) | | δ | 6 | | |
| B347 RL-ALP-010 Work Order: LONP71AD Report DB ID: 9LONP710 -241 4.25E-02 U 2.3E-02 2.3E-02 4.25E-02 0.41 5/5/10 11:29 p 1.0 0.33441 -241 4.25E-02 U 2.3E-02 2.3E-02 4.25E-02 0.01 1.5) 9 9 9 9 9 9 8349 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 9 | RL-ALP-010 Work Order: LONP71AD Report DB ID: 9LONP710 4.25E-02 0.38-02 2.3E-02 4.25E-02 0/91% 0.41 5/5/10 11:29 p 1.0 0.33441 4.25E-02 0 1.34E-02 1.00E+00 (1.5) 9 9 9 9 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9.00NP710 9 9 9 1.935E+01 7.4E-01 3.0E+00 8.41E-02 pC/99 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 1.935E+01 5.7E-01 2.0E+00 7.71E-02 pC/99 108% (72.1) 5/5/10 02:41 a 1.0 0.33384 1.255E+01 5.7E-01 2.0E+00 7.71E-02 pC/99 108% (72.1) 5/5/10 02:41 a 1.0 0.33384 1.255E+01 5.7E-01 2.0E+00 7.71E-02 pC/99 108% (72.8) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 10.0E+00 (12.8) 10.0E+00< | | | | | | | | Ratio U. | -234/238 = 0.8 | | | | | |
| -241 4.25E-02 U 2.3E-02 2.3E-02 2.3E-02 4.25E-02 0.41 5/5/10 11:29 p 10 0.3341 8349 RAD-TH ISO BY ALPHA Nork Order: LONP71AE 1.34E-02 1.00E+00 (1.5) 9 9 9 9 9 8349 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9L0NP710 9 9 9 9 228 1.93E+01 7.4E-01 3.0E+00 8.41E-02 PC/00E+00 (1.3.) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 PC/09 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7F-01 2.0E+00 7.71E-02 PC/09 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 239E-02 1.26F+00 7.71E-02 PC/09 1.00E+00 (12.8) 9 9 9 9 20010111111111111111111111111111111111 | 4.25E-02 U 2.3E-02 2.3E-02 4.25E-02 CUO 91% 0.41 5/5/10 11:29 p 1.0 0.334t1 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 9 9 9 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 9 9 9 1.93E+01 7.4E-01 3.0E+00 8.41E-02 PC/Ig 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 1.93E+01 5.7E-01 2.0E+00 7.71E-02 PC/Ig 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 1.25E+101 5.7E-01 2.0E+00 7.71E-02 PC/Ig 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 1.25E+101 5.7F-01 2.0E+00 7.71E-02 PC/Ig 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 1.25E+101 5.7F-01 2.0E+00 7.71E-02 PC/Ig 1.00E+00 (12.8) 9 9 9 9 9 9 9 9 9 9 9 | | RL-ALP-010 | | | Work Order: | LONP71AD | Report | DB ID: 9LON | IP710 | | | | | |
| 1.34E-02 1.00E+00 (1.5) 9 9 9 8349 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 1.0 0.033384 228 1.93E+01 7.4E-01 3.0E+00 8.41E-02 pCl/g 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCl/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCl/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 2304 2.09E-02 1.00E+00 (12.8) 9 9 9 9 9 9 | 1.34E-02 1.00E+00 (1.5) 9 9 9 9 9 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 9 10 10 | Am-241 | | | 3E-02 | 2.3E-02 | 5E-02 | pCi/g | 91% | 0.41 | 5/5/10 11:29 p | 1.0 | 0.33441 | ALP123 | |
| B349 RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 228 1.93E+01 7.4E-01 3.0E+00 8.41E-02 pCi/g 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 2.0E+00 2.0E+00 7.71E-02 pCi/g 100E+00 (12.8) g g g | RAD-TH ISO BY ALPHA Work Order: LONP71AE Report DB ID: 9LONP710 1.938+01 7.4E-01 3.0E+00 8.41E-02 pCi/g 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 1.938+01 7.4E-01 3.0E+00 8.41E-02 pCi/g 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 MDC[MDALc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. 9 10.06+00 (12.8) 9 9 9 9 9 9 9 10.04+00 10.2.8)< | | | | | | | 1.34E-02 | 1.00E+00 | (1.5) | | ð | D | | |
| 228 1.93E+01 7.4E-01 3.0E+00 8.41E-02 DCI/g 108% (229.9) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 DCI/g 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 DCI/g 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 DCI/g 1.08% (162.1) 5/5/10 02:41 a 1.0 0.33384 2304 2.99E-02 1.00E+00 (12.8) g g g g | 1.93E+01 7.4E-01 3.0E+00 8.41E-02 pCi/g 108% (229.9) 5/5/10 02:41 1.0 0.33384 3.26E-02 1.00E+00 (13.) 9 100 10.2.6) 10.2.6) 10.2.6) 10.0 10. | | RAD-TH ISO BY ALF | AHA | | | LONP71AE | Report | DB ID: 9LON | P710 | | | | | |
| 3.26E-02 1.00E+00 (13.) 9 9 9 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 0.33384 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 0.33384 200 2.99E-02 1.00E+00 (12.8) 9 9 9 | 3.26E-02 1.00E+00 (13.) 9 9 9 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 a 1.0 0.33384 MDC[MDA,Lc 0 2.99E-02 1.00E+00 (12.8) 9 9 9 9 MDC[MDA,Lc Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. 1.0 Line Analyzed for but not detected above limiting criteria is less than the Mdc/Mda or Total Uncert or not identified by damma scan software. | Th-228 | 1.93E+01 | 7.4 | tE-01 | 3.0E+00 | | pCi/g | 108% | (229.9) | 5/5/10 02:41 a | 1.0 | 0.33384 | ALP172 | |
| 230 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (<i>162.1</i>) 5/5/10 02:41 a 1.0 0.33384 2.99E-02 1.00E+00 (<i>12.8</i>) g g g | 1.25E+01 5.7E-01 2.0E+00 7.71E-02 pCi/g 108% (162.1) 5/5/10 02:41 1.0 0.33384 RDC[MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. 9 9 | | | | | | | 3.26E-02 | 1.00E+00 | (13.) | | ŋ | ŋ | | |
| 2.99E-02 1.00E+00 (12.8) g MOCIMDAL C. Detection Desicion Local hand instrument harborning or blank adjusted by the sample Efficiency Viald and Volume | 2.99E-02 1.00E+00 (<i>12.8</i>) 9 MDC[MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. 11 Ouel - Analyzed for hirt not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by damma scan software | Th-230 | 1.25E+01 | 5.7 | 'E-01 | 2.0E+00 | | pCi/g | 108% | (162.1) | 5/5/10 02:41 a | 1.0 | 0.33384 | ALP172 | |
| | | | | | | | | 2.99E-02 | 1.00E+00 | (12.8) | | D | D | | |
| | | | | | | | | | | | | | | | |
| | | TestAmerica | MDC MDA,Lc - Detectio | on, Decisio | n Level ba | ised on instrun | nent backgrou | ind or blank, ad | justed by the | sample Efficie | ncy, Yield, and Volume | di bi | | | |

TestAmerica Laboratories, Inc.

| | | | | SAW | | | | | | | |
|------------------------------|---------------|-------------------------|-----------------------|-------------------------------------|-------------------|-------------------|---|--------------------------------------|--|-----------------|---------------------|
| Lab Name: | TestAmerica | ca | | SDG: | 41277 | 77 | | Collection Date: 2/5/2010 9:02:00 PM | 2/5/2010 9:0 | 02:00 PM | |
| Lot-Sample No.: J0D280537-2 | J0D280537 | -2 | | Report No. : | No.: 43800 | 00 | | Received Date: | 4/28/2010 10:00:00 AM | 0:00:00 AN | _ |
| Client Sample ID: ITA1358-02 |): ITA1358-02 | ~ | | COC No. : | | | | Matrix: | WATER | | |
| ITA1358 | | | | | | | | Orde | Ordered by Client Sample ID, Batch No. | Sample ID, F | 3atch No. |
| Parameter | Result Qua | Count Qual Error(2s) | Total Uncert(2 s) | MDC MDA, Rpt Unit, Action Lev Lc | Rpt Unit, Lc | Yieid CRDL(RL) | Yield Rst/MDC, CRDL(RL) Rst/TotUcert | Analysis, Prep Date | Total Sa Size | Aliquot Size | Primary Detector |
| Th-232 1 | 1.65E+01 | 6.5E-01 | 2.6E+00 | 6.91E-02 pCi/g | Di/g | 108% | (238.9) | 5/5/10 02:41 a | 1.0 | 0.33384 | ALP172 |
| | | | | | 2.59E-02 | 1.00E+00 | (12.9) | | ß | ĝ | |

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software. rptSTLRchSample V5.2.5 A2002 TestAmerica

