# APPENDIX G

## Section 7

Outfall 004, February 6, 2009

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

# LABORATORY REPORT

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

Project: Annual Outfall 004

Sampled: 02/06/09
Received: 02/06/09
Issued: 03/11/09 09:17

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

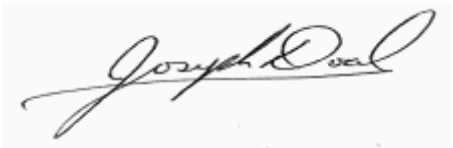


## SAMPLE CROSS REFERENCE

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

| LABORATORY ID | CLIENT ID | MATRIX |
|---|---|---|
| ISB0717-01 | Outfall 004 | Water |
| ISB0717-02 | Trip Blanks | Water |

Reviewed By:



**TestAmerica Irvine**

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water)** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Benzene | EPA 624 | 9B07011 | 0.28 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Bromodichloromethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Bromoform | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Bromomethane | EPA 624 | 9B07011 | 0.42 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Carbon tetrachloride | EPA 624 | 9B07011 | 0.28 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chlorobenzene | EPA 624 | 9B07011 | 0.36 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chloroethane | EPA 624 | 9B07011 | 0.40 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chloroform | EPA 624 | 9B07011 | 0.33 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chloromethane | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Dibromochloromethane | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,2-Dichlorobenzene | EPA 624 | 9B07011 | 0.32 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,3-Dichlorobenzene | EPA 624 | 9B07011 | 0.35 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,4-Dichlorobenzene | EPA 624 | 9B07011 | 0.37 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1-Dichloroethane | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,2-Dichloroethane | EPA 624 | 9B07011 | 0.28 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1-Dichloroethene | EPA 624 | 9B07011 | 0.42 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| trans-1,2-Dichloroethene | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,2-Dichloropropane | EPA 624 | 9B07011 | 0.35 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| cis-1,3-Dichloropropene | EPA 624 | 9B07011 | 0.22 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | L |
| trans-1,3-Dichloropropene | EPA 624 | 9B07011 | 0.32 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Ethylbenzene | EPA 624 | 9B07011 | 0.25 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Methylene chloride | EPA 624 | 9B07011 | 0.95 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1,2,2-Tetrachloroethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Tetrachloroethene | EPA 624 | 9B07011 | 0.32 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Toluene | EPA 624 | 9B07011 | 0.36 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1,1-Trichloroethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1,2-Trichloroethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Trichloroethene | EPA 624 | 9B07011 | 0.26 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Trichlorofluoromethane | EPA 624 | 9B07011 | 0.34 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Trichlorotrifluoroethane (Freon 113) | EPA 624 | 9B07011 | 0.50 | 5.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Vinyl chloride | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Xylenes, Total | EPA 624 | 9B07011 | 0.90 | 1.5 | ND | 1 | 02/07/09 | 02/07/09 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | | *83 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | | *89 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | | *93 %* | | | | |

**TestAmerica Irvine**

Joseph Doak
Project Manager

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## PURGEABLES BY GC/MS (EPA 624)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-02 (Trip Blanks - Water)** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Benzene | EPA 624 | 9B07011 | 0.28 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Bromodichloromethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Bromoform | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Bromomethane | EPA 624 | 9B07011 | 0.42 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Carbon tetrachloride | EPA 624 | 9B07011 | 0.28 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chlorobenzene | EPA 624 | 9B07011 | 0.36 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chloroethane | EPA 624 | 9B07011 | 0.40 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chloroform | EPA 624 | 9B07011 | 0.33 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Chloromethane | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Dibromochloromethane | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,2-Dichlorobenzene | EPA 624 | 9B07011 | 0.32 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,3-Dichlorobenzene | EPA 624 | 9B07011 | 0.35 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,4-Dichlorobenzene | EPA 624 | 9B07011 | 0.37 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1-Dichloroethane | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,2-Dichloroethane | EPA 624 | 9B07011 | 0.28 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1-Dichloroethene | EPA 624 | 9B07011 | 0.42 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| trans-1,2-Dichloroethene | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,2-Dichloropropane | EPA 624 | 9B07011 | 0.35 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| cis-1,3-Dichloropropene | EPA 624 | 9B07011 | 0.22 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | L |
| trans-1,3-Dichloropropene | EPA 624 | 9B07011 | 0.32 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Ethylbenzene | EPA 624 | 9B07011 | 0.25 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Methylene chloride | EPA 624 | 9B07011 | 0.95 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1,2,2-Tetrachloroethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Tetrachloroethene | EPA 624 | 9B07011 | 0.32 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Toluene | EPA 624 | 9B07011 | 0.36 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1,1-Trichloroethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| 1,1,2-Trichloroethane | EPA 624 | 9B07011 | 0.30 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Trichloroethene | EPA 624 | 9B07011 | 0.26 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Trichlorofluoromethane | EPA 624 | 9B07011 | 0.34 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Trichlorotrifluoroethane (Freon 113) | EPA 624 | 9B07011 | 0.50 | 5.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Vinyl chloride | EPA 624 | 9B07011 | 0.40 | 0.50 | ND | 1 | 02/07/09 | 02/07/09 | |
| Xylenes, Total | EPA 624 | 9B07011 | 0.90 | 1.5 | ND | 1 | 02/07/09 | 02/07/09 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | | *86 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | | *92 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | | *94 %* | | | | |

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

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

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water)** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Acrolein | EPA 624 | 9B07011 | 4.0 | 5.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Acrylonitrile | EPA 624 | 9B07011 | 0.70 | 2.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| 2-Chloroethyl vinyl ether | EPA 624 | 9B07011 | 1.8 | 5.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | | *83 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | | *89 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | | *93 %* | | | | |
| **Sample ID: ISB0717-02 (Trip Blanks - Water)** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Acrolein | EPA 624 | 9B07011 | 4.0 | 5.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Acrylonitrile | EPA 624 | 9B07011 | 0.70 | 2.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| 2-Chloroethyl vinyl ether | EPA 624 | 9B07011 | 1.8 | 5.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | | *86 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | | *92 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | | *94 %* | | | | |

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

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

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water)** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Acenaphthene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Acenaphthylene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Aniline | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Anthracene | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzidine | EPA 625 | 9B09071 | 10 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzo(a)anthracene | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzo(a)pyrene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzo(b)fluoranthene | EPA 625 | 9B09071 | 2.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzo(g,h,i)perylene | EPA 625 | 9B09071 | 4.1 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzo(k)fluoranthene | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzoic acid | EPA 625 | 9B09071 | 10 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Benzyl alcohol | EPA 625 | 9B09071 | 3.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Bromophenyl phenyl ether | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Butyl benzyl phthalate | EPA 625 | 9B09071 | 4.1 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Chloro-3-methylphenol | EPA 625 | 9B09071 | 2.5 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Chloroaniline | EPA 625 | 9B09071 | 2.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Bis(2-chloroethoxy)methane | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Bis(2-chloroethyl)ether | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Bis(2-chloroisopropyl)ether | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2-Chloronaphthalene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2-Chlorophenol | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Chlorophenyl phenyl ether | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Chrysene | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Dibenz(a,h)anthracene | EPA 625 | 9B09071 | 3.0 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Dibenzofuran | EPA 625 | 9B09071 | 4.1 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Di-n-butyl phthalate | EPA 625 | 9B09071 | 3.0 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 1,2-Dichlorobenzene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 1,3-Dichlorobenzene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 1,4-Dichlorobenzene | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 3,3'-Dichlorobenzidine | EPA 625 | 9B09071 | 7.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,4-Dichlorophenol | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Diethyl phthalate | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,4-Dimethylphenol | EPA 625 | 9B09071 | 3.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Dimethyl phthalate | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4,6-Dinitro-2-methylphenol | EPA 625 | 9B09071 | 4.1 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,4-Dinitrophenol | EPA 625 | 9B09071 | 8.1 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,4-Dinitrotoluene | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,6-Dinitrotoluene | EPA 625 | 9B09071 | 2.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Di-n-octyl phthalate | EPA 625 | 9B09071 | 3.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 1,2-Diphenylhydrazine/Azobenzene | EPA 625 | 9B09071 | 2.5 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Bis(2-ethylhexyl)phthalate | EPA 625 | 9B09071 | 4.1 | 51 | ND | 1.02 | 02/09/09 | 02/12/09 | |

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

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

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Fluoranthene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Fluorene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Hexachlorobenzene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Hexachlorobutadiene | EPA 625 | 9B09071 | 4.1 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Hexachlorocyclopentadiene | EPA 625 | 9B09071 | 5.1 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Hexachloroethane | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Indeno(1,2,3-cd)pyrene | EPA 625 | 9B09071 | 3.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Isophorone | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2-Methylnaphthalene | EPA 625 | 9B09071 | 2.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2-Methylphenol | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Methylphenol | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Naphthalene | EPA 625 | 9B09071 | 3.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2-Nitroaniline | EPA 625 | 9B09071 | 2.0 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 3-Nitroaniline | EPA 625 | 9B09071 | 3.0 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Nitroaniline | EPA 625 | 9B09071 | 4.1 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Nitrobenzene | EPA 625 | 9B09071 | 3.0 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2-Nitrophenol | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 4-Nitrophenol | EPA 625 | 9B09071 | 5.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| N-Nitroso-di-n-propylamine | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| N-Nitrosodimethylamine | EPA 625 | 9B09071 | 2.5 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| N-Nitrosodiphenylamine | EPA 625 | 9B09071 | 2.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Pentachlorophenol | EPA 625 | 9B09071 | 3.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Phenanthrene | EPA 625 | 9B09071 | 3.6 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Phenol | EPA 625 | 9B09071 | 2.0 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| Pyrene | EPA 625 | 9B09071 | 4.1 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 1,2,4-Trichlorobenzene | EPA 625 | 9B09071 | 2.5 | 10 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,4,5-Trichlorophenol | EPA 625 | 9B09071 | 3.0 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| 2,4,6-Trichlorophenol | EPA 625 | 9B09071 | 4.6 | 20 | ND | 1.02 | 02/09/09 | 02/12/09 | |
| *Surrogate: 2,4,6-Tribromophenol (40-120%)* | | | | | *84 %* | | | | |
| *Surrogate: 2-Fluorobiphenyl (50-120%)* | | | | | *79 %* | | | | |
| *Surrogate: 2-Fluorophenol (30-120%)* | | | | | *72 %* | | | | |
| *Surrogate: Nitrobenzene-d5 (45-120%)* | | | | | *77 %* | | | | |
| *Surrogate: Phenol-d6 (35-120%)* | | | | | *78 %* | | | | |
| *Surrogate: Terphenyl-d14 (50-125%)* | | | | | *106 %* | | | | |

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## ORGANOCHLORINE PESTICIDES (EPA 608)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| 4,4'-DDD | EPA 608 | 9B12048 | 0.0020 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| 4,4'-DDE | EPA 608 | 9B12048 | 0.0030 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| 4,4'-DDT | EPA 608 | 9B12048 | 0.0040 | 0.010 | ND | 1 | 02/12/09 | 02/13/09 | |
| Aldrin | EPA 608 | 9B12048 | 0.0015 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| alpha-BHC | EPA 608 | 9B12048 | 0.0025 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| beta-BHC | EPA 608 | 9B12048 | 0.0040 | 0.010 | ND | 1 | 02/12/09 | 02/13/09 | |
| delta-BHC | EPA 608 | 9B12048 | 0.0035 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Dieldrin | EPA 608 | 9B12048 | 0.0020 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Endosulfan I | EPA 608 | 9B12048 | 0.0020 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Endosulfan II | EPA 608 | 9B12048 | 0.0030 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Endosulfan sulfate | EPA 608 | 9B12048 | 0.0030 | 0.010 | ND | 1 | 02/12/09 | 02/13/09 | |
| Endrin | EPA 608 | 9B12048 | 0.0020 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Endrin aldehyde | EPA 608 | 9B12048 | 0.0020 | 0.010 | ND | 1 | 02/12/09 | 02/13/09 | |
| Endrin ketone | EPA 608 | 9B12048 | 0.0030 | 0.010 | ND | 1 | 02/12/09 | 02/13/09 | |
| gamma-BHC (Lindane) | EPA 608 | 9B12048 | 0.0030 | 0.020 | ND | 1 | 02/12/09 | 02/13/09 | |
| Heptachlor | EPA 608 | 9B12048 | 0.0030 | 0.010 | ND | 1 | 02/12/09 | 02/13/09 | |
| Heptachlor epoxide | EPA 608 | 9B12048 | 0.0025 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Methoxychlor | EPA 608 | 9B12048 | 0.0035 | 0.0050 | ND | 1 | 02/12/09 | 02/13/09 | |
| Chlordane | EPA 608 | 9B12048 | 0.040 | 0.10 | ND | 1 | 02/12/09 | 02/13/09 | |
| Toxaphene | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/13/09 | |
| *Surrogate: Decachlorobiphenyl (45-120%)* | | | | | *82 %* | | | | |
| *Surrogate: Tetrachloro-m-xylene (35-115%)* | | | | | *85 %* | | | | |

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Received: 02/06/09

## TOTAL PCBS (EPA 608)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Aroclor 1016 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| Aroclor 1221 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| Aroclor 1232 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| Aroclor 1242 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| Aroclor 1248 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| Aroclor 1254 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| Aroclor 1260 | EPA 608 | 9B12048 | 0.25 | 0.50 | ND | 1 | 02/12/09 | 02/12/09 | |
| *Surrogate: Decachlorobiphenyl (45-120%)* | | | | | *101 %* | | | | |

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Received: 02/06/09

## HEXANE EXTRACTABLE MATERIAL

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | EPA 1664A | 9B12121 | 1.3 | 4.7 | ND | 1 | 02/12/09 | 02/12/09 | |

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Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## METALS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Hardness as CaCO3** | SM2340B | [CALC] | N/A | 0.33 | **23** | 1 | 02/09/09 | 02/14/09 | |
| Boron | EPA 200.7 | 9B09073 | 0.020 | 0.050 | ND | 1 | 02/09/09 | 02/16/09 | |
| **Calcium** | EPA 200.7 | 9B09073 | 0.050 | 0.10 | **5.2** | 1 | 02/09/09 | 02/14/09 | |
| **Iron** | EPA 200.7 | 9B09073 | 0.015 | 0.040 | **4.7** | 1 | 02/09/09 | 02/14/09 | |
| **Magnesium** | EPA 200.7 | 9B09073 | 0.012 | 0.020 | **2.6** | 1 | 02/09/09 | 02/14/09 | |

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Received: 02/06/09

## METALS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| **Aluminum** | EPA 200.7 | 9B09073 | 40 | 50 | **4000** | 1 | 02/09/09 | 02/16/09 | |
| **Arsenic** | EPA 200.7 | 9B09073 | 7.0 | 10 | **14** | 1 | 02/09/09 | 02/14/09 | B |
| **Antimony** | EPA 200.8 | 9B09075 | 0.20 | 2.0 | **0.43** | 1 | 02/09/09 | 02/10/09 | Ja |
| Beryllium | EPA 200.7 | 9B09073 | 0.90 | 2.0 | ND | 1 | 02/09/09 | 02/14/09 | |
| **Chromium** | EPA 200.7 | 9B09073 | 2.0 | 5.0 | **4.8** | 1 | 02/09/09 | 02/14/09 | Ja |
| **Nickel** | EPA 200.7 | 9B09073 | 2.0 | 10 | **3.6** | 1 | 02/09/09 | 02/14/09 | Ja |
| Selenium | EPA 200.7 | 9B09073 | 8.0 | 10 | ND | 1 | 02/09/09 | 02/14/09 | |
| Silver | EPA 200.7 | 9B09073 | 6.0 | 10 | ND | 1 | 02/09/09 | 02/14/09 | |
| Cadmium | EPA 200.8 | 9B09075 | 0.11 | 1.0 | ND | 1 | 02/09/09 | 02/10/09 | |
| **Vanadium** | EPA 200.7 | 9B09073 | 3.0 | 10 | **11** | 1 | 02/09/09 | 02/14/09 | |
| **Zinc** | EPA 200.7 | 9B09073 | 6.0 | 20 | **14** | 1 | 02/09/09 | 02/14/09 | Ja |
| **Copper** | EPA 200.8 | 9B09075 | 0.75 | 2.0 | **4.1** | 1 | 02/09/09 | 02/10/09 | |
| **Lead** | EPA 200.8 | 9B09075 | 0.30 | 1.0 | **2.8** | 1 | 02/09/09 | 02/10/09 | |
| Thallium | EPA 200.8 | 9B09075 | 0.20 | 1.0 | ND | 1 | 02/09/09 | 02/10/09 | |

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Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## DISSOLVED METALS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Hardness as CaCO3** | SM2340B-Diss | [CALC] | N/A | 0.33 | **19** | 1 | 02/09/09 | 02/11/09 | |
| **Boron** | EPA 200.7-Diss | 9B09083 | 0.020 | 0.050 | **0.020** | 1 | 02/09/09 | 02/11/09 | Ja |
| **Calcium** | EPA 200.7-Diss | 9B09083 | 0.050 | 0.10 | **5.3** | 1 | 02/09/09 | 02/11/09 | |
| **Iron** | EPA 200.7-Diss | 9B09083 | 0.015 | 0.040 | **0.21** | 1 | 02/09/09 | 02/11/09 | |
| **Magnesium** | EPA 200.7-Diss | 9B09083 | 0.012 | 0.020 | **1.5** | 1 | 02/09/09 | 02/11/09 | |

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Received: 02/06/09

## DISSOLVED METALS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| **Aluminum** | EPA 200.7-Diss | 9B09083 | 40 | 50 | **170** | 1 | 02/09/09 | 02/11/09 | |
| Arsenic | EPA 200.7-Diss | 9B09083 | 7.0 | 10 | ND | 1 | 02/09/09 | 02/11/09 | |
| **Antimony** | EPA 200.8-Diss | 9B12130 | 0.20 | 2.0 | **0.61** | 1 | 02/12/09 | 02/13/09 | Ja |
| Beryllium | EPA 200.7-Diss | 9B09083 | 0.90 | 2.0 | ND | 1 | 02/09/09 | 02/11/09 | |
| Chromium | EPA 200.7-Diss | 9B09083 | 2.0 | 5.0 | ND | 1 | 02/09/09 | 02/11/09 | |
| Nickel | EPA 200.7-Diss | 9B09083 | 2.0 | 10 | ND | 1 | 02/09/09 | 02/11/09 | |
| Selenium | EPA 200.7-Diss | 9B09083 | 8.0 | 10 | ND | 1 | 02/09/09 | 02/11/09 | |
| Silver | EPA 200.7-Diss | 9B09083 | 6.0 | 10 | ND | 1 | 02/09/09 | 02/11/09 | |
| Cadmium | EPA 200.8-Diss | 9B12130 | 0.11 | 1.0 | ND | 1 | 02/12/09 | 02/13/09 | |
| Vanadium | EPA 200.7-Diss | 9B09083 | 3.0 | 10 | ND | 1 | 02/09/09 | 02/11/09 | |
| Zinc | EPA 200.7-Diss | 9B09083 | 6.0 | 20 | ND | 1 | 02/09/09 | 02/11/09 | |
| **Copper** | EPA 200.8-Diss | 9B12130 | 0.75 | 2.0 | **0.86** | 1 | 02/12/09 | 02/13/09 | Ja |
| Lead | EPA 200.8-Diss | 9B12130 | 0.30 | 1.0 | ND | 1 | 02/12/09 | 02/13/09 | |
| Thallium | EPA 200.8-Diss | 9B12130 | 0.20 | 1.0 | ND | 1 | 02/12/09 | 02/13/09 | C |

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Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: mg/l** | | | | | | | | | |
| **Chloride** | EPA 300.0 | 9B06069 | 5.0 | 10 | **50** | 20 | 02/06/09 | 02/07/09 | |
| Total Cyanide | SM4500-CN-C,E | 9B09095 | 0.0022 | 0.0050 | ND | 1 | 02/09/09 | 02/09/09 | |
| **Fluoride** | SM 4500-F-C | 9B16034 | 0.020 | 0.10 | **0.26** | 1 | 02/16/09 | 02/16/09 | B |
| **Nitrate/Nitrite-N** | EPA 300.0 | 9B06069 | 0.15 | 0.26 | **0.16** | 1 | 02/06/09 | 02/06/09 | Ja |
| **Sulfate** | EPA 300.0 | 9B06069 | 0.20 | 0.50 | **22** | 1 | 02/06/09 | 02/06/09 | |
| **Total Dissolved Solids** | SM2540C | 9B11043 | 10 | 10 | **210** | 1 | 02/11/09 | 02/11/09 | |
| **Total Suspended Solids** | SM 2540D | 9B12141 | 1.0 | 10 | **27** | 1 | 02/12/09 | 02/12/09 | |

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Received: 02/06/09

## INORGANICS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Perchlorate | EPA 314.0 | 9B13054 | 0.90 | 4.0 | ND | 1 | 02/13/09 | 02/13/09 | |

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/l** | | | | | | | | | |
| Chlorpyrifos | EPA 525.2 | C9B0701 | 0.10 | 1.0 | ND | 1 | 02/07/09 | 02/07/09 | |
| Diazinon | EPA 525.2 | C9B0701 | 0.24 | 0.25 | ND | 1 | 02/07/09 | 02/07/09 | |
| *Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)* | | | | | *102 %* | | | | |
| *Surrogate: Triphenylphosphate (70-130%)* | | | | | *126 %* | | | | |
| *Surrogate: Perylene-d12 (70-130%)* | | | | | *81 %* | | | | |

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Sampled: 02/06/09
Received: 02/06/09

## MCAWW 245.1

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | **Sampled: 02/06/09** | | | | |
| **Reporting Units: ug/L** | | | | | | | | | |
| **Mercury** | MCAWW 245.1 | 9043305 | 0.027 | 0.2 | **0.1** | 1 | 02/12/09 | 02/12/09 | J, Ba |

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## MCAWW 245.1-DISS

| Analyte | Method | Batch | MDL Limit | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01 (Outfall 004 - Water) - cont.** | | | | | | **Sampled: 02/06/09** | | | |
| **Reporting Units: ug/L** | | | | | | | | | |
| **Mercury** | MCAWW 245.1-DISS | 9043330 | 0.027 | 0.2 | **0.054** | 1 | 02/12/09 | 02/12/09 | J, Ba |

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Received: 02/06/09

## SHORT HOLD TIME DETAIL REPORT

| | Hold Time (in days) | Date/Time Sampled | Date/Time Received | Date/Time Extracted | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Sample ID: Outfall 004 (ISB0717-01) - Water** | | | | | |
| EPA 300.0 | 2 | 02/06/2009 09:10 | 02/06/2009 17:35 | 02/06/2009 20:00 | 02/06/2009 23:47 |
| EPA 525.2 | 1 | 02/06/2009 09:10 | 02/06/2009 17:35 | 02/07/2009 07:30 | 02/07/2009 13:18 |
| EPA 624 | 3 | 02/06/2009 09:10 | 02/06/2009 17:35 | 02/07/2009 00:00 | 02/07/2009 14:05 |
| Filtration | 1 | 02/06/2009 09:10 | 02/06/2009 17:35 | 02/06/2009 21:59 | 02/06/2009 22:02 |
| **Sample ID: Trip Blanks (ISB0717-02) - Water** | | | | | |
| EPA 624 | 3 | 02/06/2009 15:00 | 02/06/2009 17:35 | 02/07/2009 00:00 | 02/07/2009 14:37 |

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Sampled: 02/06/09
Received: 02/06/09

## 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: 9B07011 Extracted: 02/07/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/07/2009 (9B07011-BLK1)** | | | | | | | | | | | |
| 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 | | | | | | | |
| 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* | *21.2* | | | *ug/l* | *25.0* | | *85* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *22.5* | | | *ug/l* | *25.0* | | *90* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.5* | | | *ug/l* | *25.0* | | *94* | *80-120* | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B07011 Extracted: 02/07/09** | | | | | | | | | | | |
| **LCS Analyzed: 02/07/2009 (9B07011-BS1)** | | | | | | | | | | | |
| Benzene | 24.4 | 0.50 | 0.28 | ug/l | 25.0 | | 98 | 70-120 | | | |
| Bromodichloromethane | 27.5 | 0.50 | 0.30 | ug/l | 25.0 | | 110 | 70-135 | | | |
| Bromoform | 22.1 | 0.50 | 0.40 | ug/l | 25.0 | | 88 | 55-130 | | | |
| Bromomethane | 26.1 | 1.0 | 0.42 | ug/l | 25.0 | | 104 | 65-140 | | | |
| Carbon tetrachloride | 28.1 | 0.50 | 0.28 | ug/l | 25.0 | | 112 | 65-140 | | | |
| Chlorobenzene | 24.8 | 0.50 | 0.36 | ug/l | 25.0 | | 99 | 75-120 | | | |
| Chloroethane | 26.2 | 1.0 | 0.40 | ug/l | 25.0 | | 105 | 60-140 | | | |
| Chloroform | 26.5 | 0.50 | 0.33 | ug/l | 25.0 | | 106 | 70-130 | | | |
| Chloromethane | 22.9 | 0.50 | 0.40 | ug/l | 25.0 | | 92 | 50-140 | | | |
| Dibromochloromethane | 28.2 | 0.50 | 0.40 | ug/l | 25.0 | | 113 | 70-140 | | | |
| 1,2-Dichlorobenzene | 24.9 | 0.50 | 0.32 | ug/l | 25.0 | | 100 | 75-120 | | | |
| 1,3-Dichlorobenzene | 25.4 | 0.50 | 0.35 | ug/l | 25.0 | | 102 | 75-120 | | | |
| 1,4-Dichlorobenzene | 22.6 | 0.50 | 0.37 | ug/l | 25.0 | | 90 | 75-120 | | | |
| 1,1-Dichloroethane | 25.2 | 0.50 | 0.40 | ug/l | 25.0 | | 101 | 70-125 | | | |
| 1,2-Dichloroethane | 24.6 | 0.50 | 0.28 | ug/l | 25.0 | | 99 | 60-140 | | | |
| 1,1-Dichloroethene | 23.0 | 0.50 | 0.42 | ug/l | 25.0 | | 92 | 70-125 | | | |
| trans-1,2-Dichloroethene | 20.4 | 0.50 | 0.30 | ug/l | 25.0 | | 82 | 70-125 | | | |
| 1,2-Dichloropropane | 25.5 | 0.50 | 0.35 | ug/l | 25.0 | | 102 | 70-125 | | | |
| cis-1,3-Dichloropropene | 32.4 | 0.50 | 0.22 | ug/l | 25.0 | | 130 | 75-125 | | | *L* |
| trans-1,3-Dichloropropene | 25.4 | 0.50 | 0.32 | ug/l | 25.0 | | 102 | 70-125 | | | |
| Ethylbenzene | 25.9 | 0.50 | 0.25 | ug/l | 25.0 | | 104 | 75-125 | | | |
| Methylene chloride | 24.2 | 1.0 | 0.95 | ug/l | 25.0 | | 97 | 55-130 | | | |
| 1,1,2,2-Tetrachloroethane | 26.4 | 0.50 | 0.30 | ug/l | 25.0 | | 106 | 55-130 | | | |
| Tetrachloroethene | 23.7 | 0.50 | 0.32 | ug/l | 25.0 | | 95 | 70-125 | | | |
| Toluene | 26.5 | 0.50 | 0.36 | ug/l | 25.0 | | 106 | 70-120 | | | |
| 1,1,1-Trichloroethane | 26.7 | 0.50 | 0.30 | ug/l | 25.0 | | 107 | 65-135 | | | |
| 1,1,2-Trichloroethane | 25.4 | 0.50 | 0.30 | ug/l | 25.0 | | 101 | 70-125 | | | |
| Trichloroethene | 23.8 | 0.50 | 0.26 | ug/l | 25.0 | | 95 | 70-125 | | | |
| Trichlorofluoromethane | 24.0 | 0.50 | 0.34 | ug/l | 25.0 | | 96 | 65-145 | | | |
| Vinyl chloride | 22.8 | 0.50 | 0.40 | ug/l | 25.0 | | 91 | 55-135 | | | |
| Xylenes, Total | 81.0 | 1.5 | 0.90 | ug/l | 75.0 | | 108 | 70-125 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *22.4* | | | *ug/l* | *25.0* | | *90* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *24.1* | | | *ug/l* | *25.0* | | *96* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.2* | | | *ug/l* | *25.0* | | *93* | *80-120* | | | |

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B07011 Extracted: 02/07/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/07/2009 (9B07011-MS1)** | | | | | | **Source: ISA2844-05** | | | | | |
| Benzene | 23.9 | 0.50 | 0.28 | ug/l | 25.0 | ND | 95 | 65-125 | | | |
| Bromodichloromethane | 27.1 | 0.50 | 0.30 | ug/l | 25.0 | ND | 108 | 70-135 | | | |
| Bromoform | 22.4 | 0.50 | 0.40 | ug/l | 25.0 | ND | 89 | 55-135 | | | |
| Bromomethane | 25.6 | 1.0 | 0.42 | ug/l | 25.0 | ND | 102 | 55-145 | | | |
| Carbon tetrachloride | 27.0 | 0.50 | 0.28 | ug/l | 25.0 | ND | 108 | 65-140 | | | |
| Chlorobenzene | 24.7 | 0.50 | 0.36 | ug/l | 25.0 | ND | 99 | 75-125 | | | |
| Chloroethane | 25.2 | 1.0 | 0.40 | ug/l | 25.0 | ND | 101 | 55-140 | | | |
| Chloroform | 25.7 | 0.50 | 0.33 | ug/l | 25.0 | ND | 103 | 65-135 | | | |
| Chloromethane | 21.9 | 0.50 | 0.40 | ug/l | 25.0 | ND | 88 | 45-145 | | | |
| Dibromochloromethane | 28.0 | 0.50 | 0.40 | ug/l | 25.0 | ND | 112 | 65-140 | | | |
| 1,2-Dichlorobenzene | 24.6 | 0.50 | 0.32 | ug/l | 25.0 | ND | 98 | 75-125 | | | |
| 1,3-Dichlorobenzene | 24.8 | 0.50 | 0.35 | ug/l | 25.0 | ND | 99 | 75-125 | | | |
| 1,4-Dichlorobenzene | 22.2 | 0.50 | 0.37 | ug/l | 25.0 | ND | 89 | 75-125 | | | |
| 1,1-Dichloroethane | 24.7 | 0.50 | 0.40 | ug/l | 25.0 | ND | 99 | 65-130 | | | |
| 1,2-Dichloroethane | 25.2 | 0.50 | 0.28 | ug/l | 25.0 | ND | 101 | 60-140 | | | |
| 1,1-Dichloroethene | 22.4 | 0.50 | 0.42 | ug/l | 25.0 | ND | 90 | 60-130 | | | |
| trans-1,2-Dichloroethene | 19.7 | 0.50 | 0.30 | ug/l | 25.0 | ND | 79 | 65-130 | | | |
| 1,2-Dichloropropane | 25.3 | 0.50 | 0.35 | ug/l | 25.0 | ND | 101 | 65-130 | | | |
| cis-1,3-Dichloropropene | 32.3 | 0.50 | 0.22 | ug/l | 25.0 | ND | 129 | 70-130 | | | |
| trans-1,3-Dichloropropene | 25.6 | 0.50 | 0.32 | ug/l | 25.0 | ND | 102 | 65-135 | | | |
| Ethylbenzene | 25.3 | 0.50 | 0.25 | ug/l | 25.0 | ND | 101 | 65-130 | | | |
| Methylene chloride | 24.0 | 1.0 | 0.95 | ug/l | 25.0 | ND | 96 | 50-135 | | | |
| 1,1,2,2-Tetrachloroethane | 26.1 | 0.50 | 0.30 | ug/l | 25.0 | ND | 105 | 55-135 | | | |
| Tetrachloroethene | 23.6 | 0.50 | 0.32 | ug/l | 25.0 | ND | 95 | 65-130 | | | |
| Toluene | 25.9 | 0.50 | 0.36 | ug/l | 25.0 | ND | 104 | 70-125 | | | |
| 1,1,1-Trichloroethane | 25.8 | 0.50 | 0.30 | ug/l | 25.0 | ND | 103 | 65-140 | | | |
| 1,1,2-Trichloroethane | 25.7 | 0.50 | 0.30 | ug/l | 25.0 | ND | 103 | 65-130 | | | |
| Trichloroethene | 23.6 | 0.50 | 0.26 | ug/l | 25.0 | ND | 95 | 65-125 | | | |
| Trichlorofluoromethane | 23.0 | 0.50 | 0.34 | ug/l | 25.0 | ND | 92 | 60-145 | | | |
| Vinyl chloride | 22.2 | 0.50 | 0.40 | ug/l | 25.0 | ND | 89 | 45-140 | | | |
| Xylenes, Total | 81.0 | 1.5 | 0.90 | ug/l | 75.0 | ND | 108 | 60-130 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *23.0* | | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *23.8* | | | *ug/l* | *25.0* | | *95* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.4* | | | *ug/l* | *25.0* | | *94* | *80-120* | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B07011 Extracted: 02/07/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/07/2009 (9B07011-MSD1)** | | | | | | **Source: ISA2844-05** | | | | | |
| Benzene | 25.2 | 0.50 | 0.28 | ug/l | 25.0 | ND | 101 | 65-125 | 5 | 20 | |
| Bromodichloromethane | 28.9 | 0.50 | 0.30 | ug/l | 25.0 | ND | 116 | 70-135 | 6 | 20 | |
| Bromoform | 22.8 | 0.50 | 0.40 | ug/l | 25.0 | ND | 91 | 55-135 | 2 | 25 | |
| Bromomethane | 27.8 | 1.0 | 0.42 | ug/l | 25.0 | ND | 111 | 55-145 | 8 | 25 | |
| Carbon tetrachloride | 28.7 | 0.50 | 0.28 | ug/l | 25.0 | ND | 115 | 65-140 | 6 | 25 | |
| Chlorobenzene | 26.1 | 0.50 | 0.36 | ug/l | 25.0 | ND | 104 | 75-125 | 5 | 20 | |
| Chloroethane | 27.8 | 1.0 | 0.40 | ug/l | 25.0 | ND | 111 | 55-140 | 10 | 25 | |
| Chloroform | 27.3 | 0.50 | 0.33 | ug/l | 25.0 | ND | 109 | 65-135 | 6 | 20 | |
| Chloromethane | 24.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 97 | 45-145 | 10 | 25 | |
| Dibromochloromethane | 29.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 117 | 65-140 | 5 | 25 | |
| 1,2-Dichlorobenzene | 26.0 | 0.50 | 0.32 | ug/l | 25.0 | ND | 104 | 75-125 | 6 | 20 | |
| 1,3-Dichlorobenzene | 26.3 | 0.50 | 0.35 | ug/l | 25.0 | ND | 105 | 75-125 | 6 | 20 | |
| 1,4-Dichlorobenzene | 23.5 | 0.50 | 0.37 | ug/l | 25.0 | ND | 94 | 75-125 | 6 | 20 | |
| 1,1-Dichloroethane | 26.3 | 0.50 | 0.40 | ug/l | 25.0 | ND | 105 | 65-130 | 6 | 20 | |
| 1,2-Dichloroethane | 26.4 | 0.50 | 0.28 | ug/l | 25.0 | ND | 106 | 60-140 | 5 | 20 | |
| 1,1-Dichloroethene | 23.8 | 0.50 | 0.42 | ug/l | 25.0 | ND | 95 | 60-130 | 6 | 20 | |
| trans-1,2-Dichloroethene | 21.4 | 0.50 | 0.30 | ug/l | 25.0 | ND | 86 | 65-130 | 9 | 20 | |
| 1,2-Dichloropropane | 27.0 | 0.50 | 0.35 | ug/l | 25.0 | ND | 108 | 65-130 | 6 | 20 | |
| cis-1,3-Dichloropropene | 34.5 | 0.50 | 0.22 | ug/l | 25.0 | ND | 138 | 70-130 | 7 | 20 | *M7* |
| trans-1,3-Dichloropropene | 27.0 | 0.50 | 0.32 | ug/l | 25.0 | ND | 108 | 65-135 | 5 | 25 | |
| Ethylbenzene | 27.0 | 0.50 | 0.25 | ug/l | 25.0 | ND | 108 | 65-130 | 6 | 20 | |
| Methylene chloride | 25.4 | 1.0 | 0.95 | ug/l | 25.0 | ND | 101 | 50-135 | 6 | 20 | |
| 1,1,2,2-Tetrachloroethane | 27.7 | 0.50 | 0.30 | ug/l | 25.0 | ND | 111 | 55-135 | 6 | 30 | |
| Tetrachloroethene | 24.9 | 0.50 | 0.32 | ug/l | 25.0 | ND | 100 | 65-130 | 5 | 20 | |
| Toluene | 27.6 | 0.50 | 0.36 | ug/l | 25.0 | ND | 110 | 70-125 | 6 | 20 | |
| 1,1,1-Trichloroethane | 27.6 | 0.50 | 0.30 | ug/l | 25.0 | ND | 110 | 65-140 | 7 | 20 | |
| 1,1,2-Trichloroethane | 27.0 | 0.50 | 0.30 | ug/l | 25.0 | ND | 108 | 65-130 | 5 | 25 | |
| Trichloroethene | 24.6 | 0.50 | 0.26 | ug/l | 25.0 | ND | 98 | 65-125 | 4 | 20 | |
| Trichlorofluoromethane | 25.0 | 0.50 | 0.34 | ug/l | 25.0 | ND | 100 | 60-145 | 8 | 25 | |
| Vinyl chloride | 22.4 | 0.50 | 0.40 | ug/l | 25.0 | ND | 89 | 45-140 | 1 | 30 | |
| Xylenes, Total | 85.0 | 1.5 | 0.90 | ug/l | 75.0 | ND | 113 | 60-130 | 5 | 20 | |
| *Surrogate: 4-Bromofluorobenzene* | *23.1* | | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *24.3* | | | *ug/l* | *25.0* | | *97* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.3* | | | *ug/l* | *25.0* | | *93* | *80-120* | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B07011 Extracted: 02/07/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/07/2009 (9B07011-BLK1)** | | | | | | | | | | | |
| Acrolein | ND | 5.0 | 4.0 | ug/l | | | | | | | |
| Acrylonitrile | ND | 2.0 | 0.70 | ug/l | | | | | | | |
| 2-Chloroethyl vinyl ether | ND | 5.0 | 1.8 | ug/l | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *21.2* | | | *ug/l* | *25.0* | | *85* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *22.5* | | | *ug/l* | *25.0* | | *90* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.5* | | | *ug/l* | *25.0* | | *94* | *80-120* | | | |
| **LCS Analyzed: 02/07/2009 (9B07011-BS1)** | | | | | | | | | | | |
| 2-Chloroethyl vinyl ether | 24.9 | 5.0 | 1.8 | ug/l | 25.0 | | 100 | 25-170 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *22.4* | | | *ug/l* | *25.0* | | *90* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *24.1* | | | *ug/l* | *25.0* | | *96* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.2* | | | *ug/l* | *25.0* | | *93* | *80-120* | | | |
| **Matrix Spike Analyzed: 02/07/2009 (9B07011-MS1)** | | | | | | **Source: ISA2844-05** | | | | | |
| 2-Chloroethyl vinyl ether | ND | 5.0 | 1.8 | ug/l | 25.0 | ND | | 25-170 | | | *M13* |
| *Surrogate: 4-Bromofluorobenzene* | *23.0* | | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *23.8* | | | *ug/l* | *25.0* | | *95* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.4* | | | *ug/l* | *25.0* | | *94* | *80-120* | | | |
| **Matrix Spike Dup Analyzed: 02/07/2009 (9B07011-MSD1)** | | | | | | **Source: ISA2844-05** | | | | | |
| 2-Chloroethyl vinyl ether | ND | 5.0 | 1.8 | ug/l | 25.0 | ND | | 25-170 | | 25 | *M13* |
| *Surrogate: 4-Bromofluorobenzene* | *23.1* | | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *24.3* | | | *ug/l* | *25.0* | | *97* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *23.3* | | | *ug/l* | *25.0* | | *93* | *80-120* | | | |

