APPENDIX G

Section 1

Outfall 001, February 16, 2009

MEC^X Data Validation Report

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISB1786

Prepared by

MEC^X, LP
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I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ISB1786
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 001	ISB1786-01	D9B190127-001, D9C050234-001, 31438-001, F9B180223-001, 981797-1	Water	02/16/09 1400	120.1, 180.1, 200.7, 200.7 (Diss), 200.8, 200.8 (Diss) 245.1, 245.1 (Diss), 608, 625, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 908.0, 1613B, 8315M, SM2340B, SM2540D, SM5310B

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at all laboratories within the temperature limit of 4 ±2°C. According to the case narrative for this SDG, the samples were received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine and Truesdail, custody seals were not required. Custody seal were present and intact upon arrival at TestAmerica-Denver, TestAmerica-St. Louis, and Vista. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight
Date Reviewed: March 26, 2009

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

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

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

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

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

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

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

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

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

B. EPA METHOD 8315M—Hydrazines

Reviewed By: P. Meeks
Date Reviewed: March 27, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 8315M*, and the *National Functional Guidelines for Organic Data Review* (10/99).

- Holding Times: Extraction and analytical holding times were met. The water sample was derivitized within three days of collection and analyzed within 3 days of derivitization.

- Calibration: Calibration criteria were met. The initial calibration r^2 values were $\geq$0.995 except for hydrazine; therefore, nondetected hydrazine was qualified as estimated, "UJ." The ICV and QCS recoveries were within 85-115%.

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

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

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

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

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

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

- Compound Identification: Compound identification was verified. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

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

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

Reviewed By: P. Meeks
Date Reviewed: March 26, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 2007, 200.8, and 245.1,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: The analytical holding times, 180 days for ICP and ICP-MS metals and 28 days for mercury, were met.

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

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995. Initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. The copper and selenium CRI recoveries associated

with the total metals analyses were 63% and 134%, respectively; therefore, total copper and selenium detected in the sample were qualified as estimated, "J." The zinc CRI recovery associated with the dissolved metals analyses was 63%; therefore, dissolved zinc detected in the sample was qualified as estimated, "J." The remaining CRI and CRA and check standards were recovered within the control limits of 70-130%.

- Blanks: Chromium and nickel were detected in the total method blank at 4.13 and 2.91 µg/L, respectively; therefore, total chromium and nickel detected in the sample were qualified as nondetected, "U," at the level of contamination if detected above the control limit or at the reporting limit if detected below. Boron was detected in the dissolved method blank at 20.9 µg/L; therefore, dissolved boron detected in the sample was qualified as nondetected, "U," at the reporting limit. Antimony was detected in CCBs bracketing the sample analyses at 0.666 and 0.412 µg/L; therefore both total and dissolved antimony detected in the sample were qualified as nondetected, "U," at the reporting limit. Selenium was detected in a CCB bracketing the dissolved metals analysis at 0.443 µg/L; therefore, dissolved selenium detected in the sample was qualified as nondetected, "U," at the reporting limit. Zinc was reported in a CCB bracketing the dissolved metals analysis at -7.6 µg/L; therefore, dissolved zinc detected in the sample was qualified as estimated, "J." There were no other applicable detects in the method blanks or CCBs.

- Interference Check Samples: Recoveries were within the method-established control limits. There were detects and negative results in the ICSA associated with the ICP analyses; however, the concentration of interferents in the site sample were insufficient to cause matrix interference. There were detects in the ICP-MS ICSA solution but the reviewer was unable to ascertain if the detects were due to matrix interference.

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

- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.

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

- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.

- Internal Standards Performance: All associated sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summaries were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

D. EPA METHOD 608—Pesticides and PCBs

Reviewed By: K. Shadowlight
Date Reviewed: March 26, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0), EPA Method 608*, and the *National Functional Guidelines for Organic Data Review* (10/99).

- Holding Times: The original extraction and analytical holding times were met. The water sample was originally extracted within seven days of collection; however, as the detect for alpha BHC was suspected to be a lab contaminant, the sample was re-extracted at TestAmerica-Irvine and another extraction was performed at TestAmerica-Denver. The re-extraction performed at TestAmerica Denver was outside of the holding time period. The retained result (nondetect) for alpha-BHC was qualified as estimated, "UJ," in sample Outfall 001 (see the Blanks section).

- Calibration: The initial calibration had average %RSDs of ≤10% or r^2 ≥0.995 for the pesticide analysis. The %Ds for all analytes except beta-BHC, chlordane, and toxaphene exceeded 15% in one or both of the low-level CCVs bracketing the pesticide analysis; therefore, the nondetects for these analytes were qualified as estimated, "UJ," in the retained results of the sample in this SDG. As there were no confirmed detects for the retained results, the confirmation column %Ds were not evaluated. The ICV and remaining CCVs bracketing the sample analyses had %Ds within the QC limit of ≤15%.

- Blanks: The method blank associated with the retained results had no target compound detects above the MDL.

    Alpha BHC was reported in sample Outfall 001; however, the laboratory suspected contamination related to one highly contaminated sample with percent level alpha-BHC. A second extraction of Outfall 001 yielded a low-level concentration of alpha BHC, indicating that the laboratory was not contamination free. The sample was sent to TestAmerica-Denver for alpha-BHC analysis. The nondetect result yielded from the TestAmerica-Denver analysis confirmed the suspicion that the original result was indeed laboratory contamination; therefore, the original sample extraction in batch 9B20074 and the alpha-

BHC result in the re-extraction from batch 9B23113 were rejected, "R," in favor of the result for alpha BHC reported in batch 9064381 from TestAmerica-Denver. Several corrective action steps have been taken by TestAmerica-Irvine including replacing glassware throughout the organics department and implementing an acid wash procedure to prevent future contamination issues.

- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs for the blank spike/blank spike duplicate pairs were within laboratory-established QC limits.

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

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed for the sample in this SDG. Method accuracy and precision was evaluated based on the blank spike/blank spike duplicate results.

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

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

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

- Compound Identification: Compound identification was verified. The laboratory analyzed for pesticides and PCBs by EPA Method 608. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

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

E. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: March 25, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0, ASTM Method D-5174,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquots for gross alpha, gross beta, cesium-137, potassium-40, and total uranium were prepared beyond the five-day holding time for unpreserved samples; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. All remaining aliquots were prepared within the five-day holding time for unpreserved samples.

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

  The gross alpha detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as estimated, "J." The gross beta detector efficiency was greater than 20%.

  The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The tritium detector efficiency for the sample was at least 20% and was considered acceptable. The strontium, radium-226, and radium-228 chemical yields were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

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

- Blank Spikes and Laboratory Control Samples: The recoveries and the strontium-90, radium-226, and radium-228 RPDs were within laboratory-established control limits.

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

- Matrix Spike/Matrix Spike Duplicate: No matrix spike or MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision, when applicable, were evaluated based on LCS results.

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Total uranium, normally reported in aqueous units, was converted to pCi/L using a conversion factor for naturally occurring uranium. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA.

  The reviewer noted that the total uncertainty for potassium-40 was more than an order of magnitude larger than usually reported for site samples. The laboratory attributed this high uncertainty to a very low sample count and a slightly high background count.

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

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

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

F. EPA METHOD 625—Semivolatile Organic Compounds (SVOCs)

Reviewed By: S. Dellamia
Date Reviewed: March 27, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625*, and the *National Functional Guidelines for Organic Data Review* (10/99).

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

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

- Calibration: Calibration criteria were met. Initial calibration average RRFs were ≥0.05 and %RSDs ≤35% or r^2 values ≥0.995. Continuing calibration RRFs were ≥0.05 and %Ds ≤20%.