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Date: 10-May-10

BLANK RESULTS

| Matrix: | WATER | | | | | | | | Report No. : | o. : 43800 | | |
|---|---------------------|------------|-----------------------|-----------------------|-----------------|-------------------|------------------------|--------------------------|--|--------------------|-----------------|---------------------|
| Parameter Sarameter | Result | Qual | Count Error (2 s) | Total Uncert(2 s) | MDC MDA, Lc | Rpt Unit, CRDL | Yield | Rst/MDC, Rst/TotUcert | Analysis, Prep Date | Total Sa Size | Aliquot Size | Primary Detector |
| Batch: 0118345 | RL-ALP-002 | | | Work Order: | LONTH1AA | Report I | Report DB ID: LONTH1AB | TH1AB | | | | |
| Pu-238 | 7.77E-05 | ⊃ | 4.1E-05 | 4.1E-05 | 7.77E-05 | pCi/g | 78% | 0.22 | 5/5/10 11:11 p | | 200.04 | ALP39 |
| | | | | | 2.75E-05 | 1.00E+00 | | 0.81 | | | ŋ | |
| Pu-239/40 | 6.15E-05 | D | 3.7E-05 | 3.8E-05 | 6.15E-05 | pCi/g | 78% | 0.41 | 5/5/10 11:11 p | | 200.04 | ALP39 |
| | | | | | 1.94E-05 | 1.00E+00 | | (1.3) | | | б | |
| Batch: 0118347 | RL-ALP-010 | | | Work Order: | LONTM1AA | Report [| Report DB ID: LONTM1AB | TM1AB | | | | |
| Am-241 | 6.28E-05 | | 2.4E-05 | 2.4E-05 | 6.28E-05 | pCi/g | 68% | ö | 5/5/10 11:29 p | | 200.04 | ALP124 |
| | | | | | 1.99E-05 | 1.00E+00 | | ō | | | b | |
| C Batch: 0118349 | RAD-TH ISO BY ALPHA | BY ALPF | łA | Work Order: | LONTN1AA | Report [| Report DB ID: LONTN1AB | TN1AB | | | | |
| Th-228 | 5.93E-04 | | 2.0E-04 | 2.2E-04 | 1.15E-04 | pCi/g | 108% | (5.2) | 5/5/10 02:41 a | | 207.53 | ALP173 |
| | | | | | 3.63E-05 | 1.00E+00 | | (5.5) | | | ŋ | |
| Th-230 | 1.05E-04 | ⊃ | 7.6E-05 | 7.6E-05 | 1.05E-04 | pCi/g | 108% | 0.68 | 5/5/10 02:41 a | | 207.53 | ALP173 |
| | | | | | 3.33E-05 | 1.00E+00 | | (1.9) | | | ß | |
| Th-232 | 1.05E-04 | ⊃ | 5.7E-05 | 5.8E-05 | 1.05E-04 | pCi/g | 108% | 0.41 | 5/5/10 02:41 a | | 207.53 | ALP173 |
| | | | | | 3.33E-05 | 1.00E+00 | | (1.5) | | | D | |
| Batch: 0118346 | RL-ALP-009 | | | Work Order: | LONTK1AA | Report I | Report DB ID: LONTK1AB | TK1AB | | | | |
| U-233/234 | 6.61E-05 | ⊃ | 4.9E-05 | 5.0E-05 | 6.61E-05 | pCi/g | 94% | 0.93 | 5/5/10 02:44 a | | 208.99 | ALP4 |
| | | | | | 2.48E-05 | 5.00Ë-01 | | (2.5) | | | D | |
| U-235/236 | 6.61E-05 | ⊃ | 2.5E-05 | 2.5E-05 | 6.61E-05 | pCi/g | 94% | -0.19 | 5/5/10 02:44 a | | 208.99 | ALP4 |
| | | | | | 2.48E-05 | 5.00E-01 | | -1. | | | σ | |
| U-238 | 7.38E-05 | ⊃ | 4.1E-05 | 4.1E-05 | 7.38E-05 | pCi/g | 94% | 0.25 | 5/5/10 02:44 a | | 208.99 | ALP4 |
| | | | | | 2.86E-05 | 5.00E-01 | | 0.9 | | | ß | |
| | | | | | | | Ratio | Ratio U-234/238 = 3.3 | | | | |
| | | | | | | | | | | | | |
| | C MDA,Lc - De | etection, | Decision Level | based on instru | nent backgrou | nd or blank, ad | justed by th | te sample Efficie | MDC MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume. | me. on software | | |
| rptSTLRchBlank ^U V V5.2.5 A2002 | guai - Aualyzeu | 101 0411 1 | int detected apove | : muuung ci mei m. | | | | | ר להמו - אומואכפו ועד טינו הטר הכוכנוכט מטטיס ווווונווט כי ווכויום איז וכא האינטיאוום ער דעיבו עו אוין ווכנוידים איז איז איז געים איז איז איז איז איז איז איז איז גער איז איז איז איז גער איז איז גערטיאוים איז איז איז גערטיאיז כי ער גערטיאיז גער | | | |

TestAmerica Laboratories, Inc.

| SD: 41277 SD: 41277 WATEH SD: 41270 WATEH Report No.: 43800 Count Count Count Analysis, From Count Analysis, From Count Analysis, From Count Analysis, From Count Size Alguor Percent comments: < | SDG: 41277 Report No.: 43800 Count Total MDC(MDA, Rat Unit, Rat MDC, Analysis, Total Sa Aliduot Loo Total MDC(MDA, Rat Unit, Rat MDC, Rat MDC, Rat MDC, Analysis, Total Sa Aliduot Loo Total MDC(MDA, Rat Unit, Net/TotUcent Prep Date Total Sa Aliduot | SDG: 41277 Beport No.: 4300 Lo MDC/MDA Rt Unit, Rs/MDC, Rs/MDC, Analysis, Prep Date Total Size Aliava | SDG: 41277 Beport No.: 43800 Let OPDL Net(10; tr) Analysis, 10al Size 3ize 3ize Letror(2s) Uncert(2s) Lc OPDL Neld Ref/ToUbert Prep Date 3ize 3ize | | | | BLA | FORM II BLANK RESULTS | SL | | | - | Date: 10-May-10 | May-10 |
|--|--|---|--|---------|-------------|-----------------------|----------------|--------------------------|-------|--------------------------|------------------------|------------------|-----------------|---------------------|
| Count Total MDC(IMDA, Rpt Unit, Rst/MDC, Analysis, Total Size Aliduot ual Error(2s) Uncert(2s) Mc(IDA, Rpt Unit, Yield Rst/TotUcert Prep Date Size Size | Lad Drottal Marysis, Total Alalysis, Ala | Loant Total MDC(MDA, Rat Unit, Rat MDC, Rat MDC, </th <th>Count Total MDC(MDA, Rat Unit, Analysis, Total sa Aliquot ual Error(2s) Uncert(2s) Lc CRDL Yield Rst/Nt0Cert Pep Date Size Size</th> <th></th> <th>TestAmerica</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>SDG:</th> <th>41277</th> <th></th> <th></th> | Count Total MDC(MDA, Rat Unit, Analysis, Total sa Aliquot ual Error(2s) Uncert(2s) Lc CRDL Yield Rst/Nt0Cert Pep Date Size Size | | TestAmerica | | | | | | SDG: | 41277 | | |
| Count Total MDC/MDA, Rpt Unit, Rs/MDC, Analysis, Total Sa Aliquot Qual Error (2s) Uncert(2s) Lc CRDL Yield Rs/TotUcert Prep Date Size Size | Count Total MDC/MDA, Rpt Unit, RstMDC, Analysis, Total sa Alquot Quai Error (2 s) Uncert(2 s) Lc CRD L Yreid RstTrotUcert Prep Date Size Size Size | Count Total MDC(MDA, Lc Rpt Unit, Yield Ret/MDC, Ret/TotUcert Analysis, Prep Date Total Sa Aliquot | Count Total MDC(MDA, Rat Unit, Rat MDC, Analysis, Total Sa Aliquot Qual Error (2 s) Uncert(2 s) Lc CDL Yield Rat/TotUcert Pep Date Size Sa Size | Matrix: | WATER | | | | | | Report No | | | |
| Comments: | Comments: | Commets: | Comments | 1 | | Total Uncert(2 s) | MDC MDA, Lc | Rpt Unit, CRDL | Yield | Rst/MDC, Rst/TotUcert | Analysis, Prep Date | Total Sa Size | Aliquot Size | Primary Detector |
| | | | | 1 | Comments: | | | | | | | | | |
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MDC[MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

TestAmerica rptSTLRchBlank V5.2.5 A2002 Date: 10-May-10

FORM II

LCS RESULTS

Lab Name: TestAmerica Matrix: WATER

41277 3800 SDG:

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| Batch: 0118345 RL-ALP-002 Pu-239/40 3.05E-02 Batch: 0118347 RL-ALP-010 Am-241 3.90E-02 | 02 | | Uncert(2 s) | Uncert(2 s) MDC MDA Unit | Yield | Expected Uncert | t Bias | Prep Date | Size | Detector |
|--|-----------|---------|--------------|--------------------------|------------------------|----------------------------|-----------|----------------|--------|----------|
| BL-4 | 02 | | Work Order. | Work Order: LONTH1AC | Report DB ID: LONTH1CS | LONTH1CS | | | | |
| HL-/ | | 9.7E-04 | 4.3E-03 | 9.22E-05 pCi/g | 83% | 3.35E-02 1.01E-03 | -03 91% | 5/5/10 11:11 p | 210.71 | ALP40 |
| HL-/ | | | | | Rec Limits: | 70 130 | -0.1 | | Ø | |
| | | | Work Order | Work Order: LONTM1AC | Report DB ID: LONTM1CS | LONTMICS | | | | |
| | 02 | 1.0E-03 | 5.5E-03 | 5.01E-05 pCi/g | 110% | 110% 4.28E-02 1.40E-03 91% | -03 91% | 5/5/10 11:29 p | 210.71 | ALP125 |
| | | | | | Rec Limits: | 70 130 | -0.1 | | 6 | |
| Batch: 0118349 RAD-TH ISO BY ALPHA |) BY ALPH | IA | Work Order | Work Order: LONTN1AC | Report DB ID: LONTN1CS | LONTN1CS | | | | |
| Th-230 1.09E-02 | 02 | 8.1E-04 | 1.8E-03 | 1.10E-04 pCi/g | 103% | 1.16E-02 3.47E-04 | -04 95% | 5/5/10 02:41 a | 201.96 | ALP174 |
| 15 | | | | | Rec Limits: | 70 130 | -0.1 | | Ð | |
| Batch: 0118346 RL-ALP-009 | | | Work Order | Work Order: LONTK1AC | Report DB ID: LONTK1CS | LONTK1CS | | | | |
| U-233/234 9.30E-03 | 03 | 4.9E-04 | 1.5E-03 | 5.90E-05 pCi/g | 86% | 8.53E-03 5.19E-05 109% | -05 109% | 5/5/10 02:44 a | 204.28 | ALP5 |
| | | | | | Rec Limits: | 70 130 | 0.1 | | ŋ | |
| U-238 9.20E-03 | 03 | 4.8E-04 | 1.5E-03 | 6.84E-05 pCi/g | 86% | 8.93E-03 5.43E-05 | :-05 103% | 5/5/10 02:44 a | 204.28 | ALP5 |
| | ÷ | | | | Rec Limits: | 70 130 | 0.0 | | D | |

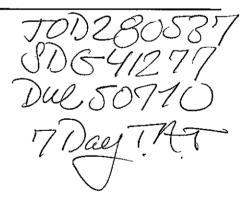
SUBCONTRACT ORDER **TestAmerica** Irvine

ITA1358

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| SENDING LABORATORY: | RECEIVING LABORATORY: |
|--------------------------------|---|
| TestAmerica Irvine | TestAmerica St. Louis |
| 17461 Derian Avenue. Suite 100 | 13715 Rider Trail North |
| Irvine, CA 92614 | Earth City, MO 63045 |
| Phone: (949) 261-1022 | Phone :(314) 298-8566 |
| Fax: (949) 260-3297 | Fax: (314) 298-8757 |
| Project Manager: Joseph Doak | Project Location: CA - CALIFORNIA |
| Client: MWH-Pasadena/Boeing | Receipt Temperature: <u>°C</u> Ice: Y / N |

| Analysis | Units | Due | Expires | Interlab Price S | urch | Comments |
|----------------------------|---------------|----------------|----------------|------------------|------|---|
| ample ID: ITA1358-02 (Out | tfall 008 (Co | mposite) - Wat | er) Sampled | : 01/18/10 14:08 | | LONPT |
| Gamma Spec-O - | mg/kg | 01/27/10 | 01/18/11 14:08 | | 0% | Out St Louis, K-40 and CS-137 only, DO NOT FILTER! |
| Gross Alpha-O | pCi/L | 01/27/10 | 07/17/10 14:08 | \$100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Gross Beta-O | pCi/L | 01/27/10 | 07/17/10 14:08 | \$100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Level 4 Data Package - Out | N/A | 01/27/10 | 02/15/10 14:08 | \$0.00 | 0% | |
| Radium, Combined-O | pCi/L | 01/27/10 | 01/18/11 14:08 | \$238.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Strontium 90-0 · | pCi/L | 01/27/10 | 01/18/11 14:08 | \$155.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
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| Analysis Method Matrix # of Samples Import Lab's Analysis Method Matrix # of Samples Unit Price 10-A-OSR-01 10-A-OSR-01 10-A-OSR-01 10-A-OSR-01 10-A-OSR-01 10-A-OSR-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 | Analysis Method Analysis Method 10-A-CO-SR-01 10-A-CO-SR-01 10-A-SR-S0-01 10-A-SY-SN-01 10-A-8Y-SN-01 10-A-SY-SN-01 | | See Attached | | | |
| Analysis Method Matrix # of Samples Import Lab's 10-A-CO-SR-01 10-A-CO-SR-01 10-A-CO-SR-01 10-A-CO-SR-01 10-A-SCO-SR-01 10-A-SCO-SCO-SR-01 10-A-SCO-SCO-SR-01 10-A-SCO-SCO-SR-01 10-A-SCO-SCO-SCO-SR-01 10-A-SCO-SCO-SCO-SCO-SCO-SCO-SCO-SCO-SCO-SCO | Analysis Method I Analysis 10-A-CO-SR-01 10-A-SR-01 10-A-SR-01 10-A-SR-SO-01 10-A-SY-SN-01 10-A-SY-SN-01 10-A-SY-SN-01 | | | | | |
| Analysis Method Matrix # of Samples Unit Price 10-A-CO-SR-01 10-A-SP-S1-01 5 5 10-A-SP-S1-01 10-A-SP-S0-01 5 5 10-A-SP-SN-01 10-A-SP-SN-01 5 5 10-A-BY-SN-01 10 6 5 5 10 10 10 6 5 5 10 10 10 10 6 5 5 10 10 10 10 10 5 5 5 10 10 10 10 10 10 5 5 10 10 10 10 10 5 5 5 10 10 10 10 10 10 5 | Analysis Method I Analysis 10-A-CO-SR-01 10-A-CO-SR-01 10-A-SR-SO-01 10-A-SV-SN-01 10-A-SV-SN-01 | | | | | |
| 10-A-CO-SR-01 10-A-SR-51-01 10-A-SR-SO-01 10-A-SY-SN-01 10-A-SY-SN-01 | | | | | e w/Surcharges | Extended Price |
| 10-A-9R-S1-01 10-A-6A-SO-01 10-A-6A-SO-01 10-A-8Y-SN-01 10-A-8Y-SN-01 | | -A-CO-SR-01 | | ¢ | • | \$ |
| 10-A-EA-SO-01 10-A-8Y-SN-01 10-A-8Y-SN-01 | |)-A-9R-S1-01 | | • • • | 3 | ı د |
| 10-A-8Y-SN-01 | |)-A-6A-SO-01 | | 69 | , | |
| | |)-A-8Y-SN-01 | | 69 | • | ۰ ه |
| | | | | \$ | | \$ |
| | | | | ↔ | r | , \$ |
| с | | | | \$ | | ۰ \$ |
| 8 | | | | \$ | 1 | ۰ 49 |
| | | | | | | ج |
| Approximate Total Project Value | | | | Approximat | | - \$ |
| | Work Instruction No. CA-WI-010/A-03/07 | | | | | |

TestAmerica Laboratories, Inc.

| | ** ** | and the second sec |
|-------|--|--|
| | <u>TestAmerica</u> | |
| • | THE LEADER IN ENVIRONMENTAL TESTING | 1ple Check-in List |
| | Date/Time Received: 42010 GM | Screen Results (out) |
| | Client: TA-ININE SDG #: | |
| | Work Order Number: 70028053 | Chain of Custody #_UTA 1358 |
| | Shipping Container ID: | () Air Bill # |
| | Item 1 through 5 for shipping container only. <u>Initial</u> a | |
| | 1. Custody Seals on shipping container intact? | |
| | 2. Custody Seals dated and signed? | G and I into outstody sear [] |
| | 3. Chain of Custody record present? | G and find the custody sear [] |
| | 4 Cooler torrest | Vermioulitate |
| | Item 6 through 10 for samples. Initial appropriate resp | Vermiculite/packing materials is NA [] Wet [] Dry |
| | 6. Number of samples in shipping container (Eac | |
| | 7. Sample holding times exceeded? | |
| | 8. Samples have: | NA[]Yes[]No |
| | custody seals | hazard labels 24P-CACK |
| | 9. Samples are: | appropriate sample labels |
| | broken | leaking |
| | · | have air bubbles . (Only for samples requiring head space) |
| | 10. Sample pH taken? NA [] pH<2[pH>2 | 2 [pH>9 [] Amount of HNO3 Added |
| | 11. Sample Location, Sample Collector Listed? * . *For documentation only. No corrective action | |
| · · · | 12. Were any anomalies identified in sample receip | t? |
| | 13. Description of anomalies (include sample numb | |
| | | to the state of th |
| | | |
| · · · | +++ | |
| | Sample Custodian | for additional comments |
| | Client Informed on by | Person contacted |
| | Xi No action necessary; process as is. | Person contacted |
| . : | Project Manager Lube And | - Ulasha |
| | LS-023, Rev. 10, 10/09 | Date 1/ 6/10 |
| | • • • | • |

TestAmerica Laboratories, Inc.

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TestAmerica St. Louis



TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. ITA1358

MWH-Pasadena Boeing

Lot #: F0C010430

Joseph Doak

TestAmerica Irvine 17461 Derian Ave Suite 100 Irvine, CA 92614-5817

TESTAMERICA LABORATORIES, INC.

Ølay Project Manager

March 18, 2010

Case Narrative LOT NUMBER: F0C010430

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on March 1, 2010. This sample is associated with your MWH-Pasadena Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. **TestAmerica St. Louis' Florida certification number is E87689.** The case narrative is an integral part of this report.