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B09071-BLK1)** | | | | | | | | | | | |
| 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 | | | | | | | |
| 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 | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 20 | 4.0 | ug/l | | | | | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B09071-BLK1)** | | | | | | | | | | | |
| 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 | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 50 | 4.0 | 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* | *171* | | | *ug/l* | *200* | | *85* | *40-120* | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B09071-BLK1)** | | | | | | | | | | | |
| *Surrogate: 2-Fluorobiphenyl* | *86.4* | | | *ug/l* | *100* | | *86* | *50-120* | | | |
| *Surrogate: 2-Fluorophenol* | *156* | | | *ug/l* | *200* | | *78* | *30-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *82.8* | | | *ug/l* | *100* | | *83* | *45-120* | | | |
| *Surrogate: Phenol-d6* | *158* | | | *ug/l* | *200* | | *79* | *35-120* | | | |
| *Surrogate: Terphenyl-d14* | *92.8* | | | *ug/l* | *100* | | *93* | *50-125* | | | |
| **LCS Analyzed: 02/12/2009 (9B09071-BS1)** | | | | | | | | | | | |
| Acenaphthene | 84.0 | 10 | 3.0 | ug/l | 100 | | 84 | 60-120 | | | |
| Acenaphthylene | 89.6 | 10 | 3.0 | ug/l | 100 | | 90 | 60-120 | | | |
| Aniline | 71.6 | 10 | 3.5 | ug/l | 100 | | 72 | 35-120 | | | |
| Anthracene | 92.8 | 10 | 2.5 | ug/l | 100 | | 93 | 65-120 | | | |
| Benzidine | 105 | 20 | 10 | ug/l | 100 | | 105 | 30-160 | | | |
| Benzo(a)anthracene | 93.0 | 10 | 2.5 | ug/l | 100 | | 93 | 65-120 | | | |
| Benzo(a)pyrene | 98.8 | 10 | 3.0 | ug/l | 100 | | 99 | 55-130 | | | |
| Benzo(b)fluoranthene | 90.7 | 10 | 2.0 | ug/l | 100 | | 91 | 55-125 | | | |
| Benzo(g,h,i)perylene | 92.8 | 10 | 4.0 | ug/l | 100 | | 93 | 45-135 | | | |
| Benzo(k)fluoranthene | 99.4 | 10 | 2.5 | ug/l | 100 | | 99 | 50-125 | | | |
| Benzoic acid | 81.5 | 20 | 10 | ug/l | 100 | | 81 | 25-120 | | | |
| Benzyl alcohol | 80.3 | 20 | 3.5 | ug/l | 100 | | 80 | 50-120 | | | |
| 4-Bromophenyl phenyl ether | 92.3 | 10 | 3.0 | ug/l | 100 | | 92 | 60-120 | | | |
| Butyl benzyl phthalate | 90.4 | 20 | 4.0 | ug/l | 100 | | 90 | 55-130 | | | |
| 4-Chloro-3-methylphenol | 81.4 | 20 | 2.5 | ug/l | 100 | | 81 | 60-120 | | | |
| 4-Chloroaniline | 86.3 | 10 | 2.0 | ug/l | 100 | | 86 | 55-120 | | | |
| Bis(2-chloroethoxy)methane | 82.4 | 10 | 3.0 | ug/l | 100 | | 82 | 55-120 | | | |
| Bis(2-chloroethyl)ether | 76.2 | 10 | 3.0 | ug/l | 100 | | 76 | 50-120 | | | |
| Bis(2-chloroisopropyl)ether | 79.1 | 10 | 2.5 | ug/l | 100 | | 79 | 45-120 | | | |
| 2-Chloronaphthalene | 87.6 | 10 | 3.0 | ug/l | 100 | | 88 | 60-120 | | | |
| 2-Chlorophenol | 74.7 | 10 | 3.0 | ug/l | 100 | | 75 | 45-120 | | | |
| 4-Chlorophenyl phenyl ether | 87.0 | 10 | 2.5 | ug/l | 100 | | 87 | 65-120 | | | |
| Chrysene | 95.6 | 10 | 2.5 | ug/l | 100 | | 96 | 65-120 | | | |
| Dibenz(a,h)anthracene | 100 | 20 | 3.0 | ug/l | 100 | | 100 | 50-135 | | | |
| Dibenzofuran | 89.3 | 10 | 4.0 | ug/l | 100 | | 89 | 65-120 | | | |
| Di-n-butyl phthalate | 91.6 | 20 | 3.0 | ug/l | 100 | | 92 | 60-125 | | | |
| 1,2-Dichlorobenzene | 67.6 | 10 | 3.0 | ug/l | 100 | | 68 | 40-120 | | | |
| 1,3-Dichlorobenzene | 63.4 | 10 | 3.0 | ug/l | 100 | | 63 | 35-120 | | | |
| 1,4-Dichlorobenzene | 65.1 | 10 | 2.5 | ug/l | 100 | | 65 | 35-120 | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **LCS Analyzed: 02/12/2009 (9B09071-BS1)** | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 92.9 | 20 | 7.5 | ug/l | 100 | | 93 | 45-135 | | | |
| 2,4-Dichlorophenol | 80.9 | 10 | 3.5 | ug/l | 100 | | 81 | 55-120 | | | |
| Diethyl phthalate | 89.3 | 10 | 3.5 | ug/l | 100 | | 89 | 55-120 | | | |
| 2,4-Dimethylphenol | 69.6 | 20 | 3.5 | ug/l | 100 | | 70 | 40-120 | | | |
| Dimethyl phthalate | 87.7 | 10 | 2.5 | ug/l | 100 | | 88 | 30-120 | | | |
| 4,6-Dinitro-2-methylphenol | 87.7 | 20 | 4.0 | ug/l | 100 | | 88 | 45-120 | | | |
| 2,4-Dinitrophenol | 83.9 | 20 | 8.0 | ug/l | 100 | | 84 | 40-120 | | | |
| 2,4-Dinitrotoluene | 92.8 | 10 | 3.5 | ug/l | 100 | | 93 | 65-120 | | | |
| 2,6-Dinitrotoluene | 91.6 | 10 | 2.0 | ug/l | 100 | | 92 | 65-120 | | | |
| Di-n-octyl phthalate | 106 | 20 | 3.5 | ug/l | 100 | | 106 | 65-135 | | | |
| 1,2-Diphenylhydrazine/Azobenzene | 85.3 | 20 | 2.5 | ug/l | 100 | | 85 | 60-120 | | | |
| Bis(2-ethylhexyl)phthalate | 92.8 | 50 | 4.0 | ug/l | 100 | | 93 | 65-130 | | | |
| Fluoranthene | 94.6 | 10 | 3.0 | ug/l | 100 | | 95 | 60-120 | | | |
| Fluorene | 88.7 | 10 | 3.0 | ug/l | 100 | | 89 | 65-120 | | | |
| Hexachlorobenzene | 92.9 | 10 | 3.0 | ug/l | 100 | | 93 | 60-120 | | | |
| Hexachlorobutadiene | 69.2 | 10 | 4.0 | ug/l | 100 | | 69 | 40-120 | | | |
| Hexachlorocyclopentadiene | 53.8 | 20 | 5.0 | ug/l | 100 | | 54 | 25-120 | | | |
| Hexachloroethane | 60.8 | 10 | 3.5 | ug/l | 100 | | 61 | 35-120 | | | |
| Indeno(1,2,3-cd)pyrene | 95.5 | 20 | 3.5 | ug/l | 100 | | 96 | 45-135 | | | |
| Isophorone | 83.3 | 10 | 3.0 | ug/l | 100 | | 83 | 50-120 | | | |
| 2-Methylnaphthalene | 80.5 | 10 | 2.0 | ug/l | 100 | | 80 | 55-120 | | | |
| 2-Methylphenol | 77.2 | 10 | 3.0 | ug/l | 100 | | 77 | 50-120 | | | |
| 4-Methylphenol | 73.4 | 10 | 3.0 | ug/l | 100 | | 73 | 50-120 | | | |
| Naphthalene | 78.1 | 10 | 3.0 | ug/l | 100 | | 78 | 55-120 | | | |
| 2-Nitroaniline | 92.8 | 20 | 2.0 | ug/l | 100 | | 93 | 65-120 | | | |
| 3-Nitroaniline | 93.9 | 20 | 3.0 | ug/l | 100 | | 94 | 60-120 | | | |
| 4-Nitroaniline | 92.7 | 20 | 4.0 | ug/l | 100 | | 93 | 55-125 | | | |
| Nitrobenzene | 83.4 | 20 | 3.0 | ug/l | 100 | | 83 | 55-120 | | | |
| 2-Nitrophenol | 84.9 | 10 | 3.5 | ug/l | 100 | | 85 | 50-120 | | | |
| 4-Nitrophenol | 90.2 | 20 | 5.5 | ug/l | 100 | | 90 | 45-120 | | | |
| N-Nitroso-di-n-propylamine | 80.3 | 10 | 3.5 | ug/l | 100 | | 80 | 45-120 | | | |
| N-Nitrosodimethylamine | 80.1 | 20 | 2.5 | ug/l | 100 | | 80 | 45-120 | | | |
| N-Nitrosodiphenylamine | 90.8 | 10 | 2.0 | ug/l | 100 | | 91 | 60-120 | | | |
| Pentachlorophenol | 87.3 | 20 | 3.5 | ug/l | 100 | | 87 | 50-120 | | | |
| Phenanthrene | 92.7 | 10 | 3.5 | ug/l | 100 | | 93 | 65-120 | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **LCS Analyzed: 02/12/2009 (9B09071-BS1)** | | | | | | | | | | | |
| Phenol | 79.0 | 10 | 2.0 | ug/l | 100 | | 79 | 40-120 | | | |
| Pyrene | 93.6 | 10 | 4.0 | ug/l | 100 | | 94 | 55-125 | | | |
| 1,2,4-Trichlorobenzene | 73.2 | 10 | 2.5 | ug/l | 100 | | 73 | 45-120 | | | |
| 2,4,5-Trichlorophenol | 89.7 | 20 | 3.0 | ug/l | 100 | | 90 | 55-120 | | | |
| 2,4,6-Trichlorophenol | 91.6 | 20 | 4.5 | ug/l | 100 | | 92 | 55-120 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *177* | | | *ug/l* | *200* | | *89* | *40-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *86.6* | | | *ug/l* | *100* | | *87* | *50-120* | | | |
| *Surrogate: 2-Fluorophenol* | *138* | | | *ug/l* | *200* | | *69* | *30-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *81.4* | | | *ug/l* | *100* | | *81* | *45-120* | | | |
| *Surrogate: Phenol-d6* | *149* | | | *ug/l* | *200* | | *75* | *35-120* | | | |
| *Surrogate: Terphenyl-d14* | *89.4* | | | *ug/l* | *100* | | *89* | *50-125* | | | |
| **LCS Dup Analyzed: 02/12/2009 (9B09071-BSD1)** | | | | | | | | | | | |
| Acenaphthene | 76.7 | 10 | 3.0 | ug/l | 100 | | 77 | 60-120 | 9 | 20 | |
| Acenaphthylene | 80.2 | 10 | 3.0 | ug/l | 100 | | 80 | 60-120 | 11 | 20 | |
| Aniline | 68.9 | 10 | 3.5 | ug/l | 100 | | 69 | 35-120 | 4 | 30 | |
| Anthracene | 87.9 | 10 | 2.5 | ug/l | 100 | | 88 | 65-120 | 5 | 20 | |
| Benzidine | 111 | 20 | 10 | ug/l | 100 | | 111 | 30-160 | 5 | 35 | |
| Benzo(a)anthracene | 88.8 | 10 | 2.5 | ug/l | 100 | | 89 | 65-120 | 5 | 20 | |
| Benzo(a)pyrene | 93.8 | 10 | 3.0 | ug/l | 100 | | 94 | 55-130 | 5 | 25 | |
| Benzo(b)fluoranthene | 87.0 | 10 | 2.0 | ug/l | 100 | | 87 | 55-125 | 4 | 25 | |
| Benzo(g,h,i)perylene | 88.0 | 10 | 4.0 | ug/l | 100 | | 88 | 45-135 | 5 | 25 | |
| Benzo(k)fluoranthene | 93.8 | 10 | 2.5 | ug/l | 100 | | 94 | 50-125 | 6 | 20 | |
| Benzoic acid | 67.9 | 20 | 10 | ug/l | 100 | | 68 | 25-120 | 18 | 30 | |
| Benzyl alcohol | 71.5 | 20 | 3.5 | ug/l | 100 | | 72 | 50-120 | 12 | 20 | |
| 4-Bromophenyl phenyl ether | 87.6 | 10 | 3.0 | ug/l | 100 | | 88 | 60-120 | 5 | 25 | |
| Butyl benzyl phthalate | 86.1 | 20 | 4.0 | ug/l | 100 | | 86 | 55-130 | 5 | 20 | |
| 4-Chloro-3-methylphenol | 74.4 | 20 | 2.5 | ug/l | 100 | | 74 | 60-120 | 9 | 25 | |
| 4-Chloroaniline | 77.5 | 10 | 2.0 | ug/l | 100 | | 78 | 55-120 | 11 | 25 | |
| Bis(2-chloroethoxy)methane | 73.3 | 10 | 3.0 | ug/l | 100 | | 73 | 55-120 | 12 | 20 | |
| Bis(2-chloroethyl)ether | 67.7 | 10 | 3.0 | ug/l | 100 | | 68 | 50-120 | 12 | 20 | |
| Bis(2-chloroisopropyl)ether | 70.1 | 10 | 2.5 | ug/l | 100 | | 70 | 45-120 | 12 | 20 | |
| 2-Chloronaphthalene | 78.0 | 10 | 3.0 | ug/l | 100 | | 78 | 60-120 | 12 | 20 | |
| 2-Chlorophenol | 63.4 | 10 | 3.0 | ug/l | 100 | | 63 | 45-120 | 16 | 25 | |
| 4-Chlorophenyl phenyl ether | 79.9 | 10 | 2.5 | ug/l | 100 | | 80 | 65-120 | 8 | 20 | |
| Chrysene | 90.9 | 10 | 2.5 | ug/l | 100 | | 91 | 65-120 | 5 | 20 | |

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## METHOD BLANK/QC DATA

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

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **LCS Dup Analyzed: 02/12/2009 (9B09071-BSD1)** | | | | | | | | | | | |
| Dibenz(a,h)anthracene | 94.1 | 20 | 3.0 | ug/l | 100 | | 94 | 50-135 | 6 | 25 | |
| Dibenzofuran | 81.2 | 10 | 4.0 | ug/l | 100 | | 81 | 65-120 | 10 | 20 | |
| Di-n-butyl phthalate | 87.4 | 20 | 3.0 | ug/l | 100 | | 87 | 60-125 | 5 | 20 | |
| 1,2-Dichlorobenzene | 58.0 | 10 | 3.0 | ug/l | 100 | | 58 | 40-120 | 15 | 25 | |
| 1,3-Dichlorobenzene | 53.4 | 10 | 3.0 | ug/l | 100 | | 53 | 35-120 | 17 | 25 | |
| 1,4-Dichlorobenzene | 55.5 | 10 | 2.5 | ug/l | 100 | | 55 | 35-120 | 16 | 25 | |
| 3,3'-Dichlorobenzidine | 80.1 | 20 | 7.5 | ug/l | 100 | | 80 | 45-135 | 15 | 25 | |
| 2,4-Dichlorophenol | 70.7 | 10 | 3.5 | ug/l | 100 | | 71 | 55-120 | 13 | 20 | |
| Diethyl phthalate | 82.9 | 10 | 3.5 | ug/l | 100 | | 83 | 55-120 | 7 | 30 | |
| 2,4-Dimethylphenol | 63.5 | 20 | 3.5 | ug/l | 100 | | 64 | 40-120 | 9 | 25 | |
| Dimethyl phthalate | 82.3 | 10 | 2.5 | ug/l | 100 | | 82 | 30-120 | 6 | 30 | |
| 4,6-Dinitro-2-methylphenol | 81.3 | 20 | 4.0 | ug/l | 100 | | 81 | 45-120 | 8 | 25 | |
| 2,4-Dinitrophenol | 76.2 | 20 | 8.0 | ug/l | 100 | | 76 | 40-120 | 10 | 25 | |
| 2,4-Dinitrotoluene | 86.2 | 10 | 3.5 | ug/l | 100 | | 86 | 65-120 | 7 | 20 | |
| 2,6-Dinitrotoluene | 83.8 | 10 | 2.0 | ug/l | 100 | | 84 | 65-120 | 9 | 20 | |
| Di-n-octyl phthalate | 99.3 | 20 | 3.5 | ug/l | 100 | | 99 | 65-135 | 6 | 20 | |
| 1,2-Diphenylhydrazine/Azobenzene | 79.4 | 20 | 2.5 | ug/l | 100 | | 79 | 60-120 | 7 | 25 | |
| Bis(2-ethylhexyl)phthalate | 87.2 | 50 | 4.0 | ug/l | 100 | | 87 | 65-130 | 6 | 20 | |
| Fluoranthene | 92.1 | 10 | 3.0 | ug/l | 100 | | 92 | 60-120 | 3 | 20 | |
| Fluorene | 81.9 | 10 | 3.0 | ug/l | 100 | | 82 | 65-120 | 8 | 20 | |
| Hexachlorobenzene | 88.3 | 10 | 3.0 | ug/l | 100 | | 88 | 60-120 | 5 | 20 | |
| Hexachlorobutadiene | 59.9 | 10 | 4.0 | ug/l | 100 | | 60 | 40-120 | 14 | 25 | |
| Hexachlorocyclopentadiene | 44.1 | 20 | 5.0 | ug/l | 100 | | 44 | 25-120 | 20 | 30 | |
| Hexachloroethane | 50.0 | 10 | 3.5 | ug/l | 100 | | 50 | 35-120 | 19 | 25 | |
| Indeno(1,2,3-cd)pyrene | 88.8 | 20 | 3.5 | ug/l | 100 | | 89 | 45-135 | 7 | 25 | |
| Isophorone | 75.8 | 10 | 3.0 | ug/l | 100 | | 76 | 50-120 | 9 | 20 | |
| 2-Methylnaphthalene | 73.1 | 10 | 2.0 | ug/l | 100 | | 73 | 55-120 | 10 | 20 | |
| 2-Methylphenol | 67.0 | 10 | 3.0 | ug/l | 100 | | 67 | 50-120 | 14 | 20 | |
| 4-Methylphenol | 63.7 | 10 | 3.0 | ug/l | 100 | | 64 | 50-120 | 14 | 20 | |
| Naphthalene | 68.6 | 10 | 3.0 | ug/l | 100 | | 69 | 55-120 | 13 | 20 | |
| 2-Nitroaniline | 86.4 | 20 | 2.0 | ug/l | 100 | | 86 | 65-120 | 7 | 20 | |
| 3-Nitroaniline | 86.2 | 20 | 3.0 | ug/l | 100 | | 86 | 60-120 | 9 | 25 | |
| 4-Nitroaniline | 86.9 | 20 | 4.0 | ug/l | 100 | | 87 | 55-125 | 7 | 20 | |
| Nitrobenzene | 72.5 | 20 | 3.0 | ug/l | 100 | | 73 | 55-120 | 14 | 25 | |
| 2-Nitrophenol | 73.5 | 10 | 3.5 | ug/l | 100 | | 74 | 50-120 | 14 | 25 | |

**TestAmerica Irvine**

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **LCS Dup Analyzed: 02/12/2009 (9B09071-BSD1)** | | | | | | | | | | | |
| 4-Nitrophenol | 79.2 | 20 | 5.5 | ug/l | 100 | | 79 | 45-120 | 13 | 30 | |
| N-Nitroso-di-n-propylamine | 72.8 | 10 | 3.5 | ug/l | 100 | | 73 | 45-120 | 10 | 20 | |
| N-Nitrosodimethylamine | 67.9 | 20 | 2.5 | ug/l | 100 | | 68 | 45-120 | 16 | 20 | |
| N-Nitrosodiphenylamine | 85.4 | 10 | 2.0 | ug/l | 100 | | 85 | 60-120 | 6 | 20 | |
| Pentachlorophenol | 82.1 | 20 | 3.5 | ug/l | 100 | | 82 | 50-120 | 6 | 25 | |
| Phenanthrene | 87.5 | 10 | 3.5 | ug/l | 100 | | 87 | 65-120 | 6 | 20 | |
| Phenol | 64.6 | 10 | 2.0 | ug/l | 100 | | 65 | 40-120 | 20 | 25 | |
| Pyrene | 87.0 | 10 | 4.0 | ug/l | 100 | | 87 | 55-125 | 7 | 25 | |
| 1,2,4-Trichlorobenzene | 63.9 | 10 | 2.5 | ug/l | 100 | | 64 | 45-120 | 14 | 20 | |
| 2,4,5-Trichlorophenol | 79.2 | 20 | 3.0 | ug/l | 100 | | 79 | 55-120 | 12 | 30 | |
| 2,4,6-Trichlorophenol | 80.5 | 20 | 4.5 | ug/l | 100 | | 81 | 55-120 | 13 | 30 | |
| *Surrogate: 2,4,6-Tribromophenol* | *163* | | | *ug/l* | *200* | | *81* | *40-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *77.7* | | | *ug/l* | *100* | | *78* | *50-120* | | | |
| *Surrogate: 2-Fluorophenol* | *108* | | | *ug/l* | *200* | | *54* | *30-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *70.9* | | | *ug/l* | *100* | | *71* | *45-120* | | | |
| *Surrogate: Phenol-d6* | *120* | | | *ug/l* | *200* | | *60* | *35-120* | | | |
| *Surrogate: Terphenyl-d14* | *83.8* | | | *ug/l* | *100* | | *84* | *50-125* | | | |
| **Matrix Spike Analyzed: 02/12/2009 (9B09071-MS1)** | | | | | | **Source: ISB0559-05** | | | | | |
| Acenaphthene | 78.0 | 20 | 5.9 | ug/l | 99.0 | ND | 79 | 60-120 | | | |
| Acenaphthylene | 79.3 | 20 | 5.9 | ug/l | 99.0 | ND | 80 | 60-120 | | | |
| Aniline | 58.3 | 20 | 6.9 | ug/l | 99.0 | ND | 59 | 35-120 | | | |
| Anthracene | 86.5 | 20 | 5.0 | ug/l | 99.0 | ND | 87 | 65-120 | | | |
| Benzidine | ND | 40 | 20 | ug/l | 99.0 | ND | | 30-160 | | | *M2* |
| Benzo(a)anthracene | 85.5 | 20 | 5.0 | ug/l | 99.0 | ND | 86 | 65-120 | | | |
| Benzo(a)pyrene | 89.9 | 20 | 5.9 | ug/l | 99.0 | ND | 91 | 55-130 | | | |
| Benzo(b)fluoranthene | 87.5 | 20 | 4.0 | ug/l | 99.0 | ND | 88 | 55-125 | | | |
| Benzo(g,h,i)perylene | 101 | 20 | 7.9 | ug/l | 99.0 | ND | 102 | 45-135 | | | |
| Benzo(k)fluoranthene | 89.8 | 20 | 5.0 | ug/l | 99.0 | ND | 91 | 55-125 | | | |
| Benzoic acid | 79.5 | 40 | 20 | ug/l | 99.0 | ND | 80 | 25-125 | | | |
| Benzyl alcohol | 72.4 | 40 | 6.9 | ug/l | 99.0 | ND | 73 | 40-120 | | | |
| 4-Bromophenyl phenyl ether | 84.5 | 20 | 5.9 | ug/l | 99.0 | ND | 85 | 60-120 | | | |
| Butyl benzyl phthalate | 85.1 | 40 | 7.9 | ug/l | 99.0 | ND | 86 | 55-130 | | | |
| 4-Chloro-3-methylphenol | 78.9 | 40 | 5.0 | ug/l | 99.0 | ND | 80 | 60-120 | | | |
| 4-Chloroaniline | 74.5 | 20 | 4.0 | ug/l | 99.0 | ND | 75 | 55-120 | | | |
| Bis(2-chloroethoxy)methane | 78.4 | 20 | 5.9 | ug/l | 99.0 | ND | 79 | 50-120 | | | |

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/12/2009 (9B09071-MS1)** | | | | | | **Source: ISB0559-05** | | | | | |
| Bis(2-chloroethyl)ether | 71.3 | 20 | 5.9 | ug/l | 99.0 | ND | 72 | 50-120 | | | |
| Bis(2-chloroisopropyl)ether | 75.5 | 20 | 5.0 | ug/l | 99.0 | ND | 76 | 45-120 | | | |
| 2-Chloronaphthalene | 78.8 | 20 | 5.9 | ug/l | 99.0 | ND | 80 | 60-120 | | | |
| 2-Chlorophenol | 67.8 | 20 | 5.9 | ug/l | 99.0 | ND | 68 | 45-120 | | | |
| 4-Chlorophenyl phenyl ether | 80.9 | 20 | 5.0 | ug/l | 99.0 | ND | 82 | 65-120 | | | |
| Chrysene | 86.1 | 20 | 5.0 | ug/l | 99.0 | ND | 87 | 65-120 | | | |
| Dibenz(a,h)anthracene | 98.4 | 40 | 5.9 | ug/l | 99.0 | ND | 99 | 45-135 | | | |
| Dibenzofuran | 83.8 | 20 | 7.9 | ug/l | 99.0 | ND | 85 | 65-120 | | | |
| Di-n-butyl phthalate | 86.1 | 40 | 5.9 | ug/l | 99.0 | ND | 87 | 60-125 | | | |
| 1,2-Dichlorobenzene | 65.8 | 20 | 5.9 | ug/l | 99.0 | ND | 66 | 40-120 | | | |
| 1,3-Dichlorobenzene | 63.1 | 20 | 5.9 | ug/l | 99.0 | ND | 64 | 35-120 | | | |
| 1,4-Dichlorobenzene | 64.6 | 20 | 5.0 | ug/l | 99.0 | ND | 65 | 35-120 | | | |
| 3,3'-Dichlorobenzidine | 56.0 | 40 | 15 | ug/l | 99.0 | ND | 57 | 45-135 | | | |
| 2,4-Dichlorophenol | 74.1 | 20 | 6.9 | ug/l | 99.0 | ND | 75 | 55-120 | | | |
| Diethyl phthalate | 89.3 | 20 | 6.9 | ug/l | 99.0 | ND | 90 | 55-120 | | | |
| 2,4-Dimethylphenol | 83.6 | 40 | 6.9 | ug/l | 99.0 | 10.8 | 74 | 40-120 | | | |
| Dimethyl phthalate | 83.2 | 20 | 5.0 | ug/l | 99.0 | ND | 84 | 30-120 | | | |
| 4,6-Dinitro-2-methylphenol | 82.6 | 40 | 7.9 | ug/l | 99.0 | ND | 83 | 45-120 | | | |
| 2,4-Dinitrophenol | 74.8 | 40 | 16 | ug/l | 99.0 | ND | 76 | 40-120 | | | |
| 2,4-Dinitrotoluene | 85.1 | 20 | 6.9 | ug/l | 99.0 | ND | 86 | 65-120 | | | |
| 2,6-Dinitrotoluene | 84.0 | 20 | 4.0 | ug/l | 99.0 | ND | 85 | 65-120 | | | |
| Di-n-octyl phthalate | 96.8 | 40 | 6.9 | ug/l | 99.0 | ND | 98 | 65-135 | | | |
| 1,2-Diphenylhydrazine/Azobenzene | 81.3 | 40 | 5.0 | ug/l | 99.0 | ND | 82 | 60-120 | | | |
| Bis(2-ethylhexyl)phthalate | 103 | 99 | 7.9 | ug/l | 99.0 | ND | 104 | 65-130 | | | |
| Fluoranthene | 86.3 | 20 | 5.9 | ug/l | 99.0 | ND | 87 | 60-120 | | | |
| Fluorene | 83.0 | 20 | 5.9 | ug/l | 99.0 | ND | 84 | 65-120 | | | |
| Hexachlorobenzene | 85.2 | 20 | 5.9 | ug/l | 99.0 | ND | 86 | 60-120 | | | |
| Hexachlorobutadiene | 74.1 | 20 | 7.9 | ug/l | 99.0 | ND | 75 | 40-120 | | | |
| Hexachlorocyclopentadiene | 23.1 | 40 | 9.9 | ug/l | 99.0 | ND | 23 | 25-120 | | | *M2, Ja* |
| Hexachloroethane | 133 | 20 | 6.9 | ug/l | 99.0 | ND | 134 | 35-120 | | | *M1* |
| Indeno(1,2,3-cd)pyrene | 97.1 | 40 | 6.9 | ug/l | 99.0 | ND | 98 | 40-135 | | | |
| Isophorone | 77.5 | 20 | 5.9 | ug/l | 99.0 | ND | 78 | 50-120 | | | |
| 2-Methylnaphthalene | 81.5 | 20 | 4.0 | ug/l | 99.0 | ND | 82 | 55-120 | | | |
| 2-Methylphenol | 70.9 | 20 | 5.9 | ug/l | 99.0 | ND | 72 | 50-120 | | | |
| 4-Methylphenol | 68.3 | 20 | 5.9 | ug/l | 99.0 | ND | 69 | 50-120 | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/12/2009 (9B09071-MS1)** | | | | | | **Source: ISB0559-05** | | | | | |
| Naphthalene | 139 | 20 | 5.9 | ug/l | 99.0 | 70.9 | 69 | 55-120 | | | |
| 2-Nitroaniline | 84.6 | 40 | 4.0 | ug/l | 99.0 | ND | 85 | 65-120 | | | |
| 3-Nitroaniline | 79.8 | 40 | 5.9 | ug/l | 99.0 | ND | 81 | 60-120 | | | |
| 4-Nitroaniline | 80.6 | 40 | 7.9 | ug/l | 99.0 | ND | 81 | 55-125 | | | |
| Nitrobenzene | 79.0 | 40 | 5.9 | ug/l | 99.0 | ND | 80 | 55-120 | | | |
| 2-Nitrophenol | 74.5 | 20 | 6.9 | ug/l | 99.0 | ND | 75 | 50-120 | | | |
| 4-Nitrophenol | 77.7 | 40 | 11 | ug/l | 99.0 | ND | 78 | 45-120 | | | |
| N-Nitroso-di-n-propylamine | 73.9 | 20 | 6.9 | ug/l | 99.0 | ND | 75 | 45-120 | | | |
| N-Nitrosodimethylamine | 69.1 | 40 | 5.0 | ug/l | 99.0 | ND | 70 | 45-120 | | | |
| N-Nitrosodiphenylamine | 79.9 | 20 | 4.0 | ug/l | 99.0 | ND | 81 | 60-120 | | | |
| Pentachlorophenol | 73.9 | 40 | 6.9 | ug/l | 99.0 | ND | 75 | 50-120 | | | |
| Phenanthrene | 87.2 | 20 | 6.9 | ug/l | 99.0 | ND | 88 | 65-120 | | | |
| Phenol | 67.0 | 20 | 4.0 | ug/l | 99.0 | ND | 68 | 40-120 | | | |
| Pyrene | 87.0 | 20 | 7.9 | ug/l | 99.0 | ND | 88 | 55-125 | | | |
| 1,2,4-Trichlorobenzene | 72.9 | 20 | 5.0 | ug/l | 99.0 | ND | 74 | 45-120 | | | |
| 2,4,5-Trichlorophenol | 79.4 | 40 | 5.9 | ug/l | 99.0 | ND | 80 | 55-120 | | | |
| 2,4,6-Trichlorophenol | 79.7 | 40 | 8.9 | ug/l | 99.0 | ND | 80 | 55-120 | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *163* | | | *ug/l* | *198* | | *82* | *40-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *77.8* | | | *ug/l* | *99.0* | | *79* | *50-120* | | | |
| *Surrogate: 2-Fluorophenol* | *99.6* | | | *ug/l* | *198* | | *50* | *30-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *73.8* | | | *ug/l* | *99.0* | | *75* | *45-120* | | | |
| *Surrogate: Phenol-d6* | *126* | | | *ug/l* | *198* | | *64* | *35-120* | | | |
| *Surrogate: Terphenyl-d14* | *83.8* | | | *ug/l* | *99.0* | | *85* | *50-125* | | | |
| **Matrix Spike Dup Analyzed: 02/12/2009 (9B09071-MSD1)** | | | | | | **Source: ISB0559-05** | | | | | |
| Acenaphthene | 78.7 | 19 | 5.7 | ug/l | 94.3 | ND | 83 | 60-120 | 1 | 25 | |
| Acenaphthylene | 80.8 | 19 | 5.7 | ug/l | 94.3 | ND | 86 | 60-120 | 2 | 25 | |
| Aniline | 54.0 | 19 | 6.6 | ug/l | 94.3 | ND | 57 | 35-120 | 8 | 30 | |
| Anthracene | 85.9 | 19 | 4.7 | ug/l | 94.3 | ND | 91 | 65-120 | 1 | 25 | |
| Benzidine | ND | 38 | 19 | ug/l | 94.3 | ND | | 30-160 | | 35 | *M2* |
| Benzo(a)anthracene | 85.4 | 19 | 4.7 | ug/l | 94.3 | ND | 91 | 65-120 | 0 | 20 | |
| Benzo(a)pyrene | 90.6 | 19 | 5.7 | ug/l | 94.3 | ND | 96 | 55-130 | 1 | 25 | |
| Benzo(b)fluoranthene | 88.9 | 19 | 3.8 | ug/l | 94.3 | ND | 94 | 55-125 | 2 | 25 | |
| Benzo(g,h,i)perylene | 101 | 19 | 7.5 | ug/l | 94.3 | ND | 107 | 45-135 | 0 | 30 | |
| Benzo(k)fluoranthene | 89.2 | 19 | 4.7 | ug/l | 94.3 | ND | 95 | 55-125 | 1 | 30 | |
| Benzoic acid | 90.5 | 38 | 19 | ug/l | 94.3 | ND | 96 | 25-125 | 13 | 30 | |

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## METHOD BLANK/QC DATA

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

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/12/2009 (9B09071-MSD1)** | | | | | | **Source: ISB0559-05** | | | | | |
| Benzyl alcohol | 76.4 | 38 | 6.6 | ug/l | 94.3 | ND | 81 | 40-120 | 5 | 30 | |
| 4-Bromophenyl phenyl ether | 84.9 | 19 | 5.7 | ug/l | 94.3 | ND | 90 | 60-120 | 1 | 25 | |
| Butyl benzyl phthalate | 84.6 | 38 | 7.5 | ug/l | 94.3 | ND | 90 | 55-130 | 1 | 25 | |
| 4-Chloro-3-methylphenol | 79.8 | 38 | 4.7 | ug/l | 94.3 | ND | 85 | 60-120 | 1 | 25 | |
| 4-Chloroaniline | 75.9 | 19 | 3.8 | ug/l | 94.3 | ND | 80 | 55-120 | 2 | 25 | |
| Bis(2-chloroethoxy)methane | 80.2 | 19 | 5.7 | ug/l | 94.3 | ND | 85 | 50-120 | 2 | 25 | |
| Bis(2-chloroethyl)ether | 75.1 | 19 | 5.7 | ug/l | 94.3 | ND | 80 | 50-120 | 5 | 25 | |
| Bis(2-chloroisopropyl)ether | 77.2 | 19 | 4.7 | ug/l | 94.3 | ND | 82 | 45-120 | 2 | 25 | |
| 2-Chloronaphthalene | 81.4 | 19 | 5.7 | ug/l | 94.3 | ND | 86 | 60-120 | 3 | 20 | |
| 2-Chlorophenol | 72.1 | 19 | 5.7 | ug/l | 94.3 | ND | 76 | 45-120 | 6 | 25 | |
| 4-Chlorophenyl phenyl ether | 80.4 | 19 | 4.7 | ug/l | 94.3 | ND | 85 | 65-120 | 1 | 25 | |
| Chrysene | 87.7 | 19 | 4.7 | ug/l | 94.3 | ND | 93 | 65-120 | 2 | 25 | |
| Dibenz(a,h)anthracene | 97.5 | 38 | 5.7 | ug/l | 94.3 | ND | 103 | 45-135 | 1 | 30 | |
| Dibenzofuran | 83.9 | 19 | 7.5 | ug/l | 94.3 | ND | 89 | 65-120 | 0 | 25 | |
| Di-n-butyl phthalate | 85.1 | 38 | 5.7 | ug/l | 94.3 | ND | 90 | 60-125 | 1 | 25 | |
| 1,2-Dichlorobenzene | 67.3 | 19 | 5.7 | ug/l | 94.3 | ND | 71 | 40-120 | 2 | 25 | |
| 1,3-Dichlorobenzene | 64.5 | 19 | 5.7 | ug/l | 94.3 | ND | 68 | 35-120 | 2 | 25 | |
| 1,4-Dichlorobenzene | 65.2 | 19 | 4.7 | ug/l | 94.3 | ND | 69 | 35-120 | 1 | 25 | |
| 3,3'-Dichlorobenzidine | 59.2 | 38 | 14 | ug/l | 94.3 | ND | 63 | 45-135 | 6 | 25 | |
| 2,4-Dichlorophenol | 77.2 | 19 | 6.6 | ug/l | 94.3 | ND | 82 | 55-120 | 4 | 25 | |
| Diethyl phthalate | 86.0 | 19 | 6.6 | ug/l | 94.3 | ND | 91 | 55-120 | 4 | 30 | |
| 2,4-Dimethylphenol | 85.4 | 38 | 6.6 | ug/l | 94.3 | 10.8 | 79 | 40-120 | 2 | 25 | |
| Dimethyl phthalate | 81.9 | 19 | 4.7 | ug/l | 94.3 | ND | 87 | 30-120 | 2 | 30 | |
| 4,6-Dinitro-2-methylphenol | 82.2 | 38 | 7.5 | ug/l | 94.3 | ND | 87 | 45-120 | 1 | 25 | |
| 2,4-Dinitrophenol | 73.7 | 38 | 15 | ug/l | 94.3 | ND | 78 | 40-120 | 1 | 25 | |
| 2,4-Dinitrotoluene | 85.4 | 19 | 6.6 | ug/l | 94.3 | ND | 91 | 65-120 | 0 | 25 | |
| 2,6-Dinitrotoluene | 83.8 | 19 | 3.8 | ug/l | 94.3 | ND | 89 | 65-120 | 0 | 20 | |
| Di-n-octyl phthalate | 97.7 | 38 | 6.6 | ug/l | 94.3 | ND | 104 | 65-135 | 1 | 20 | |
| 1,2-Diphenylhydrazine/Azobenzene | 80.8 | 38 | 4.7 | ug/l | 94.3 | ND | 86 | 60-120 | 1 | 25 | |
| Bis(2-ethylhexyl)phthalate | 88.1 | 94 | 7.5 | ug/l | 94.3 | ND | 93 | 65-130 | 16 | 25 | *Ja* |
| Fluoranthene | 88.1 | 19 | 5.7 | ug/l | 94.3 | ND | 93 | 60-120 | 2 | 25 | |
| Fluorene | 83.0 | 19 | 5.7 | ug/l | 94.3 | ND | 88 | 65-120 | 0 | 25 | |
| Hexachlorobenzene | 85.5 | 19 | 5.7 | ug/l | 94.3 | ND | 91 | 60-120 | 0 | 25 | |
| Hexachlorobutadiene | 74.6 | 19 | 7.5 | ug/l | 94.3 | ND | 79 | 40-120 | 1 | 25 | |
| Hexachlorocyclopentadiene | 34.3 | 38 | 9.4 | ug/l | 94.3 | ND | 36 | 25-120 | 39 | 30 | *R-2, Ja* |