- Blanks: The method blank had detects for benzo(g,h,i)perylene at 0.400(J) µg/L, butyl benzyl phthalate at 1.04(J) µg/L and ideno(1,2,3-cd)perylene at 0.240(J) µg/L; therefore, the detect for butyl benzyl phthalate in sample Outfall 001 was qualified as nondetected, "U," at the RL. There were no other target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits. RPDs were above QC limits for bis(2-chloroethoxy)methane, 2,6-dinitrotoluene, isophorone and n-nitroso-di-n-propylamine; therefore, nondetected results for all four compounds in sample Outfall 001 were qualified as estimated, "UJ." Remaining RPDs were within QC limits.

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

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

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

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

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

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

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

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

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

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

G. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 27, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 120.1, 180.1, Standard Methods SM2540D and SM5310B,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: Analytical holding times, 24 hours for conductivity, 48 hours from collection for turbidity, 7 days for TSS, and 28 days for TOC, were met.

- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110%. Balance calibration logs were reviewed and found to be acceptable.

- Blanks: Method blanks and CCBs had no detects.

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

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

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

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Turbidity was analyzed at a 20× dilution in order to report the analyte within the linear range of the calibration. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

Sample ID: ISB1786-01 Outfall 001 **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	31438-001	Date Received:	18-Feb-09
Project:	ISB1786	Sample Size:	1.04 L	QC Batch No.:	1907	Date Extracted:	21-Feb-09
Date Collected:	16-Feb-09			Date Analyzed DB-5:	24-Feb-09	Date Analyzed DB-225:	NA
Time Collected:	1400						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND U	0.000000671		
1,2,3,7,8-PeCDD	ND U	0.00000147		
1,2,3,4,7,8-HxCDD	ND U	0.00000312		
1,2,3,6,7,8-HxCDD	ND U	0.00000328		
1,2,3,7,8,9-HxCDD	ND U	0.00000309		
1,2,3,4,6,7,8-HpCDD	0.0000667			
OCDD	0.000643			
2,3,7,8-TCDF	ND U	0.000000676		
1,2,3,7,8-PeCDF	ND U	0.000000841		
2,3,4,7,8-PeCDF	ND U	0.000000908		
1,2,3,4,7,8-HxCDF	ND U	0.00000157		
1,2,3,6,7,8-HxCDF	ND U	0.00000167		
2,3,4,6,7,8-HxCDF	ND U	0.00000180		
1,2,3,7,8,9-HxCDF	ND U	0.00000263		
1,2,3,4,6,7,8-HpCDF	0.0000119 J/DNQ			J
1,2,3,4,7,8,9-HpCDF	ND U	0.00000305		
OCDF	0.0000412 J/DNQ			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	84.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	76.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	77.7	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	75.6	23 - 140	
	13C-OCDD	66.2	17 - 157	
	13C-2,3,7,8-TCDF	93.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	80.9	24 - 185	
	13C-2,3,4,7,8-PeCDF	80.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	84.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	76.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	82.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	77.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	73.2	26 - 138	
	13C-OCDF	59.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	90.1	35 - 197	

Totals		
Total TCDD	ND U	0.000000671
Total PeCDD	ND U	0.00000147
Total HxCDD	0.0000114 J/DNQ	
Total HpCDD	0.000146	
Total TCDF	ND U	0.000000676
Total PeCDF	0.00000342 J/DNQ	
Total HxCDF	0.0000139 J/DNQ	
Total HpCDF	0.0000350	

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 07-Mar-2009 08:50

LEVEL IV

NPDES - 17

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

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

Attention: Joseph Doak
Sample: Water / 1 Sample
Project Name: ISB1786
P.O. Number: 2294262
Method Number: 8315 (Modified)
Investigation: Hydrazines

REPORT

Laboratory No: 981797
Report Date: February 20, 2009
Sampling Date: February 16, 2009
Receiving Date: February 17, 2009
Extraction Date: February 18, 2009
Analysis Date: February 19, 2009
Units: µg/L
Reported By: JS

Analytical Results

Sample ID	Sample Descript	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
708023-MB	Method Blank	100	1	ND *	ND *	ND *	None
981797 Outfall 001	ISB1786-01	100	1	ND U	ND U	ND UJ/C	None
MDL				1.70	1.42	0.60	
PQL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

LEVEL IV

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

Linda Saetern, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

*Analysis not validated

004

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	**46**	1	02/17/09	02/17/09	
Barium	EPA 200.7	9B17091	0.0060	0.010	**0.073**	1	02/17/09	02/17/09	
Boron J/DNQ	EPA 200.7	9B17091	0.020	0.050	**0.043**	1	02/17/09	02/17/09	J
Calcium	EPA 200.7	9B17091	0.050	0.10	**11**	1	02/17/09	02/17/09	
Iron	EPA 200.7	9B17091	0.015	0.040	**8.1**	1	02/17/09	02/17/09	
Magnesium	EPA 200.7	9B17091	0.012	0.020	**4.6**	1	02/17/09	02/17/09	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Arsenic U	EPA 200.7	9B17091	7.0	10	ND	1	02/17/09	02/17/09	
Antimony U/B	EPA 200.8	9B17103	0.20	2.0	**0.72**	1	02/17/09	02/18/09	J
Beryllium U	EPA 200.7	9B17091	0.90	2.0	ND	1	02/17/09	02/17/09	
Chromium U/B	EPA 200.7	9B17091	2.0	5.0	**10**	1	02/17/09	02/17/09	B
Cobalt J/DNQ	EPA 200.7	9B17091	2.0	10	**2.5**	1	02/17/09	02/17/09	J
Manganese	EPA 200.7	9B17091	7.0	20	**110**	1	02/17/09	02/17/09	
Nickel U/B	EPA 200.7	9B17091	2.0	10	**7.9**	1	02/17/09	02/17/09	B, J
Cadmium J/DNQ	EPA 200.8	9B17103	0.11	1.0	**0.14**	1	02/17/09	02/18/09	J
Vanadium	EPA 200.7	9B17091	3.0	10	**19**	1	02/17/09	02/17/09	
Zinc	EPA 200.7	9B17091	6.0	20	**37**	1	02/17/09	02/17/09	
Copper J/4III	EPA 200.8	9B17103	0.75	2.0	**6.6**	1	02/17/09	02/18/09	
Lead	EPA 200.8	9B17103	0.30	1.0	**6.6**	1	02/17/09	02/18/09	
Selenium J/4III, DNQ	EPA 200.8	9B17103	0.30	2.0	**0.52**	1	02/17/09	02/18/09	J
Silver U	EPA 200.8	9B17103	0.30	1.0	ND	1	02/17/09	02/18/09	
Thallium U	EPA 200.8	9B17103	0.20	1.0	ND	1	02/17/09	02/18/09	

LEVEL IV

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Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]	N/A	0.33	**37**	1	02/17/09	02/23/09	
Barium	EPA 200.7-Diss	9B17100	0.0060	0.010	**0.013**	1	02/17/09	02/23/09	
Boron U/B	EPA 200.7-Diss	9B17100	0.020	0.050	**0.034**	1	02/17/09	02/23/09	B, J
Calcium	EPA 200.7-Diss	9B17100	0.050	0.10	**9.8**	1	02/17/09	02/23/09	
Iron	EPA 200.7-Diss	9B17100	0.015	0.040	**0.45**	1	02/17/09	02/23/09	
Magnesium	EPA 200.7-Diss	9B17100	0.012	0.020	**3.0**	1	02/17/09	02/23/09	

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Sampled: 02/16/09
Received: 02/16/09