This report shall not be reproduced, except in full, without the written approval of the laboratory.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Gross Alpha/Beta Method: 900.0 MOD

Batch 0062107 The Gross Alpha reporting limit was not met due to a reduction of sample size attributed to the sample's high residual mass. The analytical results are reported. **Affected Sample:** F0C010430 (1): ITA1358-02

Gross Alpha/Beta Method: 9310 MOD

Batch 0073019-Suspended The Gross Alpha and Beta reporting limits were not met due to a reduction of sample size attributed to the high activity of the sample. The analytical results are reported. **Affected Sample:** F0C010430 (1): ITA1358-02

METHODS SUMMARY

F0C010430

| PARAMETER | ANALYTICAL METHOD | PREPARATION METHOD |
|--|---------------------------------|-----------------------|
| Gross Alpha/Beta by GFPC Gross Alpha/Beta EPA 900 | SW846 9310 MOD EPA 900.0 MOD | EPA 900.0 |

References:

- EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F0C010430

| WO # SAI | MPLE# | CLIENT SAMPLE ID | SAMPLED DATE | SAMP TIME |
|------------|-------|------------------|-----------------|--------------|
| LV6L6 | 001 | ITA1358-02 | 01/18/10 | 14:08 |
| NOTE (S) : | | | | |

- The analytical results of the samples listed above are presented on the following pages.

- All calculations are performed before rounding to avoid round-off errors in calculated results.

- Results noted as "ND" were not detected at or above the stated limit.

- This report must not be reproduced, except in full, without the written approval of the laboratory.

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

.

TestAmerica Irvine

Client Sample ID: ITA1358-02

Radiochemistry

| Lab Sample ID: Work Order: Matrix: | F0C010430-001 LV6L6 WATER | | | Date Colle Date Recei | | 1/18/10 1408 3/01/10 1000 | |
|--|---------------------------------|------|------------------------------|--------------------------|------|------------------------------|------------------|
| Parameter | Result | Qual | Total Uncert. (2 s+/-) | RL | mdc | Prep Date | Analysis Date |
| Gross Alpha/Beta | EPA 900 | | I | Ci/L | Batc | h # 0062107 | Yld % |
| Gross Alpha | 32.6 | | 8.1 | 3.0 | 6.3 | 03/03/10 | 03/07/10 |
| GROSS A/B BY GFP | C SW846 9310 MOD | | I | Ci/L | Batc | h # 0073020 | Yld % |
| Gross Alpha, Disso | lved 2.2 | J | 1.0 | 3.0 | 1.1 | 03/14/10 | 03/18/10 |
| Gross Beta, Dissol | ved 5.1 | | 1.2 | 4.0 | 1.6 | 03/14/10 | 03/18/10 |
| GROSS A/B BY GFP | C SW846 9310 MOD | | I | Ci/L | Batc | h # 0073019 | Yld % |
| Gross Alpha, Suspe | nded 43 | | 13 | 3 | 10 | 03/15/10 | 03/16/10 |
| Gross Beta, Suspen | ded 64 | | 16 | 4 | 16 | 03/15/10 | 03/16/10 |

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined by instrument performance only. Bold results are greater than the MDC.

J Result is greater than sample detection limit but less than stated reporting limit.

METHOD BLANK REPORT

Radiochemistry

| Client Lot ID: | F0C010430 |
|----------------|-----------|
| Matrix: | WATER |

| Parameter | Result | Qual | Total Uncert. (2 g+/-) | RL | MDC | | Prep Date | Lab Sample ID Analysis Date |
|--|---|------------------|------------------------------|------------------------|-----------------|-------|------------------------------------|-----------------------------------|
| Gross Alpha/Beta | EPA 900 | | pCi/L | Batch # | 0062107 | Yld % | E.(| 0C030000-107B |
| Gross Alpha | -0.52 | U | 0.42 | 3.00 | 1.1 | | 03/03/10 | 03/07/10 |
| Gross Beta | -0.44 | U | 0.57 | 4.00 | 1.1 | | 03/03/10 | 03/07/10 |
| | | | | | | | | |
| GROSS A/B BY GFP | C SW846 9310 | MOD | pCi/L | Batch # | 0073020 | Yld % | F | 0C140000-020B |
| GROSS A/B BY GFP Gross Alpha, Dissolva | | МО Д U | pCi/L | Batch # 3.00 | 0073020 0.82 | Yld % | | DC140000-020B 03/16/10 |
| Gross Alpha, Dissolve | ed -0.09 | | | | - | Yld % | 03/14/10 | |
| Gross Alpha, Dissolve | ed -0.09 1 0.53 | U U | 0.38 | 3.00 | 0.82 1.5 | Yld % | 03/14/10 03/14/10 | 03/16/10 |
| Gross Alpha, Dissolve Gross Beta, Dissolve | ed -0.09 1 0.53 C SW846 9310 | U U | 0.38 0.92 | 3.00 4.00 | 0.82 1.5 | | 03/14/10 03/14/10 F (| 03/16/10 03/16/10 |

NOTE (S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only Bold results are greater than the MDC.

U Result is less than the sample detection limit.

Laboratory Control Sample Report

Radiochemistry

Client Lot ID: F0C010430 Matrix: WATER

| | | | Total | | Lab Sample ID | | |
|------------------------|--------------|---------|---------------------|----------------|---------------|----------------------|--|
| Parameter | Spike Amount | Result | Uncert. (2 g+/-) | MDC | % Yld % Rec | QC Control Limits | |
| Gross Alpha/Beta EPA | 900 | | pCi/L | 900.0 MOD | FOCO | 30000-107C | |
| Gross Beta | 68,0 | 75.0 | 6.3 | 0.7 | 110 | (58 - 133) | |
| | Batch #: | 0062107 | | Analysis Date: | 03/07/10 | | |
| Gross Alpha/Beta EPA | 900 | | pCi/L | 900.0 MOD | FOCO | 30000-107C | |
| Gross Alpha | 49.4 | 47.9 | 5.5 | 1.1 | 97 | (62 - 134) | |
| | Batch #: | 0062107 | | Analysis Date: | 03/07/10 | | |
| GROSS A/B BY GFPC SW | 846 9310 MOD | | pCi/L | 9310 MOD | F0C1 | 40000-019C | |
| Gross Alpha, Suspended | 372 | 318 | 26 | 0.5 | 86 | (73 - 136) | |
| Gross Beta, Suspended | 283 | 259 | 20 | 1 | 92 | (73 - 122) | |
| | Batch #: | 0073019 | | Analysis Date: | 03/16/10 | | |
| GROSS A/B BY GFPC SW | 846 9310 MOD | | pCi/L | 9310 MOD | F0C1 | 40000-020C | |
| Gross Beta, Dissolved | 68.2 | 67.8 | 5.8 | 1.6 | 99 | (77 - 123) | |
| | Batch #: | 0073020 | | Analysis Date: | 03/16/10 | | |
| GROSS A/B BY GFPC SW | 846 9310 MOD | | pCi/L | 9310 MOD | F0C1 | 40000-020C | |
| Gross Alpha, Dissolved | 49.4 | 50.0 | 5.4 | 1 | 101 | (80 - 140) | |
| | Batch #: | 0073020 | | Analysis Date: | 03/16/10 | | |

NOTE (S)

MATRIX SPIKE REPORT

Radiochemistry

| Client Lot Id: | F0B250518 | Date Sampled: | 02/25/10 |
|----------------|-----------|----------------|----------|
| Matrix: | WATER | Date Received: | 02/25/10 |

| | | | Total | | Total | QC Sample ID | |
|------------------------|-----------------|-----------------|--------------------|---------------------------|-----------|--------------|----------------------|
| Parameter | Spike Amount | Spike Result | Uncert. (20+/-) | Spike Sampl Yld. Resul | e Uncert. | %YLD %REC | QC Control Limits |
| Gross Alpha/Beta EPA 9 | 00 | | pCi/L | 900.0 M | OD | F0B250518 | 3-001 |
| Gross Beta | 566 | 595 | 50 | 56.3 | 9.4 | 95 | (54 - 150) |
| | Batch #: | 0062107 | Ar | nalysis Date: | 03/07/10 | | |
| Gross Alpha/Beta EPA 9 | 00 | | pCi/L | 900.0 M | OD | F0B250518 | 3-001 |
| Gross Alpha | 412 | 339 | 49 | 10 | 10 | 80 | (35 - 150) |
| | Batch #: | 0062107 | Ar | nalysis Date: | 03/07/10 | | |
| GROSS A/B BY GFPC SW84 | 6 9310 MOD | | pCi/L | 9310 MO | D | F0C01043 | 0-001 |
| Gross Beta, Dissolved | 68.2 | 79.2 | 6.6 | 5.1 | 1.2 | 109 | (71 - 146) |
| | Batch #: | 0073020 | Ar | nalysis Date: | 03/16/10 | | |
| GROSS A/B BY GFPC SW84 | 6 9310 MOD | | pCi/L | 9310 MO | D | F0C01043 | 0-001 |
| Gross Alpha, Dissolved | 49.4 | 51,9 | 5.8 | 2.2 | 1.0 | 100 | (33 - 150) |
| | Batch #: | 0073020 | Ar | nalysis Date; | 03/16/10 | | |

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off errors in calculated results.