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## METHOD BLANK/QC DATA

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

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09071 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/12/2009 (9B09071-MSD1)** | | | | | | **Source: ISB0559-05** | | | | | |
| Hexachloroethane | 150 | 19 | 6.6 | ug/l | 94.3 | ND | 159 | 35-120 | 12 | 25 | *M1* |
| Indeno(1,2,3-cd)pyrene | 98.0 | 38 | 6.6 | ug/l | 94.3 | ND | 104 | 40-135 | 1 | 30 | |
| Isophorone | 78.6 | 19 | 5.7 | ug/l | 94.3 | ND | 83 | 50-120 | 1 | 25 | |
| 2-Methylnaphthalene | 82.5 | 19 | 3.8 | ug/l | 94.3 | ND | 87 | 55-120 | 1 | 20 | |
| 2-Methylphenol | 75.2 | 19 | 5.7 | ug/l | 94.3 | ND | 80 | 50-120 | 6 | 25 | |
| 4-Methylphenol | 74.0 | 19 | 5.7 | ug/l | 94.3 | ND | 78 | 50-120 | 8 | 25 | |
| Naphthalene | 152 | 19 | 5.7 | ug/l | 94.3 | 70.9 | 85 | 55-120 | 9 | 25 | |
| 2-Nitroaniline | 88.0 | 38 | 3.8 | ug/l | 94.3 | ND | 93 | 65-120 | 4 | 25 | |
| 3-Nitroaniline | 78.3 | 38 | 5.7 | ug/l | 94.3 | ND | 83 | 60-120 | 2 | 25 | |
| 4-Nitroaniline | 81.5 | 38 | 7.5 | ug/l | 94.3 | ND | 86 | 55-125 | 1 | 25 | |
| Nitrobenzene | 83.2 | 38 | 5.7 | ug/l | 94.3 | ND | 88 | 55-120 | 5 | 25 | |
| 2-Nitrophenol | 78.1 | 19 | 6.6 | ug/l | 94.3 | ND | 83 | 50-120 | 5 | 25 | |
| 4-Nitrophenol | 80.6 | 38 | 10 | ug/l | 94.3 | ND | 85 | 45-120 | 4 | 30 | |
| N-Nitroso-di-n-propylamine | 76.3 | 19 | 6.6 | ug/l | 94.3 | ND | 81 | 45-120 | 3 | 25 | |
| N-Nitrosodimethylamine | 73.7 | 38 | 4.7 | ug/l | 94.3 | ND | 78 | 45-120 | 6 | 25 | |
| N-Nitrosodiphenylamine | 80.0 | 19 | 3.8 | ug/l | 94.3 | ND | 85 | 60-120 | 0 | 25 | |
| Pentachlorophenol | 75.9 | 38 | 6.6 | ug/l | 94.3 | ND | 80 | 50-120 | 3 | 25 | |
| Phenanthrene | 85.4 | 19 | 6.6 | ug/l | 94.3 | ND | 91 | 65-120 | 2 | 25 | |
| Phenol | 71.1 | 19 | 3.8 | ug/l | 94.3 | ND | 75 | 40-120 | 6 | 25 | |
| Pyrene | 85.2 | 19 | 7.5 | ug/l | 94.3 | ND | 90 | 55-125 | 2 | 25 | |
| 1,2,4-Trichlorobenzene | 75.4 | 19 | 4.7 | ug/l | 94.3 | ND | 80 | 45-120 | 3 | 20 | |
| 2,4,5-Trichlorophenol | 82.3 | 38 | 5.7 | ug/l | 94.3 | ND | 87 | 55-120 | 3 | 30 | |
| 2,4,6-Trichlorophenol | 83.4 | 38 | 8.5 | ug/l | 94.3 | ND | 88 | 55-120 | 5 | 30 | |
| *Surrogate: 2,4,6-Tribromophenol* | *163* | | | *ug/l* | *189* | | *87* | *40-120* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *81.1* | | | *ug/l* | *94.3* | | *86* | *50-120* | | | |
| *Surrogate: 2-Fluorophenol* | *85.1* | | | *ug/l* | *189* | | *45* | *30-120* | | | |
| *Surrogate: Nitrobenzene-d5* | *77.1* | | | *ug/l* | *94.3* | | *82* | *45-120* | | | |
| *Surrogate: Phenol-d6* | *138* | | | *ug/l* | *189* | | *73* | *35-120* | | | |
| *Surrogate: Terphenyl-d14* | *81.7* | | | *ug/l* | *94.3* | | *87* | *50-125* | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B12048 Extracted: 02/12/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B12048-BLK1)** | | | | | | | | | | | |
| 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* | *0.416* | | | *ug/l* | *0.500* | | *83* | *45-120* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.423* | | | *ug/l* | *0.500* | | *85* | *35-115* | | | |
| **LCS Analyzed: 02/12/2009 (9B12048-BS1)** | | | | | | | | | | | **MNR1** |
| 4,4'-DDD | 0.459 | 0.0050 | 0.0020 | ug/l | 0.500 | | 92 | 55-120 | | | |
| 4,4'-DDE | 0.444 | 0.0050 | 0.0030 | ug/l | 0.500 | | 89 | 50-120 | | | |
| 4,4'-DDT | 0.460 | 0.010 | 0.0040 | ug/l | 0.500 | | 92 | 55-120 | | | |
| Aldrin | 0.411 | 0.0050 | 0.0015 | ug/l | 0.500 | | 82 | 40-115 | | | |
| alpha-BHC | 0.393 | 0.0050 | 0.0025 | ug/l | 0.500 | | 79 | 45-115 | | | |
| beta-BHC | 0.440 | 0.010 | 0.0040 | ug/l | 0.500 | | 88 | 55-115 | | | |
| delta-BHC | 0.456 | 0.0050 | 0.0035 | ug/l | 0.500 | | 91 | 55-115 | | | |
| Dieldrin | 0.487 | 0.0050 | 0.0020 | ug/l | 0.500 | | 97 | 55-115 | | | |
| Endosulfan I | 0.458 | 0.0050 | 0.0020 | ug/l | 0.500 | | 92 | 55-115 | | | |
| Endosulfan II | 0.474 | 0.0050 | 0.0030 | ug/l | 0.500 | | 95 | 55-120 | | | |
| Endosulfan sulfate | 0.481 | 0.010 | 0.0030 | ug/l | 0.500 | | 96 | 60-120 | | | |
| Endrin | 0.460 | 0.0050 | 0.0020 | ug/l | 0.500 | | 92 | 55-115 | | | |

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Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B12048 Extracted: 02/12/09** | | | | | | | | | | | |
| **LCS Analyzed: 02/12/2009 (9B12048-BS1)** | | | | | | | | | | | **MNR1** |
| Endrin aldehyde | 0.419 | 0.010 | 0.0020 | ug/l | 0.500 | | 84 | 50-120 | | | |
| Endrin ketone | 0.452 | 0.010 | 0.0030 | ug/l | 0.500 | | 90 | 55-120 | | | |
| gamma-BHC (Lindane) | 0.400 | 0.020 | 0.0030 | ug/l | 0.500 | | 80 | 45-115 | | | |
| Heptachlor | 0.433 | 0.010 | 0.0030 | ug/l | 0.500 | | 87 | 45-115 | | | |
| Heptachlor epoxide | 0.464 | 0.0050 | 0.0025 | ug/l | 0.500 | | 93 | 55-115 | | | |
| Methoxychlor | 0.447 | 0.0050 | 0.0035 | ug/l | 0.500 | | 89 | 60-120 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.384* | | | *ug/l* | *0.500* | | *77* | *45-120* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.364* | | | *ug/l* | *0.500* | | *73* | *35-115* | | | |
| **LCS Dup Analyzed: 02/12/2009 (9B12048-BSD1)** | | | | | | | | | | | |
| 4,4'-DDD | 0.466 | 0.0050 | 0.0020 | ug/l | 0.500 | | 93 | 55-120 | 2 | 30 | |
| 4,4'-DDE | 0.457 | 0.0050 | 0.0030 | ug/l | 0.500 | | 91 | 50-120 | 3 | 30 | |
| 4,4'-DDT | 0.469 | 0.010 | 0.0040 | ug/l | 0.500 | | 94 | 55-120 | 2 | 30 | |
| Aldrin | 0.430 | 0.0050 | 0.0015 | ug/l | 0.500 | | 86 | 40-115 | 5 | 30 | |
| alpha-BHC | 0.421 | 0.0050 | 0.0025 | ug/l | 0.500 | | 84 | 45-115 | 7 | 30 | |
| beta-BHC | 0.456 | 0.010 | 0.0040 | ug/l | 0.500 | | 91 | 55-115 | 4 | 30 | |
| delta-BHC | 0.462 | 0.0050 | 0.0035 | ug/l | 0.500 | | 92 | 55-115 | 1 | 30 | |
| Dieldrin | 0.497 | 0.0050 | 0.0020 | ug/l | 0.500 | | 99 | 55-115 | 2 | 30 | |
| Endosulfan I | 0.471 | 0.0050 | 0.0020 | ug/l | 0.500 | | 94 | 55-115 | 3 | 30 | |
| Endosulfan II | 0.482 | 0.0050 | 0.0030 | ug/l | 0.500 | | 96 | 55-120 | 2 | 30 | |
| Endosulfan sulfate | 0.482 | 0.010 | 0.0030 | ug/l | 0.500 | | 96 | 60-120 | 0 | 30 | |
| Endrin | 0.471 | 0.0050 | 0.0020 | ug/l | 0.500 | | 94 | 55-115 | 2 | 30 | |
| Endrin aldehyde | 0.426 | 0.010 | 0.0020 | ug/l | 0.500 | | 85 | 50-120 | 2 | 30 | |
| Endrin ketone | 0.448 | 0.010 | 0.0030 | ug/l | 0.500 | | 90 | 55-120 | 1 | 30 | |
| gamma-BHC (Lindane) | 0.422 | 0.020 | 0.0030 | ug/l | 0.500 | | 84 | 45-115 | 5 | 30 | |
| Heptachlor | 0.453 | 0.010 | 0.0030 | ug/l | 0.500 | | 91 | 45-115 | 5 | 30 | |
| Heptachlor epoxide | 0.481 | 0.0050 | 0.0025 | ug/l | 0.500 | | 96 | 55-115 | 4 | 30 | |
| Methoxychlor | 0.449 | 0.0050 | 0.0035 | ug/l | 0.500 | | 90 | 60-120 | 0 | 30 | |
| *Surrogate: Decachlorobiphenyl* | *0.382* | | | *ug/l* | *0.500* | | *76* | *45-120* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.377* | | | *ug/l* | *0.500* | | *75* | *35-115* | | | |

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Sampled: 02/06/09
Received: 02/06/09

## 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: 9B12048 Extracted: 02/12/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B12048-BLK1)** | | | | | | | | | | | |
| 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* | *0.530* | | | *ug/l* | *0.500* | | *106* | *45-120* | | | |
| **LCS Analyzed: 02/12/2009 (9B12048-BS2)** | | | | | | | | | | | **MNR1** |
| Aroclor 1016 | 3.96 | 0.50 | 0.25 | ug/l | 4.00 | | 99 | 50-115 | | | |
| Aroclor 1260 | 4.16 | 0.50 | 0.25 | ug/l | 4.00 | | 104 | 60-120 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.540* | | | *ug/l* | *0.500* | | *108* | *45-120* | | | |
| **LCS Dup Analyzed: 02/13/2009 (9B12048-BSD2)** | | | | | | | | | | | |
| Aroclor 1016 | 3.95 | 0.50 | 0.25 | ug/l | 4.00 | | 99 | 50-115 | 0 | 30 | |
| Aroclor 1260 | 4.00 | 0.50 | 0.25 | ug/l | 4.00 | | 100 | 60-120 | 4 | 25 | |
| *Surrogate: Decachlorobiphenyl* | *0.517* | | | *ug/l* | *0.500* | | *103* | *45-120* | | | |

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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: 9B12121 Extracted: 02/12/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B12121-BLK1)** | | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | ND | 5.0 | 1.4 | mg/l | | | | | | | |
| **LCS Analyzed: 02/12/2009 (9B12121-BS1)** | | | | | | | | | | | **MNR1** |
| Hexane Extractable Material (Oil & Grease) | 18.2 | 5.0 | 1.4 | mg/l | 20.0 | | 91 | 78-114 | | | |
| **LCS Dup Analyzed: 02/12/2009 (9B12121-BSD1)** | | | | | | | | | | | |
| Hexane Extractable Material (Oil & Grease) | 18.8 | 5.0 | 1.4 | mg/l | 20.0 | | 94 | 78-114 | 3 | 11 | |

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Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## METHOD BLANK/QC DATA

## METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09073 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/14/2009-02/16/2009 (9B09073-BLK1)** | | | | | | | | | | | |
| Aluminum | ND | 50 | 40 | ug/l | | | | | | | |
| Arsenic | 7.21 | 10 | 7.0 | ug/l | | | | | | | *Ja* |
| 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 | 0.0162 | 0.040 | 0.015 | mg/l | | | | | | | *Ja* |
| Magnesium | ND | 0.020 | 0.012 | mg/l | | | | | | | |
| Nickel | ND | 10 | 2.0 | ug/l | | | | | | | |
| Selenium | ND | 10 | 8.0 | ug/l | | | | | | | |
| Silver | ND | 10 | 6.0 | ug/l | | | | | | | |
| Vanadium | ND | 10 | 3.0 | ug/l | | | | | | | |
| Zinc | ND | 20 | 6.0 | ug/l | | | | | | | |
| **LCS Analyzed: 02/14/2009-02/16/2009 (9B09073-BS1)** | | | | | | | | | | | |
| Aluminum | 464 | 50 | 40 | ug/l | 500 | | 93 | 85-115 | | | |
| Arsenic | 515 | 10 | 7.0 | ug/l | 500 | | 103 | 85-115 | | | |
| Beryllium | 494 | 2.0 | 0.90 | ug/l | 500 | | 99 | 85-115 | | | |
| Boron | 0.507 | 0.050 | 0.020 | mg/l | 0.500 | | 101 | 85-115 | | | |
| Calcium | 2.45 | 0.10 | 0.050 | mg/l | 2.50 | | 98 | 85-115 | | | |
| Chromium | 480 | 5.0 | 2.0 | ug/l | 500 | | 96 | 85-115 | | | |
| Iron | 0.483 | 0.040 | 0.015 | mg/l | 0.500 | | 97 | 85-115 | | | |
| Magnesium | 2.47 | 0.020 | 0.012 | mg/l | 2.50 | | 99 | 85-115 | | | |
| Nickel | 486 | 10 | 2.0 | ug/l | 500 | | 97 | 85-115 | | | |
| Selenium | 468 | 10 | 8.0 | ug/l | 500 | | 94 | 85-115 | | | |
| Silver | 251 | 10 | 6.0 | ug/l | 250 | | 100 | 85-115 | | | |
| Vanadium | 484 | 10 | 3.0 | ug/l | 500 | | 97 | 85-115 | | | |
| Zinc | 488 | 20 | 6.0 | ug/l | 500 | | 98 | 85-115 | | | |

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## METHOD BLANK/QC DATA

## METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09073 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/14/2009-02/16/2009 (9B09073-MS1)** | | | | | | **Source: ISB0733-01** | | | | | |
| Aluminum | 1020 | 50 | 40 | ug/l | 500 | 355 | 133 | 70-130 | | | *M1* |
| Arsenic | 523 | 10 | 7.0 | ug/l | 500 | ND | 105 | 70-130 | | | |
| Beryllium | 502 | 2.0 | 0.90 | ug/l | 500 | ND | 100 | 70-130 | | | |
| Boron | 0.525 | 0.050 | 0.020 | mg/l | 0.500 | ND | 105 | 70-130 | | | |
| Calcium | 31.7 | 0.10 | 0.050 | mg/l | 2.50 | 29.5 | 85 | 70-130 | | | *MHA* |
| Chromium | 489 | 5.0 | 2.0 | ug/l | 500 | ND | 98 | 70-130 | | | |
| Iron | 0.892 | 0.040 | 0.015 | mg/l | 0.500 | 0.385 | 101 | 70-130 | | | |
| Magnesium | 7.66 | 0.020 | 0.012 | mg/l | 2.50 | 5.19 | 99 | 70-130 | | | |
| Nickel | 493 | 10 | 2.0 | ug/l | 500 | ND | 99 | 70-130 | | | |
| Selenium | 474 | 10 | 8.0 | ug/l | 500 | ND | 95 | 70-130 | | | |
| Silver | 255 | 10 | 6.0 | ug/l | 250 | ND | 102 | 70-130 | | | |
| Vanadium | 491 | 10 | 3.0 | ug/l | 500 | ND | 98 | 70-130 | | | |
| Zinc | 492 | 20 | 6.0 | ug/l | 500 | ND | 98 | 70-130 | | | |
| **Matrix Spike Analyzed: 02/14/2009-02/16/2009 (9B09073-MS2)** | | | | | | **Source: ISB0719-01** | | | | | |
| Aluminum | 1890 | 50 | 40 | ug/l | 500 | 921 | 195 | 70-130 | | | *M1* |
| Arsenic | 521 | 10 | 7.0 | ug/l | 500 | 8.61 | 103 | 70-130 | | | |
| Beryllium | 495 | 2.0 | 0.90 | ug/l | 500 | ND | 99 | 70-130 | | | |
| Boron | 0.568 | 0.050 | 0.020 | mg/l | 0.500 | 0.0645 | 101 | 70-130 | | | |
| Calcium | 8.94 | 0.10 | 0.050 | mg/l | 2.50 | 6.51 | 97 | 70-130 | | | |
| Chromium | 481 | 5.0 | 2.0 | ug/l | 500 | ND | 96 | 70-130 | | | |
| Iron | 1.36 | 0.040 | 0.015 | mg/l | 0.500 | 0.797 | 112 | 70-130 | | | |
| Magnesium | 3.96 | 0.020 | 0.012 | mg/l | 2.50 | 1.42 | 101 | 70-130 | | | |
| Nickel | 487 | 10 | 2.0 | ug/l | 500 | 2.23 | 97 | 70-130 | | | |
| Selenium | 467 | 10 | 8.0 | ug/l | 500 | ND | 93 | 70-130 | | | |
| Silver | 251 | 10 | 6.0 | ug/l | 250 | ND | 100 | 70-130 | | | |
| Vanadium | 487 | 10 | 3.0 | ug/l | 500 | ND | 97 | 70-130 | | | |
| Zinc | 489 | 20 | 6.0 | ug/l | 500 | ND | 98 | 70-130 | | | |

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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 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## METHOD BLANK/QC DATA

## METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09073 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/14/2009-02/16/2009 (9B09073-MSD1)** | | | | | | **Source: ISB0733-01** | | | | | |
| Aluminum | 1000 | 50 | 40 | ug/l | 500 | 355 | 129 | 70-130 | 2 | 20 | |
| Arsenic | 528 | 10 | 7.0 | ug/l | 500 | ND | 106 | 70-130 | 1 | 20 | |
| Beryllium | 504 | 2.0 | 0.90 | ug/l | 500 | ND | 101 | 70-130 | 0 | 20 | |
| Boron | 0.525 | 0.050 | 0.020 | mg/l | 0.500 | ND | 105 | 70-130 | 0 | 20 | |
| Calcium | 31.7 | 0.10 | 0.050 | mg/l | 2.50 | 29.5 | 84 | 70-130 | 0 | 20 | *MHA* |
| Chromium | 490 | 5.0 | 2.0 | ug/l | 500 | ND | 98 | 70-130 | 0 | 20 | |
| Iron | 0.898 | 0.040 | 0.015 | mg/l | 0.500 | 0.385 | 103 | 70-130 | 1 | 20 | |
| Magnesium | 7.66 | 0.020 | 0.012 | mg/l | 2.50 | 5.19 | 99 | 70-130 | 0 | 20 | |
| Nickel | 494 | 10 | 2.0 | ug/l | 500 | ND | 99 | 70-130 | 0 | 20 | |
| Selenium | 478 | 10 | 8.0 | ug/l | 500 | ND | 96 | 70-130 | 1 | 20 | |
| Silver | 257 | 10 | 6.0 | ug/l | 250 | ND | 103 | 70-130 | 1 | 20 | |
| Vanadium | 493 | 10 | 3.0 | ug/l | 500 | ND | 99 | 70-130 | 0 | 20 | |
| Zinc | 491 | 20 | 6.0 | ug/l | 500 | ND | 98 | 70-130 | 0 | 20 | |
| **Batch: 9B09075 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/10/2009 (9B09075-BLK1)** | | | | | | | | | | | |
| Antimony | ND | 2.0 | 0.20 | ug/l | | | | | | | |
| Cadmium | ND | 1.0 | 0.11 | ug/l | | | | | | | |
| Copper | ND | 2.0 | 0.75 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.30 | ug/l | | | | | | | |
| Thallium | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| **LCS Analyzed: 02/10/2009 (9B09075-BS1)** | | | | | | | | | | | |
| Antimony | 81.1 | 2.0 | 0.20 | ug/l | 80.0 | | 101 | 85-115 | | | |
| Cadmium | 81.4 | 1.0 | 0.11 | ug/l | 80.0 | | 102 | 85-115 | | | |
| Copper | 82.3 | 2.0 | 0.75 | ug/l | 80.0 | | 103 | 85-115 | | | |
| Lead | 81.7 | 1.0 | 0.30 | ug/l | 80.0 | | 102 | 85-115 | | | |
| Thallium | 78.4 | 1.0 | 0.20 | ug/l | 80.0 | | 98 | 85-115 | | | |

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| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09075 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/10/2009 (9B09075-MS1)** | | | | | | **Source: ISB0733-01** | | | | | |
| Antimony | 79.7 | 2.0 | 0.20 | ug/l | 80.0 | 0.490 | 99 | 70-130 | | | |
| Cadmium | 78.2 | 1.0 | 0.11 | ug/l | 80.0 | ND | 98 | 70-130 | | | |
| Copper | 82.2 | 2.0 | 0.75 | ug/l | 80.0 | 1.11 | 101 | 70-130 | | | |
| Lead | 78.9 | 1.0 | 0.30 | ug/l | 80.0 | ND | 99 | 70-130 | | | |
| Thallium | 75.9 | 1.0 | 0.20 | ug/l | 80.0 | ND | 95 | 70-130 | | | |
| **Matrix Spike Analyzed: 02/10/2009 (9B09075-MS2)** | | | | | | **Source: ISB0719-01** | | | | | |
| Antimony | 76.8 | 2.0 | 0.20 | ug/l | 80.0 | 0.584 | 95 | 70-130 | | | |
| Cadmium | 77.2 | 1.0 | 0.11 | ug/l | 80.0 | ND | 96 | 70-130 | | | |
| Copper | 81.7 | 2.0 | 0.75 | ug/l | 80.0 | 2.10 | 99 | 70-130 | | | |
| Lead | 78.8 | 1.0 | 0.30 | ug/l | 80.0 | 0.736 | 98 | 70-130 | | | |
| Thallium | 74.6 | 1.0 | 0.20 | ug/l | 80.0 | ND | 93 | 70-130 | | | |
| **Matrix Spike Dup Analyzed: 02/10/2009 (9B09075-MSD1)** | | | | | | **Source: ISB0733-01** | | | | | |
| Antimony | 79.7 | 2.0 | 0.20 | ug/l | 80.0 | 0.490 | 99 | 70-130 | 0 | 20 | |
| Cadmium | 78.1 | 1.0 | 0.11 | ug/l | 80.0 | ND | 98 | 70-130 | 0 | 20 | |
| Copper | 82.2 | 2.0 | 0.75 | ug/l | 80.0 | 1.11 | 101 | 70-130 | 0 | 20 | |
| Lead | 79.0 | 1.0 | 0.30 | ug/l | 80.0 | ND | 99 | 70-130 | 0 | 20 | |
| Thallium | 76.2 | 1.0 | 0.20 | ug/l | 80.0 | ND | 95 | 70-130 | 0 | 20 | |

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## METHOD BLANK/QC DATA

## DISSOLVED METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09083 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/11/2009 (9B09083-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 | | | | | | | |
| Silver | ND | 10 | 6.0 | ug/l | | | | | | | |
| Vanadium | ND | 10 | 3.0 | ug/l | | | | | | | |
| Zinc | ND | 20 | 6.0 | ug/l | | | | | | | |
| **LCS Analyzed: 02/11/2009 (9B09083-BS1)** | | | | | | | | | | | |
| Aluminum | 442 | 50 | 40 | ug/l | 500 | | 88 | 85-115 | | | |
| Arsenic | 480 | 10 | 7.0 | ug/l | 500 | | 96 | 85-115 | | | |
| Beryllium | 472 | 2.0 | 0.90 | ug/l | 500 | | 94 | 85-115 | | | |
| Boron | 0.473 | 0.050 | 0.020 | mg/l | 0.500 | | 95 | 85-115 | | | |
| Calcium | 2.35 | 0.10 | 0.050 | mg/l | 2.50 | | 94 | 85-115 | | | |
| Chromium | 478 | 5.0 | 2.0 | ug/l | 500 | | 96 | 85-115 | | | |
| Iron | 0.454 | 0.040 | 0.015 | mg/l | 0.500 | | 91 | 85-115 | | | |
| Magnesium | 2.39 | 0.020 | 0.012 | mg/l | 2.50 | | 96 | 85-115 | | | |
| Nickel | 473 | 10 | 2.0 | ug/l | 500 | | 95 | 85-115 | | | |
| Selenium | 446 | 10 | 8.0 | ug/l | 500 | | 89 | 85-115 | | | |
| Silver | 250 | 10 | 6.0 | ug/l | 250 | | 100 | 85-115 | | | |
| Vanadium | 486 | 10 | 3.0 | ug/l | 500 | | 97 | 85-115 | | | |
| Zinc | 466 | 20 | 6.0 | ug/l | 500 | | 93 | 85-115 | | | |

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## DISSOLVED METALS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09083 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/11/2009 (9B09083-MS1)** | | | | | | **Source: ISB0173-01** | | | | | |
| Aluminum | 451 | 50 | 40 | ug/l | 500 | ND | 90 | 70-130 | | | |
| Arsenic | 481 | 10 | 7.0 | ug/l | 500 | ND | 96 | 70-130 | | | |
| Beryllium | 477 | 2.0 | 0.90 | ug/l | 500 | ND | 95 | 70-130 | | | |
| Boron | 0.499 | 0.050 | 0.020 | mg/l | 0.500 | 0.0277 | 94 | 70-130 | | | |
| Calcium | 65.4 | 0.10 | 0.050 | mg/l | 2.50 | 62.2 | 125 | 70-130 | | | *MHA* |
| Chromium | 476 | 5.0 | 2.0 | ug/l | 500 | ND | 95 | 70-130 | | | |
| Iron | 0.443 | 0.040 | 0.015 | mg/l | 0.500 | ND | 89 | 70-130 | | | |
| Magnesium | 21.4 | 0.020 | 0.012 | mg/l | 2.50 | 18.8 | 105 | 70-130 | | | *MHA* |
| Nickel | 468 | 10 | 2.0 | ug/l | 500 | ND | 94 | 70-130 | | | |
| Selenium | 448 | 10 | 8.0 | ug/l | 500 | ND | 90 | 70-130 | | | |
| Silver | 254 | 10 | 6.0 | ug/l | 250 | ND | 101 | 70-130 | | | |
| Vanadium | 489 | 10 | 3.0 | ug/l | 500 | ND | 98 | 70-130 | | | |
| Zinc | 482 | 20 | 6.0 | ug/l | 500 | 13.0 | 94 | 70-130 | | | |
| **Matrix Spike Analyzed: 02/11/2009 (9B09083-MS2)** | | | | | | **Source: ISB0825-01** | | | | | |
| Aluminum | 496 | 50 | 40 | ug/l | 500 | ND | 99 | 70-130 | | | |
| Arsenic | 504 | 10 | 7.0 | ug/l | 500 | 12.4 | 98 | 70-130 | | | |
| Beryllium | 476 | 2.0 | 0.90 | ug/l | 500 | ND | 95 | 70-130 | | | |
| Boron | 0.577 | 0.050 | 0.020 | mg/l | 0.500 | 0.114 | 93 | 70-130 | | | |
| Calcium | 10.7 | 0.10 | 0.050 | mg/l | 2.50 | 8.30 | 96 | 70-130 | | | |
| Chromium | 479 | 5.0 | 2.0 | ug/l | 500 | 2.40 | 95 | 70-130 | | | |
| Iron | 0.482 | 0.040 | 0.015 | mg/l | 0.500 | ND | 96 | 70-130 | | | |
| Magnesium | 3.79 | 0.020 | 0.012 | mg/l | 2.50 | 1.37 | 97 | 70-130 | | | |
| Nickel | 475 | 10 | 2.0 | ug/l | 500 | ND | 95 | 70-130 | | | |
| Selenium | 455 | 10 | 8.0 | ug/l | 500 | ND | 91 | 70-130 | | | |
| Silver | 251 | 10 | 6.0 | ug/l | 250 | ND | 100 | 70-130 | | | |
| Vanadium | 492 | 10 | 3.0 | ug/l | 500 | 7.61 | 97 | 70-130 | | | |
| Zinc | 494 | 20 | 6.0 | ug/l | 500 | 25.0 | 94 | 70-130 | | | |

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| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09083 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/11/2009 (9B09083-MSD1)** | | | | | | **Source: ISB0173-01** | | | | | |
| Aluminum | 465 | 50 | 40 | ug/l | 500 | ND | 93 | 70-130 | 3 | 20 | |
| Arsenic | 492 | 10 | 7.0 | ug/l | 500 | ND | 98 | 70-130 | 2 | 20 | |
| Beryllium | 483 | 2.0 | 0.90 | ug/l | 500 | ND | 97 | 70-130 | 1 | 20 | |
| Boron | 0.512 | 0.050 | 0.020 | mg/l | 0.500 | 0.0277 | 97 | 70-130 | 3 | 20 | |
| Calcium | 68.3 | 0.10 | 0.050 | mg/l | 2.50 | 62.2 | 241 | 70-130 | 4 | 20 | *MHA* |
| Chromium | 484 | 5.0 | 2.0 | ug/l | 500 | ND | 97 | 70-130 | 2 | 20 | |
| Iron | 0.450 | 0.040 | 0.015 | mg/l | 0.500 | ND | 90 | 70-130 | 2 | 20 | |
| Magnesium | 22.5 | 0.020 | 0.012 | mg/l | 2.50 | 18.8 | 147 | 70-130 | 5 | 20 | *MHA* |
| Nickel | 479 | 10 | 2.0 | ug/l | 500 | ND | 96 | 70-130 | 2 | 20 | |
| Selenium | 465 | 10 | 8.0 | ug/l | 500 | ND | 93 | 70-130 | 4 | 20 | |
| Silver | 254 | 10 | 6.0 | ug/l | 250 | ND | 102 | 70-130 | 0 | 20 | |
| Vanadium | 492 | 10 | 3.0 | ug/l | 500 | ND | 98 | 70-130 | 1 | 20 | |
| Zinc | 489 | 20 | 6.0 | ug/l | 500 | 13.0 | 95 | 70-130 | 1 | 20 | |
| **Batch: 9B12130 Extracted: 02/12/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/13/2009 (9B12130-BLK1)** | | | | | | | | | | | |
| Antimony | ND | 2.0 | 0.20 | ug/l | | | | | | | |
| Cadmium | ND | 1.0 | 0.11 | ug/l | | | | | | | |
| Copper | ND | 2.0 | 0.75 | ug/l | | | | | | | |
| Lead | ND | 1.0 | 0.30 | ug/l | | | | | | | |
| Thallium | ND | 1.0 | 0.20 | ug/l | | | | | | | |
| **LCS Analyzed: 02/13/2009 (9B12130-BS1)** | | | | | | | | | | | |
| Antimony | 75.7 | 2.0 | 0.20 | ug/l | 80.0 | | 95 | 85-115 | | | |
| Cadmium | 76.5 | 1.0 | 0.11 | ug/l | 80.0 | | 96 | 85-115 | | | |
| Copper | 79.0 | 2.0 | 0.75 | ug/l | 80.0 | | 99 | 85-115 | | | |
| Lead | 77.5 | 1.0 | 0.30 | ug/l | 80.0 | | 97 | 85-115 | | | |
| Thallium | 79.2 | 1.0 | 0.20 | ug/l | 80.0 | | 99 | 85-115 | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B12130 Extracted: 02/12/09** | | | | | | | | | | | |
| **Matrix Spike Analyzed: 02/13/2009 (9B12130-MS1)** | | | | | | **Source: ISB0566-01** | | | | | |
| Antimony | 78.9 | 2.0 | 0.20 | ug/l | 80.0 | 0.373 | 98 | 70-130 | | | |
| Cadmium | 75.5 | 1.0 | 0.11 | ug/l | 80.0 | ND | 94 | 70-130 | | | |
| Copper | 79.0 | 2.0 | 0.75 | ug/l | 80.0 | 1.76 | 97 | 70-130 | | | |
| Lead | 75.1 | 1.0 | 0.30 | ug/l | 80.0 | ND | 94 | 70-130 | | | |
| Thallium | 77.0 | 1.0 | 0.20 | ug/l | 80.0 | ND | 96 | 70-130 | | | |
| **Matrix Spike Dup Analyzed: 02/13/2009 (9B12130-MSD1)** | | | | | | **Source: ISB0566-01** | | | | | |
| Antimony | 78.5 | 2.0 | 0.20 | ug/l | 80.0 | 0.373 | 98 | 70-130 | 0 | 20 | |
| Cadmium | 74.9 | 1.0 | 0.11 | ug/l | 80.0 | ND | 94 | 70-130 | 1 | 20 | |
| Copper | 79.6 | 2.0 | 0.75 | ug/l | 80.0 | 1.76 | 97 | 70-130 | 1 | 20 | |
| Lead | 74.4 | 1.0 | 0.30 | ug/l | 80.0 | ND | 93 | 70-130 | 1 | 20 | |
| Thallium | 75.8 | 1.0 | 0.20 | ug/l | 80.0 | ND | 95 | 70-130 | 2 | 20 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B06069 Extracted: 02/06/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/06/2009 (9B06069-BLK1)** | | | | | | | | | | | |
| 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: 02/06/2009 (9B06069-BS1)** | | | | | | | | | | | |
| Chloride | 4.64 | 0.50 | 0.25 | mg/l | 5.00 | | 93 | 90-110 | | | |
| Sulfate | 9.98 | 0.50 | 0.20 | mg/l | 10.0 | | 100 | 90-110 | | | |
| **Matrix Spike Analyzed: 02/06/2009 (9B06069-MS1)** | | | | | | **Source: ISB0573-01** | | | | | |
| Chloride | 905 | 25 | 12 | mg/l | 50.0 | 865 | 81 | 80-120 | | | *MHA* |
| Sulfate | 1550 | 25 | 10 | mg/l | 100 | 1450 | 98 | 80-120 | | | *MHA* |
| **Matrix Spike Dup Analyzed: 02/06/2009 (9B06069-MSD1)** | | | | | | **Source: ISB0573-01** | | | | | |
| Chloride | 889 | 25 | 12 | mg/l | 50.0 | 865 | 50 | 80-120 | 2 | 20 | *MHA* |
| Sulfate | 1520 | 25 | 10 | mg/l | 100 | 1450 | 75 | 80-120 | 2 | 20 | *MHA* |
| **Batch: 9B09095 Extracted: 02/09/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/09/2009 (9B09095-BLK1)** | | | | | | | | | | | |
| Total Cyanide | ND | 0.0050 | 0.0022 | mg/l | | | | | | | |
| **LCS Analyzed: 02/09/2009 (9B09095-BS1)** | | | | | | | | | | | |
| Total Cyanide | 0.193 | 0.0050 | 0.0022 | mg/l | 0.200 | | 97 | 90-110 | | | |
| **Matrix Spike Analyzed: 02/09/2009 (9B09095-MS1)** | | | | | | **Source: ISB0752-01** | | | | | |
| Total Cyanide | 0.201 | 0.0050 | 0.0022 | mg/l | 0.200 | 0.00601 | 97 | 70-115 | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B09095 Extracted: 02/09/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/09/2009 (9B09095-MSD1)** | | | | | | **Source: ISB0752-01** | | | | | |
| Total Cyanide | 0.201 | 0.0050 | 0.0022 | mg/l | 0.200 | 0.00601 | 97 | 70-115 | 0 | 15 | |
| **Batch: 9B11043 Extracted: 02/11/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/11/2009 (9B11043-BLK1)** | | | | | | | | | | | |
| Total Dissolved Solids | ND | 10 | 10 | mg/l | | | | | | | |
| **LCS Analyzed: 02/11/2009 (9B11043-BS1)** | | | | | | | | | | | |
| Total Dissolved Solids | 1010 | 10 | 10 | mg/l | 1000 | | 101 | 90-110 | | | |
| **Duplicate Analyzed: 02/11/2009 (9B11043-DUP1)** | | | | | | **Source: ISB1079-01** | | | | | |
| Total Dissolved Solids | 1970 | 10 | 10 | mg/l | | 1990 | | | 1 | 10 | |
| **Batch: 9B12141 Extracted: 02/12/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/12/2009 (9B12141-BLK1)** | | | | | | | | | | | |
| Total Suspended Solids | ND | 10 | 1.0 | mg/l | | | | | | | |
| **LCS Analyzed: 02/12/2009 (9B12141-BS1)** | | | | | | | | | | | |
| Total Suspended Solids | 998 | 10 | 1.0 | mg/l | 1000 | | 100 | 85-115 | | | |
| **Duplicate Analyzed: 02/12/2009 (9B12141-DUP1)** | | | | | | **Source: ISB0702-01** | | | | | |
| Total Suspended Solids | 102 | 10 | 1.0 | mg/l | | 106 | | | 4 | 10 | |
| **Batch: 9B13054 Extracted: 02/13/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/13/2009 (9B13054-BLK1)** | | | | | | | | | | | |
| Perchlorate | ND | 1.0 | 0.90 | ug/l | | | | | | | |

**TestAmerica Irvine**

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## METHOD BLANK/QC DATA

## INORGANICS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9B13054 Extracted: 02/13/09** | | | | | | | | | | | |
| **LCS Analyzed: 02/13/2009 (9B13054-BS1)** | | | | | | | | | | | |
| Perchlorate | 26.6 | 1.0 | 0.90 | ug/l | 25.0 | | 106 | 85-115 | | | |
| **Matrix Spike Analyzed: 02/13/2009 (9B13054-MS1)** | | | | | | **Source: ISB1195-02** | | | | | |
| Perchlorate | 31.2 | 1.0 | 0.90 | ug/l | 25.0 | 3.82 | 109 | 80-120 | | | |
| **Matrix Spike Dup Analyzed: 02/13/2009 (9B13054-MSD1)** | | | | | | **Source: ISB1195-02** | | | | | |
| Perchlorate | 31.7 | 1.0 | 0.90 | ug/l | 25.0 | 3.82 | 111 | 80-120 | 2 | 20 | |
| **Batch: 9B16034 Extracted: 02/16/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/16/2009 (9B16034-BLK1)** | | | | | | | | | | | |
| Fluoride | 0.0343 | 0.10 | 0.020 | mg/l | | | | | | | *Ja* |
| **LCS Analyzed: 02/16/2009 (9B16034-BS1)** | | | | | | | | | | | |
| Fluoride | 1.00 | 0.10 | 0.020 | mg/l | 1.00 | | 100 | 90-110 | | | |
| **Matrix Spike Analyzed: 02/16/2009 (9B16034-MS1)** | | | | | | **Source: ISB0462-01** | | | | | |
| Fluoride | 1.36 | 0.10 | 0.020 | mg/l | 1.00 | 0.344 | 102 | 80-120 | | | |
| **Matrix Spike Dup Analyzed: 02/16/2009 (9B16034-MSD1)** | | | | | | **Source: ISB0462-01** | | | | | |
| Fluoride | 1.38 | 0.10 | 0.020 | mg/l | 1.00 | 0.344 | 103 | 80-120 | 1 | 20 | |

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Sampled: 02/06/09
Received: 02/06/09

## 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: C9B0701 Extracted: 02/07/09** | | | | | | | | | | | |
| **Blank Analyzed: 02/07/2009 (C9B0701-BLK1)** | | | | | | | | | | | |
| Chlorpyrifos | ND | 1.0 | 0.10 | ug/l | | | | | | | |
| Diazinon | ND | 0.25 | 0.24 | ug/l | | | | | | | |
| *Surrogate: 1,3-Dimethyl-2-nitrobenzene* | *4.99* | | | *ug/l* | *5.00* | | *100* | *70-130* | | | |
| *Surrogate: Triphenylphosphate* | *4.60* | | | *ug/l* | *5.00* | | *92* | *70-130* | | | |
| *Surrogate: Perylene-d12* | *4.02* | | | *ug/l* | *5.00* | | *80* | *70-130* | | | |
| **LCS Analyzed: 02/07/2009 (C9B0701-BS1)** | | | | | | | | | | | **MNR1** |
| Chlorpyrifos | 5.37 | 1.0 | 0.10 | ug/l | 5.00 | | 107 | 70-130 | | | |
| Diazinon | 5.21 | 0.25 | 0.24 | ug/l | 5.00 | | 104 | 70-130 | | | |
| *Surrogate: 1,3-Dimethyl-2-nitrobenzene* | *4.91* | | | *ug/l* | *5.00* | | *98* | *70-130* | | | |
| *Surrogate: Triphenylphosphate* | *5.04* | | | *ug/l* | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: Perylene-d12* | *4.63* | | | *ug/l* | *5.00* | | *93* | *70-130* | | | |
| **LCS Dup Analyzed: 02/07/2009 (C9B0701-BSD1)** | | | | | | | | | | | |
| Chlorpyrifos | 5.62 | 1.0 | 0.10 | ug/l | 5.00 | | 112 | 70-130 | 5 | 10 | |
| Diazinon | 5.34 | 0.25 | 0.24 | ug/l | 5.00 | | 107 | 70-130 | 3 | 39 | |
| *Surrogate: 1,3-Dimethyl-2-nitrobenzene* | *5.03* | | | *ug/l* | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: Triphenylphosphate* | *5.13* | | | *ug/l* | *5.00* | | *103* | *70-130* | | | |
| *Surrogate: Perylene-d12* | *4.54* | | | *ug/l* | *5.00* | | *91* | *70-130* | | | |

**TestAmerica Irvine**

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Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## METHOD BLANK/QC DATA

## MCAWW 245.1

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9043305 Extracted: 02/12/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/12/2009 (D9B100241001D)** | | | | | | **Source: D9B100241001** | | | | | |
| Mercury | 4.61 | 0.2 | 0.027 | ug/L | 5 | 0.064 | 91 | 90-110 | 3 | 10 | |
| **Matrix Spike Analyzed: 02/12/2009 (D9B100241001S)** | | | | | | **Source: D9B100241001** | | | | | |
| Mercury | 4.75 | 0.2 | 0.027 | ug/L | 5 | 0.064 | 94 | 90-110 | 3 | 10 | |
| **Blank Analyzed: 02/12/2009 (D9B120000305B)** | | | | | | **Source:** | | | | | |
| Mercury | 0.036 | 0.2 | 0.027 | ug/L | | | | - | | | *J* |
| **LCS Analyzed: 02/12/2009 (D9B120000305C)** | | | | | | **Source:** | | | | | |
| Mercury | 4.77 | 0.2 | 0.027 | ug/L | 5 | | 95 | 90-110 | | | |