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Arsenic U	EPA 200.7-Diss	9B17100	7.0	10	ND	1	02/17/09	02/23/09	
Antimony U/B	EPA 200.8-Diss	9B20106	0.20	2.0	**1.1**	1	02/20/09	02/24/09	J
Beryllium U	EPA 200.7-Diss	9B17100	0.90	2.0	ND	1	02/17/09	02/23/09	
Chromium ↓	EPA 200.7-Diss	9B17100	2.0	5.0	ND	1	02/17/09	02/23/09	
Cobalt ↓	EPA 200.7-Diss	9B17100	2.0	10	ND	1	02/17/09	02/23/09	
Manganese J/DNQ	EPA 200.7-Diss	9B17100	7.0	20	**12**	1	02/17/09	02/23/09	J
Nickel U	EPA 200.7-Diss	9B17100	2.0	10	ND	1	02/17/09	02/23/09	
Cadmium J/DNQ	EPA 200.8-Diss	9B20106	0.11	1.0	**0.14**	1	02/20/09	02/24/09	J
Vanadium U	EPA 200.7-Diss	9B17100	3.0	10	ND	1	02/17/09	02/23/09	
Zinc J/III, B, DNQ	EPA 200.7-Diss	9B17100	6.0	20	**15**	1	02/17/09	02/23/09	J
Copper	EPA 200.8-Diss	9B20106	0.75	2.0	**2.3**	1	02/20/09	02/23/09	
Lead J/DNQ	EPA 200.8-Diss	9B20106	0.30	1.0	**0.31**	1	02/20/09	02/23/09	J
Selenium U/B	EPA 200.8-Diss	9B20106	0.30	2.0	**0.42**	1	02/20/09	02/23/09	J
Silver U	EPA 200.8-Diss	9B20106	0.30	1.0	ND	1	02/20/09	02/23/09	
Thallium U	EPA 200.8-Diss	9B20106	0.20	1.0	ND	1	02/20/09	02/23/09	C

LEVEL IV

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

MCAWW 245.1

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	9050174	0.027	0.2	ND	1	02/19/09	02/19/09	

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Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

MCAWW 245.1-DISS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1-DISS	9050182	0.027	0.2	ND	1	02/19/09	02/19/09	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
4,4'-DDE	EPA 608	9B20074	0.0028	0.0047	ND	0.943	02/20/09	02/22/09	
4,4'-DDT	EPA 608	9B20074	0.0038	0.0094	ND	0.943	02/20/09	02/22/09	
Aldrin	EPA 608	9B20074	0.0014	0.0047	ND	0.943	02/20/09	02/22/09	
alpha-BHC	EPA 608	9B20074	0.0024	0.0094	**0.023**	0.943	02/20/09	02/22/09	N2
beta-BHC	EPA 608	9B20074	0.0038	0.0094	ND	0.943	02/20/09	02/22/09	
delta-BHC	EPA 608	9B20074	0.0033	0.0047	ND	0.943	02/20/09	02/22/09	
Dieldrin	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
Endosulfan I	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
Endosulfan II	EPA 608	9B20074	0.0028	0.0047	ND	0.943	02/20/09	02/22/09	
Endosulfan sulfate	EPA 608	9B20074	0.0028	0.0094	ND	0.943	02/20/09	02/22/09	
Endrin	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
Endrin aldehyde	EPA 608	9B20074	0.0019	0.0094	ND	0.943	02/20/09	02/22/09	C
Endrin ketone	EPA 608	9B20074	0.0028	0.0094	ND	0.943	02/20/09	02/22/09	
gamma-BHC (Lindane)	EPA 608	9B20074	0.0028	0.019	ND	0.943	02/20/09	02/22/09	
Heptachlor	EPA 608	9B20074	0.0028	0.0094	ND	0.943	02/20/09	02/22/09	
Heptachlor epoxide	EPA 608	9B20074	0.0024	0.0047	ND	0.943	02/20/09	02/22/09	
Methoxychlor	EPA 608	9B20074	0.0033	0.0047	ND	0.943	02/20/09	02/22/09	
Chlordane	EPA 608	9B20074	0.038	0.094	ND	0.943	02/20/09	02/22/09	
Toxaphene	EPA 608	9B20074	0.24	0.47	ND	0.943	02/20/09	02/22/09	
Surrogate: Decachlorobiphenyl (45-120%)					*81 %*				
Surrogate: Decachlorobiphenyl (45-120%)					*81 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*72 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*72 %*				

LEVEL IV

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

ORGANOCHLORINE PESTICIDES (EPA 608)

Sample ID: ISB1786-01RE1 (Outfall 001 - Water) - cont.

Reporting Units: ug/l

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
4,4'-DDD UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
4,4'-DDE UJC	EPA 608	9B23113	0.0028	0.0047	ND	0.943	02/23/09	02/25/09	
4,4'-DDT UJC	EPA 608	9B23113	0.0038	0.0094	ND	0.943	02/23/09	02/25/09	
Aldrin UJC	EPA 608	9B23113	0.0014	0.0047	ND	0.943	02/23/09	02/25/09	
alpha-BHC RD	EPA 608	9B23113	0.0024	0.0094	**0.013**	0.943	02/23/09	02/25/09	N2
beta-BHC ~~UJC~~ U	EPA 608	9B23113	0.0038	0.0094	ND	0.943	02/23/09	02/25/09	
delta-BHC UJC	EPA 608	9B23113	0.0033	0.0047	ND	0.943	02/23/09	02/25/09	
Dieldrin UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
Endosulfan I UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
Endosulfan II UJC	EPA 608	9B23113	0.0028	0.0047	ND	0.943	02/23/09	02/25/09	
Endosulfan sulfate UJC	EPA 608	9B23113	0.0028	0.0094	ND	0.943	02/23/09	02/25/09	
Endrin UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
Endrin aldehyde UJC	EPA 608	9B23113	0.0019	0.0094	ND	0.943	02/23/09	02/25/09	
Endrin ketone UJC	EPA 608	9B23113	0.0028	0.0094	ND	0.943	02/23/09	02/25/09	
gamma-BHC (Lindane) UJC	EPA 608	9B23113	0.0028	0.019	ND	0.943	02/23/09	02/25/09	
Heptachlor UJC	EPA 608	9B23113	0.0028	0.0094	ND	0.943	02/23/09	02/25/09	
Heptachlor epoxide UJC	EPA 608	9B23113	0.0024	0.0047	ND	0.943	02/23/09	02/25/09	
Methoxychlor UJC	EPA 608	9B23113	0.0033	0.0047	ND	0.943	02/23/09	02/25/09	
Chlordane U	EPA 608	9B23113	0.038	0.094	ND	0.943	02/23/09	02/25/09	
Toxaphene ↓	EPA 608	9B23113	0.24	0.47	ND	0.943	02/23/09	02/25/09	
Surrogate: Decachlorobiphenyl (45-120%)					*88 %*				
Surrogate: Decachlorobiphenyl (45-120%)					*88 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*83 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*83 %*				

LEVEL IV

llo 3.26.09

TestAmerica Irvine

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

CFR136A 608

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/L									
alpha-BHC	CFR136A 608	9064381	0.0053	0.05	ND	1	03/05/09	03/10/09	HTV
Surrogate: Decachlorobiphenyl (32-144%)					*58 %*				
Surrogate: Tetrachloro-m-xylene (52-117%)					*90 %*				

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica Irvine

Client Sample ID: ISB1786-01

Outfall 001

Radiochemistry

Lab Sample ID: F9B180223-001
Work Order: K7DJX
Matrix: WATER

Date Collected: 02/16/09 1400
Date Received: 02/18/09 0930

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 # 9058211		Yld %
Cesium 137 UJ/H	2.6	U	9.8	20.0	18	02/27/09	03/15/09
Potassium 40 ↓ ↓	-80	U	1600		300	02/27/09	03/15/09
Gross Alpha/Beta EPA 900				pCi/L	Batch # 9050133		Yld %
Gross Alpha J/H,C	5.5		1.6	3.0	1.1	02/24/09	03/03/09
Gross Beta J/H	4.9		1.1	4.0	1.2	02/24/09	03/03/09
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	Batch # 9066052		Yld %
Tritium U	-50	U	170	500	300	03/07/09	03/13/09
SR-90 BY GFPC EPA-905 MOD				pCi/L	Batch # 9049442		Yld % 61
Strontium 90 U	0.06	U	0.28	3.00	0.49	02/18/09	02/28/09
Total Uranium by KPA ASTM 5174-91				pCi/L	Batch # 9050413		Yld %
Total Uranium J/H,DNQ	0.547	J	0.066	1.35	0.42	02/19/09	03/08/09
Radium 226 by EPA 903.0 MOD				pCi/L	Batch # 9049439		Yld % 90
Radium (226) J/DNQ	0.31	J	0.17	1.00	0.22	02/18/09	03/13/09
Radium 228 by GFPC EPA 904 MOD				pCi/L	Batch # 9049441		Yld % 80
Radium 228 U	0.17	U	0.35	1.00	0.58	02/18/09	03/13/09

LEVEL IV

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.