DUPLICATE EVALUATION REPORT

Radiochemistry

| Client Lot ID: | F0C010430 | Date Sampled: | 02/25/10 |
|----------------|-----------|----------------|----------|
| Matrix: | WATER | Date Received: | 02/25/10 |

| | | | Total | | | Total | Q | C Sample ID | |
|------------------------|--------------|----------|----------------------|----------|---------------------|---------------------|-------|-------------|------|
| Parameter | SAME Resu | | Uncert. (2 g +/-) | % Yld | DUPLICATE Result | Uncert. (2 σ+/-) | % Yld | Precis: | ion |
| Gross Alpha/Beta EPA | 900 | | | pCi/L | 900.0 M | סכ | FOI | 3250518-0 | 01 |
| Gross Alpha | 10 | U | 10 | | 14 U | 12 | | 29 | %RPD |
| Gross Beta | 56, | 3 | 9.4 | | 57.4 | 9.4 | | 2 | %RPD |
| | | Batch #: | 0062107 | (Sample) | 0062107 | (Duplicate) | | | |
| GROSS A/B BY GFPC SW | 846 | 9310 MOD | | pCi/L | 9310 MOI | b | FOC | 2010430-0 | 01 |
| Gross Alpha, Dissolved | 2.2 | J | 1.0 | | 3.6 | 1.2 | | 46 | %RPD |
| Gross Beta, Dissolved | 5.1 | | 1.2 | | 5.6 | 1.3 | | 9 | %RPD |
| | | Batch #: | 0073020 | (Sample) | 0073020 | (Duplicate) | | | |
| GROSS A/B BY GFPC SW | 846 | 9310 MOD | | pCi/L | 9310 MOI | D | FOC | 2010430-0 | 01 |
| Gross Alpha, Suspended | 43 | | 13 | | 36 | 13 | | 17 | %RPD |
| Gross Beta, Suspended | 64 | | 16 | | 52 | 15 | | 20 | %RPD |
| | | Batch #: | 0073019 | (Sample) | 0073019 | (Duplicate) | | | |

NOTE (S)

Data are incomplete without the case narrative.

Calculations are performed before rounding to avoid round-off error in calculated results

J Result is greater than sample detection limit but less than stated reporting limit.

TestAmerica EANALYSIS / SUB-CONTRACT / CLIENT RETURN FORM

| Req | uest Initiated by: Request Date: Quote Number: Client Number: SDG Number: | (4 (Protocol B) | Kay Clay 03-01-10 |
|----------------------|--|--|--|
| Retu Reau Sub- | t is for (check one): Irn to Client <i>(Client FedE</i> nalysis Contract Sample tional Analysis | | New Lot (check one): |
| | Old Lot Number: | F0A210532 | · |
| Client ID | Sampled date/time* | Shelf Location | Line item from quote (include Rad Screen if required) |
| ITA1358-02 | See attached | R232 | 1. Gross Alpha (re-analysis) 2. Gross Alpha Suspended |
| | · | | 3. Gross Alpha Dissolved |
| | | | |
| | | | |
| * or attach o | riginal Chain of Custody | | |
| | | Date for New Lo | |
| | Analytical 3-15-10 | | Report 3-16-10 |
| | For Sub-Cont | ract or Return to | Client ONLY |
| s | hipping Address: | ·· | |
| | <u></u> | <u></u> | |
| | | | |
| | Contact Person: Phone Number: | | |
| L | Project Manager Signa | ture: | |
| | | ······································ | IGINAL SAMPLE |
| Law | eted by: | | Date: 3././ð |
| New Login | Lot Number: FOCO/ | 5430 | (place copy of this form in old file) |
| | Containers were Re-lat | e | (place below lot number of old label) |

SUBCONTRACT ORDER TestAmerica Irvine

ITA1358

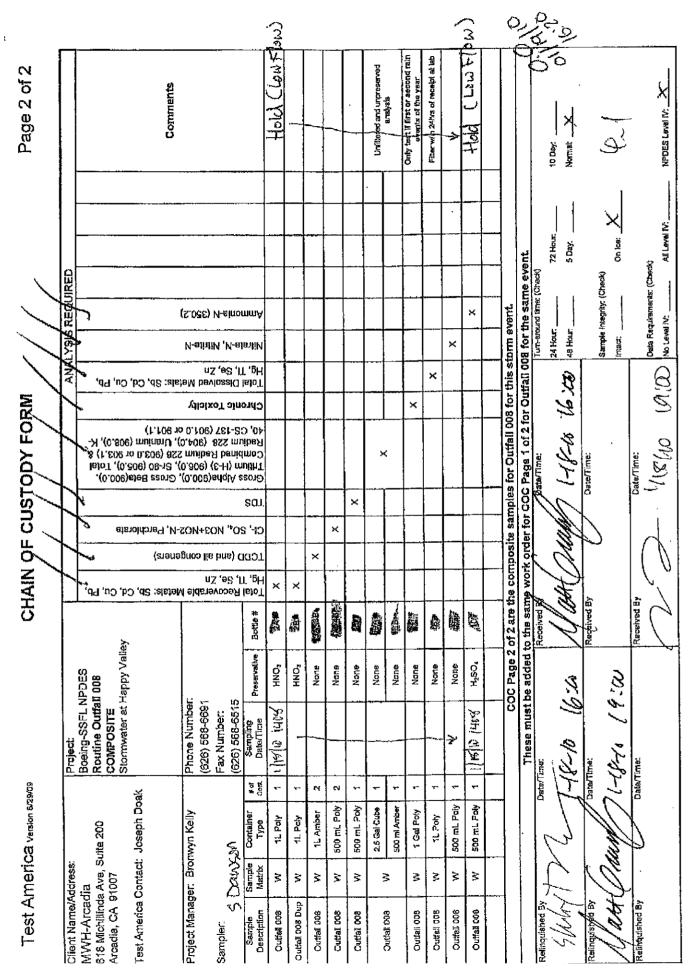
.

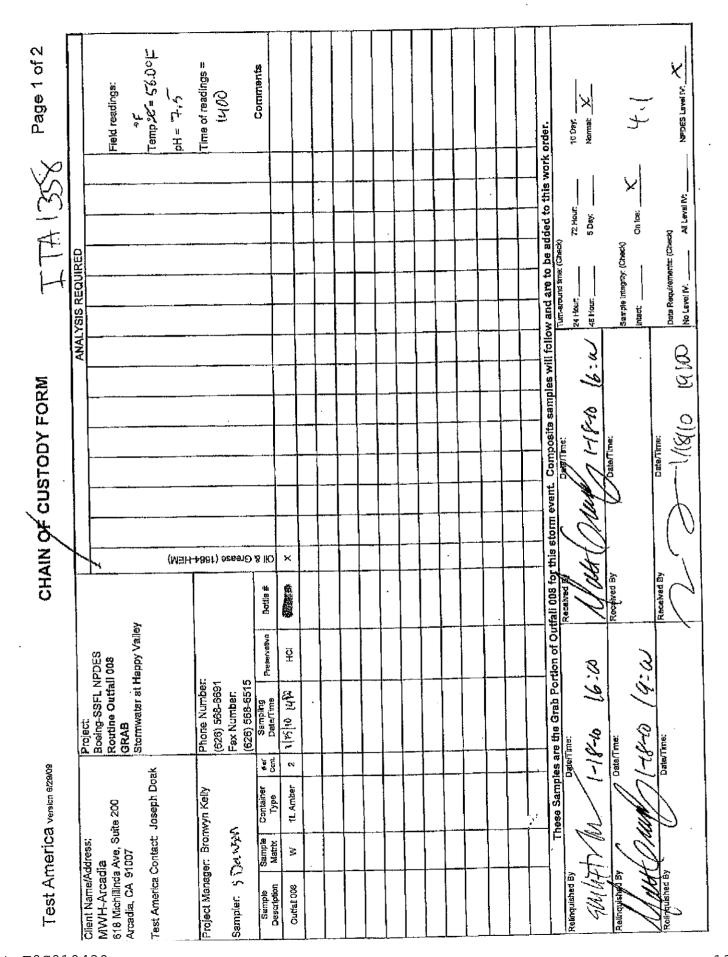
| SENDING LABORATORY: | RECEIVING LABORATORY: |
|--------------------------------|--|
| TestAmerica Irvine | TestAmerica St. Louis |
| 17461 Derian Avenue. Suite 100 | 13715 Rider Trail North |
| Irvine, CA 92614 | Earth City, MO 63045 |
| Phone: (949) 261-1022 | Phone :(314) 298-8566 |
| Fax: (949) 260-3297 | Fax: (314) 298-8757 |
| Project Manager: Joseph Doak | Project Location: CA - CALIFORNIA |
| Client: MWH-Pasadena/Boeing | Receipt Temperature: <u>°</u> C Ice: Y / N |

| Analysis | Units | Due | Expires | Interlab Price S | urch | Comments |
|----------------------------|--------------|----------------|----------------|------------------|------|---|
| ample ID: ITA1358-02 (Out | fall 008 (Co | nposite) - Wat | er) Samoled | : 01/18/10 14:08 | ł | |
| Gamma Spec-O - | mg/kg | 01/27/10 | 01/18/11 14:08 | | 0% | Out St Louis, K-40 and CS-137 only, DO NOT FILTER! |
| Gross Alpha-O | pCi/L | 01/27/10 | 07/17/10 14:08 | \$100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Gross Beta-O | pCi/L | 01/27/10 | 07/17/10 14:08 | \$100.00 | 50% | Out St Louis, Beeing permit, DO NOT FILTER! |
| Level 4 Data Package - Out | N/A | 01/27/10 | 02/15/10 14:08 | \$0.00 | 0% | |
| Radium, Combined-O | pCi/L | 01/27/10 | 01/18/11 14:08 | \$238.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Strontium 90-0 🧃 | pCi/L | 01/27/10 | 01/18/11 14:08 | \$155.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Uranium, Combined-O | pCi/L | 01/27/10 | 01/18/11 14:08 | \$120.00 | 0% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Containers Supplied: | | | | | | |
| 2.5 gal Poly (H) 🗧 🥴 | 500 mL Aml | per (I) | | | | |