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Received: 02/06/09

## METHOD BLANK/QC DATA

## MCAWW 245.1-DISS

| Analyte | Result | Reporting Limit | MDL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 9043330 Extracted: 02/12/09** | | | | | | | | | | | |
| **Matrix Spike Dup Analyzed: 02/12/2009 (D9B100241001D)** | | | | | | **Source: D9B100241001** | | | | | |
| Mercury | 4.78 | 0.2 | 0.027 | ug/L | 5 | 0.036 | 95 | 90-110 | 1 | 10 | |
| **Matrix Spike Analyzed: 02/12/2009 (D9B100241001S)** | | | | | | **Source: D9B100241001** | | | | | |
| Mercury | 4.81 | 0.2 | 0.027 | ug/L | 5 | 0.036 | 96 | 90-110 | 1 | 10 | |
| **Blank Analyzed: 02/12/2009 (D9B120000330B)** | | | | | | **Source:** | | | | | |
| Mercury | 0.039 | 0.2 | 0.027 | ug/L | | | | - | | | *J* |
| **LCS Analyzed: 02/12/2009 (D9B120000330C)** | | | | | | **Source:** | | | | | |
| Mercury | 4.9 | 0.2 | 0.027 | ug/L | 5 | | 98 | 90-110 | | | |

**TestAmerica Irvine**

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Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## 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 |
|---|---|---|---|---|---|---|
| ISB0717-01 | 1664-HEM | Hexane Extractable Material (Oil & Greas | mg/l | 0.094 | 4.7 | 15 |
| ISB0717-01 | Antimony-200.8 | Antimony | ug/l | 0.43 | 2.0 | 6 |
| ISB0717-01 | Boron-200.7 | Boron | mg/l | 0.019 | 0.050 | 1 |
| ISB0717-01 | Cadmium-200.8 | Cadmium | ug/l | 0.090 | 1.0 | 4 |
| ISB0717-01 | Chloride - 300.0 | Chloride | mg/l | 50 | 10 | 150 |
| ISB0717-01 | Copper-200.8 | Copper | ug/l | 4.10 | 2.0 | 14 |
| ISB0717-01 | Fluoride SM4500F,C | Fluoride | mg/l | 0.26 | 0.10 | 1.6 |
| ISB0717-01 | Lead-200.8 | Lead | ug/l | 2.76 | 1.0 | 5.2 |
| ISB0717-01 | Nickel-200.7 | Nickel | ug/l | 3.61 | 10 | 100 |
| ISB0717-01 | Nitrogen, NO3+NO2 -N | Nitrate/Nitrite-N | mg/l | 0.16 | 0.26 | 10 |
| ISB0717-01 | Perchlorate 314.0 (1ppb_IC6) | Perchlorate | ug/l | 0 | 4.0 | 6 |
| ISB0717-01 | Sulfate-300.0 | Sulfate | mg/l | 22 | 0.50 | 250 |
| ISB0717-01 | TDS - SM2540C | Total Dissolved Solids | mg/l | 209 | 10 | 850 |
| ISB0717-01 | Thallium-200.8 | Thallium | ug/l | 0.020 | 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 | Compliance Limit |
|---|---|---|---|---|---|---|

**TestAmerica Irvine**

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Attention: Bronwyn Kelly

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Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## DATA QUALIFIERS AND DEFINITIONS

| | |
|---|---|
| **B** | Analyte was detected in the associated Method Blank. |
| **Ba** | The analyte was found in the associated blank, as well as in the sample. |
| **C** | Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted. |
| **J** | Estimated Result: Result is less than RL and greater than or equal to the MDL. |
| **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. |
| **L** | Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted. |
| **M1** | The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS). |
| **M13** | The sample spiked had a pH of less than 2. 2-Chloroethylvinylether degrades under acidic conditions. |
| **M2** | The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS). |
| **M7** | The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). |
| **MHA** | Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS). |
| **MNR1** | There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate. |
| **R-2** | The RPD exceeded the acceptance limit. |
| **ND** | Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified. |
| **RPD** | Relative Percent Difference |

## ADDITIONAL COMMENTS

**For 1,2-Diphenylhydrazine:**

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

**TestAmerica Irvine**

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Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

## Certification Summary

### TestAmerica Irvine

| Method | Matrix | Nelac | California |
|---|---|---|---|
| EPA 1664A | Water | X | X |
| EPA 200.7-Diss | Water | X | X |
| EPA 200.7 | Water | X | X |
| EPA 200.8-Diss | Water | X | X |
| EPA 200.8 | Water | X | X |
| EPA 300.0 | Water | X | X |
| EPA 314.0 | Water | X | X |
| EPA 608 | Water | X | X |
| EPA 624 | Water | X | X |
| EPA 625 | Water | X | X |
| Filtration | Water | N/A | N/A |
| SM 2540D | Water | X | X |
| SM 4500-F-C | Water | X | X |
| SM2340B-Diss | Water | | |
| SM2340B | Water | X | X |
| SM2540C | Water | X | |
| SM4500-CN-C,E | Water | X | X |

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

### Subcontracted Laboratories

**Aquatic Testing Laboratories-SUB** *California Cert #1775*
4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnic
Samples: ISB0717-01

Analysis Performed: Bioassay-Acute 96hr
Samples: ISB0717-01

**TestAmerica - Ontario, CA** *California Cert #1169, Arizona Cert #AZ0062, Nevada Cert #CA-242*
1014 E. Cooley Drive, Suite AB - Colton, CA 92324

Method Performed: EPA 525.2
Samples: ISB0717-01

**TestAmerica Irvine**

Joseph Doak
Project Manager

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

Project ID: Annual Outfall 004
Report Number: ISB0717

Sampled: 02/06/09
Received: 02/06/09

**TestAmerica Denver**

4955 Yarrow Street - Arvada, CO 80002

Method Performed: MCAWW 245.1
Samples: ISB0717-01

Method Performed: MCAWW 245.1-DISS
Samples: ISB0717-01

**TestAmerica St. Louis**

13715 Rider Trail North - Earth City, MO 63045

Analysis Performed: Gamma Spec
Samples: ISB0717-01

Analysis Performed: Gross Alpha
Samples: ISB0717-01

Analysis Performed: Gross Beta
Samples: ISB0717-01

Analysis Performed: Radium, Combined
Samples: ISB0717-01

Analysis Performed: Strontium 90
Samples: ISB0717-01

Analysis Performed: Tritium
Samples: ISB0717-01

Analysis Performed: Uranium, Combined
Samples: ISB0717-01

**Vista Analytical** *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta
Samples: ISB0717-01

**TestAmerica Irvine**

Joseph Doak
Project Manager

Test America Version 12/20/07

# CHAIN OF CUSTODY FORM

ISB0717



| Client Name/Address: | Project: |
|---|---|
| MWH-Arcadia<br>618 Michillinda Avenue, Suite 200<br>Arcadia, CA 91007<br>Test America Contact: Joseph Doak | Boeing-SSFL NPDES<br>**Annual Outfall 004**<br>Stormwater at SRE-1 |
| Project Manager: Bronwyn Kelly<br>Sampler: J MANISCALC<br>N BANACH | Phone Number:<br>(626) 568-6691<br>Fax Number:<br>(626) 568-6515 |

| Sample Description | Sample Matrix | Container Type | # of Cont. | Sampling Date/Time | Preservative | Bottle # | Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni, + PP, Hardness as Ca $CO_3$ | TCDD (and all congeners) | Oil & Grease (1664-HEM) | Cl, $SO_4$, $NO_3$+$NO_2$-N, F, Perchlorate | TDS, TSS | VOCs (624), xylenes + PP | VOCs A+A+2CVE | 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) + PP | Acute and Chronic Toxicity | Cyanide | Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, B, V, Tl, Fe, Al, Ni + PP, Hardness as Ca $CO_3$ | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Outfall 004 | W | 1L Poly | 1 | 2-6-09 09:10 | $HNO_3$ | 1A | X | | | | | | | | | | | | | |
| Outfall 004-Dup | W | 1L Poly | 1 | | $HNO_3$ | 1B | X | | | | | | | | | | | | | |
| Outfall 004 | W | 1L Amber | 2 | | None | 2A, 2B | | X | | | | | | | | | | | | |
| Outfall 004 | W | 1L Amber | 2 | | HCl | 3A, 3B | | | X | | | | | | | | | | | |
| Outfall 004 | W | 500 ml Poly | 2 | | None | 4A, 4B | | | | X | | | | | | | | | | |
| Outfall 004 | W | 500 ml Poly | 2 | | None | 5A, 5B | | | | | X | | | | | | | | | |
| Outfall 004 | W | VOAs | 3 | | HCl | 6A, 6B, 6C | | | | | | X | | | | | | | | |
| Outfall 004 | W | VOAs | 3 | | None | 7A, 7B, 7C | | | | | | | X | | | | | | | |
| Outfall 004 | W | 1L Amber | 2 | | None | 8A, 8B | | | | | | | | X | | | | | | |
| Outfall 004 | W | 2.5 Gal Cube<br>500 ml Amber | 1<br>1 | | None<br>None | 9A<br>9B | | | | | | | | | X | | | | | Unfiltered and unpreserved analysis |
| Outfall 004 | W | 1L Amber | 2 | | None | 10A, 10B | | | | | | | | | | X | | | | |
| Outfall 004 | W | 1 Gal Poly | 2 | | None | 11A, 11B | | | | | | | | | | | X | | | |
| Outfall 004 | W | 500ml Poly | 1 | | NaOH | 12 | | | | | | | | | | | | X | | |
| Outfall 004 | W | 1L Poly | 1 | 2-6-09 09:10 | None | 13 | | | | | | | | | | | | | X | Filter w/in 24hrs of receipt at lab |
| Trip Blanks | W | VOAs | 3 | | HCl | 14A, 14B, 14C | | | | | | X | | | | | | | | |
| Trip Blanks | W | VOAs | 3 | | None | 15A, 15B, 15C | | | | | | | X | | | | | | | |

ANALYSIS REQUIRED

Field readings:
Temp = [illegible]51°
pH = 7.4
Time of readings = 09:10

| Relinquished By | Date/Time: | Received By | Date/Time: |
|---|---|---|---|
| 2-6-09 | 1500 | 2/6/09 | 1500 |
| Relinquished By | Date/Time: | Received By | Date/Time: |
| 2/6/09 | 1735 | 2/6/09 | |
| Relinquished By | Date/Time: | Received By | Date/Time: |

TP 2/6/09 1925

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

Sample Integrity: (check)
Intact X On Ice: X 3.5C

Data Requirements: (check)
No Level IV ____ All Level IV ____
NPDES Level IV X

# 176

NPDES - 705

# LABORATORY REPORT

Aquatic Testing Laboratories

*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107
Ventura, CA 93003
(805) 650-0546 FAX (805) 650-0756
*CA DOHS ELAP Cert. No.: 1775*

**Date:** February 15, 2009

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

**Laboratory No.:** A-09020703
**Sample I.D.:** ISB0717-01 (Outfall 004)

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

| | |
|---|---|
| Date Sampled: | 02/06/09 |
| Date Received: | 02/07/09 |
| Temp. Received: | 1.0°C |
| Chlorine (TRC): | 0.0 mg/l |
| Date Tested: | 02/07/09 to 02/14/09 |

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

Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0), *Ceriodaphnia dubia* Survival and Reproduction Test (EPA Method 1002).

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

**Result Summary:**

| **Acute:** | **Survival** | **TUa** |
|---|---|---|
| Fathead Minnow: | 100% | 0.0 |
| **Chronic:** | **NOEC** | **TUc** |
| *Ceriodaphnia* Survival: | 100% | 1.0 |
| *Ceriodaphnia* Reproduction: | 100% | 1.0 |

**Quality Control:** Reviewed and approved by:

Joseph A. LeMay
Laboratory Director

# FATHEAD MINNOW PERCENT SURVIVAL TEST
## EPA Method 2000.0

Aquatic Testing Laboratories

**Lab No.: A-09020703-001**
**Client/ID: TestAmerica - ISB0717-01 (Outfall 004)** **Start Date: 02/07/2009**

### TEST SUMMARY

Species: *Pimephales promelas*.
Age: 13 (1-14) days.
Regulations: NPDES.
Test solution volume: 250 ml.
Feeding: prior to renewal at 48 hrs.
Number of replicates: 2.
Dilution water: Moderately hard reconstituted water.
Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.
Test type: Static-Renewal.
Test Protocol: EPA-821-R-02-012.
Endpoints: Percent Survival at 96 hrs.
Test chamber: 600 ml beakers.
Temperature: 20 +/- 1°C.
Number of fish per chamber: 10.
QA/QC Batch No.: RT-090203.

### TEST DATA

| | | °C | DO | pH | # Dead A | # Dead B | Analyst & Time of Readings |
|---|---|---|---|---|---|---|---|
| INITIAL | Control | 20.7 | 8.8 | 7.7 | 0 | 0 | [illegible] |
| | 100% | 20.1 | 9.6 | 6.4 | 0 | 0 | 1500 |
| 24 Hr | Control | 20.1 | 8.3 | 7.6 | 0 | 0 | [illegible] |
| | 100% | 19.7 | 8.3 | 7.7 | 0 | 0 | 1400 |
| 48 Hr | Control | 19.4 | 7.2 | 7.3 | 0 | 0 | [illegible] |
| | 100% | 19.4 | 6.4 | 7.4 | 0 | 0 | 1500 |
| Renewal | Control | 19.8 | 8.1 | 7.5 | 0 | 0 | [illegible] |
| | 100% | 19.8 | 9.1 | 7.8 | 0 | 0 | 1500 |
| 72 Hr | Control | 19.1 | 8.1 | 7.5 | 0 | 0 | [illegible] |
| | 100% | 19.1 | 6.3 | 7.7 | 0 | 0 | 1400 |
| 96 Hr | Control | 19.1 | 7.3 | 7.2 | 0 | 0 | [illegible] |
| | 100% | 19.1 | 6.9 | 7.2 | 0 | 0 | 1500 |

Comments:
Sample as received: Chlorine: 0.0 mg/l; pH: 6.4; Conductivity: 235 umho; Temp: 1.0°C;
DO: 9.6 mg/l; Alkalinity: 32 mg/l; Hardness: 28 mg/l; $NH_3$-N: 0.4 mg/l.
Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / (No)
Control: Alkalinity: 60 mg/l; Hardness: 93 mg/l; Conductivity: 300 umho.
Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / (No)
Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.
Dissolved Oxygen (DO) readings in mg/l $O_2$.

### RESULTS

Percent Survival In: Control: 100 % 100% Sample: 100 %

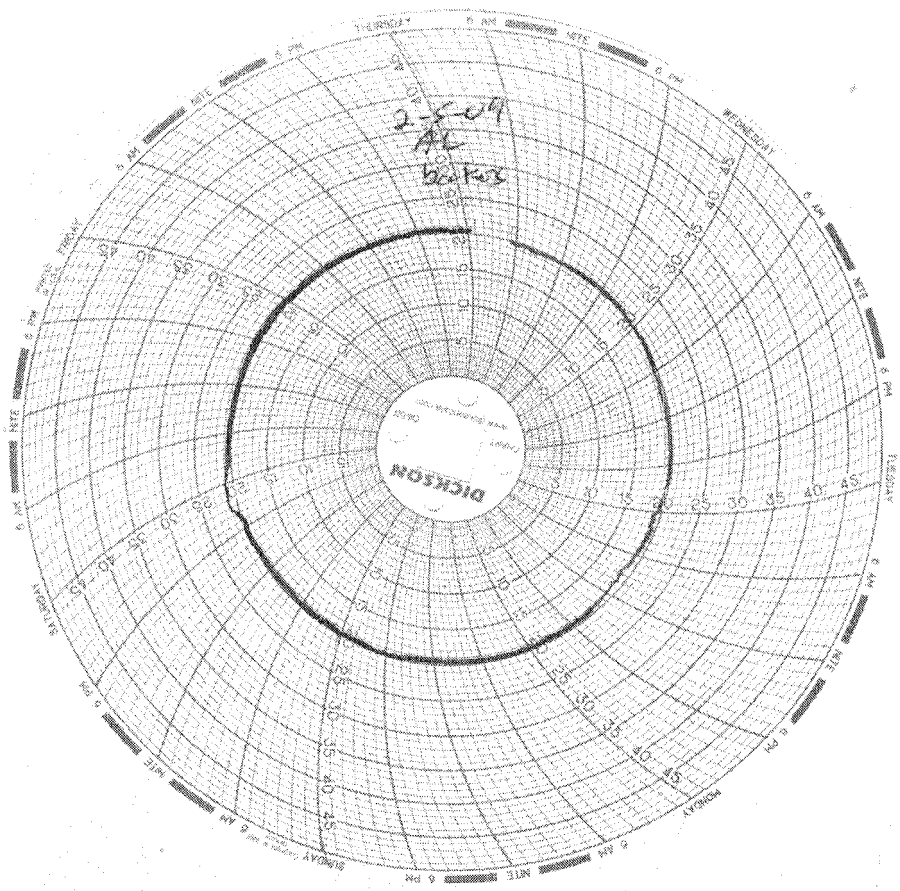
Aquatic
Testing
Laboratories

# *Test Temperature Chart*

## *Test No: A-09020703*

## *Date Tested: 02/07/09 to 02/11/09*

## *Acceptable Range: 20+/- 1°C*




Aquatic
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# *CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST*

- *Test and Results Summary*
- *Data Summary and Statistical Analyses*
- *Raw Test Data: Water Quality & Test Organism Measurements*

# CERIODAPHNIA CHRONIC BIOASSAY
# EPA METHOD 1002.0

Aquatic Testing Laboratories

Lab No.: A-09020703-001
Client/ID: Test America – ISB0717-01 (Outfall 004)

Date Tested: 02/07/09 to 02/14/09

## 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-090203.

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% | 22.6 |
| 100% Sample | 100% | 26.1 |
| * 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 (22.6 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 = 5.8%) |
| Statistically significantly different concentrations relative difference >13% | Pass (no concentration significantly different) |
| Concentration response relationship acceptable | Pass (no significant response at concentration tested) |

## Ceriodaphnia Survival and Reproduction Test-7 Day Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 2/7/2009 15:30 | Test ID: | 9020703 | Sample ID: | Outfall 004 |
| End Date: | 2/14/2009 14:30 | Lab ID: | CAATL-Aquatic Testing Labs | Sample Type: | EFF2-Industrial |
| Sample Date: | 2/6/2009 09:10 | Protocol: | FWCH 4TH-EPA-821-R-02-0 | Test Species: | CD-Ceriodaphnia dubia |
| Comments: | | | | | |

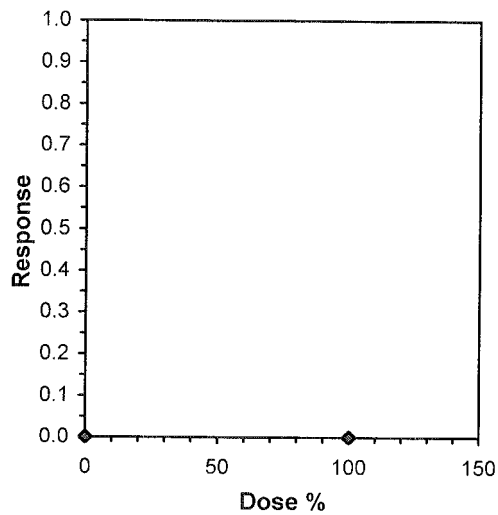
| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| D-Control | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 100 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

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

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

Linear Interpolation (200 Resamples)

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



## Ceriodaphnia Survival and Reproduction Test-Reproduction

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 2/7/2009 15:30 | Test ID: | 9020703 | Sample ID: | Outfall 004 |
| End Date: | 2/14/2009 14:30 | Lab ID: | CAATL-Aquatic Testing Labs | Sample Type: | EFF2-Industrial |
| Sample Date: | 2/6/2009 09:10 | Protocol: | FWCH 4TH-EPA-821-R-02-0 | Test Species: | CD-Ceriodaphnia dubia |
| Comments: | | | | | |

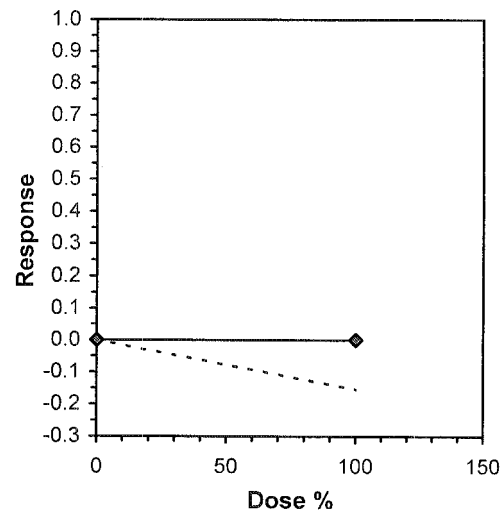
| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| D-Control | 20.000 | 23.000 | 21.000 | 25.000 | 21.000 | 25.000 | 22.000 | 22.000 | 25.000 | 22.000 |
| 100 | 26.000 | 27.000 | 26.000 | 25.000 | 26.000 | 25.000 | 28.000 | 27.000 | 28.000 | 23.000 |

| | | | Transform: Untransformed | | | | | 1-Tailed | | | Isotonic | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD | Mean | N-Mean |
| D-Control | 22.600 | 1.0000 | 22.600 | 20.000 | 25.000 | 8.132 | 10 | | | | 24.350 | 1.0000 |
| 100 | 26.100 | 1.1549 | 26.100 | 23.000 | 28.000 | 5.839 | 10 | -4.636 | 1.734 | 1.309 | 24.350 | 1.0000 |

| Auxiliary Tests | Statistic | | Critical | | Skew | Kurt |
|---|---|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.05) | 0.95018 | | 0.905 | | -0.0285 | -0.7506 |
| F-Test indicates equal variances (p = 0.59) | 1.45455 | | 6.54109 | | | |
| **Hypothesis Test (1-tail, 0.05)** | **MSDu** | **MSDp** | **MSB** | **MSE** | **F-Prob** | **df** |
| Homoscedastic t Test indicates no significant differences | 1.30919 | 0.05793 | 61.25 | 2.85 | 2.1E-04 | 1, 18 |
| Treatments vs D-Control | | | | | | |

**Linear Interpolation (200 Resamples)**

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



# CERIODAPHNIA DUBIA CHRONIC BIOASSAY
## EPA METHOD 1002.0 Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-09020703-001
Client ID: TestAmerica - ISB0717-01 Outfall 004
Start Date: 02/07/2009

| | | DAY 1 | | DAY 2 | | DAY 3 | | DAY 4 | | DAY 5 | | DAY 6 | | DAY 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 hr | 24hr | 0 hr | 24hr | 0 hr | 24hr | 0 hr | 24hr | 0 hr | 24hr | 0 hr | 24hr | 0 hr | 24hr |
| Analyst Initials: | | | | | | | | | | | | | | | |
| Time of Readings: | | 1530 | 1500 | 1500 | 1500 | 1500 | 1430 | 1430 | 1530 | 1530 | 1630 | 1630 | 1600 | 1600 | 1430 |
| Control | DO | 8.4 | 8.2 | 8.3 | 8.5 | 8.6 | 8.8 | 8.5 | 8.9 | 8.6 | 8.8 | 8.3 | 8.2 | 8.2 | 8.1 |
| | pH | 7.6 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.7 | 7.9 | 7.8 | 7.8 | 7.8 | 8.0 | 7.8 | 8.0 |
| | Temp | 24.5 | 24.1 | 24.7 | 24.2 | 25.0 | 24.1 | 24.7 | 24.0 | 25.5 | 24.1 | 25.2 | 24.0 | 25.3 | 24.3 |
| 100% | DO | 10.6 | 9.2 | 10.2 | 8.9 | 9.0 | 9.0 | 9.6 | 9.3 | 10.2 | 8.1 | 10.7 | 7.6 | 9.9 | 7.6 |
| | pH | 6.7 | 7.2 | 6.7 | 7.4 | 6.7 | 7.2 | 6.8 | 7.6 | 7.0 | 7.3 | 7.2 | 7.6 | 7.4 | 7.8 |
| | Temp | 25.1 | 24.2 | 24.6 | 24.3 | 24.2 | 24.0 | 25.2 | 24.1 | 25.7 | 24.0 | 25.0 | 24.1 | 25.8 | 24.2 |

| Additional Parameters | Control | 100% Sample |
|---|---|---|
| Conductivity (umohms) | 300 | 225 |
| Alkalinity (mg/l $CaCO_3$) | 60 | 28 |
| Hardness (mg/l $CaCO_3$) | 93 | 26 |
| Ammonia (mg/l $NH_3$-N) | <0.1 | 0.4 |

**Source of Neonates**

| Replicate: | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| Brood ID: | A1 | B2 | C1 | D2 | G1 | A5 | B4 | G6 | I4 | I6 |

| Sample | Day | Number of Young Produced | | | | | | | | | | Total Live Young | No. Live Adults | Analyst Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | I | J | | | |
| Control | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 3 | 0 | 0 | 0 | 3 | 4 | 0 | 4 | 0 | 0 | 14 | 10 | |
| | 4 | 0 | 5 | 4 | 5 | 0 | 0 | 5 | 0 | 6 | 5 | 30 | 10 | |
| | 5 | 7 | 6 | 0 | 0 | 7 | 7 | 0 | 6 | 6 | 0 | 39 | 10 | |
| | 6 | 0 | 0 | 7 | 8 | 0 | 0 | 7 | 0 | 0 | 6 | 28 | 10 | |
| | 7 | 10 | 12 | 10 | 12 | 11 | 14 | 10 | 12 | 13 | 11 | 115 | 10 | |
| | Total | 20 | 23 | 21 | 25 | 21 | 25 | 22 | 22 | 25 | 22 | 226 | 10 | |
| 100% | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 3 | 0 | 0 | 4 | 3 | 3 | 0 | 4 | 0 | 0 | 17 | 10 | |
| | 4 | 7 | 5 | 4 | 0 | 8 | 7 | 5 | 0 | 6 | 5 | 47 | 10 | |
| | 5 | 16 | 0 | 7 | 9 | 0 | 15 | 8 | 7 | 0 | 0 | 62 | 10 | |
| | 6 | 0 | 12 | 15 | 12 | 15 | 0 | 15 | 0 | 10 | 7 | 86 | 10 | |
| | 7 | (10) | 10 | 0 | 0 | 0 | (16) | 0 | 16 | 12 | 11 | 49 | 10 | |
| | Total | 26 | 27 | 26 | 25 | 26 | 25 | 28 | 27 | 28 | 23 | 261 | 10 | |

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

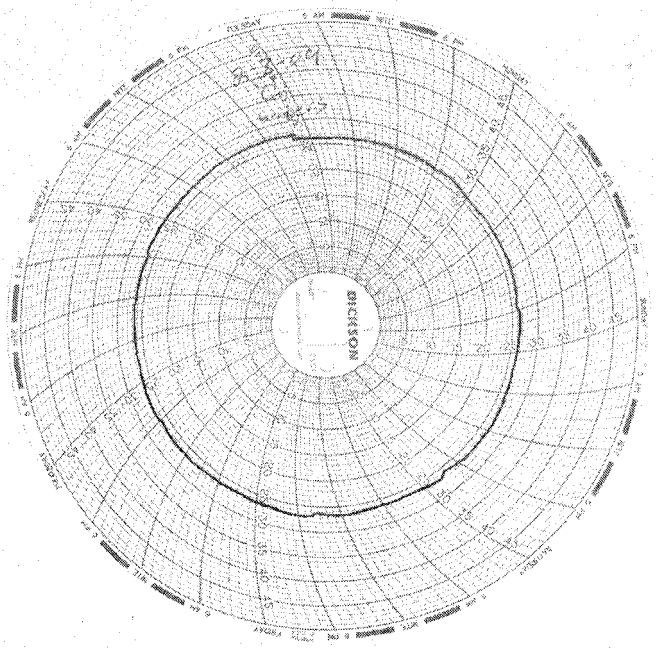
Aquatic Testing Laboratories

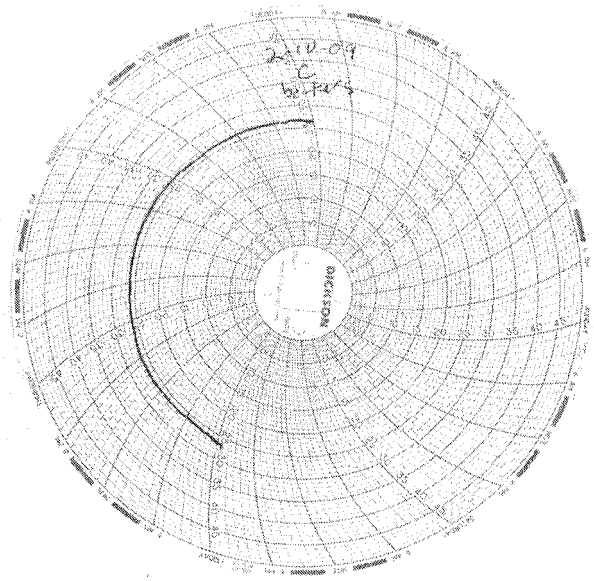
# *Test Temperature Chart*

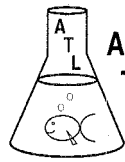
## *Test No: A-09020703*

## *Date Tested: 02/07/09 to 02/14/09*

## *Acceptable Range: 25+/- 1°C*








Aquatic
Testing
Laboratories

# *CHAIN OF CUSTODY*

# SUBCONTRACT ORDER

## TestAmerica Irvine

## ISB0717

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

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

| Analysis | Units | Due | Expires | Comments |
|---|---|---|---|---|
| **Sample ID: ISB0717-01** | **Water** | | Sampled: **02/06/09 09:10** | |
| Bioassay-7 dy Chrnic | N/A | 02/17/09 | 02/07/09 21:10 | Cerio, EPA/821-R02-013, Sub to AqTox Labs |
| Bioassay-Acute 96hr | % Survival | 02/17/09 | 02/07/09 21:10 | FH minnow, EPA/821-R02-012, Sub to AqTest Labs |
| Level 4 Data Package - Out | N/A | 02/17/09 | 03/06/09 09:10 | |
| *Containers Supplied:* | | | | |
| 1 gal Poly (W) | 1 gal Poly (X) | | | outfall 004 |

| | | | |
|---|---|---|---|
| Released By | 2-7-09 8:10 Date/Time | Received By | 2-7-09 8:10 Date/Time |
| Released By | 2-7-09 1225 Date/Time | Received By | 2-7-09 1225 Date/Time |


Aquatic
Testing
Laboratories

# *REFERENCE TOXICANT DATA*

# FATHEAD MINNOW ACUTE
## Method 2000.0
## Reference Toxicant - SDS

Aquatic Testing Laboratories

**QA/QC Batch No.: RT-090203**

### TEST SUMMARY

Species: *Pimephales promel*as.
Age: 14 days old.
Regulations: NPDES.
Test chamber volume: 250 ml.
Feeding: Prior to renewal at 48 hrs.
Temperature: 20 +/- 1°C.
Number of replicates: 2.
Dilution water: MHSF.

Source: In-lab culture.
Test type: Static-Renewal.
Test Protocol: EPA-821-R-02-012.
Endpoints: LC50 at 96 hrs.
Test chamber: 600 ml beakers.
Aeration: None.
Number of organisms per chamber: 10.
Photoperiod: 16/8 hrs light/dark.

### TEST DATA

| | INITIAL | | | 24 Hr | | | | | 48 Hr | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date/Time: | 2-3-09 1430 | | | 2-4-09 1400 | | | | | 2-5-09 1330 | | | | |
| Analyst: | | | | | | | | | | | | | |
| | °C | DO | pH | °C | DO | pH | # Dead A | # Dead B | °C | DO | pH | # Dead A | # Dead B |
| Control | 20.7 | 8.6 | 7.7 | 20.2 | 8.0 | 7.5 | 0 | 0 | 20.0 | 7.5 | 7.9 | 0 | 0 |
| 1.0 mg/l | 20.7 | 8.6 | 7.7 | 20.2 | 7.8 | 7.5 | 0 | 0 | 20.0 | 7.8 | 7.7 | 0 | 0 |
| 2.0 mg/l | 20.7 | 8.7 | 7.7 | 20.2 | 7.5 | 7.4 | 0 | 0 | 20.1 | 8.0 | 7.6 | 0 | 0 |
| 4.0 mg/l | 20.7 | 8.7 | 7.8 | 20.2 | 7.3 | 7.3 | 0 | 0 | 20.1 | 7.8 | 7.6 | 0 | 0 |
| 8.0 mg/l | 20.7 | 8.7 | 7.8 | 20.1 | 5.9 | 7.2 | 10 | 10 | — | — | — | — | — |

| | RENEWAL | | | 72 Hr | | | | | 96 Hr | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date/Time: | 2-5-09 1330 | | | 2-6-09 1300 | | | | | 2-7-09 1400 | | | | |
| Analyst: | | | | | | | | | | | | | |
| | °C | DO | pH | °C | DO | pH | # Dead A | # Dead B | °C | DO | pH | # Dead A | # Dead B |
| Control | 20.8 | 8.8 | 7.7 | 20.1 | 6.6 | 7.5 | 0 | 0 | 19.6 | 6.0 | 7.4 | 0 | 0 |
| 1.0 mg/l | 20.8 | 8.8 | 7.7 | 20.2 | 6.9 | 7.5 | 0 | 0 | 19.5 | 6.2 | 7.4 | 0 | 0 |
| 2.0 mg/l | 20.8 | 8.8 | 7.8 | 20.1 | 6.7 | 7.5 | 0 | 0 | 19.5 | 6.1 | 7.3 | 0 | 0 |
| 4.0 mg/l | 20.8 | 8.9 | 7.8 | 20.2 | 6.9 | 7.5 | 0 | 0 | 19.5 | 6.3 | 7.3 | 0 | 0 |
| 8.0 mg/l | — | — | — | — | — | — | — | — | — | — | — | — | — |

Comments: Control: Alkalinity: 70 mg/l; Hardness: 92 mg/l; Conductivity: 312 umho.
SDS: Alkalinity: 71 mg/l; Hardness: 93 mg/l; Conductivity: 318 umho.

Concentration-response relationship acceptable? (see attached computer analysis):
(Yes) (response curve normal)
No (dose interrupted indicated or non-normal)

## Acute Fish Test-96 Hr Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 2/3/2009 14:30 | Test ID: | RT-090203 | Sample ID: | REF-Ref Toxicant |
| End Date: | 2/7/2009 14:00 | Lab ID: | CAATL-Aquatic Testing Labs | Sample Type: | SDS-Sodium dodecyl sulfate |
| Sample Date: | 2/3/2009 | Protocol: | ACUTE-EPA-821-R-02-012 | Test Species: | PP-Pimephales promelas |
| Comments: | | | | | |

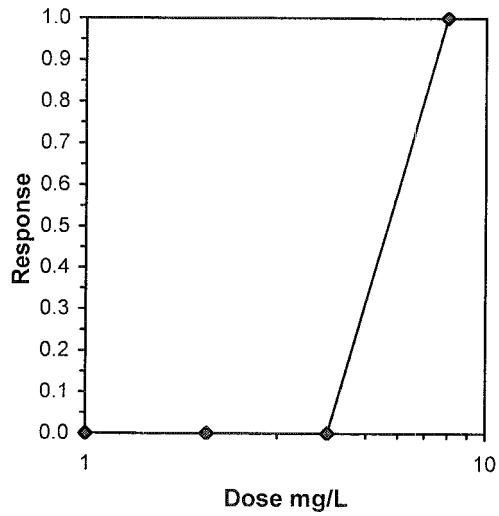
| Conc-mg/L | 1 | 2 |
|---|---|---|
| D-Control | 1.0000 | 1.0000 |
| 1 | 1.0000 | 1.0000 |
| 2 | 1.0000 | 1.0000 |
| 4 | 1.0000 | 1.0000 |
| 8 | 0.0000 | 0.0000 |

| | | | Transform: Arcsin Square Root | | | | | 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 | 1.0000 | 1.0000 | 1.4120 | 1.4120 | 1.4120 | 0.000 | 2 | 0 | 20 |
| 8 | 0.0000 | 0.0000 | 0.1588 | 0.1588 | 0.1588 | 0.000 | 2 | 20 | 20 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Normality of the data set cannot be confirmed | | | | |
| Equality of variance cannot be confirmed | | | | |

### Graphical Method

| Trim Level | EC50 |
|---|---|
| 0.0% | 5.6569 |
| | 5.6569 |





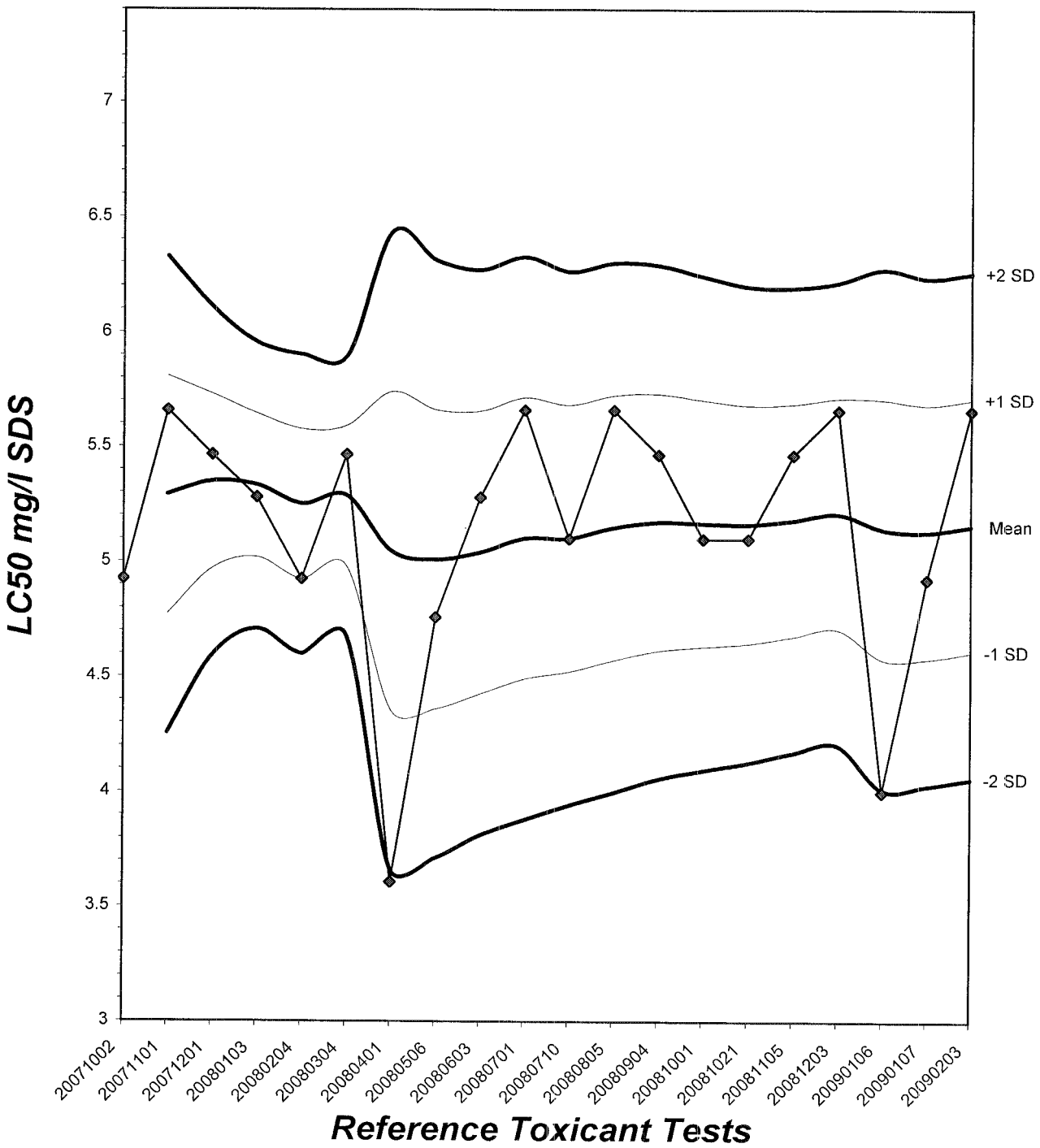

ToxCalc v5.0.23

Reviewed by:

NPDES - 719

# Fathead Minnow Acute Laboratory Control Chart

CV% = 10.7



# TEST ORGANISM LOG

Aquatic Testing Laboratories

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

**QA/QC BATCH NO.:** RT-090203

**SOURCE:** In-Lab Culture

**DATE HATCHED:** 1-20-09

**APPROXIMATE QUANTITY:** 400

**GENERAL APPEARANCE:** good

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

**DATE USED IN LAB:** 2/3/09

**AVERAGE FISH WEIGHT:** 0.006 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.:** 20.7 °C **pH:** 7.7 **Ammonia:** <0.1 mg/l $NH_3$-N

**DO:** 8.6 mg/l **Alkalinity:** 70 mg/l **Hardness:** 92 mg/l

**READINGS RECORDED BY:** _____ **DATE:** 2-7-09

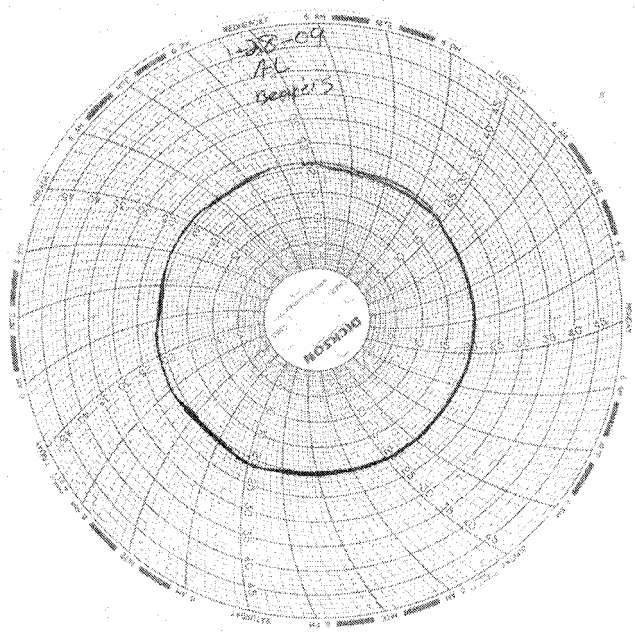
Aquatic Testing Laboratories

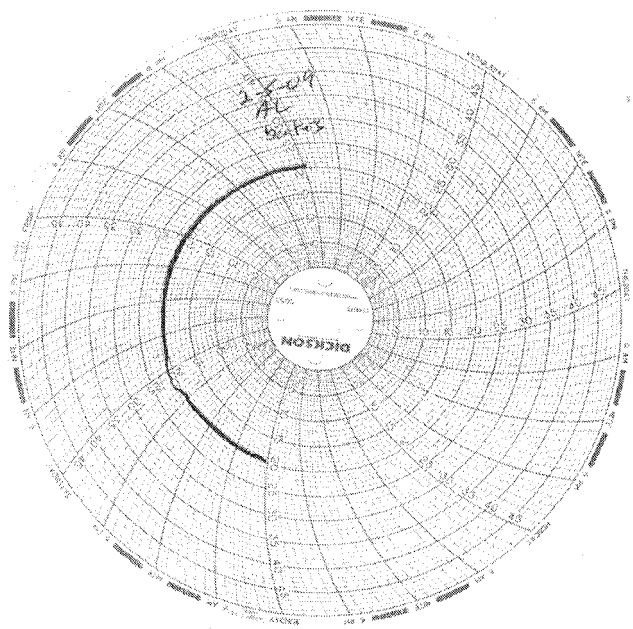
# *Test Temperature Chart*

## *Test No: RT-090203*

## *Date Tested: 02/03/09 to 02/07/09*

## *Acceptable Range: 20+/- 1°C*




Aquatic
Testing
Laboratories

# *CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST*

- *Test and Results Summary*
- *Data Summary and Statistical Analyses*
- *Raw Test Data: Water Quality & Test Organism Measurements*

# CERIODAPHNIA CHRONIC BIOASSAY
## EPA METHOD 1002.0
## REFERENCE TOXICANT - NaCl

Aquatic Testing Laboratories

QA/QC Batch No.: RT-090203

Date Tested: 02/03/09 to 02/10/09

### 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.

### RESULTS SUMMARY

| Sample Concentration | Percent Survival | | Mean Number of Young Per Female | |
|---|---|---|---|---|
| Control | 100% | | 24.1 | |
| 0.25 g/l | 100% | | 25.5 | |
| 0.5 g/l | 100% | | 23.5 | |
| 1.0 g/l | 100% | | 16.4 | * |
| 2.0 g/l | 90% | | 3.5 | * |
| 4.0 g/l | 0% | * | 0 | ** |

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

### CHRONIC TOXICITY

| | |
|---|---|
| Survival LC50 | 2.6 g/l |
| Reproduction IC25 | 0.85 g/l |

### QA/QC TEST ACCEPTABILITY

| Parameter | Result |
|---|---|
| Control survival ≥80% | Pass (100% Survival) |
| ≥15 young per surviving control female | Pass (24.1 young) |
| ≥60% surviving controls had 3 broods | Pass (90% with 3 broods) |
| PMSD <47% for reproduction | Pass (PMSD = 9.6%) |
| Stat. sig. diff. conc. relative difference >13% | Pass (Stat. sig. diff. conc. relative difference= 31.9%) |
| Concentration response relationship acceptable | Pass (Response curve normal) |

## Ceriodaphnia Survival and Reproduction Test-7 Day Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 2/3/2009 16:00 | Test ID: | RT-090203c | Sample ID: | REF-Ref Toxicant |
| End Date: | 2/10/2009 15:30 | Lab ID: | CAATL-Aquatic Testing Labs | Sample Type: | NACL-Sodium chloride |
| Sample Date: | 2/3/2009 | Protocol: | FWCH 4TH-EPA-821-R-02-0 | Test Species: | CD-Ceriodaphnia dubia |
| Comments: | | | | | |

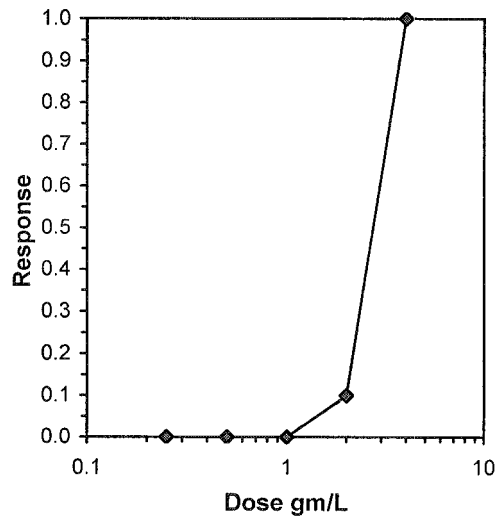
| Conc-gm/L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| D-Control | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 0.25 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000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

| Conc-gm/L | Mean | N-Mean | Resp | Not Resp | Total | N | Fisher's Exact P | 1-Tailed Critical | Number Resp | Total Number |
|---|---|---|---|---|---|---|---|---|---|---|
| D-Control | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | | | 0 | 10 |
| 0.25 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 0.5 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 1 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 2 | 0.9000 | 0.9000 | 1 | 9 | 10 | 10 | 0.5000 | 0.0500 | 1 | 10 |
| 4 | 0.0000 | 0.0000 | 10 | 0 | 10 | 10 | | | 10 | 10 |

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

**Trimmed Spearman-Karber**

| Trim Level | EC50 | 95% CL | |
|---|---|---|---|
| 0.0% | 2.6390 | 2.3138 | 3.0099 |
| 5.0% | 2.6984 | 2.2899 | 3.1798 |
| 10.0% | 2.7216 | 2.5094 | 2.9517 |
| 20.0% | 2.7216 | 2.5094 | 2.9517 |
| Auto-0.0% | 2.6390 | 2.3138 | 3.0099 |





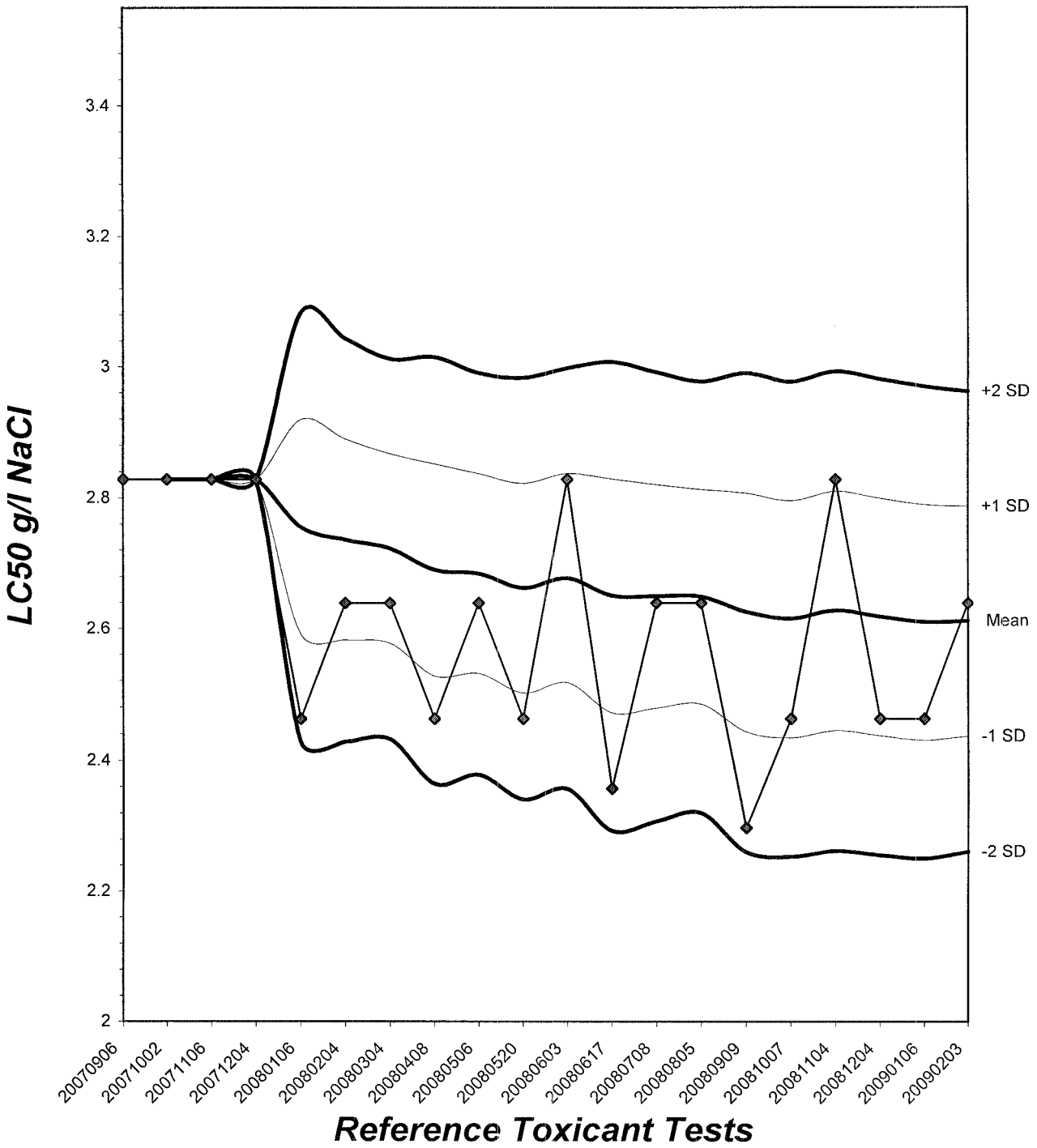

ToxCalc v5.0.23

Reviewed by: _____

NPDES - 725

# Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 6.71



## Ceriodaphnia Survival and Reproduction Test-Reproduction

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 2/3/2009 16:00 | Test ID: | RT-090203c | Sample ID: | REF-Ref Toxicant |
| End Date: | 2/10/2009 15:30 | Lab ID: | CAATL-Aquatic Testing Labs | Sample Type: | NACL-Sodium chloride |
| Sample Date: | 2/3/2009 | Protocol: | FWCH 4TH-EPA-821-R-02-0 | Test Species: | CD-Ceriodaphnia dubia |
| Comments: | | | | | |

| Conc-gm/L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| D-Control | 25.000 | 19.000 | 26.000 | 25.000 | 24.000 | 25.000 | 24.000 | 25.000 | 22.000 | 26.000 |
| 0.25 | 20.000 | 26.000 | 29.000 | 30.000 | 26.000 | 25.000 | 26.000 | 24.000 | 25.000 | 24.000 |
| 0.5 | 26.000 | 18.000 | 20.000 | 22.000 | 23.000 | 25.000 | 27.000 | 24.000 | 30.000 | 20.000 |
| 1 | 10.000 | 9.000 | 20.000 | 21.000 | 23.000 | 20.000 | 10.000 | 22.000 | 19.000 | 10.000 |
| 2 | 2.000 | 2.000 | 4.000 | 2.000 | 5.000 | 5.000 | 2.000 | 6.000 | 5.000 | 2.000 |
| 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

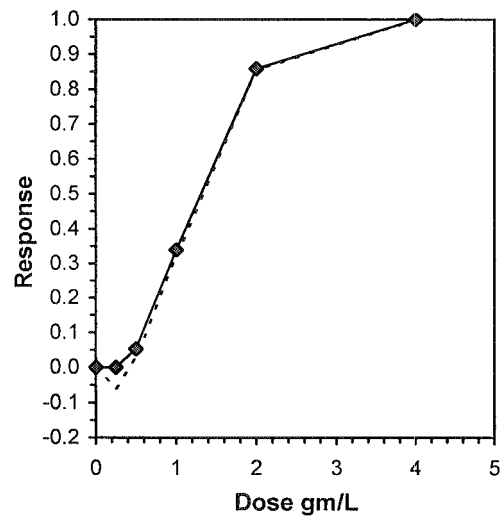
| | | | Transform: Untransformed | | | | | Rank | 1-Tailed | Isotonic | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Conc-gm/L | Mean | N-Mean | Mean | Min | Max | CV% | N | Sum | Critical | Mean | N-Mean |
| D-Control | 24.100 | 1.0000 | 24.100 | 19.000 | 26.000 | 8.846 | 10 | | | 24.800 | 1.0000 |
| 0.25 | 25.500 | 1.0581 | 25.500 | 20.000 | 30.000 | 10.819 | 10 | 121.00 | 76.00 | 24.800 | 1.0000 |
| 0.5 | 23.500 | 0.9751 | 23.500 | 18.000 | 30.000 | 15.571 | 10 | 98.50 | 76.00 | 23.500 | 0.9476 |
| *1 | 16.400 | 0.6805 | 16.400 | 9.000 | 23.000 | 35.578 | 10 | 62.00 | 76.00 | 16.400 | 0.6613 |
| *2 | 3.500 | 0.1452 | 3.500 | 2.000 | 6.000 | 47.140 | 10 | 55.00 | 76.00 | 3.500 | 0.1411 |
| 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 normal distribution (p > 0.05) | 0.95819 | 0.947 | -0.3265 | -0.1582 |
| Bartlett's Test indicates unequal variances (p = 2.14E-03) | 16.7726 | 13.2767 | | |

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

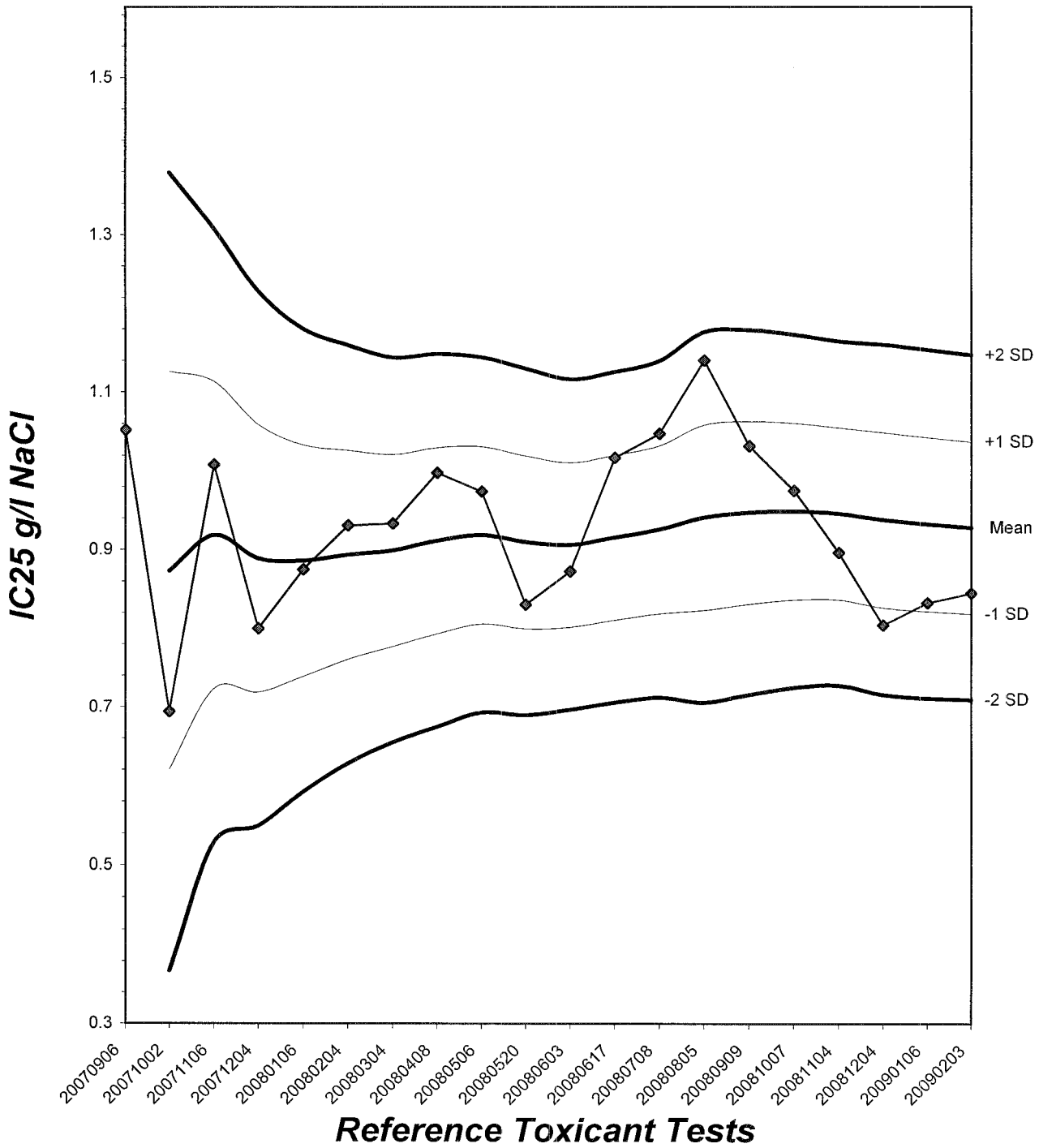
### Linear Interpolation (200 Resamples)

| Point | gm/L | SD | 95% CL | | Skew |
|---|---|---|---|---|---|
| IC05 | 0.4885 | 0.0860 | 0.3398 | 0.6005 | -0.0581 |
| IC10 | 0.5831 | 0.0780 | 0.4322 | 0.7065 | 0.2232 |
| IC15 | 0.6704 | 0.0835 | 0.5271 | 0.8274 | 0.7408 |
| IC20 | 0.7577 | 0.0888 | 0.6245 | 0.9501 | 0.7504 |
| IC25 | 0.8451 | 0.0959 | 0.7133 | 1.0505 | 0.6224 |
| IC40 | 1.1178 | 0.1068 | 0.9221 | 1.2861 | -0.1220 |
| IC50 | 1.3101 | 0.0961 | 1.0946 | 1.4453 | -0.6206 |



# Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 11.8



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

Aquatic Testing Laboratories

QA/QC No.: RT-090203

Start Date:02/03/2009

| Sample | Day | Number of Young Produced | | | | | | | | | | Total Live Young | No. Live Adults | Analyst Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | I | J | | | |
| Control | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 3 | 0 | 0 | 5 | 4 | 4 | 3 | 4 | 3 | 4 | 30 | 10 | |
| | 4 | 8 | 3 | 4 | 7 | 6 | 7 | 0 | 6 | 0 | 7 | 48 | 10 | |
| | 5 | 0 | 0 | 10 | ~~12~~ | 0 | 14 | 7 | 0 | 6 | 0 | 37 | 10 | |
| | 6 | 14 | 16 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 15 | 58 | 10 | |
| | 7 | (13) | 0 | 12 | 0 | 14 | (12) | 14 | 15 | 13 | 0 | 68 | 10 | |
| | Total | 25 | 19 | 26 | 25 | 24 | 25 | 24 | 25 | 22 | 26 | 241 | 10 | |
| 0.25 g/l | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 3 | 0 | 0 | 0 | 5 | 0 | 4 | 3 | 0 | 0 | 15 | 10 | |
| | 4 | 7 | 4 | 3 | 4 | 0 | 3 | 0 | 7 | 4 | 3 | 35 | 10 | |
| | 5 | 0 | ~~8~~ | 11 | 10 | 7 | 12 | 7 | 14 | 7 | 6 | 82 | 10 | |
| | 6 | 0 | 0 | 15 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 10 | |
| | 7 | 10 | 14 | 0 | 0 | 14 | 10 | 15 | (12) | 14 | 15 | 92 | 10 | |
| | Total | 20 | 26 | 29 | 30 | 26 | 25 | 26 | 24 | 25 | 24 | 255 | 10 | |
| 0.5 g/l | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 4 | 3 | 0 | 15 | 10 | |
| | 4 | 5 | 6 | 5 | 4 | 0 | 0 | 4 | 0 | 0 | 3 | 27 | 10 | |
| | 5 | 7 | 0 | 0 | 8 | 6 | 7 | 9 | 6 | 11 | 7 | 61 | 10 | |
| | 6 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 16 | 10 | 40 | 10 | |
| | 7 | 14 | 12 | 15 | 10 | 13 | 0 | 14 | 14 | 0 | 0 | 92 | 10 | |
| | Total | 26 | 18 | 20 | 22 | 23 | 25 | 27 | 24 | 30 | 20 | 235 | 10 | |

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-090203

Start Date:02/03/2009

| Sample | Day | Number of Young Produced | | | | | | | | | | Total Live Young | No. Live Adults | Analyst Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | I | J | | | |
| 1.0 g/l | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 4 | 4 | 3 | 4 | 3 | 2 | 4 | 3 | 2 | 3 | 4 | 32 | 10 | |
| | 5 | 0 | 0 | 6 | 11 | 10 | 7 | 0 | 11 | 8 | 0 | 53 | 10 | |
| | 6 | 6 | 0 | 0 | 0 | 11 | 0 | 7 | 0 | 0 | 6 | 30 | 10 | |
| | 7 | 0 | 6 | 10 | 7 | 0 | 9 | 0 | 9 | 8 | 0 | 49 | 10 | |
| | Total | 10 | 9 | 20 | 21 | 23 | 20 | 10 | 22 | 19 | 10 | 164 | 10 | |
| 2.0 g/l | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 7 | 10 | |
| | 5 | 0 | 2 | 2 | 0 | 3 | 2 | 2 | 0 | 0 | 0 | 11 | 10 | |
| | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 2 | 0 | 8 | 10 | |
| | 7 | 0 | X | 2 | 0 | 2 | 3 | 0 | 0 | 0 | 2 | 9 | 9 | |
| | Total | 2 | 2 | 4 | 2 | 5 | 5 | 2 | 6 | 5 | 2 | 35 | 9 | |
| 4.0 g/l | 1 | X | X | X | X | X | X | X | X | X | X | 0 | 0 | |
| | 2 | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 3 | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 4 | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 5 | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 6 | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 7 | — | — | — | — | — | — | — | — | — | — | — | — | |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

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

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

Aquatic Testing Laboratories

QA/QC No.: RT-090203

Start Date:02/03/2009

| | | DAY 1 | | DAY 2 | | DAY 3 | | DAY 4 | | DAY 5 | | DAY 6 | | DAY 7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Initial | Final | Initial | Final | Initial | Final | Initial | Final | Initial | Final | Initial | Final | Initial | Final |
| Analyst Initials: | | | | | | | | | | | | | | | |
| Time of Readings: | | 1600 | 1520 | 1500 | 1500 | 1500 | 1520 | 1500 | 1700 | 1700 | 1500 | 1500 | 1530 | 1530 | 1530 |
| Control | DO | 8.3 | 8.8 | 8.8 | 9.2 | 8.4 | 8.8 | 8.5 | 8.7 | 8.4 | 8.1 | 8.3 | 8.5 | 8.5 | 8.4 |
| | pH | 7.8 | 8.1 | 8.2 | 8.0 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 |
| | Temp | 25.0 | 24.1 | 24.2 | 24.0 | 25.5 | 24.1 | 25.5 | 24.0 | 25.0 | 24.1 | 24.7 | 24.6 | 25.0 | 24.1 |
| 0.25 g/l | DO | 8.4 | 8.7 | 8.8 | 9.1 | 8.4 | 8.7 | 8.5 | 8.6 | 8.4 | 8.3 | 8.4 | 8.2 | 8.5 | 8.3 |
| | pH | 7.8 | 8.1 | 8.2 | 8.0 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.8 | 7.8 | 7.7 | 7.8 |
| | Temp | 25.0 | 24.2 | 24.2 | 24.1 | 25.5 | 24.3 | 25.5 | 24.2 | 25.0 | 24.3 | 24.8 | 24.2 | 24.8 | 24.4 |
| 0.5 g/l | DO | 8.4 | 8.7 | 8.7 | 9.1 | 8.5 | 8.7 | 8.4 | 8.6 | 8.3 | 8.2 | 8.3 | 8.3 | 8.4 | 8.2 |
| | pH | 7.8 | 8.2 | 8.2 | 8.0 | 7.8 | 7.8 | 7.7 | 7.9 | 7.8 | 7.7 | 7.8 | 7.8 | 7.7 | 7.7 |
| | Temp | 25.0 | 24.0 | 24.2 | 24.0 | 25.5 | 24.1 | 25.4 | 24.0 | 25.0 | 24.2 | 24.9 | 24.4 | 24.7 | 24.2 |
| 1.0 g/l | DO | 8.4 | 8.8 | 8.7 | 9.0 | 8.5 | 8.8 | 8.4 | 8.7 | 8.3 | 8.1 | 8.4 | 8.4 | 8.2 | 8.3 |
| | pH | 7.8 | 8.2 | 8.2 | 8.1 | 7.8 | 7.8 | 7.8 | 7.9 | 7.8 | 7.8 | 7.9 | 7.8 | 7.7 | 7.7 |
| | Temp | 25.0 | 24.0 | 24.1 | 24.3 | 25.4 | 24.2 | 25.3 | 24.1 | 25.0 | 24.3 | 24.6 | 24.3 | 24.6 | 24.1 |
| 2.0 g/l | DO | 8.4 | 8.9 | 8.7 | 9.1 | 8.5 | 8.9 | 8.3 | 8.9 | 8.3 | 8.2 | 8.5 | 8.2 | 8.3 | 8.4 |
| | pH | 7.9 | 8.2 | 8.2 | 8.1 | 7.8 | 7.9 | 7.8 | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.7 |
| | Temp | 24.9 | 24.3 | 24.0 | 24.0 | 25.3 | 24.2 | 25.1 | 24.2 | 25.0 | 24.4 | 25.0 | 24.4 | 24.3 | 24.2 |
| 4.0 g/l | DO | 8.5 | 9.0 | — | — | — | — | — | — | — | — | — | — | — | — |
| | pH | 7.9 | 8.2 | — | — | — | — | — | — | — | — | — | — | — | — |
| | Temp | 24.8 | 24.2 | — | — | — | — | — | — | — | — | — | — | — | — |

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

| Additional Parameters | Control | | | High Concentration | | |
|---|---|---|---|---|---|---|
| | Day 1 | Day 3 | Day 5 | Day 1 | Day 3 | Day 5 |
| Conductivity (µS) | 312 | 300 | 305 | 6420 | 3350 | 3500 |
| Alkalinity (mg/l $CaCO_3$) | 70 | 60 | 60 | 71 | 64 | 63 |
| Hardness (mg/l $CaCO_3$) | 92 | 93 | 92 | 93 | 93 | 93 |

**Source of Neonates**

| Replicate: | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| Brood ID: | A1 | B2 | C3 | D2 | E3 | F2 | G1 | H3 | I1 | J2 |

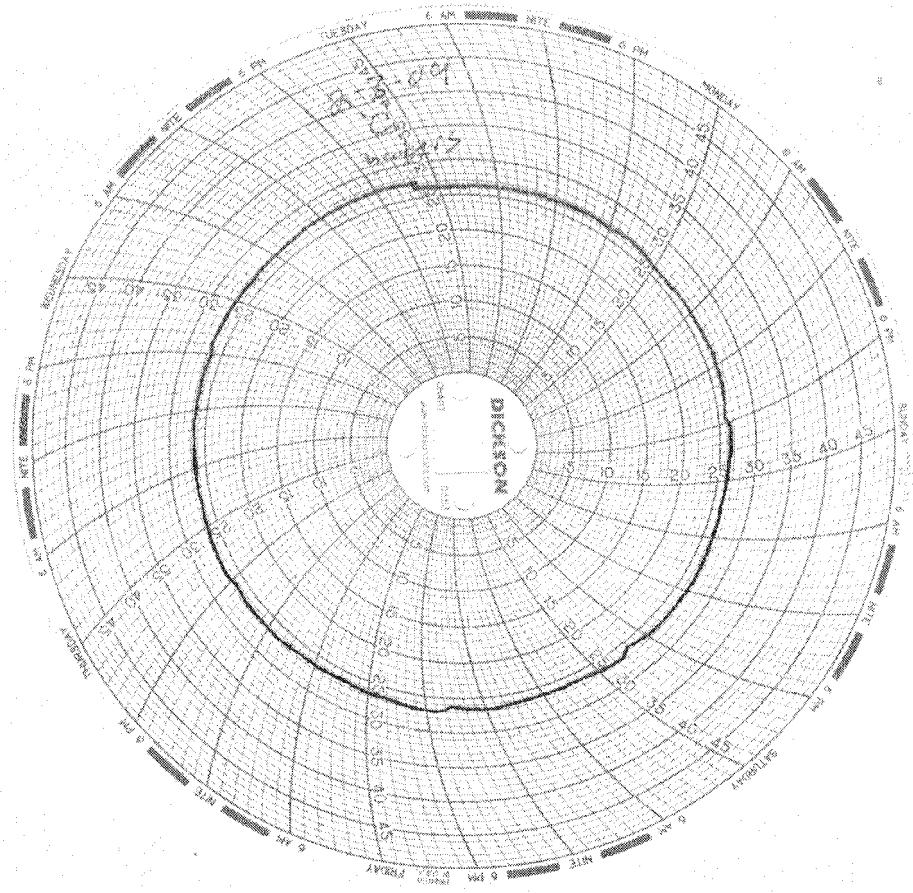
Aquatic Testing Laboratories

# *Test Temperature Chart*

## *Test No: RT-090203*

## *Date Tested: 02/03/09 to 02/10/09*

## *Acceptable Range: 25+/- 1°C*



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

# ANALYTICAL REPORT

## MWH-Pasadena / Boeing

Lot D9B100268

Project ISB0717

Joseph Doak
17461 Derian Avenue
Suite 100
Irvine, CA 92614

TestAmerica Laboratories, Inc.

for Dilea Griego
DiLea Griego
Project Manager

February 17, 2009

# Case Narrative

Enclosed is the report for one sample received at TestAmerica Laboratories, Inc. – Denver laboratory on February 10, 2009. The results included in this report relate only to the samples in this report and have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

This report may include reporting limits (RLs) less than the Denver laboratory's standard reporting limits. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Dilution factors and footnotes have been provided to assist in the interpretation of the results. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Laboratories, Inc. utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. A summary of quality control parameters is provided below.



# Quality Control Summary for Lot D9B100268

**Sample Receiving**

The cooler temperature for the sample received on February 10, 2009 at the Denver laboratory was 1.1°C.

**Total Mercury –Method 245.1**

A low level of Mercury is present in the method blank associated with QC batch 9043305. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated results in the analytical report have been flagged "B". Usability of the sample data is not compromised.

No other anomalies were observed.

**Dissolved Mercury –Method 245.1**

A low level of Mercury is present in the method blank associated with QC batch 9043330. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated results in the analytical report have been flagged "B". Usability of the sample data is not compromised.

No other anomalies were observed.

# Quality Control Definitions of Qualifiers

| Qualifier | Definition |
|---|---|
| U | Result is less than the method detection limit (MDL). |
| B | Organics: Method blank contamination. The associated method blank contains the target analyte at a reportable level.<br>Inorganics: Estimated result. Result is less than the RL |
| J | Organics: Estimated result. Result is less than RL<br>Inorganics: Method blank contamination. The associated method blank contains the target analyte at a reportable level. |
| E | Estimated result. Result concentrations exceed the calibration range. |
| p | Relative Percent Difference (RPD) is outside control limits. |
| * | Surrogate or Relative Percent Difference (RPD) is outside control limits. |
| DIL | The concentration is estimated or not reported due to dilution. |
| COL | More than 40% difference between the primary and confirmation detector results. The lower of the two results is reported. |
| CHI | More than 40% difference between the primary and confirmation detector results. The higher of the two results is reported. |
| L | Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present. |
| a | Spiked analyte recovery is outside stated control limits. |
| N | Spiked analyte recovery is outside stated control limits. |
| NC | The recovery and/or RPD were not calculated. |
| MSB | The recovery and/or RPD were not calculated because the sample amount was greater than four times the spike amount. |

# EXECUTIVE SUMMARY - Detection Highlights

**D9B100268**

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | ANALYTICAL METHOD |
|---|---|---|---|---|
| **ISB0717-01 02/06/09 09:10 001** | | | | |
| Mercury - DISSOLVED | 0.054 J,B | 0.20 | ug/L | MCAWW 245.1 |
| Mercury | 0.10 J,B | 0.20 | ug/L | MCAWW 245.1 |

# METHODS SUMMARY

**D9B100268**

| PARAMETER | ANALYTICAL METHOD | PREPARATION METHOD |
|---|---|---|
| Dissolved Mercury (CVAA) | MCAWW 245.1 | MCAWW 245.1 |
| Mercury (Manual Cold Vapor Technique) | MCAWW 245.1 | MCAWW 245.1 |

**References:**


MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

# METHOD / ANALYST SUMMARY

**D9B100268**

| ANALYTICAL METHOD | ANALYST | ANALYST ID |
|---|---|---|
| MCAWW 245.1 | Christopher Grisdale | 9582 |

**References:**

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

# SAMPLE SUMMARY

**D9B100268**

| WO # | SAMPLE# | CLIENT SAMPLE ID | SAMPLED DATE | SAMP TIME |
|---|---|---|---|---|
| K61V5 | 001 | ISB0717-01 | 02/06/09 | 09:10 |

**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.

# QC DATA ASSOCIATION SUMMARY

**D9B100268**

Sample Preparation and Analysis Control Numbers

| SAMPLE# | MATRIX | ANALYTICAL METHOD | LEACH BATCH # | PREP BATCH # | MS RUN# |
|---|---|---|---|---|---|
| 001 | WATER | MCAWW 245.1 | | 9043305 | 9043172 |
| | WATER | MCAWW 245.1 | | 9043330 | 9043187 |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# Metals

CLP-Like Forms

Lot ID: D9B100268

Client: TA Irvine

Method: 245.1

Associated Samples: -001

Batch: 9043305

## Total Metals Analysis
### COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9B100268

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

| Sample ID. | Lab Sample No. |
|---|---|
| ISB0717-01 | D9B100268-001 |

| | | |
|---|---|---|
| Were ICP interelement corrections applied? | Yes/No | YES |
| Were ICP background corrections applied? | Yes/No | YES |
| If yes-were raw data generated before application of background corrections? | Yes/No | NO |

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 2/16/09 Title: Metals Analyst

COVER PAGE - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Total Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | ISB0717-01 |
| **Lot/SDG Number:** | D9B100268 | **Lab Sample ID:** | D9B100268-001 |
| **Matrix:** | WATER | **Lab WorkOrder:** | K61V5 |
| **% Moisture:** | N/A | **Date/Time Collected:** | 02/06/09 09:10 |
| **Basis:** | Wet | **Date/Time Received:** | 02/10/09 09:00 |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043305 | **Date/Time Analyzed:** | 02/12/09 18:40 |
| **Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte | Conc. | MDL | RL | Q |
|---|---|---|---|---|---|
| 7439-97-6 | Mercury | **0.10** | 0.027 | 0.20 | J B |

*Form 1 Analysis Data Sheet Equivalent*

# Total Metals Analysis

-2A-

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Mercury | 7.000 | 6.914 | 98.8 | 5.000 | 4.934 | 98.7 | 4.986 | 99.7 | CV |

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

# Total Metals Analysis

-2A-

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | M |
| Mercury | | | | 5.000 | 4.966 | 99.3 | | | CV |

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

# Total Metals Analysis
## -2B-
## CRDL STANDARD FOR AA AND ICP

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9B100268

AA CRDL Standard Source: Ultra Scientific

ICP CRDL Standard Source:

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Mercury | 0.200 | 0.21300 | 106.5 | | | | | |

Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Total Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | |
| **Lot/SDG Number:** | D9B100268 | **Lab Sample ID:** | D9B120000-305B |
| **Matrix:** | WATER | **Lab WorkOrder:** | K64MV |
| **% Moisture:** | | **Date/Time Collected:** | |
| **Basis:** | Wet | **Date/Time Received:** | |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043305 | **Date/Time Analyzed:** | 02/12/09 18:03 |
| **Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte | Conc. | MDL | RL | Q |
|---|---|---|---|---|---|
| 7439-97-6 | Mercury | **0.036** | 0.027 | 0.20 | J |

*Form 3 Prep Blank Equivalent*

# Total Metals Analysis

-3-

## BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | Preparation Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.027 | U | 0.027 | U | 0.027 | U | 0.027 | U | 0.036 | B | CV |

Comments:

Form III - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Total Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | LAB MS/MSD |
| **Lot/SDG Number:** | D9B100268 | **MS Lab Sample ID:** | D9B100241-001S |
| **Matrix:** | WATER | **MS Lab WorkOrder:** | K61L8 |
| **% Moisture:** | N/A | **Date/Time Collected:** | 02/07/09 08:50 |
| **Basis:** | Wet | **Date/Time Received:** | 02/10/09 09:00 |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043305 | **Date/Time Analyzed:** | 02/12/09 18:10 |
| **MS Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **MS Dilution Factor:** | 1 | | |

| Analyte | Spike Amount | Sample Result | C | MS Result | C | % Rec | Q | QC Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | 5.00 | 0.064 | J B | 4.75 | | 94 | | 90 - 110 |

*Form 5A MS Analysis Data Sheet Equivalent*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Total Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | LAB MS/MSD |
| **Lot/SDG Number:** | D9B100268 | **MSD Lab Sample ID:** | D9B100241-001D |
| **Matrix:** | WATER | **MSD Lab WorkOrder:** | K61L8 |
| **% Moisture:** | N/A | **Date/Time Collected:** | 02/07/09 08:50 |
| **Basis:** | Wet | **Date/Time Received:** | 02/10/09 09:00 |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043305 | **Date/Time Analyzed:** | 02/12/09 18:12 |
| **MSD Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **MSD Dilution Factor:** | 1 | | |

| Analyte | Spike Amount | Sample Result | C | MSD Result | C | % Rec | Q | RPD | Q | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | % Rec | RPD |
| Mercury | 5.00 | 0.064 | J B | 4.61 | | 91 | | 3.0 | | 90 - 110 | 10 |

*Form 5A MSD Analysis Data Sheet Equivalent*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Total Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | |
| **Lot/SDG Number:** | D9B100268 | **Lab Sample ID:** | D9B120000-305C |
| **Matrix:** | WATER | **Lab WorkOrder:** | K64MV |
| **% Moisture:** | N/A | **Date/Time Collected:** | |
| **Basis:** | Wet | **Date/Time Received:** | |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043305 | **Date/Time Analyzed:** | 02/12/09 18:05 |
| **Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **Dilution Factor:** | 1 | | |

| Analyte | True | Found | %Rec | Q | Limits |
|---|---|---|---|---|---|
| Mercury | 5.00 | 4.77 | 95 | | 90 - 110 |

*Form 7 LCS Analysis Data Sheet Equivalent*

## Total Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

ICP ID Number: _____ Date: 12/26/2008

Flame AA ID Number: Cetac M7500 Hg

Furnace AA ID Number:

| Analyte | Wave-length (nm) | Back-ground | PQL (ug/L) | MDL (ug/L) | M |
|---|---|---|---|---|---|
| Mercury | 253.70 | | 0.20 | 0.027 | CV |