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

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: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Acenaphthene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	U
Acenaphthylene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Anthracene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Benzidine	EPA 625	9B21046	N/A	4.7	ND	0.943	02/21/09	02/24/09	
Benzo(a)anthracene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Benzo(a)pyrene	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Benzo(b)fluoranthene	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Benzo(g,h,i)perylene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Benzo(k)fluoranthene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
4-Bromophenyl phenyl ether	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Butyl benzyl phthalate	EPA 625	9B21046	0.66	4.7	**1.1**	0.943	02/21/09	02/24/09	U/B B, J
Bis(2-chloroethoxy)methane	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	UJ |*III
Bis(2-chloroethyl)ether	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	U
Bis(2-chloroisopropyl)ether	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
2-Chloronaphthalene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
4-Chlorophenyl phenyl ether	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Chrysene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Dibenz(a,h)anthracene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Di-n-butyl phthalate	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
1,2-Dichlorobenzene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
1,3-Dichlorobenzene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
1,4-Dichlorobenzene	EPA 625	9B21046	0.19	0.47	ND	0.943	02/21/09	02/24/09	
3,3'-Dichlorobenzidine	EPA 625	9B21046	N/A	4.7	ND	0.943	02/21/09	02/24/09	
Diethyl phthalate	EPA 625	9B21046	0.094	0.94	**0.11**	0.943	02/21/09	02/24/09	J/DNQ
Dimethyl phthalate	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	U
2,4-Dinitrophenol	EPA 625	9B21046	0.85	4.7	ND	0.943	02/21/09	02/24/09	
2,4-Dinitrotoluene	EPA 625	9B21046	0.19	4.7	ND	0.943	02/21/09	02/24/09	
2,6-Dinitrotoluene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	UJ |*III
Di-n-octyl phthalate	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	U
1,2-Diphenylhydrazine/Azobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Bis(2-ethylhexyl)phthalate	EPA 625	9B21046	1.6	4.7	ND	0.943	02/21/09	02/24/09	
Fluoranthene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Fluorene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Hexachlorobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Hexachlorobutadiene	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
Hexachlorocyclopentadiene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Hexachloroethane	EPA 625	9B21046	0.19	2.8	ND	0.943	02/21/09	02/24/09	
Indeno(1,2,3-cd)pyrene	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Isophorone	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	UJ |*III
Naphthalene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	U
Nitrobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	

TestAmerica Irvine

Joseph Doak
Project Manager

LEVEL IV

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

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: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
N-Nitroso-di-n-propylamine	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	UJ
N-Nitrosodimethylamine	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	U
N-Nitrosodiphenylamine	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	U
Pentachlorophenol	EPA 625	9B21046	0.094	1.9	**1.5**	0.943	02/21/09	02/24/09	J
Phenanthrene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	U
Pyrene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	U
1,2,4-Trichlorobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	U
2,4,6-Trichlorophenol	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	U
Surrogate: 2,4,6-Tribromophenol (40-120%)					*74 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*76 %*				
Surrogate: 2-Fluorophenol (30-120%)					*63 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*72 %*				
Surrogate: Phenol-d6 (35-120%)					*66 %*				
Surrogate: Terphenyl-d14 (50-125%)					*95 %*				

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Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	9B24128	0.50	0.50	**0.56**	1	02/24/09	02/24/09	
Biochemical Oxygen Demand	SM5210B	9B17161	0.50	2.0	**2.4**	1	02/17/09	02/22/09	
Chloride	EPA 300.0	9B16057	0.25	0.50	**10**	1	02/16/09	02/17/09	
Fluoride	SM 4500-F-C	9B17074	0.020	0.10	**0.12**	1	02/17/09	02/17/09	B
Nitrate-N	EPA 300.0	9B16057	0.060	0.11	**1.4**	1	02/16/09	02/17/09	
Nitrite-N	EPA 300.0	9B16057	0.090	0.15	ND	1	02/16/09	02/17/09	
Nitrate/Nitrite-N	EPA 300.0	9B16057	0.15	0.26	**1.4**	1	02/16/09	02/17/09	
Residual Chlorine	EPA 330.5	9B17105	0.10	0.10	ND	1	02/17/09	02/17/09	HFT
Sulfate	EPA 300.0	9B16057	0.20	0.50	**9.7**	1	02/16/09	02/17/09	
Surfactants (MBAS)	SM5540-C	9B17098	0.025	0.10	**0.097**	1	02/17/09	02/17/09	J
Total Dissolved Solids	SM2540C	9B18065	10	10	**120**	1	02/18/09	02/18/09	
Total Organic Carbon	SM5310B	9B23002	0.50	1.0	**10**	1	02/23/09	02/23/09	
Total Suspended Solids	SM 2540D	9B21068	1.0	10	**92**	1	02/21/09	02/21/09	

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*Analysis not validated

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Sampled: 02/16/09
Received: 02/16/09

INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B17067	0.40	10	**140**	10	02/17/09	02/17/09	

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Sampled: 02/16/09
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INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	9B18054	1.0	1.0	**120**	1	02/18/09	02/18/09	

LEVEL IV

TestAmerica Irvine

Joseph Doak
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DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISB1786

Prepared by

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

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ISB1786
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 001	ISB1786-01	D9B190127-001, D9C050234-001, 31438-001, F9B180223-001, 981797-1	Water	02/16/09 1400	120.1, 180.1, 200.7, 200.7 (Diss), 200.8, 200.8 (Diss) 245.1, 245.1 (Diss), 608, 625, 900.0, 901.1, 903.0, 904.0, 905.0, 906.0, 908.0, 1613B, 8315M, SM2340B, SM2540D, SM5310B

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at all laboratories within the temperature limit of 4 ±2°C. According to the case narrative for this SDG, the samples were received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine and Truesdail, custody seals were not required. Custody seal were present and intact upon arrival at TestAmerica-Denver, TestAmerica-St. Louis, and Vista. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: K. Shadowlight
Date Reviewed: March 26, 2009

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

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

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

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

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

- Calibration: Calibration criteria were met.

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

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

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

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

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

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

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

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

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

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

B. EPA METHOD 8315M—Hydrazines

Reviewed By: P. Meeks
Date Reviewed: March 27, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 8315M*, and the *National Functional Guidelines for Organic Data Review* (10/99).

- Holding Times: Extraction and analytical holding times were met. The water sample was derivitized within three days of collection and analyzed within 3 days of derivitization.

- Calibration: Calibration criteria were met. The initial calibration r^2 values were ≥0.995 except for hydrazine; therefore, nondetected hydrazine was qualified as estimated, "UJ." The ICV and QCS recoveries were within 85-115%.