meles 1/20/10 17:00 Released Date/Ťime

1/20/10 17:00 W Date/Time 1.21/0 12/05 Received By





TestAmerica St. Louis

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| Lot Lot | 1Ks FOA2105.32 |
|--|--|
| THE LEADER INTRODUCENTAL TESTING | |
| | <u> </u> |
| CONDITION UPON RECEIPT FORM | <u></u> |
| Client: TA Dovine | |
| Quote No: <u>85644</u> | · · · |
| COC/RFA No: 1771 1330, 31, 28, 58 | • |
| Initiated By: | Dat220 1.21.10 Time: 1215 |
| | olug Information |
| | nt Other: Multiple Packages: (Y)N |
| Shipping # (s):* | Sample Temperature (s):** |
| 1. <u>4289 2132 9059</u> 6 | 1. anlient 6. |
| 2. 9060 7. | 2 7 |
| - | 3 8 |
| . 4 9 | 4 9 |
| | 5 10 |
| *Numbered shipping lines correspond to Numbered Sample Temp lines | **Sample must be received at 4°C ± 2°C. If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquidfor Radyests- Liquid or Solids |
| Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable): | |
| 1. N Are there custody seals present on the cooler? | 8. Y N Are there custody seals present on bottles? |
| 2. Y D N/A Do custody seals on cooler appear to be tampered with? | 9. Y N (NA tampered with? |
| 3. B N Were contents of cooler frisked after opening, but before unpacking? | 10. Y N N/A Was sample received with proper pH ¹ ? (If not, make note below) |
| 4. D N Sample received with Chain of Custody? | 11. X N Sample received in proper containers? |
| 5. N N/A Does the Chain of Custody match sample ID's on the container(s)? | 12. Y NNA Headspace in VOA or TOX liquid samples? (if Yes, note sample ID's below) |
| 6. YN Was sample received broken? | 13. Y N N/2 Was Internal COC/Workshare received? |
| 7. DN Is sample volume sufficient for analysis? | 14. Y N(N/A) Was pH taken by original TestAmerica lab? |
| For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received in Notes: Log + 1+1/100 / 100 T. T. ALSSB | must be verified, EXCEPT VOA, TOX and soils. |
| | |
| | |
| | |
| Sample 1 langed 1 - Ka | is here total Alindad Asamali |
| Sample de loger for 200 | A HUPLON, TOTAL , CREASPORT + Superverler |
| A A A A A A A A A A A A A A A A A A A | A WARANER DS UT 40 |
| analyzon re-regular | ter lato 03-01-10 and lab |
| - morigint as paro | -Keo |
| Corrective Action: | |
| D Client Contact Name: | Informed by: |
| Sample(s) processed "as is" Sample(s) on hold until; | If released, notify: |
| Project Management Review: | Date: 01-22-10 |
| THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEI | ENG CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN R INITIAL AND THE DATE NEXT TO THAT ITEM. |
| ADMIN | -0004, REVISED 10/21/08 \Slavr01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev11.doc |

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APPENDIX G

Section 29

Outfall 008 – February 5 & 6, 2010

MECX Data Validation Report

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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITB0892

Prepared by

MEC^X, LP 12269 East Vassar Drive Aurora, CO 80014

I. INTRODUCTION

| Task Order Title: Contract Task Order: | Boeing SSFL NPDES 1261.100D.00 |
|---|--------------------------------|
| Sample Delivery Group: | ITB0892 |
| 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 008 (Comp) | ITB0892-03 | F0B090481- 001, G0B100426- 001, 135418- 3 | Water | 2/5/2010 | ASTM 5174-91, 100.2, 200.7, 200.7 (Diss), 200.8, 200.8 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B (Diss), SM2540D |

II. Sample Management

No anomalies were observed regarding sample management. The sample receipt temperature was noted to be ambient by TestAmerica-St Louis; however, due to the nonvolatile nature of the analytes, no qualifications were required. No temperature information was provided by EMS Laboratories for asbestos. Asbestos samples should be cooled during transport to retard algal growth; however, as the case narrative did not note any sample receipt problems, no qualifications were required. The sample was received below the temperature limits at TestAmerica-West Sacramento; however, the sample was not noted to be frozen or damaged. The samples in this SDG were received at the remaining laboratories within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. According to the case narratives for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were present upon receipt at TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were delivered to the remaining laboratories by courier, no custody seals were necessary. If necessary, the client ID was added to the sample result summary by the reviewer.

| Qualifie | r 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 or PCB congeners. | 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. |

Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|-----------|--|---|
| Н | 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 |
| С | 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. |
| В | 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. |
| Е | Not applicable. | Duplicates showed poor agreement. |
| Ι | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| А | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| Μ | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| Т | 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

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. |
|-----------|---|---|
| Ρ | 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. |
| *11, *111 | 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 100.2—Asbestos

Reviewed By: P. Meeks Date Reviewed: March 29, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^{X} Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 100.2, and the National Functional Guidelines for Inorganic Data Review (10/2004).

- Holding Times: The sample was filtered one day beyond the 48-hour holding time; therefore, nondetected asbestos in the sample was qualified as estimated, "UJ." There is no analysis holding time; however, the sample was analyzed within 5 days of collection.
- Calibration: The refractive index calibration was acceptable.
- Blanks: A method blank was analyzed with the site sample. Asbestos was not detected in the method blank.
- Blank Spikes and Laboratory Control Samples: Not applicable to this analysis.
- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- Sample Result Verification: The sample result was verified against the raw data. No transcription errors were noted. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

B. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin Date Reviewed: March 27, 2010

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 (9/05).

- 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 analyzed with the initial calibration sequence and at the beginning of each analytical sequence. 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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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 detects between the EDL and the RL for 1,2,3,4,6,7,8-HpCDD and total HpCDD, OCDD, 1,2,3,4,6,7,8-HpCDF and total HpCDF, and OCDF. Most detects in the method blank did not meet ratio criteria and were reported as EMPCs; however, due to the extent of contamination present in the method blank, it was the reviewer's professional opinion that those results be utilized to qualify applicable sample results. Isomers present in the sample between the EDLs and RLs were qualified as nondetected, "U," at the levels of contamination. The sample result for total HpCDD was

qualified as nondetected, "U," as both peaks comprising the total were present in the method blank. Total HpCDF included one peak not present in the method blank, and was qualified as estimated, "J," as only a portion of the total was considered method blank contamination. The method blank concentration for OCDD was insufficient to qualify the sample result.

- Blank Spikes and Laboratory Control Samples: OPR 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. A confirmation analysis was performed for 2,3,7,8-TCDF, and the initial result was not confirmed. The initial result was rejected, "R," in favor of the confirmation result, and the result for total TCDF was changed to nondetected, "U," at the level of the initial result.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. Any EMPCs qualified as nondetected for method blank contamination were not further qualified as EMPCs. Any remaining isomers reported as EMPCs were qualified as estimated and nondetected, "UJ," at the level of the EMPC. Any total results reported as EMPCs or including EMPCs were qualified as estimated, "J." Any detects reported below the EDL, or between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

Reviewed By: P. Meeks Date Reviewed: March 29, 2010

The sample listed in Table 1 for these analyses were validated based on the guidelines outlined in the MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA

Methods 200.7, 200.8, and 245.1, and the National Functional Guidelines for Inorganic Data Review (7/02).

- Holding Times: Analytical holding times, six months for ICP and ICP-MS 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 remaining masses of interest were calibrated to ≤ 0.1 amu and ≤0.9 amu at 10% peak height.
- Calibration: Calibration criteria were met. The total thallium ICV was recovered marginally above the control limit; however, as thallium was not detected in the sample, no qualifications were required. Mercury initial calibration r² values were ≥0.995 and all remaining initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. The total nickel 5 ppb CRDL recovery was 66%, the total cadmium 0.2 ppb CRDL recovery was 50%, and the dissolved silver 20 ppb CRDL recovery was 43%; therefore, the nondetected results for these analytes were qualified as estimated, "UJ." The remaining CRDL/CRI recoveries were within the control limits of 70-130%.
- Blanks: Boron was detected in the total and dissolved method blanks at 24.3 and 45.3 µg/L, respectively; therefore, total and dissolved boron detected in the sample were qualified as nondetected, "U," at the levels of contamination. Antimony and cadmium were reported in the total method blank at -0.36 and -0.15 µg/L, respectively; therefore, the nondetected total results for these analytes were qualified as estimated, "UJ." Method blanks and CCBs had no other applicable detects.
- Interference Check Samples: Recoveries were within 80-120%. Total and dissolved boron, total arsenic, and total silver were reported in the ICSA analyses at –78, 75, -13.9, and -7.1 µg/L, respectively; however, the concentration of the primary interferents were not sufficient to cause matrix interference in the site sample. Copper and cadmium were detected in the 200.8 dissolved ICSA; however, the reviewer was not able to determine if the detects were due to low-level contamination of the ICSA standard. No ICSA/B analyses were performed for the 200.8 total analyses.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC 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 on the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.

- Internal Standards Performance: All sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration blank. Copper was not bracketed by an internal standard of lower mass; therefore, copper detected in the sample was qualified as estimated, "J."
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit 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 MDL.