Comments: _____

Form X - IN

## Total Metals Analysis

-13-

### PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Method: CV Prep Method: _____

| Sample ID | Preparation Date | Initial Volume | Final Volume(mL) |
|---|---|---|---|
| INTRA-LAB QC | 2/12/2009 | 10.0 | 10.0 |
| LAB MS/MSD MS | 2/12/2009 | 10.0 | 10.0 |
| LAB MS/MSD MSD | 2/12/2009 | 10.0 | 10.0 |
| ISB0717-01 | 2/12/2009 | 10.0 | 10.0 |
| MB9043305 | 2/12/2009 | 10.0 | 10.0 |
| Check Sample | 2/12/2009 | 10.0 | 10.0 |

Comments:

Form XIII - IN

# Total Metals Analysis
-14-

## ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9B100268

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 2/12/2009 End Date: 2/12/2009

| Sample ID. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Cal Blank | 1.00 | 17:29 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std1 | 1.00 | 17:31 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std2 | 1.00 | 17:33 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std3 | 1.00 | 17:36 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std4 | 1.00 | 17:38 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std5 | 1.00 | 17:40 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std6 | 1.00 | 17:43 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICB | 1.00 | 17:52 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICV | 1.00 | 17:54 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| RL | 1.00 | 17:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 17:59 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 18:01 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| MB9043305 | 1.00 | 18:03 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Check Sample | 1.00 | 18:05 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| INTRA-LAB QC | 1.00 | 18:08 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LAB MS/MSD MS | 1.00 | 18:10 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LAB MS/MSD MSD | 1.00 | 18:12 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 18:26 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 18:28 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ISB0717-01 | 1.00 | 18:40 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 18:54 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 18:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# Dissolved Metals

CLP-Like Forms

Lot ID: D9B100268

Client: TA Irvine

Method: 245.1

Associated Samples: -001

Batch: 9043330

## Dissolved Metals Analysis

### COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

Contract: TestAmerica Irvine SDG No.: D9B100268

Lab Code: _____ Case No.: _____ SAS No.: _____

SOW No.: _____

| Sample ID. | Lab Sample No. |
|---|---|
| ISB0717-01 | D9B100268-001 |

| | | |
|---|---|---|
| Were ICP interelement corrections applied? | Yes/No | YES |
| Were ICP background corrections applied? | Yes/No | YES |
| If yes-were raw data generated before application of background corrections? | Yes/No | NO |

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Janice Collins Name: Janice Collins

Date: 2/16/09 Title: Metals Analyst

COVER PAGE - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Dissolved Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | ISB0717-01 |
| **Lot/SDG Number:** | D9B100268 | **Lab Sample ID:** | D9B100268-001 |
| **Matrix:** | WATER | **Lab WorkOrder:** | K61V5 |
| **% Moisture:** | N/A | **Date/Time Collected:** | 02/06/09 09:10 |
| **Basis:** | Wet | **Date/Time Received:** | 02/10/09 09:00 |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043330 | **Date/Time Analyzed:** | 02/12/09 19:19 |
| **Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte | Conc. | MDL | RL | Q |
|---|---|---|---|---|---|
| 7439-97-6 | Mercury | **0.054** | 0.027 | 0.20 | J B |

*Form 1 Analysis Data Sheet Equivalent*

## Dissolved Metals Analysis
-2A-
### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | M |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Mercury | 7.000 | 6.914 | 98.8 | 5.000 | 4.934 | 98.7 | 4.986 | 99.7 | CV |

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

## Dissolved Metals Analysis
-2A-
### INITIAL AND CONTINUING CALIBRATION VERIFICATION

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Initial Calibration Source: Inorganic Ventures

Continuing Calibration Source: Ultra Scientific

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | M |
| Mercury | | | | 5.000 | 4.966 | 99.3 | 4.983 | 99.7 | CV |

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

Form II (Part 1) - IN

# Dissolved Metals Analysis
## -2B-
## CRDL STANDARD FOR AA AND ICP

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9B100268

AA CRDL Standard Source: Ultra Scientific

ICP CRDL Standard Source:

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Mercury | 0.200 | 0.21300 | 106.5 | | | | | |

Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Dissolved Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | |
| **Lot/SDG Number:** | D9B100268 | **Lab Sample ID:** | D9B120000-330B |
| **Matrix:** | WATER | **Lab WorkOrder:** | K64PQ |
| **% Moisture:** | | **Date/Time Collected:** | |
| **Basis:** | Wet | **Date/Time Received:** | |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043330 | **Date/Time Analyzed:** | 02/12/09 18:42 |
| **Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte | Conc. | MDL | RL | Q |
|---|---|---|---|---|---|
| 7439-97-6 | Mercury | **0.039** | 0.027 | 0.20 | J |

*Form 3 Prep Blank Equivalent*

# Dissolved Metals Analysis

-3-

## BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | Preparation Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.027 | U | 0.027 | U | 0.027 | U | 0.027 | U | 0.039 | B | CV |

Comments:

Form III - IN

# Dissolved Metals Analysis

-3-

## BLANKS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | Preparation Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.027 | U | | | | | | | CV |

Comments:

Form III - IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Dissolved Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | LAB MS/MSD |
| **Lot/SDG Number:** | D9B100268 | **MS Lab Sample ID:** | D9B100241-001S |
| **Matrix:** | WATER | **MS Lab WorkOrder:** | K61L8 |
| **% Moisture:** | N/A | **Date/Time Collected:** | 02/07/09 08:50 |
| **Basis:** | Wet | **Date/Time Received:** | 02/10/09 09:00 |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043330 | **Date/Time Analyzed:** | 02/12/09 18:49 |
| **MS Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **MS Dilution Factor:** | 1 | | |

| Analyte | Spike Amount | Sample Result | C | MS Result | C | % Rec | Q | QC Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | 5.00 | 0.036 | J B | 4.81 | | 96 | | 90 - 110 |

*Form 5A MS Analysis Data Sheet Equivalent*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Dissolved Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | LAB MS/MSD |
| **Lot/SDG Number:** | D9B100268 | **MSD Lab Sample ID:** | D9B100241-001D |
| **Matrix:** | WATER | **MSD Lab WorkOrder:** | K61L8 |
| **% Moisture:** | N/A | **Date/Time Collected:** | 02/07/09 08:50 |
| **Basis:** | Wet | **Date/Time Received:** | 02/10/09 09:00 |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043330 | **Date/Time Analyzed:** | 02/12/09 18:52 |
| **MSD Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **MSD Dilution Factor:** | 1 | | |

| Analyte | Spike Amount | Sample Result | C | MSD Result | C | % Rec | Q | RPD | Q | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | % Rec | RPD |
| Mercury | 5.00 | 0.036 | J B | 4.78 | | 95 | | 0.77 | | 90 - 110 | 10 |

*Form 5A MSD Analysis Data Sheet Equivalent*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Irvine**

**Dissolved Metals Analysis Data Sheet**

| | | | |
|---|---|---|---|
| **Lab Name:** | TESTAMERICA DENVER | **Client Sample ID:** | |
| **Lot/SDG Number:** | D9B100268 | **Lab Sample ID:** | D9B120000-330C |
| **Matrix:** | WATER | **Lab WorkOrder:** | K64PQ |
| **% Moisture:** | N/A | **Date/Time Collected:** | |
| **Basis:** | Wet | **Date/Time Received:** | |
| **Analysis Method:** | 245.1 | **Date Leached:** | |
| **Unit:** | ug/L | **Date/Time Extracted:** | 02/12/09 15:10 |
| **QC Batch ID:** | 9043330 | **Date/Time Analyzed:** | 02/12/09 18:45 |
| **Sample Aliquot:** | 10 mL | **Instrument ID:** | 023 |
| **Dilution Factor:** | 1 | | |

| Analyte | True | Found | %Rec | Q | Limits |
|---|---|---|---|---|---|
| Mercury | 5.00 | 4.90 | 98 | | 90 - 110 |

*Form 7 LCS Analysis Data Sheet Equivalent*

## Dissolved Metals Analysis

-10-

DETECTION LIMITS

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

ICP ID Number: _____ Date: 12/26/2008

Flame AA ID Number: Cetac M7500 Hg

Furnace AA ID Number:

| Analyte | Wave-length (nm) | Back-ground | PQL (ug/L) | MDL (ug/L) | M |
|---|---|---|---|---|---|
| Mercury | 253.70 | | 0.20 | 0.027 | CV |

Comments: _____

Form X - IN

## Dissolved Metals Analysis

-13-

### PREPARATION LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: D9B100268

Method: CV Prep Method: _____

| Sample ID | Preparation Date | Initial Volume | Final Volume(mL) |
|---|---|---|---|
| INTRA-LAB QC | 2/12/2009 | 10.0 | 10.0 |
| LAB MS/MSD MS | 2/12/2009 | 10.0 | 10.0 |
| LAB MS/MSD MSD | 2/12/2009 | 10.0 | 10.0 |
| ISB0717-01 | 2/12/2009 | 10.0 | 10.0 |
| MB9043330 | 2/12/2009 | 10.0 | 10.0 |
| Check Sample | 2/12/2009 | 10.0 | 10.0 |

Comments:

Form XIII - IN

# Dissolved Metals Analysis
-14-

## ANALYSIS RUN LOG

Contract: TestAmerica Irvine

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: D9B100268

Instrument ID Number: Cetac M7500 Hg Method: CV

Start Date: 2/12/2009 End Date: 2/12/2009

| Sample ID. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| Cal Blank | 1.00 | 17:29 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std1 | 1.00 | 17:31 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std2 | 1.00 | 17:33 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std3 | 1.00 | 17:36 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std4 | 1.00 | 17:38 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std5 | 1.00 | 17:40 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Std6 | 1.00 | 17:43 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICB | 1.00 | 17:52 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICV | 1.00 | 17:54 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| RL | 1.00 | 17:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 17:59 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 18:01 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 18:26 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 18:28 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| MB9043330 | 1.00 | 18:42 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Check Sample | 1.00 | 18:45 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| INTRA-LAB QC | 1.00 | 18:47 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LAB MS/MSD MS | 1.00 | 18:49 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LAB MS/MSD MSD | 1.00 | 18:52 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 18:54 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 18:56 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ISB0717-01 | 1.00 | 19:19 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV | 1.00 | 19:22 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB | 1.00 | 19:24 | | | | | | | | | | | | | | | | X | | | | | | | | | |

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

*TestAmerica Denver*

# Sample Receiving Checklist

Lot #: D9B100268 Date/Time Received: 2/10/9 0900

Company Name & Sampling Site: TA Irvine

PM to Complete This Section: *Yes* *No* Quarantined : *Yes* *No*
Residual chlorine check required: ☐ ☐ ☐ ☐

Quote #: 72743

Special Instructions:

Time Zone:
• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

## Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 1.1

| *N/A* | *Yes* | *No* | | *Initials* |
|---|---|---|---|---|
| ☐ | ☑ | ☐ | 1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR. | |
| | ☑ | ☐ | 2. Coolers scanned for radiation. Is the reading ≤ to background levels? Yes: ✓ No: | |
| | ☑ | ☐ | 3. Chain of custody present? If no, document on CUR. | |
| | ☐ | ☑ | 4. Bottles broken and/or are leaking? If yes, document on CUR. | |
| | ☐ | ☑ | 5. Multiphasic samples obvious? If yes, document on CUR. | |
| | ☑ | ☐ | 6. Proper container & preservatives used? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR. | |
| ☐ | ☑ | ☐ | 7. pH of all samples checked and meet requirements? If no, document on CUR. | |
| | ☑ | ☐ | 8. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) If no, document on CUR, and contact PM before proceeding. | |
| | ☑ | ☐ | 9. Did chain of custody agree with labels ID and samples received? If no, document on CUR. | |
| ☑ | ☐ | ☐ | 10. Were VOA samples without headspace? If no, document on CUR. | |
| ☑ | ☐ | ☐ | 11. Were VOA vials preserved? Preservative ☐HCl ☐4±2°C ☐Sodium Thiosulfate ☐ Ascorbic Acid | |
| | ☐ | ☑ | 12. Did samples require preservation with sodium thiosulfate? | |
| ☑ | ☐ | ☐ | 13. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR. | |
| ☑ | ☐ | ☐ | 14. Sediment present in dissolved/filtered bottles? If yes, document on CUR. | |
| ☑ | ☐ | ☐ | 15. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding. | |
| | ☑ | ☐ | 16. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM. | |
| | ☐ | ☑ | 17. Are analyses with short holding times requested? | |
| | ☐ | ☑ | 18. Was a quick Turn Around (TAT) requested? | |

*TestAmerica Denver*

# Sample Receiving Checklist

**Lot #** D9B100268

**Login Checks:** *Initials* AC

| N/A | Yes | No | | |
|---|---|---|---|---|
| | ☑ | ☐ | 19. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DV-QA-0003) | If no, document on CUR, and contact PM before proceeding. |
| ☑ | ☐ | ☐ | 20. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? | If no, document on CUR, and contact PM before proceeding. |
| | ☑ | ☐ | 21. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times? | |
| ☐ | ☑ | ☐ | 22. Were special log in instructions read and followed? | |
| ☑ | ☐ | ☐ | 23. Were AFCEE metals logged for refrigerated storage? | |
| | ☑ | ☐ | 24. Were tests logged checked against the COC? Which samples were confirmed? All | |
| ☑ | ☐ | ☐ | 25. Was a Rush form completed for quick TAT? | |
| ☑ | ☐ | ☐ | 26. Was a Short Hold form completed for any short holds? | |
| | ☐ | ☑ | 27. Were special archiving instructions indicated in the General Comments? If so, what were they? | |

**Labeling and Storage Checks:** *Initials* AB

| | | | | |
|---|---|---|---|---|
| ☑ | ☐ | ☐ | 28. Was the subcontract COC signed and sent with samples to bottle prep? | |
| | ☑ | ☐ | 29. Were sample labels double-checked by a second person? | |
| ☐ | ☑ | ☐ | 30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person? | |
| | ☑ | ☐ | 31. Did the sample ID, Date, and Time from label match what was logged? | |
| ☑ | ☐ | ☐ | 32. Were stickers for special archiving instructions affixed to each box? See #27 | |
| ☑ | ☐ | ☐ | 33. Were AFCEE metals stored refrigerated? | |

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).

1.1°C
ARG 8 2/10/09

# SUBCONTRACT ORDER

**TestAmerica Irvine**

**ISB0717**

**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 Denver
4955 Yarrow Street
Arvada, CO 80002
Phone :(303) 736-0100
Fax: (303) 431-7171
Project Location: CA - CALIFORNIA
Receipt Temperature: _____ °C Ice: Y / N

| Analysis | Units | Due | Expires | Interlab Price | Surch | Comments |
|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01** | **Water** | | Sampled: **02/06/09 09:10** | | | |
| EDD + Level 4 | N/A | 02/17/09 | 03/06/09 09:10 | $0.00 | 0% | |
| Mercury - 245.1, Diss -OUT | ug/l | 02/17/09 | 03/06/09 09:10 | $36.00 | 0% | Boeing, J flags, sub to Denver |
| Mercury - 245.1-OUT | ug/l | 02/17/09 | 03/06/09 09:10 | $36.00 | 0% | Boeing, J flags, sub to Denver |

*Containers Supplied:*
125 mL Poly (AA) 1 L Poly w/HNO3 (B)

| Released By | Date/Time | Received By | Date/Time |
|---|---|---|---|
| [signature] | 2/9/09 17:00 | FedEx | 2/9/09 17:00 |
| | | | |

# Metals

Supporting Documentation

Sample Sequence, Instrument Printouts

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot ID: D9B100268

Client: TA-Irvine - Boeing

Batch(es) #: 9043305, 9043330

Associated Samples: 1

*I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.*

Signature/Date: Doug Garner 2/16/09

# *Metals Raw Data RoadMap*

| *LotID* | | *Metal* | *WorkOrder* | *Anal Date* | *TestDesc* | *Batch* | *File Id* | *Instr* |
|---|---|---|---|---|---|---|---|---|
| D9B100268 | 1 | HG | K61V51AC | 20090212 | M2451DS | 9043330 | 090212AA | 023 |
| D9B100268 | 1 | HG | K61V51AA | 20090212 | M2451_L | 9043305 | 090212AA | 023 |

# METALS
# PREPARATION LOGS
# CVAA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## SUPPLEMENTAL METALS PREP SHEET

*(Used in conjunction with METALS PREP LOG/BATCH SUMMARY)*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

## Hg PREP & ANALYSIS - WATERS

**SOP: DEN-MT-0015 QC Batch #:** 9043305

| Prep Date: 02/12/09 | Prep By: CGG | Analysis Date: 02/12/09 | Analyst: CGG |
|---|---|---|---|
| ***Balance ID:*** H53865 | | ***Thermometer ID:*** MT 4025 | |

| ***Digestion Cycles*** | Start Time | Temp °C | End Time | Temp °C |
|---|---|---|---|---|
| | 15:10 | 93 | 17:10 | 94 |

Purple color persists or black ppt present: [X] Yes [ ] No If "No", explain in Comments below.

**Digestion Tube Lot # :**

For dissolved mercury only, were samples filtered in the lab? [ ] Yes [X] No

One or more samples were filtered prior to analysis at the instrument. [X] Yes [ ] No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials: CG

***Reagents Used***

| Reagent | Manufacturer | Lot # | Standards Log # | Vol (mL) |
|---|---|---|---|---|
| $HNO_3$ | JT Baker | G25032 | | 0.25 |
| $H_2SO_4$ | Fisher | E49F06 | | 0.5 |
| HCl | JT Baker | G36024 | | used by instrument |
| 10% $SnCl_2$ | Fisher | G20637 | STD-0827-09 | added by instrument |
| NaCl / $NH_2OH$ | Fisher | G28617 | STD-0688-09 | 0.6 |
| | Fisher | G06476 | | |
| $KMnO_4$ | Fisher | G10662 | STD-0826-09 | 1.5 |
| $K_2S_2O_8$ | Fisher | 083661 | STD-0351-09 | 0.8 |

***Parent Calibration Stock Standards***

| | Lot # | Verification # | Exp. Date |
|---|---|---|---|
| Second Source | A2-HG02056 | STD-2364-08 | 06/01/09 |
| Primary Calibration | H00091 | STD-1683-08 | 05/01/09 |

***Standards Preparation*** **Final digestate volume = 10 mls**

| Standards | Final Conc | Parent Standard | Standards Log # | Vol (mL) | Pipette |
|---|---|---|---|---|---|
| Cal Working | 10 mg/L | Primary Cal | See Attached Standards Log Printouts | 1.00 | 7 |
| Daily Cal Working | 100 ug/L | Cal Working | | 1.00 | 7 |
| ICAL 0.2 | 0.2 ug/L | Daily Cal Working | | 0.2 | 7 |
| ICAL 0.5 | 0.5 ug/L | Daily Cal Working | | 0.5 | 7 |
| ICAL 1 | 1.0 ug/L | Daily Cal Working | | 1.0 | 7 |
| ICAL 2 | 2.0 ug/L | Daily Cal Working | | 2.0 | 7 |
| ICAL 5 | 5.0 ug/L | Daily Cal Working | | 5.0 | 24 |
| ICAL 10 | 10 ug/L | Daily Cal Working | | 10.0 | 24 |
| CCV | 5 ug/L | Daily Cal Working | | 5.0 | 7 |
| ICV Intermed | 700 ug/L | ICV Stock | | 0.70 | 7 |
| ICV Daily Working | 7.0 ug/L | ICV Intermed | | 1.00 | 7 |
| LCS | 5 ug/L | Daily Cal Working | | 0.5 | 7 |
| MS/MSD | 5 ug/L | Daily Cal Working | | 0.5 | 7 |
| RL | 0.2 ug/L | Daily Cal Working | | 0.2 | 7 |

***Second Source ICV Intermediate Stock Standard Prep*** **Standards Log #:** STD-0647-09

**NOTE:** Details for each reagent & standard prep are documented in the attached Standards Preparation Logbook Record.

***Comments*** Total - 245.1 - Boeing

***I certify that all information above is correct and complete.***

***Signature:*** Chris Trodahl **Date:** 2/13/09

**REVIEWED BY:** DG **Date:** 2/16/09

Batch Number: **9043305**

# TestAmerica Laboratories, Inc.
# Metals Prep Log/ Batch Summary

Prepared By: CJ

Prep Date: ~~02/12/09~~ CJ 2/12/09
Due Date: 02/16/09

| Lot | Work Order | | | Initial Weight/Volume |
|---|---|---|---|---|
| D9B120000 Water | **K64MV** | B 1 | Due Date: SDG: | 10 mL |
| D9B120000 Water | **K64MV** | C 2 | Due Date: SDG: | 10 mL |
| D9B100241 Water | **K61L8** Total | 3 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100241 Water | **K61L8** Total | S 4 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100241 Water | **K61L8** Total | D 5 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100246 Water | **K61MV** Total | 6 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100249 Water | **K61NK** Total | 7 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100255 Water | **K61PL** Total | 8 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100257 Water | **K61P6** Total | 9 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100260 Water | **K61Q2** Total | 10 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100262 Water | **K61RN** Total | 11 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100267 Water | **K61VL** Total | 12 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100268 Water | **K61V5** Total | 13 | Due Date: 02/16/09 SDG: | 10 mL |

**Comments:**

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

CJ 2/12/09

| | |
|---|---|
| Start 15:10 | 93°C |
| End 17:10 | 94°C |

## SUPPLEMENTAL METALS PREP SHEET

*(Used in conjunction with METALS PREP LOG/BATCH SUMMARY)*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Denver

## Hg PREP & ANALYSIS - WATERS

**SOP: DEN-MT-0015 QC Batch #:** 9043330

| Prep Date: 02/12/09 | Prep By: CGG | Analysis Date: 02/12/09 | Analyst: CGG |
|---|---|---|---|
| ***Balance ID:*** H53865 | | ***Thermometer ID:*** MT 4025 | |

| ***Digestion Cycles*** | Start Time | Temp °C | End Time | Temp °C |
|---|---|---|---|---|
| | 15:10 | 93 | 17:10 | 94 |

Purple color persists or black ppt present: [X] Yes [ ] No If "No", explain in Comments below.

**Digestion Tube Lot # :**

For dissolved mercury only, were samples filtered in the lab? [ ] Yes [X] No

One or more samples were filtered prior to analysis at the instrument. [ ] Yes [X] No

If "yes", then the method blank and the LCS were also filtered in the same manner using the same type of filter.

Analyst(s) Initials:

***Reagents Used***

| Reagent | Manufacturer | Lot # | Standards Log # | Vol (mL) |
|---|---|---|---|---|
| $HNO_3$ | JT Baker | G25032 | | 0.25 |
| $H_2SO_4$ | Fisher | E49F06 | | 0.5 |
| HCl | JT Baker | G36024 | | used by instrument |
| 10% $SnCl_2$ | Fisher | G20637 | STD-0827-09 | added by instrument |
| NaCl / $NH_2OH$ | Fisher | G28617 | STD-0688-09 | 0.6 |
| | Fisher | G06476 | | |
| $KMnO_4$ | Fisher | G10662 | STD-0826-09 | 1.5 |
| $K_2S_2O_8$ | Fisher | 083661 | STD-0351-09 | 0.8 |

***Parent Calibration Stock Standards***

| | Lot # | Verification # | Exp. Date |
|---|---|---|---|
| Second Source | A2-HG02056 | STD-2364-08 | 06/01/09 |
| Primary Calibration | H00091 | STD-1683-08 | 05/01/09 |

***Standards Preparation*** **Final digestate volume = 10 mls**

| Standards | Final Conc | Parent Standard | Standards Log # | Vol (mL) | Pipette |
|---|---|---|---|---|---|
| Cal Working | 10 mg/L | Primary Cal | See Attached Standards Log Printouts | 1.00 | 7 |
| Daily Cal Working | 100 ug/L | Cal Working | | 1.00 | 7 |
| ICAL 0.2 | 0.2 ug/L | Daily Cal Working | | 0.2 | 7 |
| ICAL 0.5 | 0.5 ug/L | Daily Cal Working | | 0.5 | 7 |
| ICAL 1 | 1.0 ug/L | Daily Cal Working | | 1.0 | 7 |
| ICAL 2 | 2.0 ug/L | Daily Cal Working | | 2.0 | 7 |
| ICAL 5 | 5.0 ug/L | Daily Cal Working | | 5.0 | 24 |
| ICAL 10 | 10 ug/L | Daily Cal Working | | 10.0 | 24 |
| CCV | 5 ug/L | Daily Cal Working | | 5.0 | 7 |
| ICV Intermed | 700 ug/L | ICV Stock | | 0.70 | 7 |
| ICV Daily Working | 7.0 ug/L | ICV Intermed | | 1.00 | 7 |
| LCS | 5 ug/L | Daily Cal Working | | 0.5 | 7 |
| MS/MSD | 5 ug/L | Daily Cal Working | | 0.5 | 7 |
| RL | 0.2 ug/L | Daily Cal Working | | 0.2 | 7 |

***Second Source ICV Intermediate Stock Standard Prep*** **Standards Log #:** STD-0647-09

**NOTE:** Details for each reagent & standard prep are documented in the attached Standards Preparation Logbook Record.

***Comments*** Dissolved - 245.1 - Boeing

***I certify that all information above is correct and complete.***

***Signature:*** Cliz Grodahl ***Date:*** 2/13/09

**REVIEWED BY:** DG **Date:** 2/16/09

Batch Number: **9043330**

# TestAmerica Laboratories, Inc.
# Metals Prep Log/ Batch Summary

Prepared By: CD

Prep Date: 02/12/09 CD
Due Date: 02/16/09

| Lot | Work Order | | | Initial Weight/Volume |
|---|---|---|---|---|
| D9B120000 Water | **K64PQ** | B 1 | Due Date: SDG: | 10 mL |
| D9B120000 Water | **K64PQ** | C 2 | Due Date: SDG: | 10 mL |
| D9B100241 Water | **K61L8** Dissolved | 3 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100241 Water | **K61L8** Dissolved | S 4 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100241 Water | **K61L8** Dissolved | D 5 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100246 Water | **K61MV** Dissolved | 6 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100249 Water | **K61NK** Dissolved | 7 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100255 Water | **K61PL** Dissolved | 8 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100257 Water | **K61P6** Dissolved | 9 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100260 Water | **K61Q2** Dissolved | 10 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100262 Water | **K61RN** Dissolved | 11 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100267 Water | **K61VL** Dissolved | 12 | Due Date: 02/16/09 SDG: | 10 mL |
| D9B100268 Water | **K61V5** Dissolved | 13 | Due Date: 02/16/09 SDG: | 10 mL |

**Comments:**

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

# METALS
# SAMPLE DATA
# CVAA

# TestAmerica Denver

## Standards Preparation Logbook Record

Feb-13-2009

Logbook: \\Densvr06\StdsLog\metals.std

### STD1683-08, 1000 mg/L Hg Calibration Stock Standard (Ultra)

Analyst: grisdalec

Vendor: Ultra Scientific (Metals) Lot No.: H00091 Vendor's Expiration Date: 05-01-2009
Solvent: 2% HN03
Date Prep./Opened: 04-03-2008 Date Received: 03-31-2008
Date Expires(1): 04-03-2009 (1 Year)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

| Component | Initial Conc (%) | Final Conc (%) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 100.00 |

### STD2364-08, Hg Inorganic Ventures ICV 100ppm Std

Analyst: grisdalec

Vendor: Inorganic Ventures Lot No.: A2-HG02056 Vendor's Expiration Date: 06-01-2009
Solvent: 3.3%HCl
Date Prep./Opened: 05-01-2008 Date Received: 05-02-2007
Date Expires(1): 05-01-2009 (1 Year)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

| Component | Initial Conc (mg/L) | Final Conc (mg/L) |
|---|---|---|
| Hg | 100.00 | 100.00 |

### STD0437-09, 10 mg/L Hg Calibration Std

Analyst: wellsd

Solvent: 1% HN03 Lot No.: G02058 Volume (ml): 100.00
Date Prep./Opened: 01-26-2009
Date Expires(1): 02-26-2009 (1 Month)
Date Expires(2): 02-26-2009 (1 Month)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD1683-08, 1000 mg/L Hg Calibration Stock Standard (Ultra) Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 04-03-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (%) | Final Conc (mg/L) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 10,000 |

## STD0647-09, Hg Inorganic Ventures ICV 700ppb

Analyst: GRISDALEC

Solvent: 1% HNO3 Lot No.: G02058 Volume (ml): 100.00
Date Prep./Opened: 02-04-2009
Date Expires(1): 02-18-2009 (2 Weeks)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD2364-08, Hg Inorganic Ventures ICV 100ppm Std Aliquot Amount (ml): 0.7000
Parent Date Expires(1): 05-01-2009 Parent Date Expires(2): 06-01-2009

| Component | Initial Conc (mg/L) | Final Conc (ug/L) |
|---|---|---|
| Hg | 100.00 | 700.00 |

## STD0856-09, 100 ppb Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0437-09, 10 mg/L Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 02-26-2009 Parent Date Expires(2): 02-26-2009

| Component | Initial Conc (mg/L) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 10,000 | 100.00 |

## STD0857-09, Blank Daily Hg Calibration Std

Analyst: GRISDALEC

Vendor: Baker Lot No.: G17027
Solvent: 1% HN03
Date Prep./Opened: 02-12-2009
Date Expires(1): 08-12-2009 (6 Months)
Date Expires(2): 02-12-2010 (1 Year)
Date Verified: 12-31--4714 by 0 (Verification ID: -)

| Component | Initial Conc (%) | Final Conc (%) |
|---|---|---|
| Nitric Acid | 1.0000 | 1.0000 |

## STD0858-09, 0.2 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0856-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.2000
Parent Date Expires(1): 02-13-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (ug/ml) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 0.2000 |

## STD0859-09, 0.5 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0856-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 0.5000
Parent Date Expires(1): 02-13-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (ug/ml) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 0.5000 |

## STD0860-09, 1.0 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0856-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 02-13-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (ug/ml) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 1.0000 |

## STD0861-09, 2.0 ppb Daily Hg Calibration Std

Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0856-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 2.0000
Parent Date Expires(1): 02-13-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (ug/ml) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 2.0000 |

STD0862-09, 5.0 ppb Daily Hg Calibration Std — Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0856-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 5.0000
Parent Date Expires(1): 02-13-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (ug/ml) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 5.0000 |

STD0863-09, 10.0 ppb Daily Hg Calibration Std — Analyst: GRISDALEC

Solvent: 1% HN03 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009 Date Consumed: 12-06-2006
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 05-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0856-09, 100 ppb Hg Calibration Std Aliquot Amount (ml): 10.000
Parent Date Expires(1): 02-13-2009 Parent Date Expires(2): 05-01-2009

| Component | Initial Conc (ug/ml) | Final Conc (ug/ml) |
|---|---|---|
| Mercuric Nitrate | 100.00 | 10.000 |

STD0864-09, Hg Daily ICV 7ppb Calibration Std — Analyst: GRISDALEC

Solvent: 1% HNO3 Lot No.: G17027 Volume (ml): 100.00
Date Prep./Opened: 02-12-2009
Date Expires(1): 02-13-2009 (1 Day)
Date Expires(2): 06-01-2009 (None)
Date Verified: 12-31--4714 by - (Verification ID: 0)

Parent Std No.: STD0647-09, Hg Inorganic Ventures ICV 700ppb Aliquot Amount (ml): 1.0000
Parent Date Expires(1): 02-18-2009 Parent Date Expires(2): 06-01-2009

| Component | Initial Conc (ug/L) | Final Conc (ug/L) |
|---|---|---|
| Hg | 700.00 | 7.0000 |

Reviewed By: Christopher Grisdale 2/13/09

Denver

# RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/13/09 09:53:37

**Sequence:** 090212AA **Date:** 02/12/09 17:29 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

| # | Sample ID | Lot No. | Batch | Matrix | Raw | DF | Result | Units | %R | Analyzed Date | Comment | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Cal Blank | | | | 0.00 | 1.0 | 0.00 | ppb | | 02/12/09 17:29 | | ☐ |
| 2 | Std1 | = 0.200 | | | 0.20 | 1.0 | 0.20 | ppb | 100.0% | 02/12/09 17:31 | | ☐ |
| 3 | Std2 | = 0.500 | | | 0.50 | 1.0 | 0.50 | ppb | 100.0% | 02/12/09 17:33 | | ☐ |
| 4 | Std3 | = 1.00 | | | 1.00 | 1.0 | 1.00 | ppb | 100.0% | 02/12/09 17:36 | | ☐ |
| 5 | Std4 | = 2.00 | | | 2.00 | 1.0 | 2.00 | ppb | 100.0% | 02/12/09 17:38 | | ☐ |
| 6 | Std5 | = 5.00 | | | 5.00 | 1.0 | 5.00 | ppb | 100.0% | 02/12/09 17:40 | | ☐ |
| 7 | Std6 | = 10.0 | | | 10.00 | 1.0 | 10.00 | ppb | 100.0% | 02/12/09 17:43 | | ☐ |
| 8 | ICB | | | | 0.01 | 1.0 | 0.01 | ppb | | 02/12/09 17:52 | | ☐ |
| 9 | ICV | = 7.00 | | | 6.91 | 1.0 | 6.91 | ppb | 98.8% | 02/12/09 17:54 | | ☐ |
| 10 | RL | = 0.200 | | | 0.21 | 1.0 | 0.21 | ppb | | 02/12/09 17:56 | | ☐ |
| 11 | CCV | = 5.00 | | | 4.93 | 1.0 | 4.93 | ppb | 98.7% | 02/12/09 17:59 | | ☐ |
| 12 | CCB | | | | 0.01 | 1.0 | 0.01 | ppb | | 02/12/09 18:01 | | ☐ |
| 13 | K64MVB | D9B120000 | 9043305 | | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 18:03 | | ☐ |
| 14 | K64MVC | D9B120000 = 5.00 | 9043305 | | 4.77 | 1.0 | 4.77 | ppb | 95.4% | 02/12/09 18:05 | | ☐ |
| 15 | K61L8 | D9B100241-1 | 9043305 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 18:08 | | ☐ |
| 16 | K61L8S | D9B100241-1 = 5.00 | 9043305 | AQUEOUS | 4.75 | 1.0 | 4.75 | ppb | | 02/12/09 18:10 | | ☐ |
| 17 | K61L8D | D9B100241-1 = 5.00 | 9043305 | AQUEOUS | 4.61 | 1.0 | 4.61 | ppb | | 02/12/09 18:12 | | ☐ |
| ~~18~~ | ~~K61L8S~~ | ~~D9B100241-1 = 5.00~~ | ~~9043305~~ | ~~AQUEOUS~~ | ~~4.63~~ | ~~1.0~~ | ~~4.63~~ | ~~ppb~~ | | ~~02/12/09 18:15~~ | NA confirms above | ☐ |
| ~~19~~ | ~~K61L8D~~ | ~~D9B100241-1 = 5.00~~ | ~~9043305~~ | ~~AQUEOUS~~ | ~~4.65~~ | ~~1.0~~ | ~~4.65~~ | ~~ppb~~ | | ~~02/12/09 18:17~~ | co 2/13/09 | ☐ |
| 20 | K61MV | D9B100246-1 | 9043305 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 18:19 | | ☐ |
| 21 | K61NK | D9B100249-1 | 9043305 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 18:22 | | ☐ |
| 22 | K61PL | D9B100255-1 | 9043305 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 18:24 | | ☐ |
| 23 | CCV | = 5.00 | | | 4.99 | 1.0 | 4.99 | ppb | 99.7% | 02/12/09 18:26 | | ☐ |
| 24 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 18:28 | | ☐ |
| 25 | K61P6 | D9B100257-1 | 9043305 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 18:31 | | ☐ |
| 26 | K61Q2 | D9B100260-1 | 9043305 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 18:33 | | ☐ |
| 27 | K61RN | D9B100262-1 | 9043305 | AQUEOUS | 0.07 | 1.0 | 0.07 | ppb | | 02/12/09 18:35 | | ☐ |
| 28 | K61VL | D9B100267-1 | 9043305 | AQUEOUS | 0.12 | 1.0 | 0.12 | ppb | | 02/12/09 18:38 | | ☐ |
| 29 | K61V5 | D9B100268-1 | 9043305 | AQUEOUS | 0.10 | 1.0 | 0.10 | ppb | | 02/12/09 18:40 | | ☐ |
| 30 | K64PQBF | D9B120000 | 9043330 | | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 18:42 | | ☐ |
| 31 | K64PQCF | D9B120000 = 5.00 | 9043330 | | 4.90 | 1.0 | 4.90 | ppb | 98.0% | 02/12/09 18:45 | | ☐ |
| 32 | K61L8F | D9B100241-1 | 9043330 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 18:47 | | ☐ |
| 33 | K61L8SF | D9B100241-1 = 5.00 | 9043330 | AQUEOUS | 4.81 | 1.0 | 4.81 | ppb | | 02/12/09 18:49 | | ☐ |
| 34 | K61L8DF | D9B100241-1 = 5.00 | 9043330 | AQUEOUS | 4.78 | 1.0 | 4.78 | ppb | | 02/12/09 18:52 | | ☐ |



co 2/13/09

Denver

# RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/13/09 09:53:37

**Sequence:** 090212AA **Date:** 02/12/09 17:29 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

| # | Sample ID | Lot No. | Batch | Matrix | Raw | DF | Result | Units | %R | Analyzed Date | Comment | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | CCV | = 5.00 | | | 4.97 | 1.0 | 4.97 | ppb | 99.3% | 02/12/09 18:54 | | ☐ |
| 36 | CCB | | | | 0.01 | 1.0 | 0.01 | ppb | | 02/12/09 18:56 | | ☐ |
| ~~37~~ | ~~K61L8SF~~ | ~~D9B100241-1 = 5.00~~ | ~~9043330~~ | ~~AQUEOUS~~ | ~~4.75~~ | ~~1.0~~ | ~~4.75~~ | ~~ppb~~ | | ~~02/12/09 18:58~~ | NA confirms above CJ 2/13/09 | ☐ |
| ~~38~~ | ~~K61L8DF~~ | ~~D9B100241-1 = 5.00~~ | ~~9043330~~ | ~~AQUEOUS~~ | ~~4.84~~ | ~~1.0~~ | ~~4.84~~ | ~~ppb~~ | | ~~02/12/09 19:01~~ | | ☐ |
| 39 | K61MVF | D9B100246-1 | 9043330 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 19:03 | | ☐ |
| 40 | K61NKF | D9B100249-1 | 9043330 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 19:05 | | ☐ |
| 41 | K61PLF | D9B100255-1 | 9043330 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 19:08 | | ☐ |
| 42 | K61P6F | D9B100257-1 | 9043330 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 19:10 | | ☐ |
| 43 | K61Q2F | D9B100260-1 | 9043330 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 19:12 | | ☐ |
| 44 | K61RNF | D9B100262-1 | 9043330 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 19:15 | | ☐ |
| 45 | K61VLF | D9B100267-1 | 9043330 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 19:17 | | ☐ |
| 46 | K61V5F | D9B100268-1 | 9043330 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 19:19 | | ☐ |
| 47 | CCV | = 5.00 | | | 4.98 | 1.0 | 4.98 | ppb | 99.7% | 02/12/09 19:22 | | ☐ |
| 48 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 19:24 | | ☐ |
| 49 | K64NTB | D9B120000 | 9043318 | | 0.03 | 1.0 | 0.03 | ppb | | 02/12/09 19:26 | | ☐ |
| 50 | K64NTC | D9B120000 = 5.00 | 9043318 | | 4.92 | 1.0 | 4.92 | ppb | 98.3% | 02/12/09 19:28 | | ☐ |
| 51 | K61TK | D9B100263-1 | 9043318 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 19:31 | | ☐ |
| 52 | K61TKS | D9B100263-1 = 5.00 | 9043318 | AQUEOUS | 5.12 | 1.0 | 5.12 | ppb | | 02/12/09 19:33 | | ☐ |
| 53 | K61TKD | D9B100263-1 = 5.00 | 9043318 | AQUEOUS | 5.10 | 1.0 | 5.10 | ppb | | 02/12/09 19:35 | | ☐ |
| ~~54~~ | ~~K61TKS~~ | ~~D9B100263-1 = 5.00~~ | ~~9043318~~ | ~~AQUEOUS~~ | ~~5.07~~ | ~~1.0~~ | ~~5.07~~ | ~~ppb~~ | | ~~02/12/09 19:38~~ | NA confirms above CJ 2/13/09 | ☐ |
| ~~55~~ | ~~K61TKD~~ | ~~D9B100263-1 = 5.00~~ | ~~9043318~~ | ~~AQUEOUS~~ | ~~5.14~~ | ~~1.0~~ | ~~5.14~~ | ~~ppb~~ | | ~~02/12/09 19:40~~ | | ☐ |
| 56 | K60WV | D9B100142-4 | 9043318 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 19:42 | | ☐ |
| 57 | K6006 | D9B100155-6 | 9043318 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 19:45 | | ☐ |
| 58 | K6XKRB | D9B090000 | 9040253 | | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 19:47 | | ☐ |
| 59 | CCV | = 5.00 | | | 5.00 | 1.0 | 5.00 | ppb | 100.0% | 02/12/09 19:49 | | ☐ |
| 60 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 19:52 | | ☐ |
| 61 | K6XKRC | D9B090000 = 5.00 | 9040253 | | 4.97 | 1.0 | 4.97 | ppb | 99.5% | 02/12/09 19:54 | | ☐ |
| 62 | K6XKRL | D9B090000 = 5.00 | 9040253 | | 4.88 | 1.0 | 4.88 | ppb | 97.5% | 02/12/09 19:56 | | ☐ |
| 63 | K6RA4 | D9B050201-10 | 9040253 | AQUEOUS | 0.03 | 1.0 | 0.03 | ppb | | 02/12/09 19:58 | | ☐ |
| 64 | K6RJM | D9B050215-23 | 9040253 | AQUEOUS | 0.03 | 1.0 | 0.03 | ppb | | 02/12/09 20:01 | | ☐ |
| 65 | K6TF5 | D9B050330-13 | 9040253 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 20:03 | | ☐ |
| 66 | K6V6FBT | D9B060000 | 9043229 | | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 20:05 | | ☐ |
| 67 | K64EQCT | D9B120000 = 5.00 | 9043229 | | 5.09 | 1.0 | 5.09 | ppb | 101.8% | 02/12/09 20:08 | | ☐ |
| 68 | K6RP2T | D9B050263-1 | 9043229 | LEACHATE | 0.25 | 1.0 | 0.25 | ppb | | 02/12/09 20:10 | | ☐ |



/cs 2/13/09

Denver

# RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/13/09 09:53:37

**Sequence:** 090212AA **Date:** 02/12/09 17:29 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

| # | Sample ID | Lot No. | Batch | Matrix | Raw | DF | Result | Units | %R | Analyzed Date | Comment | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | K6RP2P5T | D9B050263 | 9043229 | LEACHATE | 0.09 | 5.0 | 0.09 | ppb | | 02/12/09 20:12 | | ☐ |
| 70 | K6RP8T | D9B050263-2 | 9043229 | LEACHATE | 0.47 | 1.0 | 0.47 | ppb | | 02/12/09 20:15 | | ☐ |
| 71 | CCV | = 5.00 | | | 4.95 | 1.0 | 4.95 | ppb | 99.0% | 02/12/09 20:17 | | ☐ |
| 72 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 20:19 | | ☐ |
| 73 | K6K3WBT | D9B020000 | 9043288 | | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 20:21 | | ☐ |
| 74 | K64LQCT | D9B120000 = 5.00 | 9043288 | | 5.11 | 1.0 | 5.11 | ppb | 102.2% | 02/12/09 20:24 | | ☐ |
| 75 | K6PJ8T | D9B040182-1 | 9043288 | LEACHATE | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 20:26 | | ☐ |
| 76 | K6PJ8P5T | D9B040182 | 9043288 | LEACHATE | 0.05 | 5.0 | 0.05 | ppb | | 02/12/09 20:28 | | ☐ |
| 77 | K6PKAT | D9B040182-2 | 9043288 | LEACHATE | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 20:31 | | ☐ |
| 78 | K6V6CBT | D9B060000 | 9043228 | | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 20:33 | | ☐ |
| 79 | K64EKCT | D9B120000 = 5.00 | 9043228 | | 5.34 | 1.0 | 5.34 | ppb | 106.9% | 02/12/09 20:35 | | ☐ |
| 80 | K6Q8WT | D9B050200-1 | 9043228 | LEACHATE | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 20:38 | | ☐ |
| 81 | K6Q8WST | D9B050200-1 = 5.00 | 9043228 | LEACHATE | 5.34 | 1.0 | 5.34 | ppb | | 02/12/09 20:40 | | ☐ |
| 82 | K6Q8WDT | D9B050200-1 = 5.00 | 9043228 | LEACHATE | 5.54 | 1.0 | 5.54 | ppb | | 02/12/09 20:42 | | ☐ |
| 83 | CCV | = 5.00 | | | 5.71 | 1.0 | 5.71 | ppb | 114.2% | 02/12/09 20:45 | | ☐ |
| 84 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 20:47 | | ☐ |
| 85 | K6Q9HT | D9B050200-2 | 9043228 | LEACHATE | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 20:49 | | ☐ |
| 86 | K6Q9JT | D9B050200-3 | 9043228 | LEACHATE | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 20:51 | | ☐ |
| 87 | K6Q9KT | D9B050200-4 | 9043228 | LEACHATE | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 20:54 | | ☐ |
| 88 | K6XJ3B | D9B090000 | 9040246 | | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 20:56 | | ☐ |
| 89 | K6XJ3C | D9B090000 = 5.00 | 9040246 | | 5.58 | 1.0 | 5.58 | ppb | 111.7% | 02/12/09 20:58 | — LCS > 111% limit samples < RL so see NCM. CG 2/13/09 | ☐ |
| 90 | K6N90 | D9B040148-1 | 9040246 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 21:01 | | ☐ |
| 91 | K6N90S | D9B040148-1 = 5.00 | 9040246 | AQUEOUS | 4.70 | 1.0 | 4.70 | ppb | | 02/12/09 21:03 | | ☐ |
| 92 | K6N90D | D9B040148-1 = 5.00 | 9040246 | AQUEOUS | 4.90 | 1.0 | 4.90 | ppb | | 02/12/09 21:05 | | ☐ |
| 93 | K6N95 | D9B040148-2 | 9040246 | AQUEOUS | 0.09 | 1.0 | 0.09 | ppb | | 02/12/09 21:08 | | ☐ |
| 94 | K6N96 | D9B040148-3 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:10 | | ☐ |
| 95 | CCV | = 5.00 | | | 5.45 | 1.0 | 5.45 | ppb | 109.1% | 02/12/09 21:12 | | ☐ |
| 96 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 21:15 | | ☐ |
| 97 | K6N97 | D9B040148-4 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:17 | | ☐ |
| 98 | K6N98 | D9B040148-5 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:19 | | ☐ |
| 99 | K6N99 | D9B040148-6 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:21 | | ☐ |
| 100 | K6PAA | D9B040148-7 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:24 | | ☐ |
| 101 | K6PAC | D9B040148-8 | 9040246 | AQUEOUS | 0.03 | 1.0 | 0.03 | ppb | | 02/12/09 21:26 | | ☐ |
| 102 | K6PAD | D9B040148-9 | 9040246 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 21:28 | | ☐ |



CG 2/13/09

Denver

# RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/13/09 09:53:37

**Sequence:** 090212AA **Date:** 02/12/09 17:29 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

| # | Sample ID | Lot No. | Batch | Matrix | Raw | DF | Result | Units | %R | Analyzed Date | Comment | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | K6PAE | D9B040148-10 | 9040246 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 21:31 | | ☐ |
| 104 | K6PAF | D9B040148-11 | 9040246 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 21:33 | | ☐ |
| 105 | K6PAH | D9B040148-12 | 9040246 | AQUEOUS | 0.07 | 1.0 | 0.07 | ppb | | 02/12/09 21:35 | | ☐ |
| 106 | K6PAK | D9B040148-13 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:38 | | ☐ |
| 107 | CCV | = 5.00 | | | 5.65 | 1.0 | 5.65 | ppb | 113.0% | 02/12/09 21:40 | | ☐ |
| 108 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 21:42 | | ☐ |
| 109 | K6PAM | D9B040148-14 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:45 | | ☐ |
| 110 | K6PAP | D9B040148-15 | 9040246 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 21:47 | | ☐ |
| 111 | K6PAQ | D9B040148-16 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:49 | | ☐ |
| 112 | K6PAR | D9B040148-17 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:52 | | ☐ |
| 113 | K6RD6 | D9B050213-1 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:54 | | ☐ |
| 114 | K6RD9 | D9B050213-2 | 9040246 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 21:56 | | ☐ |
| 115 | K6VAF | D9B060183-1 | 9040246 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 21:58 | | ☐ |
| 116 | K6XKJB | D9B090000 | 9040250 | | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:01 | | ☐ |
| 117 | K6XKJC | D9B090000 = 5.00 | 9040250 | | 5.59 | 1.0 | 5.59 | ppb | 111.8% | 02/12/09 22:03 | LCS > 111% limit | ☐ |
| 118 | K6RCT | D9B050209-1 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 22:05 | | ☐ |
| 119 | CCV | = 5.00 | | | 5.59 | 1.0 | 5.59 | ppb | 111.9% | 02/12/09 22:08 | samples < RL so | ☐ |
| 120 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 22:10 | see NCM | ☐ |
| 121 | K6RCTS | D9B050209-1 = 5.00 | 9040250 | AQUEOUS | 5.37 | 1.0 | 5.37 | ppb | | 02/12/09 22:12 | | ☐ |
| 122 | K6RCTD | D9B050209-1 = 5.00 | 9040250 | AQUEOUS | 5.43 | 1.0 | 5.43 | ppb | | 02/12/09 22:15 | | ☐ |
| 123 | K6RC0 | D9B050209-2 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 22:17 | | ☐ |
| 124 | K6RC1 | D9B050209-3 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 22:19 | | ☐ |
| 125 | K6RC2 | D9B050209-4 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:22 | | ☐ |
| 126 | K6RC3 | D9B050209-5 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:24 | | ☐ |
| 127 | K6RC4 | D9B050209-6 | 9040250 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 22:26 | | ☐ |
| 128 | K6RC5 | D9B050209-7 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:29 | | ☐ |
| 129 | K6RC7 | D9B050209-8 | 9040250 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 22:31 | | ☐ |
| 130 | K6R0F | D9B050291-1 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:33 | | ☐ |
| 131 | CCV | = 5.00 | | | 5.61 | 1.0 | 5.61 | ppb | 112.1% | 02/12/09 22:36 | | ☐ |
| 132 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 22:38 | | ☐ |
| 133 | K6R1Q | D9B050291-2 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:40 | | ☐ |
| 134 | K6R1X | D9B050291-3 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:42 | | ☐ |
| 135 | K6R13 | D9B050291-4 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:45 | | ☐ |
| 136 | K6R14 | D9B050291-5 | 9040250 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 22:47 | | ☐ |



JCJ2113109

Denver

# RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/13/09 09:53:37

**Sequence:** 090212AA **Date:** 02/12/09 17:29 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

| # | Sample ID | Lot No. | Batch | Matrix | Raw | DF | Result | Units | %R | Analyzed Date | Comment | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 137 | K6R16 | D9B050291-6 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 22:49 | | ☐ |
| 138 | K6R19 | D9B050291-7 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 22:52 | | ☐ |
| 139 | K6R2A | D9B050291-8 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:54 | | ☐ |
| 140 | K6V8R | D9B060305-1 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 22:56 | | ☐ |
| 141 | K6V84 | D9B060305-2 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 22:59 | | ☐ |
| 142 | K6V86 | D9B060305-3 | 9040250 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 23:01 | | ☐ |
| 143 | CCV | = 5.00 | | | 5.56 | 1.0 | 5.56 | ppb | 111.2% | 02/12/09 23:03 | | ☐ |
| 144 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 23:06 | | ☐ |
| 145 | K6V87 | D9B060305-4 | 9040250 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:08 | | ☐ |
| 146 | K6XKVB | D9B090000 | 9040259 | | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:10 | | ☐ |
| 147 | K6XKVC | D9B090000 = 5.00 | 9040259 | | 5.50 | 1.0 | 5.50 | ppb | 109.9% | 02/12/09 23:13 | | ☐ |
| 148 | K6VA6 | D9B060185-1 | 9040259 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 23:15 | | ☐ |
| 149 | K6VCG | D9B060185-2 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:17 | | ☐ |
| 150 | K6VCJ | D9B060185-3 | 9040259 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 23:20 | | ☐ |
| 151 | K6VCK | D9B060185-4 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:22 | | ☐ |
| 152 | K6VCM | D9B060185-5 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:24 | | ☐ |
| 153 | K6VCN | D9B060185-6 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:26 | | ☐ |
| 154 | K6VCR | D9B060185-7 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:29 | | ☐ |
| 155 | CCV | = 5.00 | | | 5.58 | 1.0 | 5.58 | ppb | 111.6% | 02/12/09 23:31 | | ☐ |
| 156 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 23:33 | | ☐ |
| 157 | K6VCW | D9B060185-8 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:36 | | ☐ |
| 158 | K6VC0 | D9B060185-9 | 9040259 | AQUEOUS | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:38 | | ☐ |
| 159 | K6VC3 | D9B060185-10 | 9040259 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/12/09 23:40 | | ☐ |
| 160 | K6VC3P5 | D9B060185 | 9040259 | AQUEOUS | 0.05 | 5.0 | 0.05 | ppb | | 02/12/09 23:43 | | ☐ |
| 161 | K6VC3S | D9B060185-10 = 5.00 | 9040259 | AQUEOUS | 5.39 | 1.0 | 5.39 | ppb | | 02/12/09 23:45 | | ☐ |
| 162 | K6VC3D | D9B060185-10 = 5.00 | 9040259 | AQUEOUS | 5.40 | 1.0 | 5.40 | ppb | | 02/12/09 23:47 | | ☐ |
| 163 | K6VC6 | D9B060185-11 | 9040259 | AQUEOUS | 0.06 | 1.0 | 0.06 | ppb | | 02/12/09 23:50 | | ☐ |
| 164 | CCV | = 5.00 | | | 5.59 | 1.0 | 5.59 | ppb | 111.8% | 02/12/09 23:52 | | ☐ |
| 165 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/12/09 23:54 | | ☐ |
| 166 | K6XKNB | D9B090000 | 9040251 | | 0.05 | 1.0 | 0.05 | ppb | | 02/12/09 23:57 | | ☐ |
| 167 | K6XKNC | D9B090000 = 5.00 | 9040251 | | 5.54 | 1.0 | 5.54 | ppb | 110.7% | 02/12/09 23:59 | | ☐ |
| 168 | K6QHH | H9B050103-4 | 9040251 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/13/09 00:01 | | ☐ |
| 169 | K6QHHS | H9B050103-4 = 5.00 | 9040251 | AQUEOUS | 5.47 | 1.0 | 5.47 | ppb | | 02/13/09 00:04 | | ☐ |
| 170 | K6QHHD | H9B050103-4 = 5.00 | 9040251 | AQUEOUS | 5.58 | 1.0 | 5.58 | ppb | | 02/13/09 00:06 | | ☐ |



JCS 2/13/09

Denver

RUN SUMMARY

Method: CVHG - Mercury (Cold Vapor Mercury) | Instrument: A (023) | Reported: 02/13/09 09:53:37

**Sequence:** 090212AA **Date:** 02/12/09 17:29 **Analyst:** CGG **ICV:** _____ **CAL/CCV:** _____

| # | Sample ID | Lot No. | Batch | Matrix | Raw | DF | Result | Units | %R | Analyzed Date | Comment | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 171 | K6QHN | H9B050103-9 | 9040251 | AQUEOUS | 0.04 | 1.0 | 0.04 | ppb | | 02/13/09 00:08 | | ☐ |
| 172 | CCV | = 5.00 | | | 5.56 | 1.0 | 5.56 | ppb | 111.1% | 02/13/09 00:11 | | ☐ |
| 173 | CCB | | | | 0.02 | 1.0 | 0.02 | ppb | | 02/13/09 00:13 | | ☐ |
| 174 | CCV | = 5.00 | | | 5.88 | 1.0 | 5.88 | ppb | 117.6% | 02/13/09 08:19 | | ☐ |
| 175 | CCB | | | | 0.01 | 1.0 | 0.01 | ppb | | 02/13/09 08:21 | | ☐ |
| 176 | K6XKJC | D9B090000 = 5.00 | 9040250 | | 5.73 | 1.0 | 5.73 | ppb | 114.6% | 02/13/09 08:23 | NA CO 2/13/09 | ☐ |
| 177 | CCV | = 5.00 | | | 5.81 | 1.0 | 5.81 | ppb | 116.2% | 02/13/09 08:26 | | ☐ |
| 178 | CCB | | | | 0.01 | 1.0 | 0.01 | ppb | | 02/13/09 08:28 | | ☐ |



JCO 2/13/09

# CETAC Hg Analysis Report

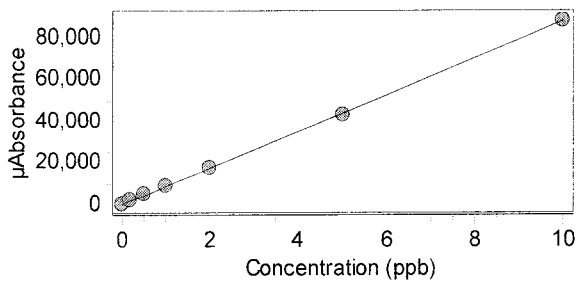
**Analyst:** grisdalec
**Worksheet file:** C:\Program Files\QuickTrace\Worksheets\090212AA.wsz
**Date Started:** 2/12/2009 3:07:15 PM
**Comment:**

## Results

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| Cal Blank | STD | 02/12/09 05:29:18 pm | 0.000 | -171 ✓ | 1.49 | | 1.00 | 1.00 1.00 |
| Std1 | STD | 02/12/09 05:31:36 pm | 0.200 | 1703 ✓ | 0.22 | | 1.00 | 1.00 1.00 |
| Std2 | STD | 02/12/09 05:33:54 pm | 0.500 | 4286 ✓ | 0.57 | | 1.00 | 1.00 1.00 |
| Std3 | STD | 02/12/09 05:36:13 pm | 1.000 | 8662 ✓ | 0.37 | | 1.00 | 1.00 1.00 |
| Std4 | STD | 02/12/09 05:38:32 pm | 2.000 | 17335 ✓ | 0.58 | | 1.00 | 1.00 1.00 |
| Std5 | STD | 02/12/09 05:40:52 pm | 5.000 | 43039 ✓ | 0.79 | | 1.00 | 1.00 1.00 |
| Std6 | STD | 02/12/09 05:43:13 pm | 10.000 | 87825 ✓ | 0.58 | | 1.00 | 1.00 1.00 |

Calibration

Equation: A = -193.346 + 8771.764C
R2: 0.99992 ✓
SEE: 322.1000
Flags:




| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ICB | ICB | 02/12/09 05:52:06 pm | 0.012 ✓ | -92 | 9.12 | | 1.00 | 1.00 1.00 |
| ICV | ICV | 02/12/09 05:54:27 pm | 6.914 ✓ | 60458 | 0.97 | | 1.00 | 1.00 1.00 |
| % Recovery 98.78 ✓ | | | | | | | | |
| RL | CRDL | 02/12/09 05:56:45 pm | 0.213 ✓ | 1672 | 0.36 | | 1.00 | 1.00 1.00 |
| % Recovery 106.31 ✓ | | | | | | | | |



TestAmerica

✓ CNEDES 2/13/09

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| CCV | CCV | 02/12/09 05:59:04 pm | 4.934 ✓ | 43087 | 1.28 | | 1.00 | 1.00 |
| % Recovery 98.68 ✓ | | | | | | | 1.00 | |
| CCB | CCB | 02/12/09 06:01:22 pm | 0.011 ✓ | -93 | 5.09 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K64MVB | UNK | 02/12/09 06:03:39 pm | 0.036 ✓ | 118 | 24.79 | s | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K64MVC | UNK | 02/12/09 06:05:56 pm | 4.769 ✓ | 41637 | 1.18 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61L8 | UNK | 02/12/09 06:08:14 pm | 0.064 | 366 | 3.78 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61L8S | UNK | 02/12/09 06:10:32 pm | 4.754 ✓ | 41506 | 2.02 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61L8D | UNK | 02/12/09 06:12:50 pm | 4.612 ✓ | 40265 | 1.26 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| ~~K61L8S~~ | ~~UNK~~ | ~~02/12/09 06:15:08 pm~~ | ~~4.628~~ | ~~40399~~ | ~~1.46~~ | | ~~1.00~~ | 1.00 |
| | | | | | | | 1.00 | |
| ~~K61L8D~~ | ~~UNK~~ | ~~02/12/09 06:17:26 pm~~ | ~~4.653~~ | ~~40618~~ | ~~1.29~~ | | ~~1.00~~ | 1.00 |
| | | | | | | | 1.00 | |
| K61MV | UNK | 02/12/09 06:19:44 pm | 0.047 | 221 | 2.46 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61NK | UNK | 02/12/09 06:22:03 pm | 0.054 | 279 | 4.23 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61PL | UNK | 02/12/09 06:24:22 pm | 0.035 | 116 | 6.45 | s | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| CCV | CCV | 02/12/09 06:26:42 pm | 4.986 ✓ | 43545 | 0.71 | | 1.00 | 1.00 |
| % Recovery 99.73 ✓ | | | | | | | 1.00 | |
| CCB | CCB | 02/12/09 06:28:59 pm | 0.016 ✓ | -57 | 7.50 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61P6 | UNK | 02/12/09 06:31:19 pm | 0.055 | 292 | 7.70 | s | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61Q2 | UNK | 02/12/09 06:33:38 pm | 0.062 | 351 | 3.49 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K61RN | UNK | 02/12/09 06:35:58 pm | 0.071 | 426 | 0.62 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |

NA, confirms above CS 2/13/09

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| K61VL | UNK | 02/12/09 06:38:18 pm | 0.123 | 883 | 0.99 | | 1.00 | 1.00 1.00 |
| K61V5 | UNK | 02/12/09 06:40:35 pm | 0.103 | 706 | 0.47 | | 1.00 | 1.00 1.00 |
| K64PQB | UNK | 02/12/09 06:42:52 pm | 0.039 ✓ | 146 | 0.74 | | 1.00 | 1.00 1.00 |
| K64PQC | UNK | 02/12/09 06:45:09 pm | 4.901 ✓ | 42799 | 0.77 | | 1.00 | 1.00 1.00 |
| K61L8 | UNK | 02/12/09 06:47:27 pm | 0.036 | 125 | 1.40 | | 1.00 | 1.00 1.00 |
| K61L8S | UNK | 02/12/09 06:49:45 pm | 4.812 ✓ | 42017 | 0.99 | | 1.00 | 1.00 1.00 |
| K61L8D | UNK | 02/12/09 06:52:03 pm | 4.775 ✓ | 41690 | 0.90 | | 1.00 | 1.00 1.00 |
| CCV<br>% Recovery 99.33 ✓ | CCV | 02/12/09 06:54:23 pm | 4.966 ✓ | 43370 | 0.90 | | 1.00 | 1.00 1.00 |
| CCB | CCB | 02/12/09 06:56:40 pm | 0.013 ✓ | -78 | 6.42 | | 1.00 | 1.00 1.00 |
| ~~K61L8S~~ | UNK | 02/12/09 06:58:58 pm | ~~4.748~~ | ~~41458~~ | ~~0.71~~ | | 1.00 | 1.00 1.00 |
| NA, confirms above CO 2/13/09 | | | | | | | | |
| ~~K61L8D~~ | UNK | 02/12/09 07:01:16 pm | ~~4.835~~ | ~~42222~~ | ~~0.55~~ | | 1.00 | 1.00 1.00 |
| K61MV | UNK | 02/12/09 07:03:34 pm | 0.041 | 163 | 5.03 | s | 1.00 | 1.00 1.00 |
| K61NK | UNK | 02/12/09 07:05:53 pm | 0.063 | 360 | 2.18 | | 1.00 | 1.00 1.00 |
| K61PL | UNK | 02/12/09 07:08:12 pm | 0.046 | 211 | 1.91 | | 1.00 | 1.00 1.00 |
| K61P6 | UNK | 02/12/09 07:10:31 pm | 0.044 | 196 | 1.31 | | 1.00 | 1.00 1.00 |
| K61Q2 | UNK | 02/12/09 07:12:51 pm | 0.041 | 167 | 0.81 | | 1.00 | 1.00 1.00 |
| K61RN | UNK | 02/12/09 07:15:11 pm | 0.060 | 334 | 0.44 | | 1.00 | 1.00 1.00 |

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| K61VL | UNK | 02/12/09 07:17:27 pm | 0.065 | 381 | 0.73 | | 1.00 | 1.00 1.00 |
| K61V5 | UNK | 02/12/09 07:19:44 pm | 0.054 | 277 | 0.78 | | 1.00 | 1.00 1.00 |
| CCV | CCV | 02/12/09 07:22:04 pm | 4.983 ✓ | 43513 | 0.84 | | 1.00 | 1.00 1.00 |
| % Recovery 99.65 ✓ | | | | | | | | |
| CCB | CCB | 02/12/09 07:24:21 pm | 0.016 ✓ | -57 | 5.96 | | 1.00 | 1.00 1.00 |
| K64NTB | UNK | 02/12/09 07:26:39 pm | 0.031 ✓ | 76 | 3.50 | | 1.00 | 1.00 1.00 |
| K64NTC | UNK | 02/12/09 07:28:56 pm | 4.916 ✓ | 42931 | 0.91 | | 1.00 | 1.00 1.00 |
| K61TK | UNK | 02/12/09 07:31:14 pm | 0.049 | 239 | 1.00 | | 1.00 | 1.00 1.00 |
| K61TKS | UNK | 02/12/09 07:33:32 pm | 5.117 ✓ | 44691 | 1.16 | | 1.00 | 1.00 1.00 |
| K61KTD | UNK | 02/12/09 07:35:51 pm | 5.104 ✓ | 44578 | 0.96 | | 1.00 | 1.00 1.00 |
| ~~K61TKS~~ | ~~UNK~~ | ~~02/12/09 07:38:09 pm~~ | ~~5.066~~ | ~~44245~~ | ~~0.94~~ | | ~~1.00~~ | ~~1.00~~ 1.00 |
| NA, Confirms above CG 2/13/09 | | | | | | | | |
| ~~K61KTD~~ | ~~UNK~~ | ~~02/12/09 07:40:27 pm~~ | ~~5.141~~ | ~~44899~~ | ~~0.88~~ | | ~~1.00~~ | ~~1.00~~ 1.00 |
| K60WV | UNK | 02/12/09 07:42:46 pm | 0.042 | 178 | 1.14 | | 1.00 | 1.00 1.00 |
| K6006 | UNK | 02/12/09 07:45:05 pm | 0.049 | 237 | 1.25 | | 1.00 | 1.00 1.00 |
| K6XKRB | UNK | 02/12/09 07:47:24 pm | 0.041 ✓ | 166 | 1.73 | | 1.00 | 1.00 1.00 |
| CCV | CCV | 02/12/09 07:49:44 pm | 5.000 ✓ | 43670 | 0.81 | | 1.00 | 1.00 1.00 |
| % Recovery 100.01 ✓ | | | | | | | | |
| CCB | CCB | 02/12/09 07:52:01 pm | 0.017 ✓ | -48 | 8.70 | | 1.00 | 1.00 1.00 |
| K6XKRC | UNK | 02/12/09 07:54:21 pm | 4.973 ✓ | 43431 | 0.77 | | 1.00 | 1.00 1.00 |

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| K6XKRL | UNK | 02/12/09 07:56:41 pm | 4.877 ✓ | 42585 | 1.28 | | 1.00 | 1.00 1.00 |
| K6RA4 | UNK | 02/12/09 07:58:58 pm | 0.031 | 76 | 6.00 | | 1.00 | 1.00 1.00 |
| K6RJM | UNK | 02/12/09 08:01:15 pm | 0.034 | 101 | 3.79 | | 1.00 | 1.00 1.00 |
| K6TF5 | UNK | 02/12/09 08:03:32 pm | 0.043 | 182 | 1.20 | | 1.00 | 1.00 1.00 |
| K6V6FB | UNK | 02/12/09 08:05:50 pm | 0.050 ✓ | 247 | 2.45 | | 1.00 | 1.00 1.00 |
| K64EQC | UNK | 02/12/09 08:08:08 pm | 5.091 ✓ | 44463 | 0.21 | | 1.00 | 1.00 1.00 |
| K6RP2 | UNK | 02/12/09 08:10:26 pm | 0.248 — | 1986 | 0.62 | | 1.00 | 1.00 1.00 |
| K6RP2P5 | UNK | 02/12/09 08:12:44 pm | 0.090 — | 598 | 0.21 | | 1.00 | 1.00 1.00 |
| K6RP8 | UNK | 02/12/09 08:15:03 pm | 0.471 | 3935 | 0.59 | | 1.00 | 1.00 1.00 |
| CCV<br>% Recovery 99.01 ✓ | CCV | 02/12/09 08:17:23 pm | 4.950 ✓ | 43231 | 1.57 | | 1.00 | 1.00 1.00 |
| CCB | CCB | 02/12/09 08:19:40 pm | 0.018 ✓ | -36 | 7.90 | | 1.00 | 1.00 1.00 |
| K6K3WB | UNK | 02/12/09 08:21:59 pm | 0.049 ✓ | 237 | 1.02 | | 1.00 | 1.00 1.00 |
| K64LQC | UNK | 02/12/09 08:24:18 pm | 5.108 ✓ | 44609 | 1.03 | | 1.00 | 1.00 1.00 |
| K6PJ8 | UNK | 02/12/09 08:26:38 pm | 0.023 — | 11 | 18.75 | | 1.00 | 1.00 1.00 |
| K6PJ8P5 | UNK | 02/12/09 08:28:58 pm | 0.046 — | 213 | 0.98 | | 1.00 | 1.00 1.00 |
| K6PKA | UNK | 02/12/09 08:31:15 pm | 0.062 | 349 | 2.02 | | 1.00 | 1.00 1.00 |
| K6V6CB | UNK | 02/12/09 08:33:33 pm | 0.061 ✓ | 343 | 0.77 | | 1.00 | 1.00 1.00 |





✓ NPDES 2/13/0963

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| K64EKC | UNK | 02/12/09 08:35:50 pm | 5.344 ✓ | 46685 | 0.95 | | 1.00 | 1.00 1.00 |
| K6Q8W | UNK | 02/12/09 08:38:08 pm | 0.042 ✓ | 174 | 4.44 | | 1.00 | 1.00 1.00 |
| K6Q8WS | UNK | 02/12/09 08:40:26 pm | 5.341 ✓ | 46654 | 0.91 | | 1.00 | 1.00 1.00 |
| K6Q8WD | UNK | 02/12/09 08:42:44 pm | 5.536 ✓ | 48366 | 1.04 | | 1.00 | 1.00 1.00 |
| CCV<br>% Recovery 114.16 ✓ | CCV | 02/12/09 08:45:04 pm | 5.708 ✓ | 49877 | 0.66 | | 1.00 | 1.00 1.00 |
| CCB | CCB | 02/12/09 08:47:21 pm | 0.018 ✓ | -32 | 8.64 | | 1.00 | 1.00 1.00 |
| K6Q9H | UNK | 02/12/09 08:49:39 pm | 0.043 | 183 | 0.90 | | 1.00 | 1.00 1.00 |
| K6Q9J | UNK | 02/12/09 08:51:58 pm | 0.053 | 271 | 1.23 | | 1.00 | 1.00 1.00 |
| K6Q9K | UNK | 02/12/09 08:54:17 pm | 0.044 | 191 | 0.76 | | 1.00 | 1.00 1.00 |
| K6XJ3B | UNK | 02/12/09 08:56:36 pm | 0.048 ✓ | 231 | 0.42 | | 1.00 | 1.00 1.00 |
| K6XJ3C | UNK | 02/12/09 08:58:56 pm | 5.583 ✓ | 48782 | 0.88 | | 1.00 | 1.00 1.00 |
| K6N90 | UNK | 02/12/09 09:01:16 pm | 0.037 | 132 | 4.43 | | 1.00 | 1.00 1.00 |
| K6N90S | UNK | 02/12/09 09:03:34 pm | 4.702 ✓ | 41055 | 1.08 | | 1.00 | 1.00 1.00 |
| K6N90D | UNK | 02/12/09 09:05:52 pm | 4.903 ✓ | 42812 | 1.01 | | 1.00 | 1.00 1.00 |
| K6N95 | UNK | 02/12/09 09:08:10 pm | 0.093 | 619 | 3.53 | | 1.00 | 1.00 1.00 |
| K6N96 | UNK | 02/12/09 09:10:28 pm | 0.046 | 209 | 2.24 | | 1.00 | 1.00 1.00 |
| CCV<br>% Recovery 109.07 ✓ | CCV | 02/12/09 09:12:48 pm | 5.453 ✓ | 47642 | 0.27 | | 1.00 | 1.00 1.00 |

111.66 % ICC.
~~111.66~~ % See NCM
CS 2/13/09



TestAmerica

NPDES 5796 2/13/09

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| CCB | CCB | 02/12/09 09:15:05 pm | 0.017 | -41 | 6.46 | | 1.00 | 1.00 1.00 |
| K6N97 | UNK | 02/12/09 09:17:23 pm | 0.047 | 216 | 0.73 | | 1.00 | 1.00 1.00 |
| K6N98 | UNK | 02/12/09 09:19:41 pm | 0.049 | 235 | 1.87 | | 1.00 | 1.00 1.00 |
| K6N99 | UNK | 02/12/09 09:21:59 pm | 0.045 | 197 | 1.15 | | 1.00 | 1.00 1.00 |
| K6PAA | UNK | 02/12/09 09:24:18 pm | 0.050 | 247 | 1.63 | | 1.00 | 1.00 1.00 |
| K6PAC | UNK | 02/12/09 09:26:37 pm | 0.034 | 106 | 2.64 | | 1.00 | 1.00 1.00 |
| K6PAD | UNK | 02/12/09 09:28:56 pm | 0.041 | 169 | 3.12 | | 1.00 | 1.00 1.00 |
| K6PAE | UNK | 02/12/09 09:31:16 pm | 0.059 | 321 | 1.25 | | 1.00 | 1.00 1.00 |
| K6PAF | UNK | 02/12/09 09:33:36 pm | 0.057 | 306 | 1.39 | | 1.00 | 1.00 1.00 |
| K6PAH | UNK | 02/12/09 09:35:54 pm | 0.067 | 398 | 2.35 | | 1.00 | 1.00 1.00 |
| K6PAK | UNK | 02/12/09 09:38:12 pm | 0.055 | 285 | 3.34 | | 1.00 | 1.00 1.00 |
| CCV<br>% Recovery 112.98 | CCV | 02/12/09 09:40:32 pm | 5.649 | 49358 | 0.82 | | 1.00 | 1.00 1.00 |
| CCB | CCB | 02/12/09 09:42:49 pm | 0.016 | -51 | 12.43 | | 1.00 | 1.00 1.00 |
| K6PAM | UNK | 02/12/09 09:45:07 pm | 0.045 | 206 | 1.59 | | 1.00 | 1.00 1.00 |
| K6PAP | UNK | 02/12/09 09:47:26 pm | 0.044 | 189 | 1.18 | | 1.00 | 1.00 1.00 |
| K6PAQ | UNK | 02/12/09 09:49:44 pm | 0.050 | 246 | 0.53 | | 1.00 | 1.00 1.00 |
| K6PAR | UNK | 02/12/09 09:52:02 pm | 0.049 | 235 | 1.08 | | 1.00 | 1.00 1.00 |

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| K6RD6 | UNK | 02/12/09 09:54:21 pm | 0.047 | 223 | 0.43 | | 1.00 | 1.00 1.00 |
| K6RD9 | UNK | 02/12/09 09:56:39 pm | 0.052 | 261 | 1.68 | | 1.00 | 1.00 1.00 |
| K6VAF | UNK | 02/12/09 09:58:58 pm | 0.058 | 314 | 0.97 | | 1.00 | 1.00 1.00 |
| K6XKJB | UNK | 02/12/09 10:01:18 pm | 0.053 ✓ | 274 | 0.78 | | 1.00 | 1.00 1.00 |
| K6XKJC | UNK | 02/12/09 10:03:37 pm | 5.591 ✓ | 48853 | 0.86 | | 1.00 | 1.00 1.00 |
| K6RCT | UNK | 02/12/09 10:05:57 pm | 0.044 | 196 | 0.41 | | 1.00 | 1.00 1.00 |
| CCV<br>% Recovery 111.88 ✓ | CCV | 02/12/09 10:08:17 pm | 5.594 ✓ | 48878 | 0.84 | | 1.00 | 1.00 1.00 |
| CCB | CCB | 02/12/09 10:10:34 pm | 0.017 ✓ | -44 | 13.84 | | 1.00 | 1.00 1.00 |
| K6RCTS | UNK | 02/12/09 10:12:53 pm | 5.374 ✓ | 46945 | 0.12 | | 1.00 | 1.00 1.00 |
| K6RCTD | UNK | 02/12/09 10:15:11 pm | 5.428 ✓ | 47424 | 1.68 | | 1.00 | 1.00 1.00 |
| K6RC0 | UNK | 02/12/09 10:17:30 pm | 0.040 | 161 | 1.12 | | 1.00 | 1.00 1.00 |
| K6RC1 | UNK | 02/12/09 10:19:48 pm | 0.044 | 190 | 1.42 | | 1.00 | 1.00 1.00 |
| K6RC2 | UNK | 02/12/09 10:22:07 pm | 0.047 | 221 | 1.67 | | 1.00 | 1.00 1.00 |
| K6RC3 | UNK | 02/12/09 10:24:25 pm | 0.048 | 227 | 0.82 | | 1.00 | 1.00 1.00 |
| K6RC4 | UNK | 02/12/09 10:26:44 pm | 0.057 | 307 | 1.46 | | 1.00 | 1.00 1.00 |
| K6RC5 | UNK | 02/12/09 10:29:02 pm | 0.053 | 274 | 1.41 | | 1.00 | 1.00 1.00 |
| K6RC7 | UNK | 02/12/09 10:31:21 pm | 0.059 | 322 | 0.68 | | 1.00 | 1.00 1.00 |

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| K6R0F | UNK | 02/12/09 10:33:41 pm | 0.047 | 215 | 1.13 | | 1.00 | 1.00 1.00 |
| CCV | CCV | 02/12/09 10:36:01 pm | 5.605 | 48976 | 1.05 | | 1.00 | 1.00 1.00 |
| % Recovery 112.11 | | | | | | | | |
| CCB | CCB | 02/12/09 10:38:18 pm | 0.018 | -37 | 7.83 | | 1.00 | 1.00 1.00 |
| K6R1Q | UNK | 02/12/09 10:40:37 pm | 0.052 | 258 | 0.84 | | 1.00 | 1.00 1.00 |
| K6R1X | UNK | 02/12/09 10:42:57 pm | 0.047 | 219 | 1.26 | | 1.00 | 1.00 1.00 |
| K6R13 | UNK | 02/12/09 10:45:16 pm | 0.050 | 245 | 1.45 | | 1.00 | 1.00 1.00 |
| K6R14 | UNK | 02/12/09 10:47:35 pm | 0.060 | 336 | 0.59 | | 1.00 | 1.00 1.00 |
| K6R16 | UNK | 02/12/09 10:49:53 pm | 0.042 | 177 | 1.26 | | 1.00 | 1.00 1.00 |
| K6R19 | UNK | 02/12/09 10:52:12 pm | 0.042 | 174 | 1.64 | | 1.00 | 1.00 1.00 |
| K6R2A | UNK | 02/12/09 10:54:31 pm | 0.050 | 243 | 1.39 | | 1.00 | 1.00 1.00 |
| K6V8R | UNK | 02/12/09 10:56:50 pm | 0.053 | 270 | 0.39 | | 1.00 | 1.00 1.00 |
| K6V84 | UNK | 02/12/09 10:59:08 pm | 0.041 | 164 | 1.07 | | 1.00 | 1.00 1.00 |
| K6V86 | UNK | 02/12/09 11:01:27 pm | 0.044 | 192 | 1.58 | | 1.00 | 1.00 1.00 |
| CCV | CCV | 02/12/09 11:03:47 pm | 5.561 | 48584 | 1.00 | | 1.00 | 1.00 1.00 |
| % Recovery 111.21 | | | | | | | | |
| CCB | CCB | 02/12/09 11:06:04 pm | 0.019 | -31 | 5.15 | | 1.00 | 1.00 1.00 |
| K6V87 | UNK | 02/12/09 11:08:23 pm | 0.049 | 238 | 2.29 | | 1.00 | 1.00 1.00 |
| K6XKVB | UNK | 02/12/09 11:10:43 pm | 0.053 | 274 | 0.46 | | 1.00 | 1.00 1.00 |

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. | ODF |
|---|---|---|---|---|---|---|---|---|---|
| K6XKVC | UNK | 02/12/09 11:13:02 pm | 5.497 | 48029 | 0.37 | | 1.00 | 1.00 | 1.00 |
| K6VA6 | UNK | 02/12/09 11:15:22 pm | 0.038 | 143 | 4.19 | | 1.00 | 1.00 | 1.00 |
| K6VCG | UNK | 02/12/09 11:17:41 pm | 0.051 | 257 | 1.41 | | 1.00 | 1.00 | 1.00 |
| K6VCJ | UNK | 02/12/09 11:20:00 pm | 0.044 | 190 | 0.96 | | 1.00 | 1.00 | 1.00 |
| K6VCK | UNK | 02/12/09 11:22:19 pm | 0.049 | 239 | 0.48 | | 1.00 | 1.00 | 1.00 |
| K6VCM | UNK | 02/12/09 11:24:38 pm | 0.047 | 216 | 1.33 | | 1.00 | 1.00 | 1.00 |
| K6VCN | UNK | 02/12/09 11:26:57 pm | 0.051 | 257 | 2.42 | | 1.00 | 1.00 | 1.00 |
| K6VCR | UNK | 02/12/09 11:29:16 pm | 0.047 | 220 | 1.07 | | 1.00 | 1.00 | 1.00 |
| CCV<br>% Recovery 111.62 | CCV | 02/12/09 11:31:36 pm | 5.581 | 48762 | 0.82 | | 1.00 | 1.00 | 1.00 |
| CCB | CCB | 02/12/09 11:33:53 pm | 0.018 | -37 | 13.44 | | 1.00 | 1.00 | 1.00 |
| K6VCW | UNK | 02/12/09 11:36:12 pm | 0.046 | 209 | 1.68 | | 1.00 | 1.00 | 1.00 |
| K6VC0 | UNK | 02/12/09 11:38:31 pm | 0.045 | 203 | 1.77 | | 1.00 | 1.00 | 1.00 |
| K6VC3 | UNK | 02/12/09 11:40:50 pm | 0.043 | 181 | 0.69 | | 1.00 | 1.00 | 1.00 |
| K6VC3P5 | UNK | 02/12/09 11:43:10 pm | 0.047 | 222 | 0.87 | | 1.00 | 1.00 | 1.00 |
| K6VC3S | UNK | 02/12/09 11:45:29 pm | 5.390 | 47090 | 0.98 | | 1.00 | 1.00 | 1.00 |
| K6VC3D | UNK | 02/12/09 11:47:49 pm | 5.397 | 47148 | 0.94 | | 1.00 | 1.00 | 1.00 |
| K6VC6 | UNK | 02/12/09 11:50:09 pm | 0.060 | 334 | 1.18 | | 1.00 | 1.00 | 1.00 |

| Sample Name | Type | Date/Time | Conc (ppb) | µAbs | %RSD | Flags | Wt. | Vol. ODF |
|---|---|---|---|---|---|---|---|---|
| CCV | CCV | 02/12/09 11:52:28 pm | 5.590 | 48842 | 1.04 | | 1.00 | 1.00 |
| % Recovery 111.80 | | | | | | | 1.00 | |
| CCB | CCB | 02/12/09 11:54:46 pm | 0.016 | -50 | 12.87 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6XKNB | UNK | 02/12/09 11:57:05 pm | 0.047 | 216 | 1.02 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6XKNC | UNK | 02/12/09 11:59:25 pm | 5.536 | 48370 | 0.89 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6QHH | UNK | 02/13/09 12:01:44 am | 0.039 | 147 | 4.71 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6QHHS | UNK | 02/13/09 12:04:04 am | 5.474 | 47820 | 0.57 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6QHHD | UNK | 02/13/09 12:06:23 am | 5.578 | 48736 | 1.03 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6QHN | UNK | 02/13/09 12:08:43 am | 0.040 | 156 | 1.18 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| CCV | CCV | 02/13/09 12:11:03 am | 5.556 | 48544 | 1.79 | | 1.00 | 1.00 |
| % Recovery 111.12 | | | | | | | 1.00 | |
| CCB | CCB | 02/13/09 12:13:20 am | 0.017 | -48 | 6.00 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| ~~CCV~~ | ~~CCV~~ | ~~02/13/09 08:19:07 am~~ | ~~5.878~~ | ~~51370~~ | ~~1.14~~ | | ~~1.00~~ | ~~1.00~~ |
| % Recovery 117.57 | | | | | | | ~~1.00~~ | |
| CCB | CCB | 02/13/09 08:21:24 am | 0.011 | -99 | 7.49 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| K6XKJC | UNK | 02/13/09 08:23:44 am | 5.732 | 50091 | 1.07 | | 1.00 | 1.00 |
| | | | | | | | 1.00 | |
| CCV | CCV | 02/13/09 08:26:04 am | 5.809 | 50759 | 0.92 | | 1.00 | 1.00 |
| % Recovery 116.17 | | | | | | | 1.00 | |
| ~~CCB~~ | ~~CCB~~ | ~~02/13/09 08:28:21 am~~ | ~~0.011~~ | ~~-99~~ | ~~4.93~~ | | ~~1.00~~ | ~~1.00~~ |
| | | | | | | | ~~1.00~~ | |

NA cy 211310s





NPDES - 211310s

# *Analysis Parameters*

## Instrument

### Conditions

| Gas flow (mL/min) | Sample Uptake (s) | Rinse (s) | Read delay (s) | Replicates (#) | Replicate time (s) | Pump speed (%) | Wavelength (nm) |
|---|---|---|---|---|---|---|---|
| 100 | 40.00 | 90.00 | 50.00 | 4 | 1.50 | 50 | 253.65 |

### Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

### Baseline Correction

| #1 Start time (s) | #1 End time (s) | #2 Start time (s) | #2 End time (s) |
|---|---|---|---|
| 25.00 | 29.00 | | |

### Standby Mode

Enabled: Yes

Standby Options: pump slow

### Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

## Calibration

### Settings

| Algorithm | Through blank | Weighted fit | Cal. Type | Racalibration rate | Reslope rate | Reslope standard |
|---|---|---|---|---|---|---|
| Linear | No | No | Normal | 0 | 0 | N/A |

### Limits

| Calibration slope | | Reslope | | Coeff. of |
|---|---|---|---|---|
| Lower (%) | Upper (%) | Lower (%) | Upper (%) | Determination |
| 20 | 150 | 75 | 125 | 0.99500 |

Error action: Flag and continue

## QC

GLP Override: Yes

### QC Tests

## CCB

| Concentration (ppb) |
|---|
| 0.2000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## ICB

| Concentration (ppb) |
|---|
| 0.2000 |

Failure flag: Z

Error action for manually inserted QC: Stop analysis

## CCV

| Concentration (ppb) | Low Limit % | High Limit % |
|---|---|---|
| 5.0000 | 80.0000 | 120.0000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## ICV

| Concentration (ppb) | Low Limit % | High Limit % |
|---|---|---|
| 7.0000 | 90.0000 | 110.0000 |

Failure flag: Q

Error action for manually inserted QC: Stop analysis

## CRDL

| Concentration (ppb) | Low Limit % | High Limit % |
|---|---|---|
| 0.2000 | 70.0000 | 130.0000 |

Failure flag: Y

Error action for manually inserted QC: Stop analysis



NPDES - 8031/13/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

PROJECT NO. BOEING NPDES

SSFL MWH-Pasadena/Boeing

Lot #: F9B100167

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

for: Sherryl Adam
Project Manager

March 10, 2009

Case Narrative
LOT NUMBER: F9B100167

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on February 10, 2009. This sample is associated with your SSFL MWH-Pasadena/Boeing project.

The analytical results included in this report meet all applicable quality control procedure requirements.

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. The case narrative is an integral part of this report.

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.

There are no observations or nonconformances associated with the analysis in this lot.

# METHODS SUMMARY

**F9B100167**

| 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 | EPA 903.0 |
| Radium-228 by GFPC | EPA 904 MOD | EPA 904 |
| 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

**F9B100167**

| WO # | SAMPLE# | CLIENT SAMPLE ID | SAMPLED DATE | SAMP TIME |
|---|---|---|---|---|
| K603D | 001 | ISB0717-01 | 02/06/09 | 09:10 |

**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: ISB0717-01

### Radiochemistry

Lab Sample ID: F9B100167-001
Work Order: K603D
Matrix: WATER

Date Collected: 02/06/09 0910
Date Received: 02/10/09 0900

| Parameter | Result | Qual | Total Uncert. (2 σ+/-) | RL | mdc | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Gamma Cs-137 & Hits by EPA 901.1 MOD** | | | | **pCi/L** | **Batch # 9042113** | | **Yld %** |
| Cesium 137 | 0.6 | U | 7.5 | 20.0 | 14 | 02/11/09 | 02/26/09 |
| Potassium 40 | -90 | U | 770 | | 280 | 02/11/09 | 02/26/09 |
| **Gross Alpha/Beta EPA 900** | | | | **pCi/L** | **Batch # 9043152** | | **Yld %** |
| **Gross Alpha** | 2.2 | J | 1.1 | 3.0 | 1.2 | 02/12/09 | 02/16/09 |
| **Gross Beta** | 13.7 | | 1.7 | 4.0 | 1.1 | 02/12/09 | 02/16/09 |
| **Radium 226 by EPA 903.0 MOD** | | | | **pCi/L** | **Batch # 9041370** | | **Yld % 81** |
| **Radium (226)** | 0.46 | J | 0.23 | 1.00 | 0.31 | 02/10/09 | 03/06/09 |
| **Radium 228 by GFPC EPA 904 MOD** | | | | **pCi/L** | **Batch # 9041371** | | **Yld % 86** |
| Radium 228 | 0.12 | U | 0.24 | 1.00 | 0.40 | 02/10/09 | 03/06/09 |
| **TRITIUM (Distill) by EPA 906.0 MOD** | | | | **pCi/L** | **Batch # 9059104** | | **Yld %** |
| Tritium | 20 | U | 190 | 500 | 340 | 02/28/09 | 03/05/09 |
| **SR-90 BY GFPC EPA-905 MOD** | | | | **pCi/L** | **Batch # 9041372** | | **Yld % 59** |
| Strontium 90 | 0.21 | U | 0.38 | 3.00 | 0.64 | 02/10/09 | 02/26/09 |
| **Total Uranium by KPA ASTM 5174-91** | | | | **pCi/L** | **Batch # 9041382** | | **Yld %** |
| **Total Uranium** | 0.518 | J | 0.059 | 1.35 | 0.42 | 02/10/09 | 03/08/09 |

**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.**

# METHOD BLANK REPORT

## Radiochemistry

Client Lot ID: F9B100167
Matrix: WATER

| Parameter | Result | Qual | Total Uncert. (2 σ+/-) | RL | MDC | Prep Date | Analysis Date | Lab Sample ID |
|---|---|---|---|---|---|---|---|---|
| **Radium 226 by EPA 903.0 MOD** | | | **pCi/L** | **Batch # 9041370** | | **Yld % 98** | | **F9B100000-370B** |
| Radium (226) | 0.037 | U | 0.092 | 1.00 | 0.17 | 02/10/09 | 03/06/09 | |
| **Radium 228 by GFPC EPA 904 MOD** | | | **pCi/L** | **Batch # 9041371** | | **Yld % 98** | | **F9B100000-371B** |
| Radium 228 | 0.13 | U | 0.24 | 1.00 | 0.41 | 02/10/09 | 03/06/09 | |
| **SR-90 BY GFPC EPA-905 MOD** | | | **pCi/L** | **Batch # 9041372** | | **Yld % 72** | | **F9B100000-372B** |
| Strontium 90 | 0.42 | U | 0.30 | 3.00 | 0.47 | 02/10/09 | 02/26/09 | |
| **Total Uranium by KPA ASTM 5174-91** | | | **pCi/L** | **Batch # 9041382** | | **Yld %** | | **F9B100000-382B** |
| Total Uranium | -0.0103 | U | 0.0012 | 0.677 | 0.21 | 02/10/09 | 03/08/09 | |
| **Gamma Cs-137 & Hits by EPA 901.1 MOD** | | | **pCi/L** | **Batch # 9042113** | | **Yld %** | | **F9B110000-113B** |
| Cesium 137 | -0.003 | U | 7.5 | 20.0 | 14 | 02/11/09 | 02/26/09 | |
| Potassium 40 | -40 | U | 160 | | 240 | 02/11/09 | 02/26/09 | |
| **Gross Alpha/Beta EPA 900** | | | **pCi/L** | **Batch # 9043152** | | **Yld %** | | **F9B120000-152B** |
| Gross Alpha | 0.45 | U | 0.46 | 2.00 | 0.69 | 02/12/09 | 02/17/09 | |
| Gross Beta | 0.36 | U | 0.90 | 4.00 | 1.5 | 02/12/09 | 02/17/09 | |
| **TRITIUM (Distill) by EPA 906.0 MOD** | | | **pCi/L** | **Batch # 9059104** | | **Yld %** | | **F9B280000-104B** |
| Tritium | 2 | U | 190 | 500 | 330 | 02/28/09 | 03/05/09 | |

**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: F9B100167
Matrix: WATER

| Parameter | Spike Amount | Result | Total Uncert. (2 σ+/-) | MDC | % Yld | % Rec | Lab Sample ID QC Control Limits |
|---|---|---|---|---|---|---|---|
| **Total Uranium by KPA ASTM 5174-91** | | **pCi/L** | | **5174-91** | | | **F9B100000-382C** |
| Total Uranium | 27.1 | 29.5 | 3.5 | 0.2 | | 109 | (90 - 118) |
| | **Batch #:** | 9041382 | | **Analysis Date:** | 03/08/09 | | |
| **Total Uranium by KPA ASTM 5174-91** | | **pCi/L** | | **5174-91** | | | **F9B100000-382C** |
| Total Uranium | 5.42 | 5.76 | 0.60 | 0.21 | | 106 | (90 - 118) |
| | **Batch #:** | 9041382 | | **Analysis Date:** | 03/08/09 | | |
| **Gamma Cs-137 & Hits by EPA 901.1 MOD** | | **pCi/L** | | **901.1 MOD** | | | **F9B110000-113C** |
| Americium 241 | 141000 | 138000 | 11000 | 500 | | 98 | (90 - 110) |
| Cesium 137 | 53100 | 51800 | 3000 | 200 | | 98 | (90 - 110) |
| Cobalt 60 | 87900 | 84600 | 4800 | 200 | | 96 | (90 - 110) |
| | **Batch #:** | 9042113 | | **Analysis Date:** | 02/26/09 | | |
| **Gross Alpha/Beta EPA 900** | | **pCi/L** | | **900.0 MOD** | | | **F9B120000-152C** |
| Gross Beta | 67.6 | 71.1 | 6.0 | 1.4 | | 105 | (73 - 122) |
| | **Batch #:** | 9043152 | | **Analysis Date:** | 02/17/09 | | |
| **Gross Alpha/Beta EPA 900** | | **pCi/L** | | **900.0 MOD** | | | **F9B120000-152C** |
| Gross Alpha | 49.4 | 55.2 | 6.0 | 1.1 | | 112 | (73 - 136) |
| | **Batch #:** | 9043152 | | **Analysis Date:** | 02/17/09 | | |
| **TRITIUM (Distill) by EPA 906.0 MOD** | | **pCi/L** | | **906.0 MOD** | | | **F9B280000-104C** |
| Tritium | 4780 | 4340 | 490 | 340 | | 91 | (77 - 110) |
| | **Batch #:** | 9059104 | | **Analysis Date:** | 03/05/09 | | |

**NOTE(S)**

MDC is determined by instrument performance only
Calculations are performed before rounding to avoid round-off error in calculated results

# Laboratory Control Sample/LCS Duplicate Report

## Radiochemistry

Client Lot ID: F9B100167
Matrix: WATER

| Parameter | | Spike Amount | Result | Total Uncert. (2 σ+/-) | % Yld | % Rec | QC Control Limits | Precision | |
|---|---|---|---|---|---|---|---|---|---|
| **Radium 226 by EPA 903.0 MOD** | | | **pCi/L** | **903.0 MOD** | | | **Lab Sample ID F9B100000-370C** | | |
| Radium (226) | | 11.3 | 12.2 | 1.2 | 96 | 108 | (52 - 150) | | |
| | Spk 2 | 11.3 | 11.6 | 1.2 | 97 | 103 | (52 - 150) | 5 | %RPD |
| | | **Batch #:** | 9041370 | | **Analysis Date:** | | 03/06/09 | | |
| **Radium 228 by GFPC EPA 904 MOD** | | | **pCi/L** | **904 MOD** | | | **F9B100000-371C** | | |
| Radium 228 | | 7.22 | 8.03 | 0.89 | 92 | 111 | (64 - 140) | | |
| | Spk 2 | 7.22 | 7.84 | 0.87 | 93 | 109 | (64 - 140) | 2 | %RPD |
| | | **Batch #:** | 9041371 | | **Analysis Date:** | | 03/06/09 | | |
| **SR-90 BY GFPC EPA-905 MOD** | | | **pCi/L** | **905 MOD** | | | **F9B100000-372C** | | |
| Strontium 90 | | 6.97 | 8.07 | 0.90 | 70 | 116 | (78 - 146) | | |
| | Spk 2 | 6.97 | 8.03 | 0.90 | 68 | 115 | (78 - 146) | 0.6 | %RPD |
| | | **Batch #:** | 9041372 | | **Analysis Date:** | | 02/26/09 | | |

**NOTE(S)**

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

# DUPLICATE EVALUATION REPORT

## Radiochemistry

Client Lot ID: F9B100167
Matrix: WATER

Date Sampled: 02/06/09
Date Received: 02/10/09

| Parameter | SAMPLE Result | | Total Uncert. (2σ+/-) | % Yld | DUPLICATE Result | | Total Uncert. (2 σ+/-) | % Yld | QC Sample ID Precision | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Gamma Cs-137 & Hits by EPA 901.1 MOD** | | | | **pCi/L** | **901.1 MOD** | | | | **F9B100164-001** | |
| Cesium 137 | 0.0 | U | 7.5 | | -0.5 | U | 8.4 | | 200 | %RPD |
| Potassium 40 | -100 | U | 1900 | | -40 | U | 250 | | 96 | %RPD |
| | Batch #: | | 9042113 | (Sample) | 9042113 | | (Duplicate) | | | |
| **Gross Alpha/Beta EPA 900** | | | | **pCi/L** | **900.0 MOD** | | | | **F9B100164-001** | |
| Gross Alpha | 0.77 | U | 0.96 | | 0.48 | U | 0.93 | | 47 | %RPD |
| Gross Beta | 4.8 | | 1.0 | | 4.10 | | 0.96 | | 16 | %RPD |
| | Batch #: | | 9043152 | (Sample) | 9043152 | | (Duplicate) | | | |
| **TRITIUM (Distill) by EPA 906.0 MOD** | | | | **pCi/L** | **906.0 MOD** | | | | **F9B100164-001** | |
| Tritium | -80 | U | 180 | | 90 | U | 200 | | 2030 | %RPD |
| | Batch #: | | 9059104 | (Sample) | 9059104 | | (Duplicate) | | | |

**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.

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

## Radiochemistry

Client Lot ID: F9B100164 Date Sampled: 02/06/09 1300
Matrix: WATER Date Received: 02/10/09 0900

| Parameter | | Spike Amount | SPIKE Result | Total Uncert. (2 σ+/-) | Spike Yld | SAMPLE Result | | Total Uncert. (2σ +/-) | QC Sample ID % Yld | %Rec | QC Control Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Uranium by KPA ASTM 5** | | | | **pCi/L** | | **5174-91** | | | | **F9B100164-001** | |
| Total Uranium | | 27.1 | 30.8 | 3.6 | | 0.266 | J | 0.029 | | 112 | (90 - 121) |
| | Spk2 | 27.1 | 30.0 | 3.6 | | 0.266 | J | 0.029 | | 110 | (90 - 121) |
| | | | | | | | | | **Precision:** | 3 | %RPD |

**Batch #:** 9041382 **Analysis date:** 03/08/09

**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 greater than or equal to the sample detection limit but less than stated reporting limit.

# MATRIX SPIKE REPORT

## Radiochemistry

Client Lot Id: F9B100164
Matrix: WATER

Date Sampled: 02/06/09
Date Received: 02/10/09

| Parameter | Spike Amount | Spike Result | Total Uncert. (2σ +/-) | Spike Yld. | Sample Result | Total Uncert. (2σ +/-) | QC Sample ID %YLD | QC Sample ID %REC | QC Control Limits |
|---|---|---|---|---|---|---|---|---|---|
| **Gross Alpha/Beta EPA 900** | | | pCi/L | | 900.0 MOD | | | F9B100164-001 | |
| Gross Alpha | 49.4 | 45.4 | 5.8 | | 0.77 | 0.96 | | 90 | (44 - 150) |
| | Batch #: | 9043152 | | Analysis Date: | | 02/16/09 | | | |
| **Gross Alpha/Beta EPA 900** | | | pCi/L | | 900.0 MOD | | | F9B100164-001 | |
| Gross Beta | 67.6 | 75.7 | 6.4 | | 4.8 | 1.0 | | 105 | (66 - 147) |
| | Batch #: | 9043152 | | Analysis Date: | | 02/16/09 | | | |
| **TRITIUM (Distill) by EPA 906.0 MOD** | | | pCi/L | | 906.0 MOD | | | F9B100167-001 | |
| Tritium | 4780 | 3840 | 460 | | 20 | 190 | | 80 | (47 - 150) |
| | Batch #: | 9059104 | | Analysis Date: | | 03/06/09 | | | |

**NOTE(S)**

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

wf 3/5

# SUBCONTRACT ORDER

## TestAmerica Irvine

## ISB0717

**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 | Surch | Comments |
|---|---|---|---|---|---|---|
| **Sample ID: ISB0717-01** | **Water** | | Sampled: **02/06/09 09:10** | | | |
| Gamma Spec-O | mg/kg | 02/17/09 | 02/06/10 09:10 | $250.00 | 0% | Out St Louis, k-40 and cs-137 only, DO NOT FILTER! |
| Gross Alpha-O | pCi/L | 02/17/09 | 08/05/09 09:10 | $100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Gross Beta-O | pCi/L | 02/17/09 | 08/05/09 09:10 | $100.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Level 4 Data Package | N/A | 02/17/09 | 03/06/09 09:10 | $0.00 | 0% | St. Louis/ Provide Element transfer file |
| Radium, Combined-O | pCi/L | 02/17/09 | 02/06/10 09:10 | $238.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Strontium 90-O | pCi/L | 02/17/09 | 02/06/10 09:10 | $155.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Tritium-O | pCi/L | 02/17/09 | 02/06/10 09:10 | $80.00 | 50% | Out St Louis, Boeing permit, DO NOT FILTER! |
| Uranium, Combined-O | pCi/L | 02/17/09 | 02/06/10 09:10 | $120.00 | 0% | Out St Louis, Boeing permit, DO NOT FILTER! |

*Containers Supplied:*

2.5 gal Poly (S) 500 mL Amber (T)

| Released By | Date/Time | Received By | Date/Time |
|---|---|---|---|
| [signature] | 2/09/09 17:00 | FedEx | 2/09/09 17:00 |
| | | [signature] | 02.09.09 0900 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F9B100158 F9B100172
60
47
- 315 -
70

# CONDITION UPON RECEIPT, FORM

Client: TA Irvine
Quote No: 77435, 61594
COC/RFA No: below
10 SN 02.10.09
Initiated By: SV Date: 02.09.09 Time: 0900

## Shipping Information

Shipper: ~~FedEx~~ UPS DHL Courier Client Other: _____ Multiple Packages: (Y) N

| Shipping # (s):* | | | | Sample Temperature (s):** | | | |
|---|---|---|---|---|---|---|---|
| 1. | 7963 2682 0979 | 6. | | 1. | 2 | 6. | |
| 2. | 1048 | 7. | | 2. | 2 | 7. | |
| 3. | 1081 | 8. | | 3. | 2 | 8. | |
| 4. | | 9. | | 4. | | 9. | |
| 5. | | 10. | | 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-Liquid or Rad tests- Liquid or Solids

**Condition** (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

| | | | | | |
|---|---|---|---|---|---|
| 1. | (Y) N | Are there custody seals present on the cooler? | 8. | Y (N) | Are there custody seals present on bottles? |
| 2. | Y (N) N/A | Do custody seals on cooler appear to be tampered with? | 9. | Y N (N/A) | Do custody seals on bottles appear to be tampered with? |
| 3. | (Y) 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. | (Y) N | Sample received with Chain of Custody? | 11. | (Y) N | Sample received in proper containers? |
| 5. | (Y) N N/A | Does the Chain of Custody match sample ID's on the container(s)? | 12. | Y N (N/A) | Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below) |
| 6. | Y (N) | Was sample received broken? | 13. | (Y) N N/A | Was Internal COC/Workshare received? |
| 7. | (Y) N | Is sample volume sufficient for analysis? | 14. | (Y) N N/A | Was pH taken by original TestAmerica lab? |

[1] For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes: ISB0752
0534
0723
0717

Corrective Action:
Client Contact Name: _____ Informed by: _____
Sample(s) processed "as is"
Sample(s) on hold until: _____ If released, notify: _____
Project Management Review: Sheryl A Adam Date: 2-11-09

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM. - 315 -

Vista
Analytical Laboratory

NPDES - 817

February 19, 2009

**Vista Project I.D.: 31400**

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

Dear Mr. Doak,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on February 10, 2009 under your Project Name "ISB0717". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.*

## Section I: Sample Inventory Report

**Date Received:** **2/10/2009**

| Vista Lab. ID | Client Sample ID |
|---|---|
| 31400-001 | ISB0717-01 |

# SECTION II

**Method Blank** **EPA Method 1613**

Matrix: Aqueous | QC Batch No.: 1876 | Lab Sample: 0-MB001

Sample Size: 1.00 L | Date Extracted: 11-Feb-09 | Date Analyzed DB-5: 13-Feb-09 | Date Analyzed DB-225: NA

| Analyte | Conc. (ug/L) | DL [a] | EMPC [b] | Qualifiers |
|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | 0.000000408 | | |
| 1,2,3,7,8-PeCDD | ND | 0.000000973 | | |
| 1,2,3,4,7,8-HxCDD | ND | 0.000000759 | | |
| 1,2,3,6,7,8-HxCDD | ND | 0.000000746 | | |
| 1,2,3,7,8,9-HxCDD | ND | 0.000000725 | | |
| 1,2,3,4,6,7,8-HpCDD | ND | 0.00000155 | | |
| OCDD | ND | 0.00000128 | | |
| 2,3,7,8-TCDF | ND | 0.000000401 | | |
| 1,2,3,7,8-PeCDF | ND | 0.000000404 | | |
| 2,3,4,7,8-PeCDF | ND | 0.000000419 | | |
| 1,2,3,4,7,8-HxCDF | ND | 0.000000475 | | |
| 1,2,3,6,7,8-HxCDF | ND | 0.000000430 | | |
| 2,3,4,6,7,8-HxCDF | ND | 0.000000400 | | |
| 1,2,3,7,8,9-HxCDF | ND | 0.000000717 | | |
| 1,2,3,4,6,7,8-HpCDF | ND | 0.000000975 | | |
| 1,2,3,4,7,8,9-HpCDF | ND | 0.00000107 | | |
| OCDF | ND | 0.00000112 | | |

| | Labeled Standard | %R | LCL-UCL [d] | Qualifiers |
|---|---|---|---|---|
| IS | 13C-2,3,7,8-TCDD | 94.1 | 25 - 164 | |
| | 13C-1,2,3,7,8-PeCDD | 88.4 | 25 - 181 | |
| | 13C-1,2,3,4,7,8-HxCDD | 95.7 | 32 - 141 | |
| | 13C-1,2,3,6,7,8-HxCDD | 88.6 | 28 - 130 | |
| | 13C-1,2,3,4,6,7,8-HpCDD | 102 | 23 - 140 | |
| | 13C-OCDD | 97.3 | 17 - 157 | |
| | 13C-2,3,7,8-TCDF | 104 | 24 - 169 | |
| | 13C-1,2,3,7,8-PeCDF | 87.5 | 24 - 185 | |
| | 13C-2,3,4,7,8-PeCDF | 85.8 | 21 - 178 | |
| | 13C-1,2,3,4,7,8-HxCDF | 91.9 | 26 - 152 | |
| | 13C-1,2,3,6,7,8-HxCDF | 91.7 | 26 - 123 | |
| | 13C-2,3,4,6,7,8-HxCDF | 114 | 28 - 136 | |
| | 13C-1,2,3,7,8,9-HxCDF | 94.0 | 29 - 147 | |
| | 13C-1,2,3,4,6,7,8-HpCDF | 91.5 | 28 - 143 | |
| | 13C-1,2,3,4,7,8,9-HpCDF | 96.4 | 26 - 138 | |
| | 13C-OCDF | 92.5 | 17 - 157 | |
| CRS | 37Cl-2,3,7,8-TCDD | 85.7 | 35 - 197 | |

**Totals**

| | | |
|---|---|---|
| Total TCDD | ND | 0.000000408 |
| Total PeCDD | ND | 0.000000973 |
| Total HxCDD | ND | 0.000000743 |
| Total HpCDD | ND | 0.00000155 |
| Total TCDF | ND | 0.000000401 |
| Total PeCDF | ND | 0.000000412 |
| Total HxCDF | ND | 0.000000506 |
| Total HpCDF | ND | 0.00000102 |

**Footnotes**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: Martha M. Maier 19-Feb-2009 13:27

**OPR Results** **EPA Method 1613**

| | | | | | |
|---|---|---|---|---|---|
| Matrix: | Aqueous | QC Batch No.: | 1876 | Lab Sample: | 0-OPR001 |
| Sample Size: | 1.00 L | Date Extracted: | 11-Feb-09 | Date Analyzed DB-5: | 13-Feb-09 |
| | | | | Date Analyzed DB-225: | NA |

| Analyte | Spike Conc. | Conc. (ng/mL) | OPR Limits | | Labeled Standard | %R | LCL-UCL | Qualifier |
|---|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 10.0 | 10.1 | 6.7 - 15.8 | IS | 13C-2,3,7,8-TCDD | 91.9 | 25 - 164 | |
| 1,2,3,7,8-PeCDD | 50.0 | 50.2 | 35 - 71 | | 13C-1,2,3,7,8-PeCDD | 79.9 | 25 - 181 | |
| 1,2,3,4,7,8-HxCDD | 50.0 | 52.0 | 35 - 82 | | 13C-1,2,3,4,7,8-HxCDD | 85.3 | 32 - 141 | |
| 1,2,3,6,7,8-HxCDD | 50.0 | 50.1 | 38 - 67 | | 13C-1,2,3,6,7,8-HxCDD | 80.2 | 28 - 130 | |
| 1,2,3,7,8,9-HxCDD | 50.0 | 50.0 | 32 - 81 | | 13C-1,2,3,4,6,7,8-HpCDD | 92.4 | 23 - 140 | |
| 1,2,3,4,6,7,8-HpCDD | 50.0 | 50.1 | 35 - 70 | | 13C-OCDD | 84.1 | 17 - 157 | |
| OCDD | 100 | 99.3 | 78 - 144 | | 13C-2,3,7,8-TCDF | 102 | 24 - 169 | |
| 2,3,7,8-TCDF | 10.0 | 9.62 | 7.5 - 15.8 | | 13C-1,2,3,7,8-PeCDF | 79.5 | 24 - 185 | |
| 1,2,3,7,8-PeCDF | 50.0 | 49.1 | 40 - 67 | | 13C-2,3,4,7,8-PeCDF | 79.2 | 21 - 178 | |
| 2,3,4,7,8-PeCDF | 50.0 | 48.6 | 34 - 80 | | 13C-1,2,3,4,7,8-HxCDF | 84.6 | 26 - 152 | |
| 1,2,3,4,7,8-HxCDF | 50.0 | 48.9 | 36 - 67 | | 13C-1,2,3,6,7,8-HxCDF | 84.2 | 26 - 123 | |
| 1,2,3,6,7,8-HxCDF | 50.0 | 48.8 | 42 - 65 | | 13C-2,3,4,6,7,8-HxCDF | 106 | 28 - 136 | |
| 2,3,4,6,7,8-HxCDF | 50.0 | 49.2 | 35 - 78 | | 13C-1,2,3,7,8,9-HxCDF | 81.2 | 29 - 147 | |
| 1,2,3,7,8,9-HxCDF | 50.0 | 50.7 | 39 - 65 | | 13C-1,2,3,4,6,7,8-HpCDF | 80.7 | 28 - 143 | |
| 1,2,3,4,6,7,8-HpCDF | 50.0 | 49.8 | 41 - 61 | | 13C-1,2,3,4,7,8,9-HpCDF | 88.8 | 26 - 138 | |
| 1,2,3,4,7,8,9-HpCDF | 50.0 | 50.7 | 39 - 69 | | 13C-OCDF | 80.0 | 17 - 157 | |
| OCDF | 100 | 98.8 | 63 - 170 | CRS | 37Cl-2,3,7,8-TCDD | 89.7 | 35 - 197 | |

Analyst: JMH

Approved By: Martha M. Maier 19-Feb-2009 13:27

**Sample ID:** **ISB0717-01** **EPA Method 1613**

| Client Data | | Sample Data | | Laboratory Data | | | |
|---|---|---|---|---|---|---|---|
| Name: | Test America-Irvine, CA | Matrix: | Aqueous | Lab Sample: | 31400-001 | Date Received: | 10-Feb-09 |
| Project: | ISB0717 | Sample Size: | 1.01 L | QC Batch No.: | 1876 | Date Extracted: | 11-Feb-09 |
| Date Collected: | 6-Feb-09 | | | Date Analyzed DB-5: | 13-Feb-09 | Date Analyzed DB-225: | NA |
| Time Collected: | 0910 | | | | | | |

| Analyte | Conc. (ug/L) | DL [a] | EMPC[b] | Qualifiers |
|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | 0.000000512 | | |
| 1,2,3,7,8-PeCDD | ND | 0.00000109 | | |
| 1,2,3,4,7,8-HxCDD | ND | 0.00000175 | | |
| 1,2,3,6,7,8-HxCDD | ND | 0.00000175 | | |
| 1,2,3,7,8,9-HxCDD | ND | 0.00000169 | | |
| 1,2,3,4,6,7,8-HpCDD | 0.0000526 | | | |
| OCDD | 0.000885 | | | |
| 2,3,7,8-TCDF | ND | 0.000000414 | | |
| 1,2,3,7,8-PeCDF | ND | 0.000000693 | | |
| 2,3,4,7,8-PeCDF | ND | 0.000000663 | | |
| 1,2,3,4,7,8-HxCDF | ND | 0.000000821 | | |
| 1,2,3,6,7,8-HxCDF | ND | 0.000000814 | | |
| 2,3,4,6,7,8-HxCDF | ND | 0.000000740 | | |
| 1,2,3,7,8,9-HxCDF | ND | 0.00000130 | | |
| 1,2,3,4,6,7,8-HpCDF | 0.00000811 | | | J |
| 1,2,3,4,7,8,9-HpCDF | ND | 0.00000190 | | |
| OCDF | 0.0000251 | | | J |

| | Labeled Standard | %R | LCL-UCL[d] | Qualifiers |
|---|---|---|---|---|
| IS | 13C-2,3,7,8-TCDD | 93.0 | 25 - 164 | |
| | 13C-1,2,3,7,8-PeCDD | 87.5 | 25 - 181 | |
| | 13C-1,2,3,4,7,8-HxCDD | 84.2 | 32 - 141 | |
| | 13C-1,2,3,6,7,8-HxCDD | 81.7 | 28 - 130 | |
| | 13C-1,2,3,4,6,7,8-HpCDD | 92.4 | 23 - 140 | |
| | 13C-OCDD | 83.7 | 17 - 157 | |
| | 13C-2,3,7,8-TCDF | 104 | 24 - 169 | |
| | 13C-1,2,3,7,8-PeCDF | 84.0 | 24 - 185 | |
| | 13C-2,3,4,7,8-PeCDF | 88.9 | 21 - 178 | |
| | 13C-1,2,3,4,7,8-HxCDF | 85.3 | 26 - 152 | |
| | 13C-1,2,3,6,7,8-HxCDF | 80.9 | 26 - 123 | |
| | 13C-2,3,4,6,7,8-HxCDF | 103 | 28 - 136 | |
| | 13C-1,2,3,7,8,9-HxCDF | 82.2 | 29 - 147 | |
| | 13C-1,2,3,4,6,7,8-HpCDF | 79.1 | 28 - 143 | |
| | 13C-1,2,3,4,7,8,9-HpCDF | 87.7 | 26 - 138 | |
| | 13C-OCDF | 82.7 | 17 - 157 | |
| CRS | 37Cl-2,3,7,8-TCDD | 88.3 | 35 - 197 | |

| Totals | | |
|---|---|---|
| Total TCDD | ND | 0.000000512 |
| Total PeCDD | ND | 0.00000109 |
| Total HxCDD | 0.00000530 | |
| Total HpCDD | 0.000101 | |
| Total TCDF | ND | 0.000000414 |
| Total PeCDF | ND | 0.000000678 |
| Total HxCDF | 0.00000595 | |
| Total HpCDF | 0.0000307 | |

**Footnotes**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: Martha M. Maier 19-Feb-2009 13:27

# APPENDIX

# DATA QUALIFIERS & ABBREVIATIONS

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

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

# CERTIFICATIONS

| Accrediting Authority | Certificate Number |
|---|---|
| State of Alaska, DEC | CA413-2008 |
| State of Arizona | AZ0639 |
| State of Arkansas, DEQ | 08-043-0 |
| State of Arkansas, DOH | Reciprocity through CA |
| State of California – NELAP Primary AA | 02102CA |
| State of Colorado | N/A |
| State of Connecticut | PH-0182 |
| State of Florida, DEP | E87777 |
| State of Indiana Department of Health | C-CA-02 |
| Commonwealth of Kentucky | 90063 |
| State of Louisiana, Health and Hospitals | LA08000 |
| State of Louisiana, DEQ | 01977 |
| State of Maine | 2008024 |
| State of Michigan | 9932 |
| State of Mississippi | Reciprocity through CA |
| Naval Facilities Engineering Service Center | NFESC413 |
| State of Nevada | CA004132007A |
| State of New Jersey | CA003 |
| State of New Mexico | Reciprocity through CA |
| State of New York, DOH | 11411 |
| State of North Carolina | 06700 |
| State of North Dakota, DOH | R-078 |
| State of Oklahoma | D9919 |
| State of Oregon | CA200001-006 |
| State of Pennsylvania | 68-00490 |
| State of South Carolina | 87002001 |
| State of Tennessee | TN02996 |
| State of Texas | T104704189-08-TX |
| U.S. Army Corps of Engineers | N/A |
| State of Utah | CA16400 |
| Commonwealth of Virginia | 00013 |
| State of Washington | C1285 |
| State of Wisconsin | 998036160 |
| State of Wyoming | 8TMS-Q |

**SUBCONTRACT ORDER**

**TestAmerica Irvine**

**ISB0717**

3400

NPDES - 826

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

Vista Analytical Laboratory- SUB
1104 Windfield Way
El Dorado Hills, CA 95762
Phone :(916) 673-1520
Fax: (916) 673-0106
Project Location: CA - CALIFORNIA
Receipt Temperature: 1.7 °C Ice: (Y) / N

| Analysis | Units | Due | Expires | Comments |
|---|---|---|---|---|
| **Sample ID: ISB0717-01** | **Water** | | Sampled: **02/06/09 09:10** | |
| 1613-Dioxin-HR-Alta | ug/l | 02/17/09 | 02/13/09 09:10 | J flags,17 congeners,no TEQ,ug/L,sub=Vista |
| Level 4 + EDD-OUT | N/A | 02/17/09 | 03/06/09 09:10 | Excel EDD email to pm,Include Std logs for Lvl IV |

*Containers Supplied:*

1 L Amber (C) 1 L Amber (D)

| | | | |
|---|---|---|---|
| Released By | 2/9/09 17:00 Date/Time | Received By | 2/9/09 17:00 Date/Time |
| Released By | Date/Time | Received By | 2/10/09 1118 Date/Time |

# SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

NPDES - 827

**Vista Project #:** 31400 **TAT** unspecified

| | | | |
|---|---|---|---|
| **Samples Arrival:** | **Date/Time** 2/10/09 0900 | **Initials:** VBB | **Location:** WR-2 **Shelf/Rack:** N/A |
| **Logged In:** | **Date/Time** 2/10/09 1118 | **Initials:** CV | **Location:** WR2 **Shelf/Rack:** C-4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Delivered By:** | (FedEx) | UPS | Cal | DHL | Hand Delivered | Other |
| **Preservation:** | (Ice) | Blue Ice | | Dry Ice | | None |
| **Temp °C** 1.7 | **Time:** 0905 | | | **Thermometer ID:** IR-1 | | |

| | YES | NO | NA |
|---|---|---|---|
| Adequate Sample Volume Received? (A & B bottles) | ✓ | | |
| Holding Time Acceptable? | ✓ | | |
| Shipping Container(s) Intact? | ✓ | | |
| Shipping Custody Seals Intact? | ✓ | | |
| Shipping Documentation Present? | ✓ | | |
| Airbill Trk # 7973 2316 6990 | ✓ | | |
| Sample Container Intact? | ✓ | | |
| Sample Custody Seals Intact? | | | ✓ |
| Chain of Custody / Sample Documentation Present? | ✓ | | |
| COC Anomaly/Sample Acceptance Form completed? | | ✓ | |
| If Chlorinated or Drinking Water Samples, Acceptable Preservation? | | | ✓ |

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

*Comments:*