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

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

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

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

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

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

- Compound Identification: Compound identification was verified. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

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

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

Reviewed By: P. Meeks
Date Reviewed: March 26, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 2007, 200.8, and 245.1,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: The analytical holding times, 180 days for ICP and ICP-MS metals and 28 days for mercury, were met.

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

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995. Initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. The copper and selenium CRI recoveries associated with the total metals analyses were 63% and 134%, respectively; therefore, total copper and selenium detected in the sample were qualified as estimated, "J." The zinc CRI recovery associated with the dissolved metals analyses was 63%; therefore, dissolved zinc detected in the sample was qualified as estimated, "J." The remaining CRI and CRA and check standards were recovered within the control limits of 70-130%.

- Blanks: Chromium and nickel were detected in the total method blank at 4.13 and 2.91 µg/L, respectively; therefore, total chromium and nickel detected in the sample were qualified as nondetected, "U," at the level of contamination if detected above the control limit or at the reporting limit if detected below. Boron was detected in the dissolved method blank at 20.9 µg/L; therefore, dissolved boron detected in the sample was qualified as nondetected, "U," at the reporting limit. Antimony was detected in CCBs bracketing the sample analyses at 0.666 and 0.412 µg/L; therefore both total and dissolved antimony detected in the sample were qualified as nondetected, "U," at the reporting limit. Selenium was detected in a CCB bracketing the dissolved metals analysis at 0.443 µg/L; therefore, dissolved selenium detected in the sample was qualified as nondetected, "U," at the reporting limit. Zinc was reported in a CCB bracketing the dissolved metals analysis at -7.6 µg/L; therefore, dissolved zinc detected in the sample was qualified as estimated, "J." There were no other applicable detects in the method blanks or CCBs.

- Interference Check Samples: Recoveries were within the method-established control limits. There were detects and negative results in the ICSA associated with the ICP analyses; however, the concentration of interferents in the site sample were insufficient to cause matrix interference. There were detects in the ICP-MS ICSA solution but the reviewer was unable to ascertain if the detects were due to matrix interference.

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

- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.

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

- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.

- Internal Standards Performance: All associated sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summaries were verified against the raw data. No transcription errors or

calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

D. EPA METHOD 608—Pesticides and PCBs

Reviewed By: K. Shadowlight
Date Reviewed: March 26, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Organochlorine Pesticides/PCBs by GC (DVP-4, Rev. 0), EPA Method 608*, and the *National Functional Guidelines for Organic Data Review* (10/99).

- Holding Times: The original extraction and analytical holding times were met. The water sample was originally extracted within seven days of collection; however, as the detect for alpha BHC was suspected to be a lab contaminant, the sample was re-extracted at TestAmerica-Irvine and another extraction was performed at TestAmerica-Denver. The re-extraction performed at TestAmerica Denver was outside of the holding time period. The retained result (nondetect) for alpha-BHC was qualified as estimated, "UJ," in sample Outfall 001 (see the Blanks section).

- Calibration: The initial calibration had average %RSDs of ≤10% or r^2 ≥0.995 for the pesticide analysis. The %Ds for all analytes except beta-BHC, chlordane, and toxaphene exceeded 15% in one or both of the low-level CCVs bracketing the pesticide analysis; therefore, the nondetects for these analytes were qualified as estimated, "UJ," in the retained results of the sample in this SDG. As there were no confirmed detects for the retained results, the confirmation column %Ds were not evaluated. The ICV and remaining CCVs bracketing the sample analyses had %Ds within the QC limit of ≤15%.

- Blanks: The method blank associated with the retained results had no target compound detects above the MDL.

    Alpha BHC was reported in sample Outfall 001; however, the laboratory suspected contamination related to one highly contaminated sample with percent level alpha-BHC. A second extraction of Outfall 001 yielded a low-level concentration of alpha BHC, indicating

that the laboratory was not contamination free. The sample was sent to TestAmerica-Denver for alpha-BHC analysis. The nondetect result yielded from the TestAmerica-Denver analysis confirmed the suspicion that the original result was indeed laboratory contamination; therefore, the original sample extraction in batch 9B20074 and the alpha-BHC result in the re-extraction from batch 9B23113 were rejected, "R," in favor of the result for alpha BHC reported in batch 9064381 from TestAmerica-Denver. Several corrective action steps have been taken by TestAmerica-Irvine including replacing glassware throughout the organics department and implementing an acid wash procedure to prevent future contamination issues.

- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs for the blank spike/blank spike duplicate pairs were within laboratory-established QC limits.

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

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed for the sample in this SDG. Method accuracy and precision was evaluated based on the blank spike/blank spike duplicate results.

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

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

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

- Compound Identification: Compound identification was verified. The laboratory analyzed for pesticides and PCBs by EPA Method 608. Review of the sample chromatograms and retention times indicated no problems with target compound identification.

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

E. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks
Date Reviewed: March 25, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *EPA Methods 900.0, 901.1, 903.1, 904.0, 905.0, and 906.0, ASTM Method D-5174,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: The tritium sample was analyzed within 180 days of collection. The aliquots for gross alpha, gross beta, cesium-137, potassium-40, and total uranium were prepared beyond the five-day holding time for unpreserved samples; therefore, the results for these analytes were qualified as estimated, "J," for detects and, "UJ," for nondetects. All remaining aliquots were prepared within the five-day holding time for unpreserved samples.

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

  The gross alpha detector efficiency was less than 20%; therefore, gross alpha detected in the sample was qualified as estimated, "J." The gross beta detector efficiency was greater than 20%.

  The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The tritium detector efficiency for the sample was at least 20% and was considered acceptable. The strontium, radium-226, and radium-228 chemical yields were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

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

- Blank Spikes and Laboratory Control Samples: The recoveries and the strontium-90, radium-226, and radium-228 RPDs were within laboratory-established control limits.

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

- Matrix Spike/Matrix Spike Duplicate: No matrix spike or MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision, when applicable, were evaluated based on LCS results.

- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Total uranium, normally reported in aqueous units, was converted to pCi/L using a conversion factor for naturally occurring uranium. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA.

The reviewer noted that the total uncertainty for potassium-40 was more than an order of magnitude larger than usually reported for site samples. The laboratory attributed this high uncertainty to a very low sample count and a slightly high background count.

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

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

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

F. EPA METHOD 625—Semivolatile Organic Compounds (SVOCs)

Reviewed By: S. Dellamia, E. Wessling
Date Reviewed: March 27, 2009, April 16, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625*, and the *National Functional Guidelines for Organic Data Review* (10/99).

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

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

- Calibration: Calibration criteria were met. Initial calibration average RRFs were ≥0.05 and %RSDs ≤35% or r^2 values ≥0.995. Continuing calibration RRFs were ≥0.05 and %Ds ≤20%.

- Blanks: The method blank had detects for benzo(g,h,i)perylene at 0.400(J) µg/L, butyl benzyl phthalate at 1.04(J) µg/L and ideno(1,2,3-cd)perylene at 0.240(J) µg/L; therefore, the detect for butyl benzyl phthalate in sample Outfall 001 was qualified as nondetected, "U," at the RL. There were no other target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits. RPDs were above QC limits for benzyl alcohol, 4-chloroaniline, bis(2-chloroethoxy)methane, 2,6-dinitrotoluene, isophorone, 2-methylphenol, 4-nitroaniline and n-nitroso-di-n-propylamine; therefore, results for all eight compounds in sample Outfall 001 were qualified as estimated, "UJ." Remaining RPDs were within QC limits and no further qualifications were required.

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

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

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

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

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

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

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

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

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

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

G. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 27, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 120.1, 180.1, Standard Methods SM2540D and SM5310B,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: Analytical holding times, 24 hours for conductivity, 48 hours from collection for turbidity, 7 days for TSS, and 28 days for TOC, were met.

- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110%. Balance calibration logs were reviewed and found to be acceptable.