The reviewer noted that the laboratory did not list the dissolved chromium or silver results for the method blank or LCS. The reviewer checked the raw data and determined that the LCS recoveries were acceptable and that neither analyte was detected in the method blank.

Antimony was not detected in the total fraction but was detected marginally above the MDL in the dissolved fraction. Boron was detected in the dissolved fraction but the slightly smaller total boron detect was qualified as nondetected 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.

D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks Date Reviewed: March 29, 2010

The sample listed in Table 1 for these analyses 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 (7/02).

• Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquots for total uranium and radium-228 were reanalyzed more than 3x beyond the

holding time for unpreserved samples; therefore, total uranium detected in the sample was qualified as estimated, "J," and nondetected radium-228 was rejected, "R." Aliquots for gross alpha and gross beta, and gamma spectroscopy were prepared beyond the five-day analytical holding time for unpreserved samples; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. Aliquots for radium-226 and strontium-90 were prepared within the five-day holding time for unpreserved aqueous samples.

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

The gross alpha and radium-226 detector efficiencies were less than 20%; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The strontium chemical yield was <40%; therefore, nondetected strontium-90 was qualified as estimated, "UJ." All remaining chemical yields were at least 40% and were considered acceptable. 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: Tritium was detected in the method blank at 165 pCi/L; therefore, tritium detected in the sample was qualified as nondetected, "U," at the reporting limit. There were no other analytes detected in the method blanks or KPA CCBs.
- Blank Spikes and Laboratory Control Samples: The recoveries and the radium-228 RPD 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. Method accuracy was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA 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 MDA.

The reviewer noted that the preparation log for KPA was not signed as having been reviewed.

- 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.

E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks Date Reviewed: March 29, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^{X} Data Validation Procedure for General Minerals (DVP-6, Rev. 0), SM2540D, and the National Functional Guidelines for Inorganic Data Review (7/02).

- Holding Times: The analytical holding time of seven days was met.
- Calibration: The balance calibration logs were acceptable.
- Blanks: The method blank had no detect.
- Blank Spikes and Laboratory Control Samples: The recovery was within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: Not applicable to this analysis.
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit 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.
- 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.

Analysis of Water by Transmission Electron Microscopy (EPA-600 R 94 134) EPA 100.2

| EMS No. | 135418 | Client | Test America | |
|----------------------------------|--------------------------|--------|---------------|-----------|
| Sample No. 1 O J | 1780892-03 tf_11 008 | | Date Analyzed | 2/10/2010 |
| Fibers > 10 µm | n in length (chrysotile) | Н | BDL* | MFL |
| Mass (chrysoti | le) | | 0 | ug/L |
| More/Less that in Sample (chr | | | LESS | _ |
| Poisson 95% (| Confidence Interval | | 0 to | 80 MFL |
| Detection Limi | t | | 22 | MFL |
| | | | | |

* BDL : Below Detection Limit; MFL: Million Fibers per Liter

Particle Size Distribution (Chrysotile)

Particle Length - Microns

| O -0.49 | 0.50 - 0.99 | 1.00 - 1.49 | 1.50 - 1.99 | 2.00 - 2.49 | 2.5 - 4.99 | 5.00 - 9.99 | 10 & UP |
|---------|-------------|-------------|---------------|-------------|------------|-------------|----------|
| 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| | | | Particle Widt | h - Microns | | | |
| O04 | .0509 | .114 | .1519 | .224 | .2549 | .5099 | 1 & UP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | Aspect R | atio L/W | | | |
| 0 - 9.9 | 10 - 19.9 | 20 - 29.9 | 30 - 39.9 | 40 - 49.9 | 50 - 99 | 100 - 199 | 200 & UP |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TEM 7B (1994)

Level IV

Validated Sample Result Forms ITB0892

Analysis Method ASTM 5174-91

| Sample Name | Outfall 008 (C | Composite |) Matri | x Type: | WATER | ۷ | alidation Le | vel: IV |
|------------------|----------------|-----------------|-----------|----------|-----------------|------------------|-------------------------|---------------------|
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Total Uranium | 7440-61-1 | 0.811 | 0.693 | 0.21 | pCi/L | | 1 | Н |
| Analysis Metho | d EPA | 200.7 | | | | | | |
| Sample Name | Outfall 008 (C | Composite |) Matri | x Type: | Water | ۷ | alidation Le | vel: IV |
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Aluminum | 7429-90-5 | 12 | 0.050 | 0.040 | mg/l | | | |
| Arsenic | 7440-38-2 | ND | 10 | 7.0 | ug/l | | U | |
| Beryllium | 7440-41-7 | ND | 2.0 | 0.90 | ug/l | | U | |
| Boron | 7440-42-8 | ND | 0.062 | 0.020 | mg/l | В | U | В |
| Calcium | 7440-70-2 | 28 | 0.10 | 0.050 | mg/l | | | |
| Chromium | 7440-47-3 | 16 | 5.0 | 2.0 | ug/l | | | |
| Iron | 7439-89-6 | 14 | 0.040 | 0.015 | mg/l | | | |
| Magnesium | 7439-95-4 | 6.8 | 0.020 | 0.012 | mg/l | | | |
| Nickel | 7440-02-0 | 7.2 | 10 | 2.0 | ug/l | Ja | J | R, DNQ |
| Silver | 7440-22-4 | ND | 10 | 6.0 | ug/l | | U | |
| Vanadium | 7440-62-2 | 26 | 10 | 3.0 | ug/l | | | |
| Zinc | 7440-66-6 | 49 | 20 | 6.0 | ug/l | | | |

| Sample Name | Outfall 008 (C | Composite |) Matri | х Туре: | Water | V | alidation Le | vel: IV |
|------------------|----------------|-----------------|-----------|----------------|-----------------|------------------|-------------------------|---------------------|
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Aluminum | 7429-90-5 | 0.27 | 0.050 | 0.040 | mg/l | | | |
| Arsenic | 7440-38-2 | ND | 10 | 7.0 | ug/l | | U | |
| Beryllium | 7440-41-7 | ND | 2.0 | 0.90 | ug/l | | U | |
| Boron | 7440-42-8 | ND | 0.12 | 0.020 | mg/l | В | U | В |
| Calcium | 7440-70-2 | 21 | 0.10 | 0.050 | mg/l | | | |
| Chromium | 7440-47-3 | 12 | 5.0 | 2.0 | ug/l | | | |
| Iron | 7439-89-6 | 0.29 | 0.040 | 0.015 | mg/l | | | |
| Magnesium | 7439-95-4 | 3.7 | 0.020 | 0.012 | mg/l | | | |
| Nickel | 7440-02-0 | 5.3 | 10 | 2.0 | ug/l | Ja | J | DNQ |
| Silver | 7440-22-4 | ND | 10 | 6.0 | ug/l | | UJ | С |
| Vanadium | 7440-62-2 | ND | 10 | 3.0 | ug/l | | U | |
| Zinc | 7440-66-6 | 49 | 20 | 6.0 | ug/l | | | |
| Analysis Metho | d EPA | 200.8 | | | | | | |
| Sample Name | Outfall 008 (C | Composite |) Matri | ix Type: Water | | V | alidation Le | vel: IV |
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Antimony | 7440-36-0 | ND | 2.0 | 0.30 | ug/l | | UJ | В |
| Cadmium | 7440-43-9 | ND | 1.0 | 0.10 | ug/l | | UJ | R, B |
| Copper | 7440-50-8 | 13.9 | 2.0 | 0.50 | ug/l | | J | *III |
| Lead | 7439-92-1 | 10 | 1.0 | 0.20 | ug/l | | | |
| Selenium | 7782-49-2 | 0.62 | 2.0 | 0.50 | ug/l | J | J | DNQ |
| Thallium | 7440-28-0 | ND | 1.0 | 0.20 | ug/l | С | U | |

Analysis Method EPA 200.7-Diss

| Sumple Rume | ple Name Outfall 008 (Composite) Matrix Type: Water Vali | | | | | alidation Le | vel: IV | |
|--|---|--|--|--|---|------------------------------|---|--|
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Antimony | 7440-36-0 | 0.36 | 2.0 | 0.30 | ug/l | Ja | J | DNQ |
| Cadmium | 7440-43-9 | ND | 1.0 | 0.10 | ug/l | | U | |
| Copper | 7440-50-8 | 3.5 | 2.0 | 0.50 | ug/l | | J | *Ш |
| Lead | 7439-92-1 | ND | 1.0 | 0.20 | ug/l | | U | |
| Selenium | 7782-49-2 | ND | 2.0 | 0.50 | ug/l | | U | |
| Thallium | 7440-28-0 | ND | 1.0 | 0.20 | ug/l | | U | |
| Analysis Metho | od EPA 2 | 245.1 | | | | | | |
| Sample Name | Outfall 008 (C | Composite | e) Matri | x Type: | Water | ۲ | alidation Le | vel: IV |
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validatior Notes |
| Mercury | 7439-97-6 | ND | 0.20 | 0.10 | ug/l | | U | |
| | | | | | e | | | |
| Analysis Metho | od EPA 2 | 245.1-1 | Diss | | C | | | |
| Analysis Metho Sample Name | od EPA 2 Outfall 008 (C | | | х Туре: | Water | v | alidation Le | vel: IV |
| | | Composite | e) Matri | • - | | v | ⁷ alidation Le | vel: IV |
| Sample Name Lab Sample Name: | Outfall 008 (C | Composite | e) Matri | • - | Water | Lab Qualifier | ⁷ alidation Le Validation Qualifier | |
| Sample Name Lab Sample Name: Analyte | Outfall 008 (C ITB0892-03 | Composite Sam Result | e) Matri pple Date: | 2/5/2010 | Water 9:02:00 PM Result | Lab | Validation | Validation |
| Sample Name Lab Sample Name: Analyte | Outfall 008 (C ITB0892-03 CAS No 7439-97-6 | Composite Sam Result Value | matri Matri Matri Date: RL 0.20 | 2/5/2010 MDL | Water 9:02:00 PM Result Units | Lab | Validation Qualifier | Validation |
| Sample Name Lab Sample Name: Analyte Mercury Analysis Metho | Outfall 008 (C ITB0892-03 CAS No 7439-97-6 | Composite Sam Result Value ND 2000.0 N | mple Date: RL 0.20 MOD | 2/5/2010 MDL | Water 9:02:00 PM Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Sample Name Lab Sample Name: Analyte Mercury Analysis Metho | Outfall 008 (C ITB0892-03 CAS No 7439-97-6 Od EPA 9 | Composite Sam Result Value ND DOO.O M Composite | mple Date: RL 0.20 MOD | 2/5/2010 MDL 0.10 x Type: | Water 9:02:00 PM Result Units ug/l | Lab Qualifier | Validation Qualifier U | Validatior Notes |
| Sample Name Lab Sample Name: Analyte Mercury Analysis Metho Sample Name Lab Sample Name: | Outfall 008 (C ITB0892-03 CAS No 7439-97-6 Od EPA 9 Outfall 008 (C | Composite Sam Result Value ND DOO.O M Composite | mple Date: RL 0.20 MOD Matri | 2/5/2010 MDL 0.10 x Type: | Water 9:02:00 PM Result Units ug/1 WATER | Lab Qualifier | Validation Qualifier U | Validation Notes vel: IV |
| Sample Name Lab Sample Name: Analyte ^{Mercury} Analysis Metho Sample Name | Outfall 008 (C ITB0892-03 CAS No 7439-97-6 Od EPA 9 Outfall 008 (C ITB0892-03 | Composite Sam Result Value ND DOO.O N Composite Sam Result | mple Date: RL 0.20 MOD mple Date: ple Date: | 2/5/2010 MDL 0.10 x Type: 2/5/2010 | Water 9:02:00 PM Result Units ug/l WATER 9:02:00 PM Result | Lab Qualifier V Lab | Validation Qualifier U 7alidation Le Validation | Validation Notes vel: IV Validation |

Analysis Method EPA 200.8-Diss

| Sample Name | Outfall 008 (C | Composite) |) Matri | x Type: | WATER | V | alidation Le | vel: IV |
|--------------------------------|----------------|-----------------|-----------|----------|---------------------|------------------|-------------------------|--------------------------------|
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Cesium 137 | 10045-97-3 | -1.6 | 20 | 16 | pCi/L | U | UJ | Н |
| Potassium 40 | 13966-00-2 | -100 | 0 | 200 | pCi/L | U | UJ | Н |
| Analysis Metho | od EPA 9 | 903.0 M | lOD | | | | | |
| Sample Name | Outfall 008 (C | Composite) |) Matri | x Type: | WATER | V | alidation Le | vel: IV |
| Lab Sample Name: | ITB0892-03 | Samj | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Radium (226) | 13982-63-3 | 0.34 | 1 | 0.21 | pCi/L | Jb | J | C, DNQ |
| Analysis Metho | od EPA 9 | 904 MO | D | | | | | |
| Sample Name | Outfall 008 (C | Composite) |) Matri | x Type: | WATER | V | alidation Le | vel: IV |
| Lab Sample Name: | ITB0892-03RE1 | Samj | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| Radium 228 | 15262-20-1 | -0.03 | 1 | 0.32 | pCi/L | U | R | Н |
| Analysis Metho | od EPA 9 | 905 MO | D | | | | | |
| Sample Name | Outfall 008 (C | Composite) |) Matri | x Type: | WATER | V | alidation Le | vel: IV |
| Lab Sample Name: | ITB0892-03 | Samj | ple Date: | 2/5/2010 | 9:02:00 PM | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| | 10000 07 0 | 0.85 | 3 | 1.4 | pCi/L | U | UJ | *III |
| Strontium 90 | 10098-97-2 | | | | | | | |
| Strontium 90 Analysis Metho | | 906.0 M | lOD | | | | | |
| | | | | х Туре: | WATER | , T | alidation Le | vel: IV |
| Analysis Metho | od EPA 9 | Composite) |) Matri | • 1 | WATER 9:02:00 PM | v | Validation Le | vel: IV |
| Analysis Metho Sample Name | Od EPA 9 | Composite) |) Matri | • 1 | | Lab Qualifier | | vel: IV Validation Notes |

Analysis Method EPA 901.1 MOD

| Sample Name | Outfall 008 (C | composite) |) Matri | Validation Level: IV | | | | |
|---------------------|-----------------|-----------------|-----------|--------------------------------------|-----------------|------------------|-------------------------|---------------------|
| Lab Sample Name: | ITB0892-03 Samj | | ple Date: | ble Date: 2/5/2010 9:02:00 PM | | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
| 1,2,3,4,6,7,8-HpCDD | 35822-46-9 | ND | 0.00005 | 0.0000008 | ug/L | J, Ba | U | В |
| 1,2,3,4,6,7,8-HpCDF | 67562-39-4 | ND | 0.0000052 | 0.0000007 | ug/L | J, Q, Ba | UJ | *III |
| 1,2,3,4,7,8,9-HpCDF | 55673-89-7 | ND | 0.0000007 | 0.0000012 | ug/L | J, Q | UJ | *III |
| 1,2,3,4,7,8-HxCDD | 39227-28-6 | ND | 0.0000006 | 0.0000007 | ug/L | J, Q | UJ | *III |
| 1,2,3,4,7,8-HxCDF | 70648-26-9 | ND | 0.0000013 | 0.0000007 | ug/L | J, Q | UJ | *Ш |
| 1,2,3,6,7,8-HxCDD | 57653-85-7 | ND | 0.0000011 | 0.0000005 | ug/L | J, Q | UJ | *Ш |
| 1,2,3,6,7,8-HxCDF | 57117-44-9 | ND | 0.0000008 | 0.0000006 | ug/L | J, Q | UJ | *Ш |
| 1,2,3,7,8,9-HxCDD | 19408-74-3 | ND | 0.0000014 | 0.0000005 | ug/L | J, Q | UJ | *Ш |
| 1,2,3,7,8,9-HxCDF | 72918-21-9 | ND | 0.00005 | 0.0000007 | ug/L | | U | |
| 1,2,3,7,8-PeCDD | 40321-76-4 | ND | 0.00005 | 0.0000008 | ug/L | | U | |
| 1,2,3,7,8-PeCDF | 57117-41-6 | ND | 0.00005 | 0.0000005 | ug/L | | U | |
| 2,3,4,6,7,8-HxCDF | 60851-34-5 | ND | 0.0000004 | 0.0000006 | ug/L | J, Q | UJ | *Ш |
| 2,3,4,7,8-PeCDF | 57117-31-4 | ND | 0.00005 | 0.0000006 | ug/L | | U | |
| 2,3,7,8-TCDD | 1746-01-6 | ND | 0.00001 | 0.0000006 | ug/L | | U | |
| 2,3,7,8-TCDF | 51207-31-9 | 0.000001 | 0.00001 | 0.0000004 | ug/L | J | R | D |
| 2,3,7,8-TCDF | 51207-31-9 | ND | 0.00001 | 0.0000028 | ug/L | | U | |
| OCDD | 3268-87-9 | 0.00012 | 0.0001 | 0.0000013 | ug/L | Ba | | |
| OCDF | 39001-02-0 | ND | 0.0001 | 0.0000009 | ug/L | J, Ba | U | В |
| Total HpCDD | 37871-00-4 | ND | 0.00005 | 0.0000008 | ug/L | J, Ba | U | В |
| Total HpCDF | 38998-75-3 | 0.000009 | 0.00005 | 0.0000007 | ug/L | J, Q, Ba | J | B, DNQ, *II |
| Total HxCDD | 34465-46-8 | 0.000004 | 0.00005 | 0.0000005 | ug/L | J, Q | 1 | DNQ, *III |
| Total HxCDF | 55684-94-1 | 0.000004 | 0.00005 | 0.0000006 | ug/L | J, Q | J | DNQ, *III |
| Total PeCDD | 36088-22-9 | ND | 0.00005 | 0.0000008 | ug/L | | U | |
| Total PeCDF | 30402-15-4 | ND | 0.00005 | 0.0000005 | ug/L | | U | |
| Total TCDD | 41903-57-5 | ND | 0.00001 | 0.0000006 | ug/L | | U | |
| Total TCDF | 55722-27-5 | ND | 0.00001 | 0.0000004 | ug/L | J | U | \$ |

Analysis Method EPA-5 1613B

| Sample Name | Outfall 008 (Composite) Matrix Type: Water | | | | | Validation Level: IV | | | |
|------------------------|--|-----------------|-----------|------------|-----------------|----------------------|-------------------------|---------------------|--|
| Lab Sample Name: | ITB0892-03 | Sam | ple Date: | 2/5/2010 9 | 9:02:00 PM | | | | |
| Analyte | CAS No | Result Value | RL | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes | |
| Total Suspended Solids | TSS | 250 | 20 | 2.0 | mg/l | | | | |

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