- Blanks: Method blanks and CCBs had no detects.

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

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

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

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Turbidity was analyzed at a 20× dilution in order to report the analyte within the linear range of the calibration. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

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

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

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

Sample ID: ISB1786-01 Outfall 001 **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	Test America-Irvine, CA	Matrix:	Aqueous	Lab Sample:	31438-001	Date Received:	18-Feb-09
Project:	ISB1786	Sample Size:	1.04 L	QC Batch No.:	1907	Date Extracted:	21-Feb-09
Date Collected:	16-Feb-09			Date Analyzed DB-5:	24-Feb-09	Date Analyzed DB-225:	NA
Time Collected:	1400						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND U	0.000000671		
1,2,3,7,8-PeCDD	ND U	0.00000147		
1,2,3,4,7,8-HxCDD	ND U	0.00000312		
1,2,3,6,7,8-HxCDD	ND U	0.00000328		
1,2,3,7,8,9-HxCDD	ND U	0.00000309		
1,2,3,4,6,7,8-HpCDD	0.0000667			
OCDD	0.000643			
2,3,7,8-TCDF	ND U	0.000000676		
1,2,3,7,8-PeCDF	ND U	0.000000841		
2,3,4,7,8-PeCDF	ND U	0.000000908		
1,2,3,4,7,8-HxCDF	ND U	0.00000157		
1,2,3,6,7,8-HxCDF	ND U	0.00000167		
2,3,4,6,7,8-HxCDF	ND U	0.00000180		
1,2,3,7,8,9-HxCDF	ND U	0.00000263		
1,2,3,4,6,7,8-HpCDF	0.0000119 J/DNQ			J
1,2,3,4,7,8,9-HpCDF	ND U	0.00000305		
OCDF	0.0000412 J/DNQ			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	84.3	25 - 164	
	13C-1,2,3,7,8-PeCDD	76.1	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.2	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	77.7	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	75.6	23 - 140	
	13C-OCDD	66.2	17 - 157	
	13C-2,3,7,8-TCDF	93.4	24 - 169	
	13C-1,2,3,7,8-PeCDF	80.9	24 - 185	
	13C-2,3,4,7,8-PeCDF	80.8	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	84.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	76.0	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	82.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.5	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	77.9	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	73.2	26 - 138	
	13C-OCDF	59.6	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	90.1	35 - 197	

Totals			
Total TCDD	ND U	0.000000671	
Total PeCDD	ND U	0.00000147	
Total HxCDD	0.0000114 J/DNQ		
Total HpCDD	0.000146		
Total TCDF	ND U	0.000000676	
Total PeCDF	0.00000342 J/DNQ		
Total HxCDF	0.0000139 J/DNQ		
Total HpCDF	0.0000350		

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 07-Mar-2009 08:50

LEVEL IV

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

Attention: Joseph Doak
Sample: Water / 1 Sample
Project Name: ISB1786
P.O. Number: 2294262
Method Number: 8315 (Modified)
Investigation: Hydrazines

REPORT

Laboratory No: 981797
Report Date: February 20, 2009
Sampling Date: February 16, 2009
Receiving Date: February 17, 2009
Extraction Date: February 18, 2009
Analysis Date: February 19, 2009
Units: µg/L
Reported By: JS

Analytical Results

Sample ID	Sample Descript	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
708023-MB	Method Blank	100	1	ND *	ND *	ND *	None
981797 Outfall 001	ISB1786-01	100	1	ND U	ND U	ND UJ/C	None
MDL				1.70	1.42	0.60	
PQL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

LEVEL IV

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

Linda Saetern, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

*Analysis not validated

004

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	**46**	1	02/17/09	02/17/09	
Barium	EPA 200.7	9B17091	0.0060	0.010	**0.073**	1	02/17/09	02/17/09	
Boron J/DNQ	EPA 200.7	9B17091	0.020	0.050	**0.043**	1	02/17/09	02/17/09	J
Calcium	EPA 200.7	9B17091	0.050	0.10	**11**	1	02/17/09	02/17/09	
Iron	EPA 200.7	9B17091	0.015	0.040	**8.1**	1	02/17/09	02/17/09	
Magnesium	EPA 200.7	9B17091	0.012	0.020	**4.6**	1	02/17/09	02/17/09	

LEVEL IV

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Received: 02/16/09

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Arsenic U	EPA 200.7	9B17091	7.0	10	ND	1	02/17/09	02/17/09	
Antimony U/B	EPA 200.8	9B17103	0.20	2.0	**0.72**	1	02/17/09	02/18/09	J
Beryllium U	EPA 200.7	9B17091	0.90	2.0	ND	1	02/17/09	02/17/09	
Chromium U/B	EPA 200.7	9B17091	2.0	5.0	**10**	1	02/17/09	02/17/09	B
Cobalt J/DNQ	EPA 200.7	9B17091	2.0	10	**2.5**	1	02/17/09	02/17/09	J
Manganese	EPA 200.7	9B17091	7.0	20	**110**	1	02/17/09	02/17/09	
Nickel U/B	EPA 200.7	9B17091	2.0	10	**7.9**	1	02/17/09	02/17/09	B, J
Cadmium J/DNQ	EPA 200.8	9B17103	0.11	1.0	**0.14**	1	02/17/09	02/18/09	J
Vanadium	EPA 200.7	9B17091	3.0	10	**19**	1	02/17/09	02/17/09	
Zinc	EPA 200.7	9B17091	6.0	20	**37**	1	02/17/09	02/17/09	
Copper J/4III	EPA 200.8	9B17103	0.75	2.0	**6.6**	1	02/17/09	02/18/09	
Lead	EPA 200.8	9B17103	0.30	1.0	**6.6**	1	02/17/09	02/18/09	
Selenium J/4III, DNQ	EPA 200.8	9B17103	0.30	2.0	**0.52**	1	02/17/09	02/18/09	J
Silver U	EPA 200.8	9B17103	0.30	1.0	ND	1	02/17/09	02/18/09	
Thallium U	EPA 200.8	9B17103	0.20	1.0	ND	1	02/17/09	02/18/09	

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Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]	N/A	0.33	**37**	1	02/17/09	02/23/09	
Barium	EPA 200.7-Diss	9B17100	0.0060	0.010	**0.013**	1	02/17/09	02/23/09	
Boron U/B	EPA 200.7-Diss	9B17100	0.020	0.050	**0.034**	1	02/17/09	02/23/09	B, J
Calcium	EPA 200.7-Diss	9B17100	0.050	0.10	**9.8**	1	02/17/09	02/23/09	
Iron	EPA 200.7-Diss	9B17100	0.015	0.040	**0.45**	1	02/17/09	02/23/09	
Magnesium	EPA 200.7-Diss	9B17100	0.012	0.020	**3.0**	1	02/17/09	02/23/09	

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Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Arsenic U	EPA 200.7-Diss	9B17100	7.0	10	ND	1	02/17/09	02/23/09	
Antimony U/B	EPA 200.8-Diss	9B20106	0.20	2.0	**1.1**	1	02/20/09	02/24/09	J
Beryllium U	EPA 200.7-Diss	9B17100	0.90	2.0	ND	1	02/17/09	02/23/09	
Chromium ↓	EPA 200.7-Diss	9B17100	2.0	5.0	ND	1	02/17/09	02/23/09	
Cobalt ↓	EPA 200.7-Diss	9B17100	2.0	10	ND	1	02/17/09	02/23/09	
Manganese J/DNQ	EPA 200.7-Diss	9B17100	7.0	20	**12**	1	02/17/09	02/23/09	J
Nickel U	EPA 200.7-Diss	9B17100	2.0	10	ND	1	02/17/09	02/23/09	
Cadmium J/DNQ	EPA 200.8-Diss	9B20106	0.11	1.0	**0.14**	1	02/20/09	02/24/09	J
Vanadium U	EPA 200.7-Diss	9B17100	3.0	10	ND	1	02/17/09	02/23/09	
Zinc J/#III, B, DNQ	EPA 200.7-Diss	9B17100	6.0	20	**15**	1	02/17/09	02/23/09	J
Copper	EPA 200.8-Diss	9B20106	0.75	2.0	**2.3**	1	02/20/09	02/23/09	
Lead J/DNQ	EPA 200.8-Diss	9B20106	0.30	1.0	**0.31**	1	02/20/09	02/23/09	J
Selenium U/B	EPA 200.8-Diss	9B20106	0.30	2.0	**0.42**	1	02/20/09	02/23/09	J
Silver U	EPA 200.8-Diss	9B20106	0.30	1.0	ND	1	02/20/09	02/23/09	
Thallium U	EPA 200.8-Diss	9B20106	0.20	1.0	ND	1	02/20/09	02/23/09	C

LEVEL IV

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Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

MCAWW 245.1

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1	9050174	0.027	0.2	ND	1	02/19/09	02/19/09	

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

MCAWW 245.1-DISS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/L									
Mercury	MCAWW 245.1-DISS	9050182	0.027	0.2	ND	1	02/19/09	02/19/09	

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Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
4,4'-DDE	EPA 608	9B20074	0.0028	0.0047	ND	0.943	02/20/09	02/22/09	
4,4'-DDT	EPA 608	9B20074	0.0038	0.0094	ND	0.943	02/20/09	02/22/09	
Aldrin	EPA 608	9B20074	0.0014	0.0047	ND	0.943	02/20/09	02/22/09	
alpha-BHC	EPA 608	9B20074	0.0024	0.0094	**0.023**	0.943	02/20/09	02/22/09	N2
beta-BHC	EPA 608	9B20074	0.0038	0.0094	ND	0.943	02/20/09	02/22/09	
delta-BHC	EPA 608	9B20074	0.0033	0.0047	ND	0.943	02/20/09	02/22/09	
Dieldrin	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
Endosulfan I	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
Endosulfan II	EPA 608	9B20074	0.0028	0.0047	ND	0.943	02/20/09	02/22/09	
Endosulfan sulfate	EPA 608	9B20074	0.0028	0.0094	ND	0.943	02/20/09	02/22/09	
Endrin	EPA 608	9B20074	0.0019	0.0047	ND	0.943	02/20/09	02/22/09	
Endrin aldehyde	EPA 608	9B20074	0.0019	0.0094	ND	0.943	02/20/09	02/22/09	C
Endrin ketone	EPA 608	9B20074	0.0028	0.0094	ND	0.943	02/20/09	02/22/09	
gamma-BHC (Lindane)	EPA 608	9B20074	0.0028	0.019	ND	0.943	02/20/09	02/22/09	
Heptachlor	EPA 608	9B20074	0.0028	0.0094	ND	0.943	02/20/09	02/22/09	
Heptachlor epoxide	EPA 608	9B20074	0.0024	0.0047	ND	0.943	02/20/09	02/22/09	
Methoxychlor	EPA 608	9B20074	0.0033	0.0047	ND	0.943	02/20/09	02/22/09	
Chlordane	EPA 608	9B20074	0.038	0.094	ND	0.943	02/20/09	02/22/09	
Toxaphene	EPA 608	9B20074	0.24	0.47	ND	0.943	02/20/09	02/22/09	
Surrogate: Decachlorobiphenyl (45-120%)					*81 %*				
Surrogate: Decachlorobiphenyl (45-120%)					*81 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*72 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*72 %*				

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

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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 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01RE1 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
4,4'-DDD UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
4,4'-DDE UJC	EPA 608	9B23113	0.0028	0.0047	ND	0.943	02/23/09	02/25/09	
4,4'-DDT UJC	EPA 608	9B23113	0.0038	0.0094	ND	0.943	02/23/09	02/25/09	
Aldrin UJC	EPA 608	9B23113	0.0014	0.0047	ND	0.943	02/23/09	02/25/09	
alpha-BHC RD	EPA 608	9B23113	0.0024	0.0094	**0.013**	0.943	02/23/09	02/25/09	N2
beta-BHC ~~UJC~~ U	EPA 608	9B23113	0.0038	0.0094	ND	0.943	02/23/09	02/25/09	
delta-BHC UJC	EPA 608	9B23113	0.0033	0.0047	ND	0.943	02/23/09	02/25/09	
Dieldrin UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
Endosulfan I UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
Endosulfan II UJC	EPA 608	9B23113	0.0028	0.0047	ND	0.943	02/23/09	02/25/09	
Endosulfan sulfate UJC	EPA 608	9B23113	0.0028	0.0094	ND	0.943	02/23/09	02/25/09	
Endrin UJC	EPA 608	9B23113	0.0019	0.0047	ND	0.943	02/23/09	02/25/09	
Endrin aldehyde UJC	EPA 608	9B23113	0.0019	0.0094	ND	0.943	02/23/09	02/25/09	
Endrin ketone UJC	EPA 608	9B23113	0.0028	0.0094	ND	0.943	02/23/09	02/25/09	
gamma-BHC (Lindane) UJC	EPA 608	9B23113	0.0028	0.019	ND	0.943	02/23/09	02/25/09	
Heptachlor UJC	EPA 608	9B23113	0.0028	0.0094	ND	0.943	02/23/09	02/25/09	
Heptachlor epoxide UJC	EPA 608	9B23113	0.0024	0.0047	ND	0.943	02/23/09	02/25/09	
Methoxychlor UJC	EPA 608	9B23113	0.0033	0.0047	ND	0.943	02/23/09	02/25/09	
Chlordane U	EPA 608	9B23113	0.038	0.094	ND	0.943	02/23/09	02/25/09	
Toxaphene ↓	EPA 608	9B23113	0.24	0.47	ND	0.943	02/23/09	02/25/09	
Surrogate: Decachlorobiphenyl (45-120%)					*88 %*				
Surrogate: Decachlorobiphenyl (45-120%)					*88 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*83 %*				
Surrogate: Tetrachloro-m-xylene (35-115%)					*83 %*				

LEVEL IV

llo 3.26.09

TestAmerica Irvine

Joseph Doak
Project Manager

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MWH-Pasadena/Boeing
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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

CFR136A 608

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/L									
alpha-BHC	CFR136A 608	9064381	0.0053	0.05	ND	1	03/05/09	03/10/09	HTV
Surrogate: Decachlorobiphenyl (32-144%)					*58 %*				
Surrogate: Tetrachloro-m-xylene (52-117%)					*90 %*				

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica Irvine

Client Sample ID: ISB1786-01

Outfall 001

Radiochemistry

Lab Sample ID: F9B180223-001
Work Order: K7DJX
Matrix: WATER

Date Collected: 02/16/09 1400
Date Received: 02/18/09 0930

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 # 9058211		Yld %
Cesium 137 UJ/H	2.6	U	9.8	20.0	18	02/27/09	03/15/09
Potassium 40 ↓ ↓	-80	U	1600		300	02/27/09	03/15/09
Gross Alpha/Beta EPA 900				pCi/L	Batch # 9050133		Yld %
Gross Alpha J/H,C	5.5		1.6	3.0	1.1	02/24/09	03/03/09
Gross Beta J/H	4.9		1.1	4.0	1.2	02/24/09	03/03/09
TRITIUM (Distill) by EPA 906.0 MOD				pCi/L	Batch # 9066052		Yld %
Tritium U	-50	U	170	500	300	03/07/09	03/13/09
SR-90 BY GFPC EPA-905 MOD				pCi/L	Batch # 9049442		Yld % 61
Strontium 90 U	0.06	U	0.28	3.00	0.49	02/18/09	02/28/09
Total Uranium by KPA ASTM 5174-91				pCi/L	Batch # 9050413		Yld %
Total Uranium J/H,DNQ	0.547	J	0.066	1.35	0.42	02/19/09	03/08/09
Radium 226 by EPA 903.0 MOD				pCi/L	Batch # 9049439		Yld % 90
Radium (226) J/DNQ	0.31	J	0.17	1.00	0.22	02/18/09	03/13/09
Radium 228 by GFPC EPA 904 MOD				pCi/L	Batch # 9049441		Yld % 80
Radium 228 U	0.17	U	0.35	1.00	0.58	02/18/09	03/13/09

LEVEL IV

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.

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

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: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Acenaphthene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Acenaphthylene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Aniline	EPA 625	9B21046	0.28	9.4	ND	0.943	02/21/09	02/24/09	
Anthracene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Benzidine	EPA 625	9B21046	N/A	4.7	ND	0.943	02/21/09	02/24/09	
Benzo(a)anthracene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Benzo(a)pyrene	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Benzo(b)fluoranthene	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Benzo(g,h,i)perylene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Benzo(k)fluoranthene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Benzoic acid	EPA 625	9B21046	2.8	19	ND	0.943	02/21/09	02/24/09	
Benzyl alcohol	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
4-Bromophenyl phenyl ether	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Butyl benzyl phthalate	EPA 625	9B21046	0.66	4.7	**1.1**	0.943	02/21/09	02/24/09	J, B
4-Chloro-3-methylphenol	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
4-Chloroaniline	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Bis(2-chloroethoxy)methane	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Bis(2-chloroethyl)ether	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Bis(2-chloroisopropyl)ether	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Bis(2-ethylhexyl)phthalate	EPA 625	9B21046	1.6	4.7	ND	0.943	02/21/09	02/24/09	
2-Chloronaphthalene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
2-Chlorophenol	EPA 625	9B21046	0.19	0.94	ND	0.943	02/21/09	02/24/09	
4-Chlorophenyl phenyl ether	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Chrysene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Dibenz(a,h)anthracene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Dibenzofuran	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Di-n-butyl phthalate	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
1,2-Dichlorobenzene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
1,3-Dichlorobenzene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
1,4-Dichlorobenzene	EPA 625	9B21046	0.19	0.47	ND	0.943	02/21/09	02/24/09	
3,3'-Dichlorobenzidine	EPA 625	9B21046	N/A	4.7	ND	0.943	02/21/09	02/24/09	
2,4-Dichlorophenol	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
Diethyl phthalate	EPA 625	9B21046	0.094	0.94	**0.11**	0.943	02/21/09	02/24/09	J
2,4-Dimethylphenol	EPA 625	9B21046	0.28	1.9	ND	0.943	02/21/09	02/24/09	
Dimethyl phthalate	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
4,6-Dinitro-2-methylphenol	EPA 625	9B21046	0.19	4.7	ND	0.943	02/21/09	02/24/09	
2,4-Dinitrophenol	EPA 625	9B21046	0.85	4.7	ND	0.943	02/21/09	02/24/09	
2,4-Dinitrotoluene	EPA 625	9B21046	0.19	4.7	ND	0.943	02/21/09	02/24/09	
2,6-Dinitrotoluene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Di-n-octyl phthalate	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	

TestAmerica Irvine

Joseph Doak
Project Manager

LEVEL IV

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

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: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Fluoranthene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Fluorene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Hexachlorobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Hexachlorobutadiene	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
Hexachlorocyclopentadiene	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
Hexachloroethane	EPA 625	9B21046	0.19	2.8	ND	0.943	02/21/09	02/24/09	
Indeno(1,2,3-cd)pyrene	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
Isophorone	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
2-Methylnaphthalene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
2-Methylphenol	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
4-Methylphenol	EPA 625	9B21046	0.19	4.7	ND	0.943	02/21/09	02/24/09	
Naphthalene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
2-Nitroaniline	EPA 625	9B21046	0.094	4.7	ND	0.943	02/21/09	02/24/09	
3-Nitroaniline	EPA 625	9B21046	0.19	4.7	ND	0.943	02/21/09	02/24/09	
4-Nitroaniline	EPA 625	9B21046	0.47	4.7	ND	0.943	02/21/09	02/24/09	
Nitrobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
2-Nitrophenol	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
4-Nitrophenol	EPA 625	9B21046	2.4	4.7	ND	0.943	02/21/09	02/24/09	
N-Nitroso-di-n-propylamine	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
N-Nitrosodimethylamine	EPA 625	9B21046	0.094	1.9	ND	0.943	02/21/09	02/24/09	
N-Nitrosodiphenylamine	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Pentachlorophenol	EPA 625	9B21046	0.094	1.9	**1.5**	0.943	02/21/09	02/24/09	J
Phenanthrene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
Phenol	EPA 625	9B21046	0.28	0.94	ND	0.943	02/21/09	02/24/09	
Pyrene	EPA 625	9B21046	0.094	0.47	ND	0.943	02/21/09	02/24/09	
1,2,4-Trichlorobenzene	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
2,4,5-Trichlorophenol	EPA 625	9B21046	0.19	1.9	ND	0.943	02/21/09	02/24/09	
2,4,6-Trichlorophenol	EPA 625	9B21046	0.094	0.94	ND	0.943	02/21/09	02/24/09	
Surrogate: 2,4,6-Tribromophenol (40-120%)					*74 %*				
Surrogate: 2-Fluorobiphenyl (50-120%)					*76 %*				
Surrogate: 2-Fluorophenol (30-120%)					*63 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*72 %*				
Surrogate: Phenol-d6 (35-120%)					*66 %*				
Surrogate: Terphenyl-d14 (50-125%)					*95 %*				

TestAmerica Irvine

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LEVEL IV

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	9B24128	0.50	0.50	**0.56**	1	02/24/09	02/24/09	
Biochemical Oxygen Demand	SM5210B	9B17161	0.50	2.0	**2.4**	1	02/17/09	02/22/09	
Chloride	EPA 300.0	9B16057	0.25	0.50	**10**	1	02/16/09	02/17/09	
Fluoride	SM 4500-F-C	9B17074	0.020	0.10	**0.12**	1	02/17/09	02/17/09	B
Nitrate-N	EPA 300.0	9B16057	0.060	0.11	**1.4**	1	02/16/09	02/17/09	
Nitrite-N	EPA 300.0	9B16057	0.090	0.15	ND	1	02/16/09	02/17/09	
Nitrate/Nitrite-N	EPA 300.0	9B16057	0.15	0.26	**1.4**	1	02/16/09	02/17/09	
Residual Chlorine	EPA 330.5	9B17105	0.10	0.10	ND	1	02/17/09	02/17/09	HFT
Sulfate	EPA 300.0	9B16057	0.20	0.50	**9.7**	1	02/16/09	02/17/09	
Surfactants (MBAS)	SM5540-C	9B17098	0.025	0.10	**0.097**	1	02/17/09	02/17/09	J
Total Dissolved Solids	SM2540C	9B18065	10	10	**120**	1	02/18/09	02/18/09	
Total Organic Carbon	SM5310B	9B23002	0.50	1.0	**10**	1	02/23/09	02/23/09	
Total Suspended Solids	SM 2540D	9B21068	1.0	10	**92**	1	02/21/09	02/21/09	

LEVEL IV

*Analysis not validated

TestAmerica Irvine

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Sampled: 02/16/09
Received: 02/16/09

INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B17067	0.40	10	**140**	10	02/17/09	02/17/09	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

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

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

Project ID: Annual Outfall 001
Report Number: ISB1786

Sampled: 02/16/09
Received: 02/16/09

INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1786-01 (Outfall 001 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	9B18054	1.0	1.0	**120**	1	02/18/09	02/18/09	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager