

APPENDIX G

Section 9

Outfall 002 – February 19, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUB2115

Prepared by

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I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES
 Contract Task Order: 1261.100D.00
 Sample Delivery Group: IUB2115
 Project Manager: B. Kelly
 Matrix: Water
 QC Level: IV
 No. of Samples: 2
 No. of Reanalyses/Dilutions: 2
 Laboratory: TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 002 (Grab)	IUB2115-01	N/A	Water	2/19/2011 08:45	120.1, 624
Trip Blanks	IUB2115-02	N/A	Water	2/19/2011 08:45	624
Outfall 002 (Composite)	IUB2115-03	G1B220485-001, S102234-01	Water	2/19/2011 18:41	180.1, 200.7, 200.7 (Diss), 245.1, 245.1 (Diss), 1613B, 8260B SIM, 625, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B-Diss, SM5310B, ASTM 5174
Outfall 002 (Composite)	IUB2115-03RE	G1B220485-001	Water	2/19/2011 18:41	1613B
Outfall 002 (Composite)	IUB2115-03RE1	N/A	Water	2/19/2011 18:41	200.7-Diss

II. Sample Management

No anomalies were observed regarding sample management. The samples were received above the temperature limit at Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at Eberline and TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine and Truesdail, no custody seals were required. Unpreserved aliquots of the samples for Method 624 were provided for analysis of 2-chloroethyl vinyl ether. 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 or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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: L. Calvin

Date Reviewed: April 1, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for most target compounds. Many were reported as EMPCs; however, due to the extent of the contamination, the reviewer deemed it appropriate to utilize all reported method blank detects to qualify sample results. Any sample detects for individual isomers also detected in the method blank were qualified as nondetected, "U," at the EDL if detected below the

EDL, or at the level of contamination if detected above. Total HpCDD was qualified as nondetected, "U," as both peaks comprising the total were also detected in the method blank. Totals for HxCDD and HpCDF were qualified as estimated, "J," as only a portion of the total was considered method blank contamination.

- Blank Spikes and Laboratory Control Samples: LCS 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: This SDG had no identified field duplicate samples.
- Internal Standards Performance: The labeled standard recoveries in the sample were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The original result for 2,3,7,8-TCDF was not confirmed by the confirmation analysis; therefore, the original result was rejected, "R," in favor of the nondetected confirmation result. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. EMPCs previously qualified as method blank contamination were not further qualified as EMPCs. Any totals containing EMPC peaks were qualified as estimated, "J." Any detects reported between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

B. EPA METHOD 8315M—Hydrazines

Reviewed By: P. Meeks

Date Reviewed: April 5, 2011

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 hydrazine sample was derivitized within 28 days of collection and was analyzed within three days of derivitization.
- Calibration: Calibration criteria were met. The initial calibration r^2 values were ≥ 0.995 . The ICV, CCV, and QCS recoveries were within 85-115%.
- Blanks: Hydrazine was not detected in the method blank.
- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG. Recoveries and RPDs were within laboratory-established QC limits.
- 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, LCS, and LCSD 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 calibrations 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 and 245.1—Metals and Mercury

Reviewed By: P. Meeks

Date Reviewed: April 4, 2011

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP metals and 28 days for mercury, were met.
- Tuning: Not applicable to these analyses.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP metals and 85-115% for mercury. The CRDL/CRI recoveries were within the control limits of 70-130%.
- Blanks: Method blanks and CCBs had no applicable detects.
- Interference Check Samples: Recoveries were within 80-120% for all 200.7 analyses. Boron was detected in the ICSA associated with the total analysis at 76.7 $\mu\text{g/L}$ and was reported in the ICSA associated with the dissolved analysis at $-57.7 \mu\text{g/L}$; however, the concentration of the primary interferent, iron, was not sufficient to cause matrix interference in the site sample.
- 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: MS/MSD analyses were performed on the sample in this SDG for total mercury. The recoveries and RPD were within the method-established control limits. Method accuracy for the remaining method was evaluated based on the LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to these analyses.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-," otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

Dissolved boron and magnesium were reported at concentrations slightly larger than the total 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.

D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 4, 2011

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

- **Holding Times:** The tritium sample was analyzed within 180 days of collection. The remaining aliquots were prepared within the five-day analytical 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 remaining detector efficiencies were $\geq 20\%$.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- **Blanks:** There were no analytes detected in the method blanks.
- **Blank Spikes and Laboratory Control Samples:** The recoveries were within laboratory-established control limits.
- **Laboratory Duplicates:** No laboratory duplicate analyses were performed on the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this SDG. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

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

Reviewed By: L. Calvin

Date Reviewed: April 4, 2011

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 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. The sample was analyzed within 12 hours of the DFTPP injection time.
- Calibration: Calibration criteria were met. The initial calibration average RRFs and the ICV and continuing calibration RRFs were ≥ 0.05 for all target compounds. The initial calibration %RSDs were $\leq 35\%$, or r^2 values ≥ 0.995 . The second source ICV had a %D above 20% for 1,2-diphenylhydrazine/azobenzene; therefore, the nondetected result for this compound was qualified as estimated, "UJ." The remaining ICV and CCV %Ds were $\leq 20\%$.
- Blanks: Acenaphthylene, bis(2-ethylhexyl)phthalate, and naphthalene were detected in the method blank between the MDL and the reporting limit; however none of the method

blank contaminants were detected in the associated sample. The method blank had no other target compound detects above the MDL.

- Blank Spikes and Laboratory Control Samples: Benzidine was not recovered in the LCS or LCSD; therefore, the nondetected result for benzidine was rejected, “R,” in the associated sample. RPDs exceeded the control limit for benzo(g,h,i)perylene, bis(2-chloroethyl)ether, and bis(2-ethylhexyl)phthalate. The nondetected results for those compounds were qualified as estimated, “UJ,” in the sample. Remaining recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample in this SDG. Method accuracy and precision was 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: This SDG had no identified field duplicate samples.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ± 30 seconds for retention times.
- Compound Identification: Compound identification was verified. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any 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.

F. EPA METHOD 624—Volatile Organic Compounds (VOCs)

Reviewed By: L. Calvin

Date Reviewed: April 4, 2011

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- **Holding Times:** Extraction and analytical holding times were met. The preserved water samples were analyzed within 14 days of collection, and the unpreserved aliquots were analyzed within seven days of collection.
- **GC/MS Tuning:** The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.
- **Calibration:** The applicable initial calibration average RRFs and the ICV and continuing calibration RRFs were ≥ 0.05 for all target compounds. The initial calibration %RSDs were $\leq 35\%$, or r^2 values ≥ 0.995 . The second source ICV recoveries were within the method control limits. Recoveries for cis-1,3-dichloropropene and 1,1,2-trichloroethane exceeded the control limits in the CCV associated with sample Trip Blanks; therefore, the results for both compounds were qualified as estimated, "UJ." Remaining recoveries were within the method control limits.
- **Blanks:** The method blank had no target compound detects above the MDL.
- **Blank Spikes and Laboratory Control Samples:** Recoveries were within laboratory-established QC limits.
- **Surrogate Recovery:** Recoveries were within laboratory-established QC limits.
- **Matrix Spike/Matrix Spike Duplicate:** MS/MSD analyses were not performed on the site sample in this SDG. Method accuracy was evaluated based on LCS results.
- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - **Trip Blanks:** Sample Trip Blanks was the trip blank associated with the site sample in this SDG. The trip blank analyses had no target compounds detected above the MDL.
 - **Field Blanks and Equipment Rinsates:** This SDG had no identified field blank or equipment rinsate samples.

- Field Duplicates: This SDG had no identified field duplicate samples.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ± 30 seconds for retention times.
- Compound Identification: Compound identification was verified. Review of the sample chromatograms, 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. EPA METHOD 8260B-SIM—1,4-Dioxane

Reviewed By: L. Calvin

Date Reviewed: April 4, 2011

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 8260B*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: The analytical holding time was met. The preserved water sample was analyzed within 14 days of collection.
- GC/MS Tuning: The BFB tunes met the method abundance criteria specified by EPA Method 8260B. Samples were analyzed within 12 hours of the BFB injection time.
- Calibration: The initial calibration average RRF and continuing calibration RRF were ≥ 0.05 for 1,4-dioxane. The initial calibration %RSD was $\leq 15\%$, and the continuing calibration %D was $\leq 20\%$.
- Blanks: The method blank had 1,4-dioxane detected marginally below the MDL at 0.68 $\mu\text{g/L}$. The sample result below the reporting limit was well below five times the method blank concentration; therefore, in the professional judgment of the reviewer, the sample result was qualified as nondetected, "U," at the level of contamination.

- Blank Spikes and Laboratory Control Samples: The LCS recovery was within laboratory-established QC limits.
- Surrogate Recovery: The recovery was within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample from this SDG. Evaluation of method accuracy was based on LCS results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Trip Blanks: A trip blank was not analyzed for 1,4-dioxane by Method 8260B SIM.
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: This SDG had no identified field duplicate samples.
- 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 1,4-dioxane by Method 8260B SIM. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limit was supported by the low point of the initial calibration and the laboratory MDL. Any result reported between the MDL and the reporting limit was qualified as estimated, "J," and coded with "DNQ" 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.

H. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: April 4, 2011

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 120.1, 180.1, SM5310B*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times were met.
- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥ 0.995 . All initial and continuing calibration recoveries were within 90-110%.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: The 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms IUB2115

Analysis Method 8664

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total		0.594	1	0.02	pCi/L	Jb	J	DNQ

Analysis Method 900

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	0.905	3	0.568	pCi/L	Jb	J	C, DNQ
Gross Beta	12587472	2.96	4	0.96	pCi/L	Jb	J	DNQ

Analysis Method 901.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.05	pCi/L	U	U	
Potassium-40	13966002	ND	25	16.6	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.373	1	0.601	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.171	1	0.567	pCi/L	U	U	

Analysis Method 905

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUB2115-03	Sample Date:	2/19/2011 6:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.013	2	0.662	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUB2115-03	Sample Date:	2/19/2011 6:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	-67.1	500	211	pCi/L	U	U	

Analysis Method EPA 120.1

Sample Name	Outfall 002 (Grab)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUB2115-01	Sample Date:	2/19/2011 8:45:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	500	1.0	1.0	umhos/c			

Analysis Method EPA 180.1

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUB2115-03	Sample Date:	2/19/2011 6:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	26	1.0	0.040	NTU			

Analysis Method EPA 200.7

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440-38-2	ND	10	7.0	ug/l		U	
Barium	7440-39-3	0.034	0.010	0.0060	mg/l			
Beryllium	7440-41-7	ND	2.0	0.90	ug/l		U	
Boron	7440-42-8	0.069	0.050	0.020	mg/l			
Calcium	7440-70-2	43	0.10	0.050	mg/l			
Chromium	7440-47-3	ND	5.0	2.0	ug/l		U	
Cobalt	7440-48-4	ND	10	2.0	ug/l		U	
Iron	7439-89-6	0.97	0.040	0.015	mg/l			
Magnesium	7439-95-4	11	0.020	0.012	mg/l			
Manganese	7439-96-5	32	20	7.0	ug/l			
Nickel	7440-02-0	ND	10	2.0	ug/l		U	
Vanadium	7440-62-2	ND	10	3.0	ug/l		U	
Zinc	7440-66-6	7.68	20.0	6.00	ug/l	Ja	J	DNQ

Analysis Method EPA 200.7-Diss

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2115-03RE1 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Arsenic	7440-38-2	ND	10	7.0	ug/l		U	
Barium	7440-39-3	0.031	0.010	0.0060	mg/l			
Beryllium	7440-41-7	ND	2.0	0.90	ug/l		U	
Boron	7440-42-8	0.076	0.050	0.020	mg/l			
Calcium	7440-70-2	38	0.10	0.050	mg/l			
Chromium	7440-47-3	ND	5.0	2.0	ug/l		U	
Cobalt	7440-48-4	ND	10	2.0	ug/l		U	
Iron	7439-89-6	0.043	0.040	0.015	mg/l			
Magnesium	7439-95-4	14	0.020	0.012	mg/l			
Manganese	7439-96-5	ND	20	7.0	ug/l		U	
Nickel	7440-02-0	ND	10	2.0	ug/l		U	
Vanadium	7440-62-2	ND	10	3.0	ug/l		U	
Zinc	7440-66-6	ND	20.0	6.00	ug/l		U	

Analysis Method *EPA 245.1*

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method *EPA 245.1-Diss*

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 624

Sample Name Outfall 002 (Grab) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2115-01 **Sample Date:** 2/19/2011 8:45:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1-Trichloroethane	71-55-6	ND	0.50	0.30	ug/l		U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	0.30	ug/l		U	
1,1,2-Trichloroethane	79-00-5	ND	0.50	0.30	ug/l		U	
1,1-Dichloroethane	75-34-3	ND	0.50	0.40	ug/l		U	
1,1-Dichloroethene	75-35-4	ND	0.50	0.42	ug/l		U	
1,2-Dichloro-1,1,2-trifluoroethane	354-23-4	ND	2.0	1.1	ug/l		U	
1,2-Dichlorobenzene	95-50-1	ND	0.50	0.32	ug/l		U	
1,2-Dichloroethane	107-06-2	ND	0.50	0.28	ug/l		U	
1,2-Dichloropropane	78-87-5	ND	0.50	0.35	ug/l		U	
1,3-Dichlorobenzene	541-73-1	ND	0.50	0.35	ug/l		U	
1,4-Dichlorobenzene	106-46-7	ND	0.50	0.37	ug/l		U	
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.8	ug/l		U	
Acrolein	107-02-8	ND	5.0	4.0	ug/l		U	
Acrylonitrile	107-13-1	ND	2.0	1.2	ug/l		U	
Benzene	71-43-2	ND	0.50	0.28	ug/l		U	
Bromodichloromethane	75-27-4	ND	0.50	0.30	ug/l		U	
Bromoform	75-25-2	ND	0.50	0.40	ug/l		U	
Bromomethane	74-83-9	ND	1.0	0.42	ug/l		U	
Carbon tetrachloride	56-23-5	ND	0.50	0.28	ug/l		U	
Chlorobenzene	108-90-7	ND	0.50	0.36	ug/l		U	
Chloroethane	75-00-3	ND	1.0	0.40	ug/l		U	
Chloroform	67-66-3	ND	0.50	0.33	ug/l		U	
Chloromethane	74-87-3	ND	0.50	0.40	ug/l		U	
cis-1,2-Dichloroethene	156-59-2	3.0	0.50	0.32	ug/l			
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	0.22	ug/l		U	
Cyclohexane	110-82-7	ND	1.0	0.40	ug/l		U	
Dibromochloromethane	124-48-1	ND	0.50	0.40	ug/l		U	
Ethylbenzene	100-41-4	ND	0.50	0.25	ug/l		U	
Methylene chloride	75-09-2	ND	1.0	0.95	ug/l		U	
Tetrachloroethene	127-18-4	ND	0.50	0.32	ug/l		U	
Toluene	108-88-3	ND	0.50	0.36	ug/l		U	
trans-1,2-Dichloroethene	156-60-5	ND	0.50	0.30	ug/l		U	
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	0.32	ug/l		U	
Trichloroethene	79-01-6	1.8	0.50	0.26	ug/l			

Analysis Method *EPA 624*

Trichlorotrifluoroethane (Freon 113)	76-13-1	ND	5.0	0.50	ug/l	U
Vinyl chloride	75-01-4	ND	0.50	0.40	ug/l	U

Analysis Method EPA 624

Sample Name Trip Blanks **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2115-02 **Sample Date:** 2/19/2011 8:45:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1-Trichloroethane	71-55-6	ND	0.50	0.30	ug/l		U	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.50	0.30	ug/l		U	
1,1,2-Trichloroethane	79-00-5	ND	0.50	0.30	ug/l	C	UJ	C
1,1-Dichloroethane	75-34-3	ND	0.50	0.40	ug/l		U	
1,1-Dichloroethene	75-35-4	ND	0.50	0.42	ug/l		U	
1,2-Dichloro-1,1,2-trifluoroethane	354-23-4	ND	2.0	1.1	ug/l		U	
1,2-Dichlorobenzene	95-50-1	ND	0.50	0.32	ug/l		U	
1,2-Dichloroethane	107-06-2	ND	0.50	0.28	ug/l		U	
1,2-Dichloropropane	78-87-5	ND	0.50	0.35	ug/l		U	
1,3-Dichlorobenzene	541-73-1	ND	0.50	0.35	ug/l		U	
1,4-Dichlorobenzene	106-46-7	ND	0.50	0.37	ug/l		U	
2-Chloroethyl vinyl ether	110-75-8	ND	5.0	1.8	ug/l		U	
Acrolein	107-02-8	ND	5.0	4.0	ug/l		U	
Acrylonitrile	107-13-1	ND	2.0	1.2	ug/l		U	
Benzene	71-43-2	ND	0.50	0.28	ug/l		U	
Bromodichloromethane	75-27-4	ND	0.50	0.30	ug/l		U	
Bromoform	75-25-2	ND	0.50	0.40	ug/l		U	
Bromomethane	74-83-9	ND	1.0	0.42	ug/l		U	
Carbon tetrachloride	56-23-5	ND	0.50	0.28	ug/l		U	
Chlorobenzene	108-90-7	ND	0.50	0.36	ug/l		U	
Chloroethane	75-00-3	ND	1.0	0.40	ug/l		U	
Chloroform	67-66-3	ND	0.50	0.33	ug/l		U	
Chloromethane	74-87-3	ND	0.50	0.40	ug/l		U	
cis-1,2-Dichloroethene	156-59-2	ND	0.50	0.32	ug/l		U	
cis-1,3-Dichloropropene	10061-01-5	ND	0.50	0.22	ug/l	C	UJ	C
Cyclohexane	110-82-7	ND	1.0	0.40	ug/l		U	
Dibromochloromethane	124-48-1	ND	0.50	0.40	ug/l		U	
Ethylbenzene	100-41-4	ND	0.50	0.25	ug/l		U	
Methylene chloride	75-09-2	ND	1.0	0.95	ug/l		U	
Tetrachloroethene	127-18-4	ND	0.50	0.32	ug/l		U	
Toluene	108-88-3	ND	0.50	0.36	ug/l		U	
trans-1,2-Dichloroethene	156-60-5	ND	0.50	0.30	ug/l		U	
trans-1,3-Dichloropropene	10061-02-6	ND	0.50	0.32	ug/l		U	
Trichloroethene	79-01-6	ND	0.50	0.26	ug/l		U	

Analysis Method *EPA 624*

Trichlorotrifluoroethane (Freon 113)	76-13-1	ND	5.0	0.50	ug/l	U
Vinyl chloride	75-01-4	ND	0.50	0.40	ug/l	U

Analysis Method EPA 625

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,4-Trichlorobenzene	120-82-1	ND	0.943	0.0943	ug/l		U	
1,2-Dichlorobenzene	95-50-1	ND	0.472	0.0943	ug/l		U	
1,2-Diphenylhydrazine/Azobenzene	103-33-3	ND	0.943	0.0943	ug/l	C	UJ	C
1,3-Dichlorobenzene	541-73-1	ND	0.472	0.0943	ug/l		U	
1,4-Dichlorobenzene	106-46-7	ND	0.472	0.189	ug/l		U	
2,4,6-Trichlorophenol	88-06-2	ND	0.943	0.0943	ug/l		U	
2,4-Dichlorophenol	120-83-2	ND	1.89	0.189	ug/l		U	
2,4-Dimethylphenol	105-67-9	ND	1.89	0.283	ug/l		U	
2,4-Dinitrophenol	51-28-5	ND	4.72	0.849	ug/l		U	
2,4-Dinitrotoluene	121-14-2	ND	4.72	0.189	ug/l		U	
2,6-Dinitrotoluene	606-20-2	ND	4.72	0.0943	ug/l		U	
2-Chloronaphthalene	91-58-7	ND	0.472	0.0943	ug/l		U	
2-Chlorophenol	95-57-8	ND	0.943	0.189	ug/l		U	
2-Nitrophenol	88-75-5	ND	1.89	0.0943	ug/l		U	
3,3'-Dichlorobenzidine	91-94-1	ND	4.72	4.72	ug/l		U	
4,6-Dinitro-2-methylphenol	534-52-1	ND	4.72	0.189	ug/l		U	
4-Bromophenyl phenyl ether	101-55-3	ND	0.943	0.0943	ug/l		U	
4-Chloro-3-methylphenol	59-50-7	ND	1.89	0.189	ug/l		U	
4-Chlorophenyl phenyl ether	7005-72-3	ND	0.472	0.0943	ug/l		U	
4-Nitrophenol	100-02-7	ND	4.72	2.36	ug/l		U	
Acenaphthene	83-32-9	ND	0.472	0.0943	ug/l		U	
Acenaphthylene	208-96-8	ND	0.472	0.0943	ug/l		U	
Anthracene	120-12-7	ND	0.472	0.0943	ug/l		U	
Benzidine	92-87-5	ND	4.72	4.72	ug/l	L6	R	L
Benzo(a)anthracene	56-55-3	ND	4.72	0.0943	ug/l		U	
Benzo(a)pyrene	50-32-8	ND	1.89	0.0943	ug/l		U	
Benzo(b)fluoranthene	205-99-2	ND	1.89	0.0943	ug/l		U	
Benzo(g,h,i)perylene	191-24-2	ND	4.72	0.0943	ug/l		UJ	*III
Benzo(k)fluoranthene	207-08-9	ND	0.472	0.0943	ug/l		U	
Bis(2-chloroethoxy)methane	111-91-1	ND	0.472	0.0943	ug/l		U	
Bis(2-chloroethyl)ether	111-44-4	ND	0.472	0.0943	ug/l		UJ	*III
Bis(2-chloroisopropyl)ether	108-60-1	ND	0.472	0.0943	ug/l		U	
Bis(2-ethylhexyl)phthalate	117-81-7	ND	4.72	1.60	ug/l		UJ	*III
Butyl benzyl phthalate	85-68-7	ND	4.72	0.660	ug/l		U	
Chrysene	218-01-9	ND	0.472	0.0943	ug/l		U	

Analysis Method *EPA 625*

Dibenz(a,h)anthracene	53-70-3	ND	0.472	0.0943	ug/l		U	
Diethyl phthalate	84-66-2	0.245	0.943	0.0943	ug/l	Ja	J	DNQ
Dimethyl phthalate	131-11-3	ND	0.472	0.0943	ug/l		U	
Di-n-butyl phthalate	84-74-2	0.396	1.89	0.189	ug/l	Ja	J	DNQ
Di-n-octyl phthalate	117-84-0	ND	4.72	0.0943	ug/l		U	
Fluoranthene	206-44-0	ND	0.472	0.0943	ug/l		U	
Fluorene	86-73-7	ND	0.472	0.0943	ug/l		U	
Hexachlorobenzene	118-74-1	ND	0.943	0.0943	ug/l		U	
Hexachlorobutadiene	87-68-3	ND	1.89	0.189	ug/l		U	
Hexachlorocyclopentadiene	77-47-4	ND	4.72	0.0943	ug/l		U	
Hexachloroethane	67-72-1	ND	2.83	0.189	ug/l		U	
Indeno(1,2,3-cd)pyrene	193-39-5	ND	1.89	0.0943	ug/l		U	
Isophorone	78-59-1	ND	0.943	0.0943	ug/l		U	
Naphthalene	91-20-3	ND	0.943	0.0943	ug/l		U	
Nitrobenzene	98-95-3	ND	0.943	0.0943	ug/l		U	
N-Nitrosodimethylamine	62-75-9	ND	1.89	0.0943	ug/l		U	
N-Nitroso-di-n-propylamine	621-64-7	ND	1.89	0.0943	ug/l		U	
N-Nitrosodiphenylamine	86-30-6	ND	0.943	0.0943	ug/l		U	
Pentachlorophenol	87-86-5	ND	1.89	0.0943	ug/l		U	
Phenanthrene	85-01-8	ND	0.472	0.0943	ug/l		U	
Phenol	108-95-2	ND	0.943	0.283	ug/l		U	
Pyrene	129-00-0	ND	0.472	0.0943	ug/l		U	

Analysis Method *EPA 8260B-SIM*

Sample Name	Outfall 002 (Composite)		Matrix Type:	Water		Validation Level:	IV	
Lab Sample Name:	IUB2115-03		Sample Date:	2/19/2011 6:41:00 PM				
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,4-Dioxane	123-91-1	ND	2.0	1.0	ug/l	Ja	U	B

Analysis Method EPA-5 1613B

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.0000006	ug/L	J, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000003	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000005	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000002	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000001	ug/L	J, Ba	U	B
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000002	ug/L	J, Q, Ba	U	B
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000001	ug/L	J, Q, Ba	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000002	ug/L	J, Q, Ba	U	B
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000002	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000003	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000002	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000001	ug/L	J, Q, Ba	U	B
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000002	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000002	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000021	ug/L		U	
2,3,7,8-TCDF	51207-31-9	4.3e-007	0.00001	0.0000002	ug/L	J, Q	R	D
OCDD	3268-87-9	ND	0.0001	0.0000013	ug/L	J, Ba	U	B
OCDF	39001-02-0	ND	0.0001	0.0000005	ug/L	J, Ba	U	B
Total HpCDD	37871-00-4	ND	0.00005	0.0000006	ug/L	J, Ba	U	B
Total HpCDF	38998-75-3	6.6e-006	0.00005	0.0000004	ug/L	J, Q, Ba	J	B, DNQ, *III
Total HxCDD	34465-46-8	2.9e-006	0.00005	0.0000002	ug/L	J, Q, Ba	J	B, DNQ, *III
Total HxCDF	55684-94-1	1.8e-006	0.00005	0.0000001	ug/L	J, Q, Ba	J	B, DNQ, *III
Total PeCDD	36088-22-9	ND	0.00005	0.0000003	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000002	ug/L		U	
Total TCDD	41903-57-5	1.4e-006	0.00001	0.0000002	ug/L	J, Q	J	DNQ, *III
Total TCDF	55722-27-5	4.3e-007	0.00001	0.0000002	ug/L	J, Q	J	DNQ, *III

Analysis Method SM2340B

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness (as CaCO3)	NA	150	0.33	0.17	mg/l			

Analysis Method SM2340B-Diss

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3		150	0.33	0.17	mg/l			

Analysis Method SM5310B

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUB2115-03 **Sample Date:** 2/19/2011 6:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Organic Carbon	TOC	8.8	1.0	0.50	mg/l			

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17461 Derian Avenue, Suite 100
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REPORT

Attention: Debby Wilson
Sample: Water / 1 Sample
Project Name: IUB2115
Project Number: IUB2115
Method Number: EPA 8315 (Modified)
Investigation: Hydrazines

Laboratory No: 993770
Report Date: March 3, 2011
Sampling Date: February 19, 2011
Receiving Date: February 22, 2011
Extraction Date: February 22, 2011
Analysis Date: February 23, 2011
Units: µg/L
Reported By: JS

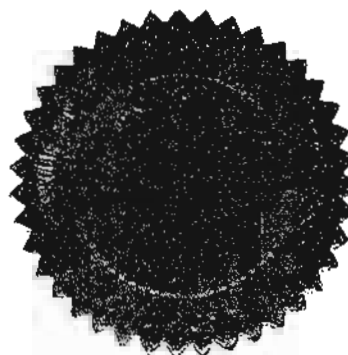
Out-fall 002

Analytical Results

Sample ID	Sample Description	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
709287-MB	Method Blank	100	1	ND	ND	ND	None
993770	IUB2115-03	100	1	ND (U)	ND (U)	ND (U)	None
MDL				1.77	1.13	0.439	
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.



Jeff Lee, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

APPENDIX G

Section 10

Outfall 002 – February 19, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Annual Outfall 002

Sampled: 02/19/11
Received: 02/19/11
Issued: 04/28/11 16:16

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

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

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

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals
Sample: 1
Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.
Some analytes are reported at a concentration below the estimated detection limit (EDL). The data is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.
Revised report to correct the dissolved metals results for Arsenic, Cobalt, Nickel, and Copper. The original analyses had J-flag detections but they were not confirmed by the 200.8 analysis or by the redigestion/reanalysis by 200.7.
Revised report to correct 8015 carbon ranges.
Revised report to include trichlorofluoromethane and total xylenes per client request.

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

LABORATORY ID

IUB2115-01
IUB2115-02
IUB2115-03
IUB2115-04

CLIENT ID

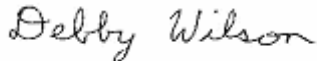
Outfall 002 (Grab)
Trip Blanks
Outfall 002 (Composite)
Trip Blank

MATRIX

Water
Water
Water
Water

I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

CORRECTIVE ACTION REPORT

Department: Pesticides

Date: 02/25/2011

Method: EPA 608

Matrix: Water

QC Batch: 11B2911

Identification and Definition of Problem:

The surrogate recovery in the method blank for batch 11B2911 was below laboratory control limits.

Determination of the Cause of the Problem:

A definitive cause for the QC failure has not been determined. The surrogate recovery was also low (but passing) in the LCS for this batch but all the associated samples had passing surrogate recoveries. It is suspected the problem was related to the laboratory's reagent water supply.

Corrective Action Taken:

The presence of a non-detect sample has been used to demonstrate passing negative (blank) control. This is based on the fact that the laboratory water is used only for the batch QC (method blank and LCS), it would have no impact on sample results. The sample used as the blank has been reported in the batch as 11B2911-BLK2 and is referenced to this non-conformance report. Corrective action on the laboratory's water system is in progress.

Quality Assurance Approval:



Dave Dawes

Date: 04/05/2011 02:44 PM

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11

Received: 02/19/11

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water)									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	11C0446	0.025	0.10	ND	1	KTS	03/03/11	
<i>Surrogate: 4-BFB (FID) (65-140%)</i>					<i>107 %</i>				

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Debby Wilson
Project Manager

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IUB2115 <Page 4 of 80>

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/EPA 8015B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water) - cont.									
Reporting Units: mg/l									
DRO (C13 - C28)	EPA 8015B	11B3290	0.094	0.47	ND	0.943	CP	02/26/11	
Surrogate: n-Octacosane (45-120%)					77 %				

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Project Manager

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IUB2115 <Page 5 of 80>

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water) - cont.									
Reporting Units: ug/l									
Benzene	EPA 624	11C0621	0.28	0.50	ND	1	ATL	03/05/11	
Bromodichloromethane	EPA 624	11C0621	0.30	0.50	ND	1	ATL	03/05/11	
Bromoform	EPA 624	11C0621	0.40	0.50	ND	1	ATL	03/05/11	
Bromomethane	EPA 624	11C0621	0.42	1.0	ND	1	ATL	03/05/11	
Carbon tetrachloride	EPA 624	11C0621	0.28	0.50	ND	1	ATL	03/05/11	
Chlorobenzene	EPA 624	11C0621	0.36	0.50	ND	1	ATL	03/05/11	
Chloroethane	EPA 624	11C0621	0.40	1.0	ND	1	ATL	03/05/11	
Chloroform	EPA 624	11C0621	0.33	0.50	ND	1	ATL	03/05/11	
Chloromethane	EPA 624	11C0621	0.40	0.50	ND	1	ATL	03/05/11	
Dibromochloromethane	EPA 624	11C0621	0.40	0.50	ND	1	ATL	03/05/11	
1,2-Dichlorobenzene	EPA 624	11C0621	0.32	0.50	ND	1	ATL	03/05/11	
1,3-Dichlorobenzene	EPA 624	11C0621	0.35	0.50	ND	1	ATL	03/05/11	
1,4-Dichlorobenzene	EPA 624	11C0621	0.37	0.50	ND	1	ATL	03/05/11	
1,1-Dichloroethane	EPA 624	11C0621	0.40	0.50	ND	1	ATL	03/05/11	
1,2-Dichloroethane	EPA 624	11C0621	0.28	0.50	ND	1	ATL	03/05/11	
1,1-Dichloroethene	EPA 624	11C0621	0.42	0.50	ND	1	ATL	03/05/11	
cis-1,2-Dichloroethene	EPA 624	11C0621	0.32	0.50	3.0	1	ATL	03/05/11	
trans-1,2-Dichloroethene	EPA 624	11C0621	0.30	0.50	ND	1	ATL	03/05/11	
1,2-Dichloropropane	EPA 624	11C0621	0.35	0.50	ND	1	ATL	03/05/11	
cis-1,3-Dichloropropene	EPA 624	11C0621	0.22	0.50	ND	1	ATL	03/05/11	
trans-1,3-Dichloropropene	EPA 624	11C0621	0.32	0.50	ND	1	ATL	03/05/11	
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624	11C0621	1.1	2.0	ND	1	ATL	03/05/11	
Ethylbenzene	EPA 624	11C0621	0.25	0.50	ND	1	ATL	03/05/11	
Methylene chloride	EPA 624	11C0621	0.95	1.0	ND	1	ATL	03/05/11	
1,1,2,2-Tetrachloroethane	EPA 624	11C0621	0.30	0.50	ND	1	ATL	03/05/11	
Tetrachloroethene	EPA 624	11C0621	0.32	0.50	ND	1	ATL	03/05/11	
Toluene	EPA 624	11C0621	0.36	0.50	ND	1	ATL	03/05/11	
1,1,1-Trichloroethane	EPA 624	11C0621	0.30	0.50	ND	1	ATL	03/05/11	
1,1,2-Trichloroethane	EPA 624	11C0621	0.30	0.50	ND	1	ATL	03/05/11	
Trichloroethene	EPA 624	11C0621	0.26	0.50	1.8	1	ATL	03/05/11	
Trichlorofluoromethane	EPA 624	11C0621	0.34	0.50	ND	1	ATL	03/05/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11C0621	0.50	5.0	ND	1	ATL	03/05/11	
Vinyl chloride	EPA 624	11C0621	0.40	0.50	ND	1	ATL	03/05/11	
Xylenes, Total	EPA 624	11C0621	0.90	1.5	ND	1	ATL	03/05/11	
Cyclohexane	EPA 624	11C0621	0.40	1.0	ND	1	ATL	03/05/11	
Surrogate: 4-Bromofluorobenzene (80-120%)					105 %				
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					112 %				

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	11C0743	0.28	0.50	ND	1	GMK	03/05/11	
Bromodichloromethane	EPA 624	11C0743	0.30	0.50	ND	1	GMK	03/05/11	
Bromoform	EPA 624	11C0743	0.40	0.50	ND	1	GMK	03/05/11	
Bromomethane	EPA 624	11C0743	0.42	1.0	ND	1	GMK	03/05/11	
Carbon tetrachloride	EPA 624	11C0743	0.28	0.50	ND	1	GMK	03/05/11	
Chlorobenzene	EPA 624	11C0743	0.36	0.50	ND	1	GMK	03/05/11	
Chloroethane	EPA 624	11C0743	0.40	1.0	ND	1	GMK	03/05/11	
Chloroform	EPA 624	11C0743	0.33	0.50	ND	1	GMK	03/05/11	
Chloromethane	EPA 624	11C0743	0.40	0.50	ND	1	GMK	03/05/11	
Dibromochloromethane	EPA 624	11C0743	0.40	0.50	ND	1	GMK	03/05/11	
1,2-Dichlorobenzene	EPA 624	11C0743	0.32	0.50	ND	1	GMK	03/05/11	
1,3-Dichlorobenzene	EPA 624	11C0743	0.35	0.50	ND	1	GMK	03/05/11	
1,4-Dichlorobenzene	EPA 624	11C0743	0.37	0.50	ND	1	GMK	03/05/11	
1,1-Dichloroethane	EPA 624	11C0743	0.40	0.50	ND	1	GMK	03/05/11	
1,2-Dichloroethane	EPA 624	11C0743	0.28	0.50	ND	1	GMK	03/05/11	
1,1-Dichloroethene	EPA 624	11C0743	0.42	0.50	ND	1	GMK	03/05/11	
cis-1,2-Dichloroethene	EPA 624	11C0743	0.32	0.50	ND	1	GMK	03/05/11	
trans-1,2-Dichloroethene	EPA 624	11C0743	0.30	0.50	ND	1	GMK	03/05/11	
1,2-Dichloropropane	EPA 624	11C0743	0.35	0.50	ND	1	GMK	03/05/11	
cis-1,3-Dichloropropene	EPA 624	11C0743	0.22	0.50	ND	1	GMK	03/05/11	C
trans-1,3-Dichloropropene	EPA 624	11C0743	0.32	0.50	ND	1	GMK	03/05/11	
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624	11C0743	1.1	2.0	ND	1	GMK	03/05/11	
Ethylbenzene	EPA 624	11C0743	0.25	0.50	ND	1	GMK	03/05/11	
Methylene chloride	EPA 624	11C0743	0.95	1.0	ND	1	GMK	03/05/11	
1,1,2,2-Tetrachloroethane	EPA 624	11C0743	0.30	0.50	ND	1	GMK	03/05/11	
Tetrachloroethene	EPA 624	11C0743	0.32	0.50	ND	1	GMK	03/05/11	
Toluene	EPA 624	11C0743	0.36	0.50	ND	1	GMK	03/05/11	
1,1,1-Trichloroethane	EPA 624	11C0743	0.30	0.50	ND	1	GMK	03/05/11	
1,1,2-Trichloroethane	EPA 624	11C0743	0.30	0.50	ND	1	GMK	03/05/11	C
Trichloroethene	EPA 624	11C0743	0.26	0.50	ND	1	GMK	03/05/11	
Trichlorofluoromethane	EPA 624	11C0743	0.34	0.50	ND	1	GMK	03/05/11	
Trichlorotrifluoroethane (Freon 113)	EPA 624	11C0743	0.50	5.0	ND	1	GMK	03/05/11	
Vinyl chloride	EPA 624	11C0743	0.40	0.50	ND	1	GMK	03/05/11	
Xylenes, Total	EPA 624	11C0743	0.90	1.5	ND	1	GMK	03/05/11	
Cyclohexane	EPA 624	11C0743	0.40	1.0	ND	1	GMK	03/05/11	
Surrogate: 4-Bromofluorobenzene (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					106 %				
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Toluene-d8 (80-120%)					111 %				
Surrogate: Toluene-d8 (80-120%)					111 %				

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	11B2348	4.0	5.0	ND	1	GMK	02/20/11	
Acrylonitrile	EPA 624	11B2348	1.2	2.0	ND	1	GMK	02/20/11	
2-Chloroethyl vinyl ether	EPA 624	11B2348	1.8	5.0	ND	1	GMK	02/20/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					97 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					104 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					117 %				
Sample ID: IUB2115-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	11B2348	4.0	5.0	ND	1	GMK	02/19/11	
Acrylonitrile	EPA 624	11B2348	1.2	2.0	ND	1	GMK	02/19/11	
2-Chloroethyl vinyl ether	EPA 624	11B2348	1.8	5.0	ND	1	GMK	02/19/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					100 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					103 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					117 %				

TestAmerica Irvine

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 Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11

Received: 02/19/11

1,4-DIOXANE BY GCMS - SINGLE ION MONITORING (SIM)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B-SIM	11B3460	1.0	2.0	1.1	1	GMK	02/28/11	Ja
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>116 %</i>				

TestAmerica Irvine

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Project Manager

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IUB2115 <Page 9 of 80>

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Acenaphthene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Acenaphthylene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Anthracene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Benzidine	EPA 625	11B2719	4.72	4.72	ND	0.943	LB	02/24/11	L6
Benzo(a)anthracene	EPA 625	11B2719	0.0943	4.72	ND	0.943	LB	02/24/11	
Benzo(a)pyrene	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
Benzo(b)fluoranthene	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
Benzo(g,h,i)perylene	EPA 625	11B2719	0.0943	4.72	ND	0.943	LB	02/24/11	
Benzo(k)fluoranthene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
4-Bromophenyl phenyl ether	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
Butyl benzyl phthalate	EPA 625	11B2719	0.660	4.72	ND	0.943	LB	02/24/11	
4-Chloro-3-methylphenol	EPA 625	11B2719	0.189	1.89	ND	0.943	LB	02/24/11	
Bis(2-chloroethoxy)methane	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Bis(2-chloroethyl)ether	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Bis(2-chloroisopropyl)ether	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Bis(2-ethylhexyl)phthalate	EPA 625	11B2719	1.60	4.72	ND	0.943	LB	02/24/11	
2-Chloronaphthalene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
2-Chlorophenol	EPA 625	11B2719	0.189	0.943	ND	0.943	LB	02/24/11	
4-Chlorophenyl phenyl ether	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Chrysene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Dibenz(a,h)anthracene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Di-n-butyl phthalate	EPA 625	11B2719	0.189	1.89	0.396	0.943	LB	02/24/11	Ja
1,2-Dichlorobenzene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
1,3-Dichlorobenzene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
1,4-Dichlorobenzene	EPA 625	11B2719	0.189	0.472	ND	0.943	LB	02/24/11	
3,3'-Dichlorobenzidine	EPA 625	11B2719	4.72	4.72	ND	0.943	LB	02/24/11	
2,4-Dichlorophenol	EPA 625	11B2719	0.189	1.89	ND	0.943	LB	02/24/11	
Diethyl phthalate	EPA 625	11B2719	0.0943	0.943	0.245	0.943	LB	02/24/11	Ja
2,4-Dimethylphenol	EPA 625	11B2719	0.283	1.89	ND	0.943	LB	02/24/11	
Dimethyl phthalate	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
4,6-Dinitro-2-methylphenol	EPA 625	11B2719	0.189	4.72	ND	0.943	LB	02/24/11	
2,4-Dinitrophenol	EPA 625	11B2719	0.849	4.72	ND	0.943	LB	02/24/11	
2,4-Dinitrotoluene	EPA 625	11B2719	0.189	4.72	ND	0.943	LB	02/24/11	
2,6-Dinitrotoluene	EPA 625	11B2719	0.0943	4.72	ND	0.943	LB	02/24/11	
Di-n-octyl phthalate	EPA 625	11B2719	0.0943	4.72	ND	0.943	LB	02/24/11	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	C
Fluoranthene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Fluorene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Hexachlorobenzene	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
Hexachlorobutadiene	EPA 625	11B2719	0.189	1.89	ND	0.943	LB	02/24/11	
Hexachlorocyclopentadiene	EPA 625	11B2719	0.0943	4.72	ND	0.943	LB	02/24/11	

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Hexachloroethane	EPA 625	11B2719	0.189	2.83	ND	0.943	LB	02/24/11	
Indeno(1,2,3-cd)pyrene	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
Isophorone	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
Naphthalene	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
Nitrobenzene	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
2-Nitrophenol	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
4-Nitrophenol	EPA 625	11B2719	2.36	4.72	ND	0.943	LB	02/24/11	
N-Nitroso-di-n-propylamine	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
N-Nitrosodimethylamine	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
N-Nitrosodiphenylamine	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
Pentachlorophenol	EPA 625	11B2719	0.0943	1.89	ND	0.943	LB	02/24/11	
Phenanthrene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
Phenol	EPA 625	11B2719	0.283	0.943	ND	0.943	LB	02/24/11	
Pyrene	EPA 625	11B2719	0.0943	0.472	ND	0.943	LB	02/24/11	
1,2,4-Trichlorobenzene	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
2,4,6-Trichlorophenol	EPA 625	11B2719	0.0943	0.943	ND	0.943	LB	02/24/11	
Surrogate: 2,4,6-Tribromophenol (40-120%)					84 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					72 %				
Surrogate: 2-Fluorophenol (30-120%)					67 %				
Surrogate: Nitrobenzene-d5 (45-120%)					76 %				
Surrogate: Phenol-d6 (35-120%)					67 %				
Surrogate: Terphenyl-d14 (50-125%)					88 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/l									
4,4'-DDD	EPA 608	11B2911	0.0040	0.0050	ND	0.99	CN	03/01/11	
4,4'-DDE	EPA 608	11B2911	0.0030	0.0050	ND	0.99	CN	03/01/11	
4,4'-DDT	EPA 608	11B2911	0.0040	0.0099	ND	0.99	CN	03/01/11	
Aldrin	EPA 608	11B2911	0.0015	0.0050	ND	0.99	CN	03/01/11	
alpha-BHC	EPA 608	11B2911	0.0025	0.0050	ND	0.99	CN	03/01/11	
beta-BHC	EPA 608	11B2911	0.0040	0.0099	ND	0.99	CN	03/01/11	
delta-BHC	EPA 608	11B2911	0.0035	0.0050	ND	0.99	CN	03/01/11	
Dieldrin	EPA 608	11B2911	0.0020	0.0050	ND	0.99	CN	03/01/11	
Endosulfan I	EPA 608	11B2911	0.0020	0.0050	ND	0.99	CN	03/01/11	
Endosulfan II	EPA 608	11B2911	0.0030	0.0050	ND	0.99	CN	03/01/11	
Endosulfan sulfate	EPA 608	11B2911	0.0030	0.0099	ND	0.99	CN	03/01/11	
Endrin	EPA 608	11B2911	0.0020	0.0050	ND	0.99	CN	03/01/11	
Endrin aldehyde	EPA 608	11B2911	0.0020	0.0099	ND	0.99	CN	03/01/11	
gamma-BHC (Lindane)	EPA 608	11B2911	0.0030	0.020	ND	0.99	CN	03/01/11	
Heptachlor	EPA 608	11B2911	0.0030	0.0099	ND	0.99	CN	03/01/11	
Heptachlor epoxide	EPA 608	11B2911	0.0025	0.0050	ND	0.99	CN	03/01/11	L
Chlordane	EPA 608	11B2911	0.079	0.099	ND	0.99	CN	03/01/11	
Toxaphene	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	03/01/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					62 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					39 %				

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IUB2115 <Page 12 of 80>

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
Aroclor 1221	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
Aroclor 1232	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
Aroclor 1242	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
Aroclor 1248	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
Aroclor 1254	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
Aroclor 1260	EPA 608	11B2911	0.25	0.50	ND	0.99	CN	02/25/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					57 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water)									
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C0868	1.3	4.8	ND	1	DA	03/07/11	

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IUB2115 <Page 14 of 80>

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: mg/l									
Hardness (as CaCO ₃)	SM2340B	[CALC]		0.33	150	1	NH	03/02/11	
Barium	EPA 200.7	11B3269	0.0060	0.010	0.034	1	NH	03/02/11	
Boron	EPA 200.7	11B3269	0.020	0.050	0.069	1	NH	03/02/11	
Calcium	EPA 200.7	11B3269	0.050	0.10	43	1	NH	03/02/11	
Iron	EPA 200.7	11B3269	0.015	0.040	0.97	1	NH	03/02/11	
Magnesium	EPA 200.7	11B3269	0.012	0.020	11	1	NH	03/02/11	
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: ug/l									
Mercury	EPA 245.1	11B3158	0.10	0.20	ND	1	DB	02/25/11	
Arsenic	EPA 200.7	11B3269	7.0	10	ND	1	NH	03/02/11	
Antimony	EPA 200.8	11B3277	0.30	2.0	ND	1	RDC	02/25/11	
Beryllium	EPA 200.7	11B3269	0.90	2.0	ND	1	NH	03/02/11	
Chromium	EPA 200.7	11B3269	2.0	5.0	ND	1	NH	03/02/11	
Cobalt	EPA 200.7	11B3269	2.0	10	ND	1	NH	03/02/11	
Manganese	EPA 200.7	11B3269	7.0	20	32	1	NH	03/02/11	
Nickel	EPA 200.7	11B3269	2.0	10	ND	1	NH	03/02/11	
Cadmium	EPA 200.8	11B3277	0.10	1.0	ND	1	RDC	02/25/11	
Vanadium	EPA 200.7	11B3269	3.0	10	ND	1	NH	03/02/11	
Zinc	EPA 200.7	11B3269	6.00	20.0	7.68	1	NH	03/02/11	Ja
Copper	EPA 200.8	11B3277	0.500	2.00	4.63	1	RDC	02/25/11	
Lead	EPA 200.8	11B3277	0.20	1.0	0.53	1	RDC	02/25/11	Ja
Selenium	EPA 200.8	11B3277	0.50	2.0	ND	1	RDC	02/25/11	
Silver	EPA 200.8	11B3277	0.10	1.0	ND	1	RDC	02/25/11	
Thallium	EPA 200.8	11B3277	0.20	1.0	ND	1	RDC	02/25/11	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]		0.33	150	1	LL	03/02/11	
Barium	EPA 200.7-Diss	11B3548	0.0060	0.010	0.031	1	LL	03/02/11	
Boron	EPA 200.7-Diss	11B3548	0.020	0.050	0.076	1	LL	03/02/11	
Calcium	EPA 200.7-Diss	11B3548	0.050	0.10	38	1	LL	03/02/11	
Iron	EPA 200.7-Diss	11B3548	0.015	0.040	0.043	1	LL	03/02/11	
Magnesium	EPA 200.7-Diss	11B3548	0.012	0.020	14	1	LL	03/02/11	

Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)

Reporting Units: ug/l

Mercury	EPA 245.1-Diss	11B3159	0.10	0.20	ND	1	DB	02/25/11	
Antimony	EPA 200.8-Diss	11B2681	0.30	2.0	ND	1	RDC	02/22/11	
Beryllium	EPA 200.7-Diss	11B3548	0.90	2.0	ND	1	LL	03/02/11	
Manganese	EPA 200.7-Diss	11B3548	7.0	20	ND	1	LL	03/02/11	
Cadmium	EPA 200.8-Diss	11B2681	0.10	1.0	ND	1	RDC	02/22/11	
Vanadium	EPA 200.7-Diss	11B3548	3.0	10	ND	1	LL	03/02/11	
Zinc	EPA 200.7-Diss	11B3548	6.00	20.0	ND	1	LL	03/02/11	
Copper	EPA 200.8-Diss	11B2681	0.500	2.00	1.83	1	RDC	02/22/11	Ja
Lead	EPA 200.8-Diss	11B2681	0.20	1.0	ND	1	RDC	02/22/11	
Selenium	EPA 200.8-Diss	11B2681	0.50	2.0	ND	1	RDC	02/22/11	
Silver	EPA 200.8-Diss	11B2681	0.10	1.0	ND	1	RDC	02/22/11	
Thallium	EPA 200.8-Diss	11B2681	0.20	1.0	ND	1	RDC	02/22/11	

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03RE1 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Arsenic	EPA 200.7-Diss	11B3548	7.0	10	ND	1	LL	03/15/11	
Chromium	EPA 200.7-Diss	11B3548	2.0	5.0	ND	1	DT	03/15/11	
Cobalt	EPA 200.7-Diss	11B3548	2.0	10	ND	1	DT	03/15/11	
Nickel	EPA 200.7-Diss	11B3548	2.0	10	ND	1	DT	03/15/11	

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IUB2115 <Page 17 of 80>

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

DISSOLVED INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/l									
Chromium VI	EPA 218.6	11B2579	0.250	1.00	ND	1	SLA	02/20/11	

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IUB2115 <Page 18 of 80>

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11B2727	0.500	0.500	ND	1	TMK	02/22/11	
Biochemical Oxygen Demand	SM5210B	11B2582	0.50	2.0	2.0	1	XL	02/25/11	
Chloride	EPA 300.0	11B2574	0.30	0.50	16	1	KS	02/20/11	
Fluoride	SM 4500-F-C	11B2818	0.020	0.10	0.33	1	FZ	02/23/11	
Nitrate-N	EPA 300.0	11B2574	0.060	0.11	0.15	1	KS	02/20/11	
Nitrite-N	EPA 300.0	11B2574	0.090	0.15	ND	1	KS	02/20/11	
Nitrate/Nitrite-N	EPA 300.0	11B2574	0.15	0.26	0.15	1	KS	02/20/11	Ja
Sulfate	EPA 300.0	11B2574	3.0	5.0	84	10	KS	02/20/11	
Surfactants (MBAS)	SM5540-C	11B2580	0.050	0.10	ND	1	SLA	02/20/11	
Total Dissolved Solids	SM2540C	11B2988	1.0	10	310	1	MC	02/24/11	
Total Organic Carbon	SM5310B	11C0193	0.50	1.0	8.8	1	FZ	03/02/11	
Total Suspended Solids	SM 2540D	11B3179	1.0	10	12	1	DC	02/24/11	

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Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water)									
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	11B2545	0.10	0.10	ND	1	AC1	02/19/11	
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	11B2577	0.040	1.0	26	1	MDR	02/20/11	
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11B2817	0.90	1.0	ND	1	mn	02/23/11	
Total Cyanide	SM4500CN-E	11B2925	2.2	5.0	ND	1	HH	02/23/11	
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water)									
Reporting Units: umhos/cm @ 25C									
Specific Conductance	EPA 120.1	11B3193	1.0	1.0	500	1	MC	02/25/11	

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Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

COLIFORMS BY MULTIPLE TUBE FERMENTATION - MPN (SM9221/40 CFR 141.21(f)(6)(i))

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water) - cont.									
Reporting Units: MPN/100 ml									
Fecal Coliform	SM9221 A,B,C,E	11B2544	2.00	2.00	50.0	1	UP	02/22/11	
E. Coli	SM9221 A,B,C,E	11B2544	2.00	2.00	50.0	1	UP	02/22/11	

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IUB2115 <Page 21 of 80>

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

8664

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Uranium, Total	8664	8664		1	0.594	1	TSC	03/04/11	Jb
Sample ID: IUB2115-04 (Trip Blank - Water)									
Reporting Units: pCi/L									
Uranium, Total	8664	8664		1	ND	1	TSC	03/04/11	U

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Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Gross Alpha	900	8664		3	0.905	1	DVP	03/05/11	Jb
Gross Beta	900	8664		4	2.96	1	DVP	03/05/11	Jb
Sample ID: IUB2115-04 (Trip Blank - Water)									
Reporting Units: pCi/L									
Gross Alpha	900	8664		3	0.095	1	DVP	03/07/11	U
Gross Beta	900	8664		4	-0.118	1	DVP	03/07/11	U

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11

Received: 02/19/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Cesium-137	901.1	8664		20	ND	1	LS	02/28/11	U
Potassium-40	901.1	8664		25	ND	1	LS	02/28/11	U
Sample ID: IUB2115-04 (Trip Blank - Water)									
Reporting Units: pCi/L									
Cesium-137	901.1	8664		20	ND	1	LS	03/01/11	U
Potassium-40	901.1	8664		25	ND	1	LS	03/01/11	U

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Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Radium-226	903.1	8664		1	0.373	1	TM	03/09/11	U
Sample ID: IUB2115-04 (Trip Blank - Water)									
Reporting Units: pCi/L									
Radium-226	903.1	8664		1	0.39	1	TM	03/09/11	U

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IUB2115 <Page 25 of 80>

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Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Radium-228	904	8664		1	0.171	1	ASM	03/09/11	U
Sample ID: IUB2115-04 (Trip Blank - Water)									
Reporting Units: pCi/L									
Radium-228	904	8664		1	-0.092	1	ASM	03/09/11	U

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Sampled: 02/19/11
Received: 02/19/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Strontium-90	905	8664		2	0.013	1	WL	03/12/11	U
Sample ID: IUB2115-04 (Trip Blank - Water)									
Reporting Units: pCi/L									
Strontium-90	905	8664		2	-0.297	1	WL	03/12/11	U

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Sampled: 02/19/11
Received: 02/19/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)									
Reporting Units: pCi/L									
Tritium	906	8664		500	-67.1	1	JO	03/10/11	U

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Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1055418	0.00000063	0.00005	8.5e-006	0.99	SY	02/26/11	J, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1055418	0.00000035	0.00005	2.4e-006	0.99	SY	02/26/11	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1055418	0.00000051	0.00005	ND	0.99	SY	02/26/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1055418	0.00000029	0.00005	ND	0.99	SY	02/26/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1055418	0.00000018	0.00005	2.5e-007	0.99	SY	02/26/11	J, Ba
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1055418	0.00000024	0.00005	2.3e-007	0.99	SY	02/26/11	J, Q, Ba
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1055418	0.00000016	0.00005	1.4e-007	0.99	SY	02/26/11	J, Q, Ba
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1055418	0.00000026	0.00005	2.4e-007	0.99	SY	02/26/11	J, Q, Ba
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1055418	0.00000022	0.00005	ND	0.99	SY	02/26/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1055418	0.00000039	0.00005	ND	0.99	SY	02/26/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1055418	0.00000026	0.00005	ND	0.99	SY	02/26/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1055418	0.00000016	0.00005	2e-007	0.99	SY	02/26/11	J, Q, Ba
2,3,4,7,8-PeCDD	EPA-5 1613B	1055418	0.00000028	0.00005	ND	0.99	SY	02/26/11	
2,3,7,8-TCDD	EPA-5 1613B	1055418	0.00000027	0.00001	ND	0.99	SY	02/26/11	
2,3,7,8-TCDF	EPA-5 1613B	1055418	0.00000021	0.00001	4.3e-007	0.99	SY	02/26/11	J, Q
OCDD	EPA-5 1613B	1055418	0.0000013	0.0001	8.5e-005	0.99	SY	02/26/11	J, Ba
OCDF	EPA-5 1613B	1055418	0.00000052	0.0001	9.7e-006	0.99	SY	02/26/11	J, Ba
Total HpCDD	EPA-5 1613B	1055418	0.00000063	0.00005	1.8e-005	0.99	SY	02/26/11	J, Ba
Total HpCDF	EPA-5 1613B	1055418	0.00000042	0.00005	6.6e-006	0.99	SY	02/26/11	J, Q, Ba
Total HxCDD	EPA-5 1613B	1055418	0.00000026	0.00005	2.9e-006	0.99	SY	02/26/11	J, Q, Ba
Total HxCDF	EPA-5 1613B	1055418	0.00000018	0.00005	1.8e-006	0.99	SY	02/26/11	J, Q, Ba
Total PeCDD	EPA-5 1613B	1055418	0.00000039	0.00005	ND	0.99	SY	02/26/11	
Total PeCDF	EPA-5 1613B	1055418	0.00000026	0.00005	ND	0.99	SY	02/26/11	
Total TCDD	EPA-5 1613B	1055418	0.00000027	0.00001	1.4e-006	0.99	SY	02/26/11	J, Q
Total TCDF	EPA-5 1613B	1055418	0.00000021	0.00001	4.3e-007	0.99	SY	02/26/11	J, Q

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	85 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	86 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	86 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	72 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	81 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	96 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	95 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	92 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	89 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	86 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	91 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	88 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	84 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	83 %
Surrogate: 13C-OCDD (17-157%)	80 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	108 %

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11

Received: 02/19/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2115-03RE (Outfall 002 (Composite) - Water) - cont.									
Reporting Units: ug/L									
2,3,7,8-TCDF	EPA-5 1613B	1055418	0.0000021	0.00001	ND	0.99	SY	02/28/11	
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					84 %				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)					74 %				

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Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 002 (Grab) (IUB2115-01) - Water					
EPA 624	3	02/19/2011 08:45	02/19/2011 12:48	02/19/2011 12:38	02/20/2011 00:10
SM2540F	2	02/19/2011 08:45	02/19/2011 12:48	02/19/2011 11:40	02/19/2011 11:40
SM9221 A,B,C,E	0	02/19/2011 08:45	02/19/2011 12:48	02/19/2011 13:14	02/22/2011 12:08
Sample ID: Trip Blanks (IUB2115-02) - Water					
EPA 624	3	02/19/2011 08:45	02/19/2011 12:48	02/19/2011 12:38	02/19/2011 23:41
Sample ID: Outfall 002 (Composite) (IUB2115-03) - Water					
EPA 180.1	2	02/19/2011 18:41	02/19/2011 12:48	02/20/2011 12:00	02/20/2011 12:00
EPA 218.6	1	02/19/2011 18:41	02/19/2011 12:48	02/20/2011 11:55	02/20/2011 12:27
EPA 300.0	2	02/19/2011 18:41	02/19/2011 12:48	02/20/2011 10:30	02/20/2011 13:14
Filtration	1	02/19/2011 18:41	02/19/2011 12:48	02/21/2011 12:40	02/21/2011 12:40
SM5210B	2	02/19/2011 18:41	02/19/2011 12:48	02/20/2011 14:46	02/25/2011 09:30
SM5540-C	2	02/19/2011 18:41	02/19/2011 12:48	02/20/2011 12:05	02/20/2011 12:59

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Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0446 Extracted: 03/03/11											
Blank Analyzed: 03/03/2011 (11C0446-BLK1)											
GRO (C4 - C12)	ND	0.10	0.025	mg/l							
Surrogate: 4-BFB (FID)	0.0116			mg/l	0.0100		116	65-140			
LCS Analyzed: 03/03/2011 (11C0446-BS1)											
GRO (C4 - C12)	0.744	0.10	0.025	mg/l	0.800		93	80-120			
Surrogate: 4-BFB (FID)	0.0197			mg/l	0.0100		197	65-140			Z2
Matrix Spike Analyzed: 03/03/2011 (11C0446-MS1) Source: IUB2148-05											
GRO (C4 - C12)	0.235	0.10	0.025	mg/l	0.220	ND	107	65-140			
Surrogate: 4-BFB (FID)	0.0111			mg/l	0.0100		111	65-140			
Matrix Spike Dup Analyzed: 03/03/2011 (11C0446-MSD1) Source: IUB2148-05											
GRO (C4 - C12)	0.237	0.10	0.025	mg/l	0.220	ND	108	65-140	0.8	20	
Surrogate: 4-BFB (FID)	0.0111			mg/l	0.0100		111	65-140			

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METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (EPA 3510C/EPA 8015B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3290 Extracted: 02/25/11											
Blank Analyzed: 02/26/2011 (11B3290-BLK1)											
DRO (C13 - C28)	ND	0.50	0.10	mg/l							
EFH (C10 - C28)	0.00363	NA	N/A	mg/l							
Surrogate: n-Octacosane	0.139			mg/l	0.200		70	45-120			
LCS Analyzed: 02/26/2011 (11B3290-BS1)											
EFH (C10 - C28)	0.656	NA	N/A	mg/l	1.00		66	40-115			
Surrogate: n-Octacosane	0.151			mg/l	0.200		76	45-120			
Matrix Spike Analyzed: 02/26/2011 (11B3290-MS1)						Source: IUB2148-05					
EFH (C10 - C28)	8.19	NA	N/A	mg/l	1.89	10.6	-129	40-120			M2
Surrogate: n-Octacosane	0.488			mg/l	0.377		129	45-120			ZX
Matrix Spike Dup Analyzed: 02/26/2011 (11B3290-MSD1)						Source: IUB2148-05					
EFH (C10 - C28)	12.4	NA	N/A	mg/l	1.89	10.6	96	40-120	41	30	R-3
Surrogate: n-Octacosane	0.689			mg/l	0.377		183	45-120			ZX

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0621 Extracted: 03/04/11											
Blank Analyzed: 03/04/2011 (11C0621-BLK1)											
Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
Chloromethane	ND	0.50	0.40	ug/l							
Dibromochloromethane	ND	0.50	0.40	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
1,1-Dichloroethane	ND	0.50	0.40	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	ug/l							
cis-1,2-Dichloroethene	ND	0.50	0.32	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.30	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.0	1.1	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	1.33	1.0	0.95	ug/l							B
1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							
Toluene	ND	0.50	0.36	ug/l							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Cyclohexane	ND	1.0	0.40	ug/l							

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Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0621 Extracted: 03/04/11											
Blank Analyzed: 03/04/2011 (11C0621-BLK1)											
Surrogate: 4-Bromofluorobenzene	25.9			ug/l	25.0		104	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120			
LCS Analyzed: 03/04/2011 (11C0621-BS1)											
Benzene	24.0	0.50	0.28	ug/l	25.0		96	70-120			
Bromodichloromethane	27.5	0.50	0.30	ug/l	25.0		110	70-135			
Bromoform	22.5	0.50	0.40	ug/l	25.0		90	55-130			
Bromomethane	22.6	1.0	0.42	ug/l	25.0		90	65-140			
Carbon tetrachloride	26.1	0.50	0.28	ug/l	25.0		105	65-140			
Chlorobenzene	25.6	0.50	0.36	ug/l	25.0		102	75-120			
Chloroethane	24.8	1.0	0.40	ug/l	25.0		99	60-140			
Chloroform	25.3	0.50	0.33	ug/l	25.0		101	70-130			
Chloromethane	22.9	0.50	0.40	ug/l	25.0		92	50-140			
Dibromochloromethane	22.9	0.50	0.40	ug/l	25.0		91	70-140			
1,2-Dichlorobenzene	26.7	0.50	0.32	ug/l	25.0		107	75-120			
1,3-Dichlorobenzene	26.6	0.50	0.35	ug/l	25.0		106	75-120			
1,4-Dichlorobenzene	25.8	0.50	0.37	ug/l	25.0		103	75-120			
1,1-Dichloroethane	24.8	0.50	0.40	ug/l	25.0		99	70-125			
1,2-Dichloroethane	26.1	0.50	0.28	ug/l	25.0		104	60-140			
1,1-Dichloroethene	23.5	0.50	0.42	ug/l	25.0		94	70-125			
cis-1,2-Dichloroethene	25.3	0.50	0.32	ug/l	25.0		101	70-125			
trans-1,2-Dichloroethene	24.6	0.50	0.30	ug/l	25.0		99	70-125			
1,2-Dichloropropane	25.8	0.50	0.35	ug/l	25.0		103	70-125			
cis-1,3-Dichloropropene	26.7	0.50	0.22	ug/l	25.0		107	75-125			
trans-1,3-Dichloropropene	24.0	0.50	0.32	ug/l	25.0		96	70-125			
Ethylbenzene	26.4	0.50	0.25	ug/l	25.0		105	75-125			
Methylene chloride	22.2	1.0	0.95	ug/l	25.0		89	55-130			
1,1,2,2-Tetrachloroethane	25.2	0.50	0.30	ug/l	25.0		101	55-130			
Tetrachloroethene	25.0	0.50	0.32	ug/l	25.0		100	70-125			
Toluene	25.9	0.50	0.36	ug/l	25.0		103	70-120			
1,1,1-Trichloroethane	26.5	0.50	0.30	ug/l	25.0		106	65-135			
1,1,2-Trichloroethane	25.2	0.50	0.30	ug/l	25.0		101	70-125			
Trichloroethene	25.8	0.50	0.26	ug/l	25.0		103	70-125			
Trichlorofluoromethane	25.3	0.50	0.34	ug/l	25.0		101	65-145			
Vinyl chloride	22.6	0.50	0.40	ug/l	25.0		90	55-135			

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0621 Extracted: 03/04/11											
LCS Analyzed: 03/04/2011 (11C0621-BS1)											
Xylenes, Total	82.2	1.5	0.90	ug/l	75.0		110	70-125			
Surrogate: 4-Bromofluorobenzene	27.2			ug/l	25.0		109	80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	27.6			ug/l	25.0		110	80-120			
Matrix Spike Analyzed: 03/04/2011 (11C0621-MS1) Source: IUB2645-02											
Benzene	25.0	0.50	0.28	ug/l	25.0	ND	100	65-125			
Bromodichloromethane	29.4	0.50	0.30	ug/l	25.0	ND	118	70-135			
Bromoform	23.6	0.50	0.40	ug/l	25.0	ND	95	55-135			
Bromomethane	23.7	1.0	0.42	ug/l	25.0	ND	95	55-145			
Carbon tetrachloride	26.6	0.50	0.28	ug/l	25.0	ND	106	65-140			
Chlorobenzene	25.7	0.50	0.36	ug/l	25.0	ND	103	75-125			
Chloroethane	25.8	1.0	0.40	ug/l	25.0	ND	103	55-140			
Chloroform	28.0	0.50	0.33	ug/l	25.0	1.04	108	65-135			
Chloromethane	25.0	0.50	0.40	ug/l	25.0	ND	100	45-145			
Dibromochloromethane	24.4	0.50	0.40	ug/l	25.0	ND	97	65-140			
1,2-Dichlorobenzene	27.2	0.50	0.32	ug/l	25.0	ND	109	75-125			
1,3-Dichlorobenzene	26.5	0.50	0.35	ug/l	25.0	ND	106	75-125			
1,4-Dichlorobenzene	26.0	0.50	0.37	ug/l	25.0	ND	104	75-125			
1,1-Dichloroethane	26.1	0.50	0.40	ug/l	25.0	ND	104	65-130			
1,2-Dichloroethane	28.5	0.50	0.28	ug/l	25.0	ND	114	60-140			
1,1-Dichloroethene	23.8	0.50	0.42	ug/l	25.0	ND	95	60-130			
cis-1,2-Dichloroethene	27.3	0.50	0.32	ug/l	25.0	ND	109	65-130			
trans-1,2-Dichloroethene	25.4	0.50	0.30	ug/l	25.0	ND	102	65-130			
1,2-Dichloropropane	27.1	0.50	0.35	ug/l	25.0	ND	108	65-130			
cis-1,3-Dichloropropene	28.9	0.50	0.22	ug/l	25.0	ND	115	70-130			
trans-1,3-Dichloropropene	26.0	0.50	0.32	ug/l	25.0	ND	104	65-135			
Ethylbenzene	26.0	0.50	0.25	ug/l	25.0	ND	104	65-130			
Methylene chloride	23.0	1.0	0.95	ug/l	25.0	ND	92	50-135			
1,1,2,2-Tetrachloroethane	26.5	0.50	0.30	ug/l	25.0	ND	106	55-135			
Tetrachloroethene	24.6	0.50	0.32	ug/l	25.0	ND	98	65-130			
Toluene	26.9	0.50	0.36	ug/l	25.0	ND	107	70-125			
1,1,1-Trichloroethane	27.7	0.50	0.30	ug/l	25.0	ND	111	65-140			
1,1,2-Trichloroethane	26.9	0.50	0.30	ug/l	25.0	ND	108	65-130			
Trichloroethene	26.0	0.50	0.26	ug/l	25.0	ND	104	65-125			
Trichlorofluoromethane	25.9	0.50	0.34	ug/l	25.0	ND	104	60-145			

TestAmerica Irvine

Debby Wilson
Project Manager

MWH-Pasadena/Boeing
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Report Number: IUB2115

Sampled: 02/19/11

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0621 Extracted: 03/04/11											
Matrix Spike Analyzed: 03/04/2011 (11C0621-MS1)						Source: IUB2645-02					
Vinyl chloride	23.8	0.50	0.40	ug/l	25.0	ND	95	45-140			
Xylenes, Total	81.6	1.5	0.90	ug/l	75.0	ND	109	60-130			
Surrogate: 4-Bromofluorobenzene	27.1			ug/l	25.0		108	80-120			
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.7			ug/l	25.0		111	80-120			
Matrix Spike Dup Analyzed: 03/04/2011 (11C0621-MSD1)						Source: IUB2645-02					
Benzene	24.7	0.50	0.28	ug/l	25.0	ND	99	65-125	1	20	
Bromodichloromethane	29.5	0.50	0.30	ug/l	25.0	ND	118	70-135	0.4	20	
Bromoform	23.6	0.50	0.40	ug/l	25.0	ND	94	55-135	0.2	25	
Bromomethane	24.2	1.0	0.42	ug/l	25.0	ND	97	55-145	2	25	
Carbon tetrachloride	26.5	0.50	0.28	ug/l	25.0	ND	106	65-140	0.3	25	
Chlorobenzene	25.6	0.50	0.36	ug/l	25.0	ND	103	75-125	0.2	20	
Chloroethane	26.6	1.0	0.40	ug/l	25.0	ND	107	55-140	3	25	
Chloroform	28.1	0.50	0.33	ug/l	25.0	1.04	108	65-135	0.5	20	
Chloromethane	26.1	0.50	0.40	ug/l	25.0	ND	105	45-145	4	25	
Dibromochloromethane	24.4	0.50	0.40	ug/l	25.0	ND	98	65-140	0.3	25	
1,2-Dichlorobenzene	27.2	0.50	0.32	ug/l	25.0	ND	109	75-125	0.04	20	
1,3-Dichlorobenzene	26.6	0.50	0.35	ug/l	25.0	ND	107	75-125	0.6	20	
1,4-Dichlorobenzene	26.3	0.50	0.37	ug/l	25.0	ND	105	75-125	1	20	
1,1-Dichloroethane	26.1	0.50	0.40	ug/l	25.0	ND	105	65-130	0.08	20	
1,2-Dichloroethane	28.4	0.50	0.28	ug/l	25.0	ND	114	60-140	0.1	20	
1,1-Dichloroethene	24.0	0.50	0.42	ug/l	25.0	ND	96	60-130	1	20	
cis-1,2-Dichloroethene	27.5	0.50	0.32	ug/l	25.0	ND	110	65-130	0.7	20	
trans-1,2-Dichloroethene	25.8	0.50	0.30	ug/l	25.0	ND	103	65-130	1	20	
1,2-Dichloropropane	27.1	0.50	0.35	ug/l	25.0	ND	108	65-130	0.07	20	
cis-1,3-Dichloropropene	28.8	0.50	0.22	ug/l	25.0	ND	115	70-130	0.2	20	
trans-1,3-Dichloropropene	26.4	0.50	0.32	ug/l	25.0	ND	106	65-135	1	25	
Ethylbenzene	25.8	0.50	0.25	ug/l	25.0	ND	103	65-130	1	20	
Methylene chloride	23.9	1.0	0.95	ug/l	25.0	ND	95	50-135	4	20	
1,1,2,2-Tetrachloroethane	26.6	0.50	0.30	ug/l	25.0	ND	106	55-135	0.3	30	
Tetrachloroethene	24.3	0.50	0.32	ug/l	25.0	ND	97	65-130	0.9	20	
Toluene	26.7	0.50	0.36	ug/l	25.0	ND	107	70-125	0.6	20	
1,1,1-Trichloroethane	27.7	0.50	0.30	ug/l	25.0	ND	111	65-140	0.2	20	
1,1,2-Trichloroethane	27.2	0.50	0.30	ug/l	25.0	ND	109	65-130	1	25	
Trichloroethene	26.1	0.50	0.26	ug/l	25.0	ND	104	65-125	0.5	20	

TestAmerica Irvine

Debby Wilson
Project Manager

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Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0621 Extracted: 03/04/11											
Matrix Spike Dup Analyzed: 03/04/2011 (11C0621-MSD1)						Source: IUB2645-02					
Trichlorofluoromethane	26.2	0.50	0.34	ug/l	25.0	ND	105	60-145	1	25	
Vinyl chloride	24.1	0.50	0.40	ug/l	25.0	ND	97	45-140	2	30	
Xylenes, Total	79.9	1.5	0.90	ug/l	75.0	ND	107	60-130	2	20	
Surrogate: 4-Bromofluorobenzene	27.2			ug/l	25.0		109	80-120			
Surrogate: Dibromofluoromethane	28.4			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.8			ug/l	25.0		111	80-120			

Batch: 11C0743 Extracted: 03/05/11

Blank Analyzed: 03/05/2011 (11C0743-BLK1)

Benzene	ND	0.50	0.28	ug/l							
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	ug/l							
Chloroform	ND	0.50	0.33	ug/l							
Chloromethane	ND	0.50	0.40	ug/l							
Dibromochloromethane	ND	0.50	0.40	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.32	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.35	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.37	ug/l							
1,1-Dichloroethane	ND	0.50	0.40	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	0.50	0.42	ug/l							
cis-1,2-Dichloroethene	ND	0.50	0.32	ug/l							
trans-1,2-Dichloroethene	ND	0.50	0.30	ug/l							
1,2-Dichloropropane	ND	0.50	0.35	ug/l							
cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l							
trans-1,3-Dichloropropene	ND	0.50	0.32	ug/l							
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.0	1.1	ug/l							
Ethylbenzene	ND	0.50	0.25	ug/l							
Methylene chloride	ND	1.0	0.95	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l							
Tetrachloroethene	ND	0.50	0.32	ug/l							

TestAmerica Irvine

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0743 Extracted: 03/05/11											
Blank Analyzed: 03/05/2011 (11C0743-BLK1)											
Toluene	ND	0.50	0.36	ug/l							
1,1,1-Trichloroethane	ND	0.50	0.30	ug/l							
1,1,2-Trichloroethane	ND	0.50	0.30	ug/l							
Trichloroethene	ND	0.50	0.26	ug/l							
Trichlorofluoromethane	ND	0.50	0.34	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	0.50	ug/l							
Vinyl chloride	ND	0.50	0.40	ug/l							
Xylenes, Total	ND	1.5	0.90	ug/l							
Cyclohexane	ND	1.0	0.40	ug/l							
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	28.3			ug/l	25.0		113	80-120			
LCS Analyzed: 03/05/2011 (11C0743-BS1)											
Benzene	26.6	0.50	0.28	ug/l	25.0		106	70-120			
Bromodichloromethane	30.0	0.50	0.30	ug/l	25.0		120	70-135			
Bromoform	24.7	0.50	0.40	ug/l	25.0		99	55-130			
Bromomethane	25.9	1.0	0.42	ug/l	25.0		104	65-140			
Carbon tetrachloride	27.7	0.50	0.28	ug/l	25.0		111	65-140			
Chlorobenzene	27.3	0.50	0.36	ug/l	25.0		109	75-120			
Chloroethane	28.4	1.0	0.40	ug/l	25.0		113	60-140			
Chloroform	27.3	0.50	0.33	ug/l	25.0		109	70-130			
Chloromethane	28.5	0.50	0.40	ug/l	25.0		114	50-140			
Dibromochloromethane	24.7	0.50	0.40	ug/l	25.0		99	70-140			
1,2-Dichlorobenzene	28.6	0.50	0.32	ug/l	25.0		115	75-120			
1,3-Dichlorobenzene	28.1	0.50	0.35	ug/l	25.0		112	75-120			
1,4-Dichlorobenzene	27.1	0.50	0.37	ug/l	25.0		109	75-120			
1,1-Dichloroethane	27.6	0.50	0.40	ug/l	25.0		110	70-125			
1,2-Dichloroethane	28.3	0.50	0.28	ug/l	25.0		113	60-140			
1,1-Dichloroethene	25.6	0.50	0.42	ug/l	25.0		103	70-125			
cis-1,2-Dichloroethene	28.0	0.50	0.32	ug/l	25.0		112	70-125			
trans-1,2-Dichloroethene	26.6	0.50	0.30	ug/l	25.0		106	70-125			
1,2-Dichloropropane	28.0	0.50	0.35	ug/l	25.0		112	70-125			
cis-1,3-Dichloropropene	29.0	0.50	0.22	ug/l	25.0		116	75-125			
trans-1,3-Dichloropropene	26.4	0.50	0.32	ug/l	25.0		106	70-125			
Ethylbenzene	28.8	0.50	0.25	ug/l	25.0		115	75-125			

TestAmerica Irvine

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0743 Extracted: 03/05/11											
LCS Analyzed: 03/05/2011 (11C0743-BS1)											
Methylene chloride	24.1	1.0	0.95	ug/l	25.0		96	55-130			
1,1,2,2-Tetrachloroethane	28.7	0.50	0.30	ug/l	25.0		115	55-130			
Tetrachloroethene	27.1	0.50	0.32	ug/l	25.0		108	70-125			
Toluene	28.4	0.50	0.36	ug/l	25.0		113	70-120			
1,1,1-Trichloroethane	28.4	0.50	0.30	ug/l	25.0		113	65-135			
1,1,2-Trichloroethane	27.8	0.50	0.30	ug/l	25.0		111	70-125			
Trichloroethene	27.0	0.50	0.26	ug/l	25.0		108	70-125			
Trichlorofluoromethane	28.3	0.50	0.34	ug/l	25.0		113	65-145			
Vinyl chloride	26.8	0.50	0.40	ug/l	25.0		107	55-135			
Xylenes, Total	88.4	1.5	0.90	ug/l	75.0		118	70-125			
Surrogate: 4-Bromofluorobenzene	28.0			ug/l	25.0		112	80-120			
Surrogate: Dibromofluoromethane	26.9			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	28.2			ug/l	25.0		113	80-120			
Matrix Spike Analyzed: 03/05/2011 (11C0743-MS1)											
Source: IUC0171-01											
Benzene	25.9	0.50	0.28	ug/l	25.0	ND	104	65-125			
Bromodichloromethane	30.8	0.50	0.30	ug/l	25.0	ND	123	70-135			
Bromoform	24.2	0.50	0.40	ug/l	25.0	ND	97	55-135			
Bromomethane	24.5	1.0	0.42	ug/l	25.0	ND	98	55-145			
Carbon tetrachloride	26.5	0.50	0.28	ug/l	25.0	ND	106	65-140			
Chlorobenzene	26.6	0.50	0.36	ug/l	25.0	ND	106	75-125			
Chloroethane	27.4	1.0	0.40	ug/l	25.0	ND	110	55-140			
Chloroform	27.8	0.50	0.33	ug/l	25.0	ND	111	65-135			
Chloromethane	26.3	0.50	0.40	ug/l	25.0	ND	105	45-145			
Dibromochloromethane	25.4	0.50	0.40	ug/l	25.0	ND	102	65-140			
1,2-Dichlorobenzene	27.5	0.50	0.32	ug/l	25.0	ND	110	75-125			
1,3-Dichlorobenzene	26.9	0.50	0.35	ug/l	25.0	ND	108	75-125			
1,4-Dichlorobenzene	26.3	0.50	0.37	ug/l	25.0	ND	105	75-125			
1,1-Dichloroethane	27.1	0.50	0.40	ug/l	25.0	ND	109	65-130			
1,2-Dichloroethane	29.1	0.50	0.28	ug/l	25.0	ND	116	60-140			
1,1-Dichloroethene	23.8	0.50	0.42	ug/l	25.0	ND	95	60-130			
cis-1,2-Dichloroethene	27.7	0.50	0.32	ug/l	25.0	ND	111	65-130			
trans-1,2-Dichloroethene	26.0	0.50	0.30	ug/l	25.0	ND	104	65-130			
1,2-Dichloropropane	28.4	0.50	0.35	ug/l	25.0	ND	114	65-130			
cis-1,3-Dichloropropene	30.2	0.50	0.22	ug/l	25.0	ND	121	70-130			
trans-1,3-Dichloropropene	27.4	0.50	0.32	ug/l	25.0	ND	109	65-135			

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0743 Extracted: 03/05/11											
Matrix Spike Analyzed: 03/05/2011 (11C0743-MS1)						Source: IUC0171-01					
Ethylbenzene	27.5	0.50	0.25	ug/l	25.0	ND	110	65-130			
Methylene chloride	24.4	1.0	0.95	ug/l	25.0	ND	98	50-135			
1,1,2,2-Tetrachloroethane	26.5	0.50	0.30	ug/l	25.0	ND	106	55-135			
Tetrachloroethene	25.4	0.50	0.32	ug/l	25.0	ND	101	65-130			
Toluene	27.8	0.50	0.36	ug/l	25.0	ND	111	70-125			
1,1,1-Trichloroethane	27.6	0.50	0.30	ug/l	25.0	ND	110	65-140			
1,1,2-Trichloroethane	28.9	0.50	0.30	ug/l	25.0	ND	116	65-130			
Trichloroethene	26.2	0.50	0.26	ug/l	25.0	ND	105	65-125			
Trichlorofluoromethane	26.1	0.50	0.34	ug/l	25.0	ND	105	60-145			
Vinyl chloride	24.3	0.50	0.40	ug/l	25.0	ND	97	45-140			
Xylenes, Total	85.1	1.5	0.90	ug/l	75.0	ND	113	60-130			
Surrogate: 4-Bromofluorobenzene	28.4			ug/l	25.0		114	80-120			
Surrogate: Dibromofluoromethane	28.8			ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	28.5			ug/l	25.0		114	80-120			
Matrix Spike Dup Analyzed: 03/05/2011 (11C0743-MSD1)						Source: IUC0171-01					
Benzene	26.1	0.50	0.28	ug/l	25.0	ND	105	65-125	0.8	20	
Bromodichloromethane	30.9	0.50	0.30	ug/l	25.0	ND	124	70-135	0.3	20	
Bromoform	24.1	0.50	0.40	ug/l	25.0	ND	97	55-135	0.3	25	
Bromomethane	25.1	1.0	0.42	ug/l	25.0	ND	100	55-145	2	25	
Carbon tetrachloride	27.2	0.50	0.28	ug/l	25.0	ND	109	65-140	2	25	
Chlorobenzene	26.5	0.50	0.36	ug/l	25.0	ND	106	75-125	0.4	20	
Chloroethane	27.6	1.0	0.40	ug/l	25.0	ND	110	55-140	0.8	25	
Chloroform	28.3	0.50	0.33	ug/l	25.0	ND	113	65-135	2	20	
Chloromethane	26.9	0.50	0.40	ug/l	25.0	ND	108	45-145	2	25	
Dibromochloromethane	25.3	0.50	0.40	ug/l	25.0	ND	101	65-140	0.6	25	
1,2-Dichlorobenzene	28.5	0.50	0.32	ug/l	25.0	ND	114	75-125	4	20	
1,3-Dichlorobenzene	27.6	0.50	0.35	ug/l	25.0	ND	110	75-125	2	20	
1,4-Dichlorobenzene	27.2	0.50	0.37	ug/l	25.0	ND	109	75-125	3	20	
1,1-Dichloroethane	28.0	0.50	0.40	ug/l	25.0	ND	112	65-130	3	20	
1,2-Dichloroethane	29.0	0.50	0.28	ug/l	25.0	ND	116	60-140	0.3	20	
1,1-Dichloroethene	24.7	0.50	0.42	ug/l	25.0	ND	99	60-130	4	20	
cis-1,2-Dichloroethene	28.7	0.50	0.32	ug/l	25.0	ND	115	65-130	4	20	
trans-1,2-Dichloroethene	27.1	0.50	0.30	ug/l	25.0	ND	109	65-130	4	20	
1,2-Dichloropropane	28.8	0.50	0.35	ug/l	25.0	ND	115	65-130	1	20	
cis-1,3-Dichloropropene	30.4	0.50	0.22	ug/l	25.0	ND	121	70-130	0.3	20	

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

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Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0743 Extracted: 03/05/11											
Matrix Spike Dup Analyzed: 03/05/2011 (11C0743-MSD1)						Source: IUC0171-01					
trans-1,3-Dichloropropene	27.3	0.50	0.32	ug/l	25.0	ND	109	65-135	0.4	25	
Ethylbenzene	27.3	0.50	0.25	ug/l	25.0	ND	109	65-130	0.8	20	
Methylene chloride	24.7	1.0	0.95	ug/l	25.0	ND	99	50-135	1	20	
1,1,2,2-Tetrachloroethane	26.5	0.50	0.30	ug/l	25.0	ND	106	55-135	0.2	30	
Tetrachloroethene	25.4	0.50	0.32	ug/l	25.0	ND	102	65-130	0.08	20	
Toluene	27.9	0.50	0.36	ug/l	25.0	ND	112	70-125	0.5	20	
1,1,1-Trichloroethane	28.7	0.50	0.30	ug/l	25.0	ND	115	65-140	4	20	
1,1,2-Trichloroethane	28.7	0.50	0.30	ug/l	25.0	ND	115	65-130	0.7	25	
Trichloroethene	26.7	0.50	0.26	ug/l	25.0	ND	107	65-125	2	20	
Trichlorofluoromethane	26.9	0.50	0.34	ug/l	25.0	ND	107	60-145	3	25	
Vinyl chloride	25.4	0.50	0.40	ug/l	25.0	ND	102	45-140	5	30	
Xylenes, Total	85.2	1.5	0.90	ug/l	75.0	ND	114	60-130	0.2	20	
Surrogate: 4-Bromofluorobenzene	27.3			ug/l	25.0		109	80-120			
Surrogate: Dibromofluoromethane	28.6			ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	27.8			ug/l	25.0		111	80-120			

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METHOD BLANK/QC DATA

PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2348 Extracted: 02/19/11											
Blank Analyzed: 02/19/2011 (11B2348-BLK1)											
Acrolein	ND	5.0	4.0	ug/l							
Acrylonitrile	ND	2.0	1.2	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: 4-Bromofluorobenzene	24.0			ug/l	25.0		96	80-120			
Surrogate: Dibromofluoromethane	23.8			ug/l	25.0		95	80-120			
Surrogate: Toluene-d8	28.6			ug/l	25.0		114	80-120			
LCS Analyzed: 02/19/2011 (11B2348-BS1)											
2-Chloroethyl vinyl ether	20.9	5.0	1.8	ug/l	25.0		84	25-170			
Surrogate: 4-Bromofluorobenzene	26.6			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	28.6			ug/l	25.0		114	80-120			
Matrix Spike Analyzed: 02/19/2011 (11B2348-MS1)											
						Source: IUB1477-06					
2-Chloroethyl vinyl ether	8.76	5.0	1.8	ug/l	25.0	ND	35	25-170			
Surrogate: 4-Bromofluorobenzene	26.6			ug/l	25.0		107	80-120			
Surrogate: Dibromofluoromethane	27.4			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	29.2			ug/l	25.0		117	80-120			
Matrix Spike Dup Analyzed: 02/19/2011 (11B2348-MSD1)											
						Source: IUB1477-06					
2-Chloroethyl vinyl ether	8.93	5.0	1.8	ug/l	25.0	ND	36	25-170	2	25	
Surrogate: 4-Bromofluorobenzene	26.9			ug/l	25.0		108	80-120			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	29.1			ug/l	25.0		116	80-120			

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METHOD BLANK/QC DATA

1,4-DIOXANE BY GCMS - SINGLE ION MONITORING (SIM)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3460 Extracted: 02/28/11											
Blank Analyzed: 02/28/2011 (11B3460-BLK1)											
1,4-Dioxane	ND	2.0	1.0	ug/l							
Surrogate: Dibromofluoromethane	1.10			ug/l	1.00		110	80-120			
LCS Analyzed: 02/28/2011 (11B3460-BS1)											
1,4-Dioxane	10.1	2.0	1.0	ug/l	10.0		101	70-125			
Surrogate: Dibromofluoromethane	1.07			ug/l	1.00		107	80-120			
Matrix Spike Analyzed: 02/28/2011 (11B3460-MS1) Source: IUB2220-02											
1,4-Dioxane	10.4	2.0	1.0	ug/l	10.0	ND	104	70-130			
Surrogate: Dibromofluoromethane	1.13			ug/l	1.00		113	80-120			
Matrix Spike Dup Analyzed: 02/28/2011 (11B3460-MSD1) Source: IUB2220-02											
1,4-Dioxane	10.4	2.0	1.0	ug/l	10.0	ND	104	70-130	0.4	30	
Surrogate: Dibromofluoromethane	1.14			ug/l	1.00		114	80-120			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2719 Extracted: 02/22/11											
Blank Analyzed: 02/24/2011 (11B2719-BLK1)											
Acenaphthene	ND	0.500	0.100	ug/l							
Acenaphthylene	0.600	0.500	0.100	ug/l							
Anthracene	ND	0.500	0.100	ug/l							
Benzidine	ND	5.00	5.00	ug/l							
Benzo(a)anthracene	ND	5.00	0.100	ug/l							
Benzo(a)pyrene	ND	2.00	0.100	ug/l							
Benzo(b)fluoranthene	ND	2.00	0.100	ug/l							
Benzo(g,h,i)perylene	ND	5.00	0.100	ug/l							
Benzo(k)fluoranthene	ND	0.500	0.100	ug/l							
4-Bromophenyl phenyl ether	ND	1.00	0.100	ug/l							
Butyl benzyl phthalate	ND	5.00	0.700	ug/l							
4-Chloro-3-methylphenol	ND	2.00	0.200	ug/l							
Bis(2-chloroethoxy)methane	ND	0.500	0.100	ug/l							
Bis(2-chloroethyl)ether	ND	0.500	0.100	ug/l							
Bis(2-chloroisopropyl)ether	ND	0.500	0.100	ug/l							
Bis(2-ethylhexyl)phthalate	4.84	5.00	1.70	ug/l							Ja
2-Chloronaphthalene	ND	0.500	0.100	ug/l							
2-Chlorophenol	ND	1.00	0.200	ug/l							
4-Chlorophenyl phenyl ether	ND	0.500	0.100	ug/l							
Chrysene	ND	0.500	0.100	ug/l							
Dibenz(a,h)anthracene	ND	0.500	0.100	ug/l							
Di-n-butyl phthalate	ND	2.00	0.200	ug/l							
1,2-Dichlorobenzene	ND	0.500	0.100	ug/l							
1,3-Dichlorobenzene	ND	0.500	0.100	ug/l							
1,4-Dichlorobenzene	ND	0.500	0.200	ug/l							
3,3'-Dichlorobenzidine	ND	5.00	5.00	ug/l							
2,4-Dichlorophenol	ND	2.00	0.200	ug/l							
Diethyl phthalate	ND	1.00	0.100	ug/l							
2,4-Dimethylphenol	ND	2.00	0.300	ug/l							
Dimethyl phthalate	ND	0.500	0.100	ug/l							
4,6-Dinitro-2-methylphenol	ND	5.00	0.200	ug/l							
2,4-Dinitrophenol	ND	5.00	0.900	ug/l							
2,4-Dinitrotoluene	ND	5.00	0.200	ug/l							
2,6-Dinitrotoluene	ND	5.00	0.100	ug/l							
Di-n-octyl phthalate	ND	5.00	0.100	ug/l							

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2719 Extracted: 02/22/11											
Blank Analyzed: 02/24/2011 (11B2719-BLK1)											
1,2-Diphenylhydrazine/Azobenzene	ND	1.00	0.100	ug/l							
Fluoranthene	ND	0.500	0.100	ug/l							
Fluorene	ND	0.500	0.100	ug/l							
Hexachlorobenzene	ND	1.00	0.100	ug/l							
Hexachlorobutadiene	ND	2.00	0.200	ug/l							
Hexachlorocyclopentadiene	ND	5.00	0.100	ug/l							
Hexachloroethane	ND	3.00	0.200	ug/l							
Indeno(1,2,3-cd)pyrene	ND	2.00	0.100	ug/l							
Isophorone	ND	1.00	0.100	ug/l							
Naphthalene	0.120	1.00	0.100	ug/l							Ja
Nitrobenzene	ND	1.00	0.100	ug/l							
2-Nitrophenol	ND	2.00	0.100	ug/l							
4-Nitrophenol	ND	5.00	2.50	ug/l							
N-Nitroso-di-n-propylamine	ND	2.00	0.100	ug/l							
N-Nitrosodimethylamine	ND	2.00	0.100	ug/l							
N-Nitrosodiphenylamine	ND	1.00	0.100	ug/l							
Pentachlorophenol	ND	2.00	0.100	ug/l							
Phenanthrene	ND	0.500	0.100	ug/l							
Phenol	ND	1.00	0.300	ug/l							
Pyrene	ND	0.500	0.100	ug/l							
1,2,4-Trichlorobenzene	ND	1.00	0.100	ug/l							
2,4,6-Trichlorophenol	ND	1.00	0.100	ug/l							
Surrogate: 2,4,6-Tribromophenol	15.4			ug/l	20.0		77	40-120			
Surrogate: 2-Fluorobiphenyl	7.64			ug/l	10.0		76	50-120			
Surrogate: 2-Fluorophenol	14.6			ug/l	20.0		73	30-120			
Surrogate: Nitrobenzene-d5	7.78			ug/l	10.0		78	45-120			
Surrogate: Phenol-d6	14.3			ug/l	20.0		72	35-120			
Surrogate: Terphenyl-d14	9.20			ug/l	10.0		92	50-125			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2719 Extracted: 02/22/11											
LCS Analyzed: 02/24/2011 (11B2719-BS1)											
Acenaphthene	7.34	0.500	0.100	ug/l	10.0		73	60-120			MNR1
Acenaphthylene	8.10	0.500	0.100	ug/l	10.0		81	60-120			
Anthracene	8.08	0.500	0.100	ug/l	10.0		81	65-120			
Benidine	ND	5.00	5.00	ug/l	10.0			30-160			L6
Benzo(a)anthracene	8.70	5.00	0.100	ug/l	10.0		87	65-120			
Benzo(a)pyrene	8.02	2.00	0.100	ug/l	10.0		80	55-130			
Benzo(b)fluoranthene	8.36	2.00	0.100	ug/l	10.0		84	55-125			
Benzo(g,h,i)perylene	8.52	5.00	0.100	ug/l	10.0		85	45-135			
Benzo(k)fluoranthene	8.02	0.500	0.100	ug/l	10.0		80	50-125			
4-Bromophenyl phenyl ether	8.16	1.00	0.100	ug/l	10.0		82	60-120			
Butyl benzyl phthalate	8.32	5.00	0.700	ug/l	10.0		83	55-130			
4-Chloro-3-methylphenol	8.18	2.00	0.200	ug/l	10.0		82	60-120			
Bis(2-chloroethoxy)methane	7.64	0.500	0.100	ug/l	10.0		76	55-120			
Bis(2-chloroethyl)ether	6.70	0.500	0.100	ug/l	10.0		67	50-120			
Bis(2-chloroisopropyl)ether	6.68	0.500	0.100	ug/l	10.0		67	45-120			
Bis(2-ethylhexyl)phthalate	8.86	5.00	1.70	ug/l	10.0		89	65-130			
2-Chloronaphthalene	7.06	0.500	0.100	ug/l	10.0		71	60-120			
2-Chlorophenol	6.56	1.00	0.200	ug/l	10.0		66	45-120			
4-Chlorophenyl phenyl ether	8.06	0.500	0.100	ug/l	10.0		81	65-120			
Chrysene	7.90	0.500	0.100	ug/l	10.0		79	65-120			
Dibenz(a,h)anthracene	8.48	0.500	0.100	ug/l	10.0		85	50-135			
Di-n-butyl phthalate	8.14	2.00	0.200	ug/l	10.0		81	60-125			
1,2-Dichlorobenzene	5.86	0.500	0.100	ug/l	10.0		59	40-120			
1,3-Dichlorobenzene	5.42	0.500	0.100	ug/l	10.0		54	35-120			
1,4-Dichlorobenzene	5.62	0.500	0.200	ug/l	10.0		56	35-120			
3,3'-Dichlorobenzidine	6.30	5.00	5.00	ug/l	10.0		63	45-135			
2,4-Dichlorophenol	6.88	2.00	0.200	ug/l	10.0		69	55-120			
Diethyl phthalate	7.72	1.00	0.100	ug/l	10.0		77	55-120			
2,4-Dimethylphenol	7.00	2.00	0.300	ug/l	10.0		70	40-120			
Dimethyl phthalate	7.80	0.500	0.100	ug/l	10.0		78	30-120			
4,6-Dinitro-2-methylphenol	6.76	5.00	0.200	ug/l	10.0		68	45-120			
2,4-Dinitrophenol	6.98	5.00	0.900	ug/l	10.0		70	40-120			
2,4-Dinitrotoluene	7.90	5.00	0.200	ug/l	10.0		79	65-120			
2,6-Dinitrotoluene	8.02	5.00	0.100	ug/l	10.0		80	65-120			
Di-n-octyl phthalate	9.24	5.00	0.100	ug/l	10.0		92	65-135			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2719 Extracted: 02/22/11											
LCS Analyzed: 02/24/2011 (11B2719-BS1)											
1,2-Diphenylhydrazine/Azobenzene	7.10	1.00	0.100	ug/l	10.0		71	60-120			MNR1
Fluoranthene	8.52	0.500	0.100	ug/l	10.0		85	60-120			
Fluorene	7.90	0.500	0.100	ug/l	10.0		79	65-120			
Hexachlorobenzene	7.78	1.00	0.100	ug/l	10.0		78	60-120			
Hexachlorobutadiene	4.38	2.00	0.200	ug/l	10.0		44	40-120			
Hexachlorocyclopentadiene	4.64	5.00	0.100	ug/l	10.0		46	25-120			Ja
Hexachloroethane	4.52	3.00	0.200	ug/l	10.0		45	35-120			
Indeno(1,2,3-cd)pyrene	8.62	2.00	0.100	ug/l	10.0		86	45-135			
Isophorone	8.08	1.00	0.100	ug/l	10.0		81	50-120			
Naphthalene	6.64	1.00	0.100	ug/l	10.0		66	55-120			
Nitrobenzene	6.84	1.00	0.100	ug/l	10.0		68	55-120			
2-Nitrophenol	6.64	2.00	0.100	ug/l	10.0		66	50-120			
4-Nitrophenol	7.60	5.00	2.50	ug/l	10.0		76	45-120			
N-Nitroso-di-n-propylamine	7.48	2.00	0.100	ug/l	10.0		75	45-120			
N-Nitrosodimethylamine	6.96	2.00	0.100	ug/l	10.0		70	45-120			
N-Nitrosodiphenylamine	8.86	1.00	0.100	ug/l	10.0		89	60-120			
Pentachlorophenol	7.38	2.00	0.100	ug/l	10.0		74	24-121			
Phenanthrene	7.78	0.500	0.100	ug/l	10.0		78	65-120			
Phenol	6.88	1.00	0.300	ug/l	10.0		69	40-120			
Pyrene	8.34	0.500	0.100	ug/l	10.0		83	55-125			
1,2,4-Trichlorobenzene	5.94	1.00	0.100	ug/l	10.0		59	45-120			
2,4,6-Trichlorophenol	7.90	1.00	0.100	ug/l	10.0		79	55-120			
Surrogate: 2,4,6-Tribromophenol	15.8			ug/l	20.0		79	40-120			
Surrogate: 2-Fluorobiphenyl	6.64			ug/l	10.0		66	50-120			
Surrogate: 2-Fluorophenol	12.6			ug/l	20.0		63	30-120			
Surrogate: Nitrobenzene-d5	6.94			ug/l	10.0		69	45-120			
Surrogate: Phenol-d6	14.1			ug/l	20.0		71	35-120			
Surrogate: Terphenyl-d14	8.20			ug/l	10.0		82	50-125			

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Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2719 Extracted: 02/22/11											
LCS Dup Analyzed: 02/24/2011 (11B2719-BSD1)											
Acenaphthene	8.32	0.500	0.100	ug/l	10.0		83	60-120	13	20	
Acenaphthylene	9.18	0.500	0.100	ug/l	10.0		92	60-120	12	20	
Anthracene	8.54	0.500	0.100	ug/l	10.0		85	65-120	6	20	
Benidine	ND	5.00	5.00	ug/l	10.0			30-160		35	L6
Benzo(a)anthracene	9.14	5.00	0.100	ug/l	10.0		91	65-120	5	20	
Benzo(a)pyrene	8.60	2.00	0.100	ug/l	10.0		86	55-130	7	25	
Benzo(b)fluoranthene	8.88	2.00	0.100	ug/l	10.0		89	55-125	6	25	
Benzo(g,h,i)perylene	11.7	5.00	0.100	ug/l	10.0		117	45-135	31	25	R-7
Benzo(k)fluoranthene	8.42	0.500	0.100	ug/l	10.0		84	50-125	5	20	
4-Bromophenyl phenyl ether	8.90	1.00	0.100	ug/l	10.0		89	60-120	9	25	
Butyl benzyl phthalate	9.24	5.00	0.700	ug/l	10.0		92	55-130	10	20	
4-Chloro-3-methylphenol	8.70	2.00	0.200	ug/l	10.0		87	60-120	6	25	
Bis(2-chloroethoxy)methane	9.28	0.500	0.100	ug/l	10.0		93	55-120	19	20	
Bis(2-chloroethyl)ether	8.62	0.500	0.100	ug/l	10.0		86	50-120	25	20	R-7
Bis(2-chloroisopropyl)ether	8.06	0.500	0.100	ug/l	10.0		81	45-120	19	20	
Bis(2-ethylhexyl)phthalate	12.0	5.00	1.70	ug/l	10.0		120	65-130	30	20	R-7
2-Chloronaphthalene	8.38	0.500	0.100	ug/l	10.0		84	60-120	17	20	
2-Chlorophenol	7.78	1.00	0.200	ug/l	10.0		78	45-120	17	25	
4-Chlorophenyl phenyl ether	8.84	0.500	0.100	ug/l	10.0		88	65-120	9	20	
Chrysene	8.42	0.500	0.100	ug/l	10.0		84	65-120	6	20	
Dibenz(a,h)anthracene	9.86	0.500	0.100	ug/l	10.0		99	50-135	15	25	
Di-n-butyl phthalate	8.50	2.00	0.200	ug/l	10.0		85	60-125	4	20	
1,2-Dichlorobenzene	7.00	0.500	0.100	ug/l	10.0		70	40-120	18	25	
1,3-Dichlorobenzene	6.38	0.500	0.100	ug/l	10.0		64	35-120	16	25	
1,4-Dichlorobenzene	6.56	0.500	0.200	ug/l	10.0		66	35-120	15	25	
3,3'-Dichlorobenzidine	5.98	5.00	5.00	ug/l	10.0		60	45-135	5	25	
2,4-Dichlorophenol	8.32	2.00	0.200	ug/l	10.0		83	55-120	19	20	
Diethyl phthalate	8.98	1.00	0.100	ug/l	10.0		90	55-120	15	30	
2,4-Dimethylphenol	8.18	2.00	0.300	ug/l	10.0		82	40-120	16	25	
Dimethyl phthalate	8.76	0.500	0.100	ug/l	10.0		88	30-120	12	30	
4,6-Dinitro-2-methylphenol	7.12	5.00	0.200	ug/l	10.0		71	45-120	5	25	
2,4-Dinitrophenol	6.74	5.00	0.900	ug/l	10.0		67	40-120	3	25	
2,4-Dinitrotoluene	8.74	5.00	0.200	ug/l	10.0		87	65-120	10	20	
2,6-Dinitrotoluene	9.14	5.00	0.100	ug/l	10.0		91	65-120	13	20	
Di-n-octyl phthalate	9.80	5.00	0.100	ug/l	10.0		98	65-135	6	20	

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Report Number: IUB2115

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2719 Extracted: 02/22/11											
LCS Dup Analyzed: 02/24/2011 (11B2719-BSD1)											
1,2-Diphenylhydrazine/Azobenzene	8.16	1.00	0.100	ug/l	10.0		82	60-120	14	25	
Fluoranthene	8.96	0.500	0.100	ug/l	10.0		90	60-120	5	20	
Fluorene	8.86	0.500	0.100	ug/l	10.0		89	65-120	11	20	
Hexachlorobenzene	8.30	1.00	0.100	ug/l	10.0		83	60-120	6	20	
Hexachlorobutadiene	4.72	2.00	0.200	ug/l	10.0		47	40-120	7	25	
Hexachlorocyclopentadiene	4.74	5.00	0.100	ug/l	10.0		47	25-120	2	30	Ja
Hexachloroethane	4.94	3.00	0.200	ug/l	10.0		49	35-120	9	25	
Indeno(1,2,3-cd)pyrene	10.6	2.00	0.100	ug/l	10.0		106	45-135	21	25	
Isophorone	9.54	1.00	0.100	ug/l	10.0		95	50-120	17	20	
Naphthalene	8.08	1.00	0.100	ug/l	10.0		81	55-120	20	20	
Nitrobenzene	8.64	1.00	0.100	ug/l	10.0		86	55-120	23	25	
2-Nitrophenol	7.86	2.00	0.100	ug/l	10.0		79	50-120	17	25	
4-Nitrophenol	7.94	5.00	2.50	ug/l	10.0		79	45-120	4	30	
N-Nitroso-di-n-propylamine	8.54	2.00	0.100	ug/l	10.0		85	45-120	13	20	
N-Nitrosodimethylamine	8.22	2.00	0.100	ug/l	10.0		82	45-120	17	20	
N-Nitrosodiphenylamine	9.42	1.00	0.100	ug/l	10.0		94	60-120	6	20	
Pentachlorophenol	7.82	2.00	0.100	ug/l	10.0		78	24-121	6	25	
Phenanthrene	8.50	0.500	0.100	ug/l	10.0		85	65-120	9	20	
Phenol	7.92	1.00	0.300	ug/l	10.0		79	40-120	14	25	
Pyrene	9.14	0.500	0.100	ug/l	10.0		91	55-125	9	25	
1,2,4-Trichlorobenzene	7.26	1.00	0.100	ug/l	10.0		73	45-120	20	20	
2,4,6-Trichlorophenol	8.96	1.00	0.100	ug/l	10.0		90	55-120	13	30	
Surrogate: 2,4,6-Tribromophenol	16.8			ug/l	20.0		84	40-120			
Surrogate: 2-Fluorobiphenyl	7.82			ug/l	10.0		78	50-120			
Surrogate: 2-Fluorophenol	14.7			ug/l	20.0		74	30-120			
Surrogate: Nitrobenzene-d5	8.62			ug/l	10.0		86	45-120			
Surrogate: Phenol-d6	16.3			ug/l	20.0		82	35-120			
Surrogate: Terphenyl-d14	9.00			ug/l	10.0		90	50-125			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2911 Extracted: 02/23/11											
Blank Analyzed: 02/24/2011 (11B2911-BLK1)											
4,4'-DDD	ND	0.0050	0.0040	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
gamma-BHC (Lindane)	ND	0.020	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Chlordane	ND	0.10	0.080	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.202			ug/l	0.500		40	45-120			Z6
Surrogate: Tetrachloro-m-xylene	0.467			ug/l	0.500		93	35-115			

Blank Analyzed: 02/24/2011 (11B2911-BLK2)

4,4'-DDD	ND	0.0050	0.0040	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
gamma-BHC (Lindane)	ND	0.020	0.0030	ug/l							

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2911 Extracted: 02/23/11											
Blank Analyzed: 02/24/2011 (11B2911-BLK2)											
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Chlordane	ND	0.10	0.080	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.428			ug/l	0.500		86	45-120			N2
Surrogate: Tetrachloro-m-xylene	0.451			ug/l	0.500		90	35-115			N2
LCS Analyzed: 02/24/2011 (11B2911-BS1)											
4,4'-DDD	0.466	0.0050	0.0040	ug/l	0.500		93	55-120			MNR1
4,4'-DDE	0.500	0.0050	0.0030	ug/l	0.500		100	50-120			
4,4'-DDT	0.492	0.010	0.0040	ug/l	0.500		98	55-120			
Aldrin	0.403	0.0050	0.0015	ug/l	0.500		81	40-115			
alpha-BHC	0.463	0.0050	0.0025	ug/l	0.500		93	45-115			
beta-BHC	0.476	0.010	0.0040	ug/l	0.500		95	55-115			
delta-BHC	0.496	0.0050	0.0035	ug/l	0.500		99	55-115			
Dieldrin	0.496	0.0050	0.0020	ug/l	0.500		99	55-115			
Endosulfan I	0.502	0.0050	0.0020	ug/l	0.500		100	55-115			
Endosulfan II	0.517	0.0050	0.0030	ug/l	0.500		103	55-120			
Endosulfan sulfate	0.440	0.010	0.0030	ug/l	0.500		88	60-120			
Endrin	0.463	0.0050	0.0020	ug/l	0.500		93	55-115			
Endrin aldehyde	0.475	0.010	0.0020	ug/l	0.500		95	50-120			
gamma-BHC (Lindane)	0.490	0.020	0.0030	ug/l	0.500		98	45-115			
Heptachlor	0.455	0.010	0.0030	ug/l	0.500		91	45-115			
Heptachlor epoxide	0.503	0.0050	0.0025	ug/l	0.500		101	55-115			
Surrogate: Decachlorobiphenyl	0.253			ug/l	0.500		51	45-120			
Surrogate: Tetrachloro-m-xylene	0.406			ug/l	0.500		81	35-115			
LCS Dup Analyzed: 02/24/2011 (11B2911-BSD1)											
4,4'-DDD	0.514	0.0050	0.0040	ug/l	0.500		103	55-120	10	30	
4,4'-DDE	0.557	0.0050	0.0030	ug/l	0.500		111	50-120	11	30	
4,4'-DDT	0.554	0.010	0.0040	ug/l	0.500		111	55-120	12	30	
Aldrin	0.451	0.0050	0.0015	ug/l	0.500		90	40-115	11	30	
alpha-BHC	0.515	0.0050	0.0025	ug/l	0.500		103	45-115	11	30	
beta-BHC	0.526	0.010	0.0040	ug/l	0.500		105	55-115	10	30	
delta-BHC	0.555	0.0050	0.0035	ug/l	0.500		111	55-115	11	30	
Dieldrin	0.545	0.0050	0.0020	ug/l	0.500		109	55-115	9	30	

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2911 Extracted: 02/23/11											
LCS Dup Analyzed: 02/24/2011 (11B2911-BSD1)											
Endosulfan I	0.543	0.0050	0.0020	ug/l	0.500		109	55-115	8	30	
Endosulfan II	0.564	0.0050	0.0030	ug/l	0.500		113	55-120	9	30	
Endosulfan sulfate	0.482	0.010	0.0030	ug/l	0.500		96	60-120	9	30	
Endrin	0.506	0.0050	0.0020	ug/l	0.500		101	55-115	9	30	
Endrin aldehyde	0.524	0.010	0.0020	ug/l	0.500		105	50-120	10	30	
gamma-BHC (Lindane)	0.546	0.020	0.0030	ug/l	0.500		109	45-115	11	30	
Heptachlor	0.508	0.010	0.0030	ug/l	0.500		102	45-115	11	30	
Heptachlor epoxide	0.606	0.0050	0.0025	ug/l	0.500		121	55-115	19	30	L
Surrogate: Decachlorobiphenyl	0.316			ug/l	0.500		63	45-120			
Surrogate: Tetrachloro-m-xylene	0.455			ug/l	0.500		91	35-115			

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METHOD BLANK/QC DATA

TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2911 Extracted: 02/23/11											
Blank Analyzed: 02/24/2011 (11B2911-BLK1)											
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.184			ug/l	0.500		37	45-120			Z6
Blank Analyzed: 02/25/2011 (11B2911-BLK2)											
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.377			ug/l	0.500		75	45-120			N2
LCS Analyzed: 02/24/2011 (11B2911-BS2)											
Aroclor 1016	2.92	0.50	0.25	ug/l	4.00		73	50-115			MNR1
Aroclor 1260	3.12	0.50	0.25	ug/l	4.00		78	60-120			
Surrogate: Decachlorobiphenyl	0.351			ug/l	0.500		70	45-120			
LCS Dup Analyzed: 02/24/2011 (11B2911-BSD2)											
Aroclor 1016	3.09	0.50	0.25	ug/l	4.00		77	50-115	6	30	
Aroclor 1260	3.09	0.50	0.25	ug/l	4.00		77	60-120	0.9	25	
Surrogate: Decachlorobiphenyl	0.350			ug/l	0.500		70	45-120			

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0868 Extracted: 03/07/11											
Blank Analyzed: 03/07/2011 (11C0868-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/07/2011 (11C0868-BS1)											
Hexane Extractable Material (Oil & Grease)	18.7	5.0	1.4	mg/l	20.0		94	78-114			MNR1
LCS Dup Analyzed: 03/07/2011 (11C0868-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.0	5.0	1.4	mg/l	20.0		95	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B3158 Extracted: 02/24/11</u>											
Blank Analyzed: 02/25/2011 (11B3158-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/25/2011 (11B3158-BS1)											
Mercury	8.06	0.20	0.10	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 02/25/2011 (11B3158-MS1)											
						Source: IUB2115-03					
Mercury	8.09	0.20	0.10	ug/l	8.00	ND	101	70-130			
Matrix Spike Dup Analyzed: 02/25/2011 (11B3158-MSD1)											
						Source: IUB2115-03					
Mercury	8.26	0.20	0.10	ug/l	8.00	ND	103	70-130	2	20	
<u>Batch: 11B3269 Extracted: 02/25/11</u>											
Blank Analyzed: 02/28/2011 (11B3269-BLK1)											
Arsenic	ND	10	7.0	ug/l							
Barium	ND	0.010	0.0060	mg/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Cobalt	ND	10	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Manganese	ND	20	7.0	ug/l							
Nickel	ND	10	2.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20.0	6.00	ug/l							

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3269 Extracted: 02/25/11											
LCS Analyzed: 02/28/2011 (11B3269-BS1)											
Arsenic	477	10	7.0	ug/l	500		95	85-115			
Barium	0.498	0.010	0.0060	mg/l	0.500		100	85-115			
Beryllium	480	2.0	0.90	ug/l	500		96	85-115			
Boron	0.515	0.050	0.020	mg/l	0.500		103	85-115			
Calcium	2.46	0.10	0.050	mg/l	2.50		98	85-115			
Chromium	509	5.0	2.0	ug/l	500		102	85-115			
Cobalt	461	10	2.0	ug/l	500		92	85-115			
Iron	0.474	0.040	0.015	mg/l	0.500		95	85-115			
Magnesium	2.58	0.020	0.012	mg/l	2.50		103	85-115			
Manganese	493	20	7.0	ug/l	500		99	85-115			
Nickel	473	10	2.0	ug/l	500		95	85-115			
Vanadium	492	10	3.0	ug/l	500		98	85-115			
Zinc	495	20.0	6.00	ug/l	500		99	85-115			

Matrix Spike Analyzed: 02/28/2011 (11B3269-MS1)

Source: IUB2067-05

Arsenic	502	10	7.0	ug/l	500	ND	100	70-130			
Barium	0.647	0.010	0.0060	mg/l	0.500	0.156	98	70-130			
Beryllium	492	2.0	0.90	ug/l	500	ND	98	70-130			
Boron	1.93	0.050	0.020	mg/l	0.500	1.44	98	70-130			
Calcium	121	0.10	0.050	mg/l	2.50	121	1	70-130			MHA
Chromium	516	5.0	2.0	ug/l	500	2.20	103	70-130			
Cobalt	453	10	2.0	ug/l	500	ND	91	70-130			
Iron	0.490	0.040	0.015	mg/l	0.500	ND	98	70-130			
Magnesium	62.9	0.020	0.012	mg/l	2.50	61.0	77	70-130			MHA
Manganese	548	20	7.0	ug/l	500	52.8	99	70-130			
Nickel	467	10	2.0	ug/l	500	14.4	90	70-130			
Vanadium	504	10	3.0	ug/l	500	ND	101	70-130			
Zinc	493	20.0	6.00	ug/l	500	ND	99	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3269 Extracted: 02/25/11											
Matrix Spike Analyzed: 02/28/2011 (11B3269-MS2)						Source: IUB1977-03					
Arsenic	474	10	7.0	ug/l	500	ND	95	70-130			
Barium	0.498	0.010	0.0060	mg/l	0.500	ND	100	70-130			
Beryllium	478	2.0	0.90	ug/l	500	ND	96	70-130			
Boron	0.698	0.050	0.020	mg/l	0.500	0.200	100	70-130			
Calcium	2.40	0.10	0.050	mg/l	2.50	ND	96	70-130			
Chromium	505	5.0	2.0	ug/l	500	ND	101	70-130			
Cobalt	455	10	2.0	ug/l	500	ND	91	70-130			
Iron	0.466	0.040	0.015	mg/l	0.500	ND	93	70-130			
Magnesium	2.53	0.020	0.012	mg/l	2.50	ND	101	70-130			
Manganese	491	20	7.0	ug/l	500	ND	98	70-130			
Nickel	457	10	2.0	ug/l	500	ND	91	70-130			
Vanadium	484	10	3.0	ug/l	500	ND	97	70-130			
Zinc	478	20.0	6.00	ug/l	500	ND	96	70-130			
Matrix Spike Dup Analyzed: 02/28/2011 (11B3269-MSD1)						Source: IUB2067-05					
Arsenic	483	10	7.0	ug/l	500	ND	97	70-130	4	20	
Barium	0.642	0.010	0.0060	mg/l	0.500	0.156	97	70-130	0.8	20	
Beryllium	481	2.0	0.90	ug/l	500	ND	96	70-130	2	20	
Boron	1.93	0.050	0.020	mg/l	0.500	1.44	98	70-130	0.07	20	
Calcium	121	0.10	0.050	mg/l	2.50	121	2	70-130	0.005	20	MHA
Chromium	501	5.0	2.0	ug/l	500	2.20	100	70-130	3	20	
Cobalt	440	10	2.0	ug/l	500	ND	88	70-130	3	20	
Iron	0.479	0.040	0.015	mg/l	0.500	ND	96	70-130	2	20	
Magnesium	63.8	0.020	0.012	mg/l	2.50	61.0	112	70-130	1	20	MHA
Manganese	533	20	7.0	ug/l	500	52.8	96	70-130	3	20	
Nickel	455	10	2.0	ug/l	500	14.4	88	70-130	3	20	
Vanadium	489	10	3.0	ug/l	500	ND	98	70-130	3	20	
Zinc	482	20.0	6.00	ug/l	500	ND	96	70-130	2	20	

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 11B3277 Extracted: 02/25/11											
Blank Analyzed: 02/25/2011 (11B3277-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.00	0.500	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Silver	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/25/2011 (11B3277-BS1)											
Antimony	84.3	2.0	0.30	ug/l	80.0		105	85-115			
Cadmium	85.4	1.0	0.10	ug/l	80.0		107	85-115			
Copper	84.5	2.00	0.500	ug/l	80.0		106	85-115			
Lead	81.4	1.0	0.20	ug/l	80.0		102	85-115			
Selenium	84.5	2.0	0.50	ug/l	80.0		106	85-115			
Silver	83.9	1.0	0.10	ug/l	80.0		105	85-115			
Thallium	81.2	1.0	0.20	ug/l	80.0		101	85-115			
Matrix Spike Analyzed: 02/25/2011 (11B3277-MS1) Source: IUB2432-01											
Antimony	85.2	2.0	0.30	ug/l	80.0	ND	107	70-130			
Cadmium	81.4	1.0	0.10	ug/l	80.0	ND	102	70-130			
Copper	75.7	2.00	0.500	ug/l	80.0	0.668	94	70-130			
Lead	75.3	1.0	0.20	ug/l	80.0	ND	94	70-130			
Selenium	83.6	2.0	0.50	ug/l	80.0	ND	105	70-130			
Silver	78.3	1.0	0.10	ug/l	80.0	ND	98	70-130			
Thallium	76.6	1.0	0.20	ug/l	80.0	ND	96	70-130			
Matrix Spike Analyzed: 02/25/2011 (11B3277-MS2) Source: IUB2352-01											
Antimony	84.2	2.0	0.30	ug/l	80.0	0.426	105	70-130			
Cadmium	79.2	1.0	0.10	ug/l	80.0	0.127	99	70-130			
Copper	81.5	2.00	0.500	ug/l	80.0	9.87	90	70-130			
Lead	75.6	1.0	0.20	ug/l	80.0	2.40	91	70-130			
Selenium	86.7	2.0	0.50	ug/l	80.0	1.50	106	70-130			
Silver	75.8	1.0	0.10	ug/l	80.0	ND	95	70-130			
Thallium	75.1	1.0	0.20	ug/l	80.0	ND	94	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3277 Extracted: 02/25/11											
Matrix Spike Dup Analyzed: 02/25/2011 (11B3277-MSD1)						Source: IUB2432-01					
Antimony	84.9	2.0	0.30	ug/l	80.0	ND	106	70-130	0.4	20	
Cadmium	81.4	1.0	0.10	ug/l	80.0	ND	102	70-130	0.04	20	
Copper	74.8	2.00	0.500	ug/l	80.0	0.668	93	70-130	1	20	
Lead	74.1	1.0	0.20	ug/l	80.0	ND	93	70-130	2	20	
Selenium	82.3	2.0	0.50	ug/l	80.0	ND	103	70-130	2	20	
Silver	77.9	1.0	0.10	ug/l	80.0	ND	97	70-130	0.5	20	
Thallium	76.3	1.0	0.20	ug/l	80.0	ND	95	70-130	0.5	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2681 Extracted: 02/22/11											
Blank Analyzed: 02/22/2011 (11B2681-BLK1)											
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Copper	1.26	2.00	0.500	ug/l							Ja
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
Silver	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/22/2011 (11B2681-BS1)											
Antimony	79.4	2.0	0.30	ug/l	80.0		99	85-115			
Cadmium	79.5	1.0	0.10	ug/l	80.0		99	85-115			
Copper	78.2	2.00	0.500	ug/l	80.0		98	85-115			
Lead	80.4	1.0	0.20	ug/l	80.0		100	85-115			
Selenium	80.1	2.0	0.50	ug/l	80.0		100	85-115			
Silver	78.0	1.0	0.10	ug/l	80.0		97	85-115			
Thallium	80.7	1.0	0.20	ug/l	80.0		101	85-115			
Matrix Spike Analyzed: 02/22/2011 (11B2681-MS1) Source: IUB1622-03											
Antimony	81.0	2.0	0.30	ug/l	80.0	0.949	100	70-130			
Cadmium	78.1	1.0	0.10	ug/l	80.0	ND	98	70-130			
Copper	77.6	2.00	0.500	ug/l	80.0	1.35	95	70-130			
Lead	70.2	1.0	0.20	ug/l	80.0	ND	88	70-130			
Selenium	75.6	2.0	0.50	ug/l	80.0	ND	95	70-130			
Silver	75.0	1.0	0.10	ug/l	80.0	ND	94	70-130			
Thallium	70.3	1.0	0.20	ug/l	80.0	0.222	88	70-130			
Matrix Spike Dup Analyzed: 02/22/2011 (11B2681-MSD1) Source: IUB1622-03											
Antimony	82.1	2.0	0.30	ug/l	80.0	0.949	101	70-130	1	20	
Cadmium	78.4	1.0	0.10	ug/l	80.0	ND	98	70-130	0.4	20	
Copper	76.5	2.00	0.500	ug/l	80.0	1.35	94	70-130	1	20	
Lead	71.2	1.0	0.20	ug/l	80.0	ND	89	70-130	1	20	
Selenium	76.7	2.0	0.50	ug/l	80.0	ND	96	70-130	1	20	
Silver	74.9	1.0	0.10	ug/l	80.0	ND	94	70-130	0.09	20	
Thallium	71.3	1.0	0.20	ug/l	80.0	0.222	89	70-130	1	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B3159 Extracted: 02/24/11</u>											
Blank Analyzed: 02/25/2011 (11B3159-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/25/2011 (11B3159-BS1)											
Mercury	8.11	0.20	0.10	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 02/25/2011 (11B3159-MS1)											
						Source: IUB2151-01					
Mercury	8.23	0.20	0.10	ug/l	8.00	ND	103	70-130			
Matrix Spike Dup Analyzed: 02/25/2011 (11B3159-MSD1)											
						Source: IUB2151-01					
Mercury	8.14	0.20	0.10	ug/l	8.00	ND	102	70-130	1	20	
<u>Batch: 11B3548 Extracted: 02/28/11</u>											
Blank Analyzed: 03/02/2011 (11B3548-BLK1)											
Arsenic	ND	10	7.0	ug/l							
Barium	ND	0.010	0.0060	mg/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	ND	0.050	0.020	mg/l							
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Cobalt	ND	10	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Manganese	ND	20	7.0	ug/l							
Nickel	ND	10	2.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20.0	6.00	ug/l							

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3548 Extracted: 02/28/11											
LCS Analyzed: 03/02/2011 (11B3548-BS1)											
Arsenic	507	10	7.0	ug/l	500		101	85-115			
Barium	0.509	0.010	0.0060	mg/l	0.500		102	85-115			
Beryllium	511	2.0	0.90	ug/l	500		102	85-115			
Boron	0.525	0.050	0.020	mg/l	0.500		105	85-115			
Calcium	2.57	0.10	0.050	mg/l	2.50		103	85-115			
Chromium	517	5.0	2.0	ug/l	500		103	85-115			
Cobalt	483	10	2.0	ug/l	500		97	85-115			
Iron	0.510	0.040	0.015	mg/l	0.500		102	85-115			
Magnesium	2.61	0.020	0.012	mg/l	2.50		104	85-115			
Manganese	513	20	7.0	ug/l	500		103	85-115			
Nickel	499	10	2.0	ug/l	500		100	85-115			
Vanadium	506	10	3.0	ug/l	500		101	85-115			
Zinc	507	20.0	6.00	ug/l	500		101	85-115			

Matrix Spike Analyzed: 03/02/2011 (11B3548-MS1)

Source: IUB2647-01

Arsenic	508	10	7.0	ug/l	500	ND	102	70-130			
Barium	0.533	0.010	0.0060	mg/l	0.500	0.0382	99	70-130			
Beryllium	508	2.0	0.90	ug/l	500	ND	102	70-130			
Boron	0.545	0.050	0.020	mg/l	0.500	0.0313	103	70-130			
Calcium	68.4	0.10	0.050	mg/l	2.50	67.0	53	70-130			MHA
Chromium	516	5.0	2.0	ug/l	500	3.31	102	70-130			
Cobalt	468	10	2.0	ug/l	500	ND	94	70-130			
Iron	0.501	0.040	0.015	mg/l	0.500	ND	100	70-130			
Magnesium	12.3	0.020	0.012	mg/l	2.50	9.87	97	70-130			
Manganese	498	20	7.0	ug/l	500	ND	100	70-130			
Nickel	473	10	2.0	ug/l	500	ND	95	70-130			
Vanadium	502	10	3.0	ug/l	500	5.00	99	70-130			
Zinc	496	20.0	6.00	ug/l	500	ND	99	70-130			

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3548 Extracted: 02/28/11											
Matrix Spike Analyzed: 03/07/2011 (11B3548-MS2)						Source: IUB2630-01					
Arsenic	499	20	14	ug/l	500	ND	100	70-130			
Barium	0.486	0.020	0.012	mg/l	0.500	0.0129	95	70-130			
Beryllium	490	4.0	1.8	ug/l	500	ND	98	70-130			
Boron	0.602	0.10	0.040	mg/l	0.500	0.120	96	70-130			
Calcium	621	0.20	0.10	mg/l	2.50	681	-2390	70-130			MHA
Chromium	475	10	4.0	ug/l	500	ND	95	70-130			
Cobalt	438	20	4.0	ug/l	500	ND	88	70-130			
Iron	0.431	0.080	0.030	mg/l	0.500	ND	86	70-130			
Magnesium	104	0.040	0.024	mg/l	2.50	109	-198	70-130			MHA
Manganese	502	40	14	ug/l	500	36.3	93	70-130			
Nickel	464	20	4.0	ug/l	500	13.0	90	70-130			
Vanadium	489	20	6.0	ug/l	500	ND	98	70-130			
Zinc	461	40.0	12.0	ug/l	500	ND	92	70-130			
Matrix Spike Dup Analyzed: 03/02/2011 (11B3548-MSD1)						Source: IUB2647-01					
Arsenic	503	10	7.0	ug/l	500	ND	101	70-130	0.8	20	
Barium	0.532	0.010	0.0060	mg/l	0.500	0.0382	99	70-130	0.3	20	
Beryllium	504	2.0	0.90	ug/l	500	ND	101	70-130	0.9	20	
Boron	0.544	0.050	0.020	mg/l	0.500	0.0313	102	70-130	0.3	20	
Calcium	69.2	0.10	0.050	mg/l	2.50	67.0	87	70-130	1	20	MHA
Chromium	509	5.0	2.0	ug/l	500	3.31	101	70-130	1	20	
Cobalt	462	10	2.0	ug/l	500	ND	92	70-130	1	20	
Iron	0.500	0.040	0.015	mg/l	0.500	ND	100	70-130	0.3	20	
Magnesium	12.3	0.020	0.012	mg/l	2.50	9.87	97	70-130	0.002	20	
Manganese	497	20	7.0	ug/l	500	ND	99	70-130	0.2	20	
Nickel	467	10	2.0	ug/l	500	ND	93	70-130	1	20	
Vanadium	500	10	3.0	ug/l	500	5.00	99	70-130	0.4	20	
Zinc	492	20.0	6.00	ug/l	500	ND	98	70-130	0.8	20	

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METHOD BLANK/QC DATA

DISSOLVED INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B2579 Extracted: 02/20/11											
Blank Analyzed: 02/20/2011 (11B2579-BLK1)											
Chromium VI	ND	1.00	0.250	ug/l							
LCS Analyzed: 02/20/2011 (11B2579-BS1)											
Chromium VI	48.0	1.00	0.250	ug/l	50.0		96	90-110			
Matrix Spike Analyzed: 02/20/2011 (11B2579-MS1)											
						Source: IUB2115-03					
Chromium VI	50.0	1.00	0.250	ug/l	50.0	ND	100	90-110			
Matrix Spike Dup Analyzed: 02/20/2011 (11B2579-MSD1)											
						Source: IUB2115-03					
Chromium VI	50.3	1.00	0.250	ug/l	50.0	ND	101	90-110	0.6	10	

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Sampled: 02/19/11
Received: 02/19/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B2574 Extracted: 02/20/11</u>											
Blank Analyzed: 02/20/2011 (11B2574-BLK1)											
Chloride	ND	0.50	0.30	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.30	mg/l							
LCS Analyzed: 02/20/2011 (11B2574-BS1)											
Chloride	4.79	0.50	0.30	mg/l	5.00		96	90-110			
Nitrate-N	1.02	0.11	0.060	mg/l	1.13		90	90-110			
Nitrite-N	1.42	0.15	0.090	mg/l	1.52		94	90-110			
Sulfate	9.34	0.50	0.30	mg/l	10.0		93	90-110			
Matrix Spike Analyzed: 02/20/2011 (11B2574-MS1) Source: IUB2115-03											
Chloride	63.3	5.0	3.0	mg/l	50.0	15.9	95	80-120			
Nitrate-N	10.4	1.1	0.60	mg/l	11.3	0.148	91	80-120			
Nitrite-N	14.5	1.5	0.90	mg/l	15.2	ND	95	80-120			
Sulfate	182	5.0	3.0	mg/l	100	84.3	98	80-120			
Matrix Spike Dup Analyzed: 02/20/2011 (11B2574-MSD1) Source: IUB2115-03											
Chloride	62.7	5.0	3.0	mg/l	50.0	15.9	93	80-120	1	20	
Nitrate-N	10.8	1.1	0.60	mg/l	11.3	0.148	94	80-120	3	20	
Nitrite-N	14.9	1.5	0.90	mg/l	15.2	ND	98	80-120	3	20	
Sulfate	182	5.0	3.0	mg/l	100	84.3	98	80-120	0.3	20	

Batch: 11B2577 Extracted: 02/20/11

Blank Analyzed: 02/20/2011 (11B2577-BLK1)

Turbidity ND 1.0 0.040 NTU

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B2577 Extracted: 02/20/11</u>											
Duplicate Analyzed: 02/20/2011 (11B2577-DUP1)						Source: IUB2151-01					
Turbidity	0.950	1.0	0.040	NTU		0.960			1	20	Ja
<u>Batch: 11B2580 Extracted: 02/20/11</u>											
Blank Analyzed: 02/20/2011 (11B2580-BLK1)											
Surfactants (MBAS)	ND	0.10	0.050	mg/l							
LCS Analyzed: 02/20/2011 (11B2580-BS1)											
Surfactants (MBAS)	0.249	0.10	0.050	mg/l	0.250		100	90-110			
Matrix Spike Analyzed: 02/20/2011 (11B2580-MS1)						Source: IUB2115-03					
Surfactants (MBAS)	0.271	0.10	0.050	mg/l	0.250	ND	108	50-125			
Matrix Spike Dup Analyzed: 02/20/2011 (11B2580-MSD1)						Source: IUB2115-03					
Surfactants (MBAS)	0.276	0.10	0.050	mg/l	0.250	ND	110	50-125	2	20	
<u>Batch: 11B2582 Extracted: 02/20/11</u>											
Blank Analyzed: 02/25/2011 (11B2582-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l							
LCS Analyzed: 02/25/2011 (11B2582-BS1)											
Biochemical Oxygen Demand	191	100	25	mg/l	198		96	85-115			
LCS Dup Analyzed: 02/25/2011 (11B2582-BSD1)											
Biochemical Oxygen Demand	188	100	25	mg/l	198		95	85-115	1	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B2727 Extracted: 02/22/11</u>											
Blank Analyzed: 02/22/2011 (11B2727-BLK1)											
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l							
LCS Analyzed: 02/22/2011 (11B2727-BS1)											
Ammonia-N (Distilled)	10.1	0.500	0.500	mg/l	10.0		101	80-115			
Matrix Spike Analyzed: 02/22/2011 (11B2727-MS1)											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 02/22/2011 (11B2727-MSD1)											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120	0	15	
<u>Batch: 11B2817 Extracted: 02/23/11</u>											
Blank Analyzed: 02/23/2011 (11B2817-BLK1)											
Perchlorate	ND	1.0	0.90	ug/l							
LCS Analyzed: 02/23/2011 (11B2817-BS1)											
Perchlorate	26.1	1.0	0.90	ug/l	25.0		104	85-115			
Matrix Spike Analyzed: 02/23/2011 (11B2817-MS1)											
Perchlorate	26.5	1.0	0.90	ug/l	25.0	ND	106	80-120			
Matrix Spike Dup Analyzed: 02/23/2011 (11B2817-MSD1)											
Perchlorate	27.8	1.0	0.90	ug/l	25.0	ND	111	80-120	5	20	
<u>Batch: 11B2818 Extracted: 02/23/11</u>											
Blank Analyzed: 02/23/2011 (11B2818-BLK1)											
Fluoride	ND	0.10	0.020	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B2818 Extracted: 02/23/11</u>											
LCS Analyzed: 02/23/2011 (11B2818-BS1)											
Fluoride	0.978	0.10	0.020	mg/l	1.00		98	90-110			
Matrix Spike Analyzed: 02/23/2011 (11B2818-MS1) Source: IUB1930-01											
Fluoride	1.06	0.10	0.020	mg/l	1.00	0.0439	102	80-120			
Matrix Spike Dup Analyzed: 02/23/2011 (11B2818-MSD1) Source: IUB1930-01											
Fluoride	1.05	0.10	0.020	mg/l	1.00	0.0439	100	80-120	1	20	
<u>Batch: 11B2925 Extracted: 02/23/11</u>											
Blank Analyzed: 02/23/2011 (11B2925-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/23/2011 (11B2925-BS1)											
Total Cyanide	185	5.0	2.2	ug/l	200		92	90-110			
Matrix Spike Analyzed: 02/23/2011 (11B2925-MS1) Source: IUB1828-01											
Total Cyanide	185	5.0	2.2	ug/l	200	ND	92	70-115			
Matrix Spike Dup Analyzed: 02/23/2011 (11B2925-MSD1) Source: IUB1828-01											
Total Cyanide	184	5.0	2.2	ug/l	200	ND	92	70-115	0.3	15	
<u>Batch: 11B2988 Extracted: 02/24/11</u>											
Blank Analyzed: 02/24/2011 (11B2988-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B2988 Extracted: 02/24/11</u>											
LCS Analyzed: 02/24/2011 (11B2988-BS1)											
Total Dissolved Solids	1010	10	1.0	mg/l	1000		101	90-110			
Duplicate Analyzed: 02/24/2011 (11B2988-DUP1)											
Total Dissolved Solids	1390	10	1.0	mg/l		Source: IUB2188-01 1380			0.4	10	
<u>Batch: 11B3179 Extracted: 02/24/11</u>											
Blank Analyzed: 02/24/2011 (11B3179-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/24/2011 (11B3179-BS1)											
Total Suspended Solids	999	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 02/24/2011 (11B3179-DUP1)											
Total Suspended Solids	23.0	10	1.0	mg/l		Source: IUB2138-02 23.0			0	10	
<u>Batch: 11B3193 Extracted: 02/25/11</u>											
Blank Analyzed: 02/25/2011 (11B3193-BLK1)											
Specific Conductance	ND	1.0	1.0	hos/cm @ 2							
LCS Analyzed: 02/25/2011 (11B3193-BS1)											
Specific Conductance	1370	1.0	1.0	hos/cm @ 2	1410		97	90-110			
Duplicate Analyzed: 02/25/2011 (11B3193-DUP1)											
Specific Conductance	31.7	1.0	1.0	hos/cm @ 2		Source: IUB2023-01 31.0			2	5	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0193 Extracted: 03/02/11											
Blank Analyzed: 03/02/2011 (11C0193-BLK1)											
Total Organic Carbon	ND	1.0	0.50	mg/l							
LCS Analyzed: 03/02/2011 (11C0193-BS1)											
Total Organic Carbon	9.35	1.0	0.50	mg/l	10.0		93	90-110			
Matrix Spike Analyzed: 03/02/2011 (11C0193-MS1)											
						Source: IUB1966-03					
Total Organic Carbon	14.3	1.0	0.50	mg/l	5.00	10.1	84	80-120			
Matrix Spike Dup Analyzed: 03/02/2011 (11C0193-MSD1)											
						Source: IUB1966-03					
Total Organic Carbon	14.3	1.0	0.50	mg/l	5.00	10.1	84	80-120	0.1	20	

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1055418 Extracted: 02/24/11											
Blank Analyzed: 02/26/2011 (G1B240000418B)						Source:					
1,2,3,4,6,7,8-HpCDD	0.0000014	0.00005	0.00000035	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	0.0000012	0.00005	0.00000027	ug/L				-			J, Q
1,2,3,4,7,8,9-HpCDF	0.0000008	0.00005	0.00000004	ug/L				-			J, Q
1,2,3,4,7,8-HxCDD	0.00000076	0.00005	0.00000035	ug/L				-			J
1,2,3,4,7,8-HxCDF	0.00000087	0.00005	0.00000021	ug/L				-			J
1,2,3,6,7,8-HxCDD	0.00000065	0.00005	0.00000028	ug/L				-			J
1,2,3,6,7,8-HxCDF	0.00000071	0.00005	0.00000019	ug/L				-			J
1,2,3,7,8,9-HxCDD	0.0000011	0.00005	0.00000031	ug/L				-			J, Q
1,2,3,7,8,9-HxCDF	0.0000006	0.00005	0.00000025	ug/L				-			J, Q
1,2,3,7,8-PeCDD	ND	0.00005	0.00000069	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.00000042	ug/L				-			
2,3,4,6,7,8-HxCDF	0.00000041	0.00005	0.00000018	ug/L				-			J, Q
2,3,4,7,8-PeCDF	ND	0.00005	0.00000044	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.00000004	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.00000026	ug/L				-			
OCDD	0.0000032	0.0001	0.00000005	ug/L				-			J, Q
OCDF	0.0000012	0.0001	0.00000046	ug/L				-			J
Total HpCDD	0.0000027	0.00005	0.00000035	ug/L				-			J, Q
Total HpCDF	0.000002	0.00005	0.00000033	ug/L				-			J, Q
Total HxCDD	0.0000034	0.00005	0.00000031	ug/L				-			J, Q
Total HxCDF	0.0000029	0.00005	0.00000002	ug/L				-			J, Q
Total PeCDD	ND	0.00005	0.00000069	ug/L				-			
Total PeCDF	ND	0.00005	0.00000018	ug/L				-			
Total TCDD	ND	0.00001	0.00000004	ug/L				-			
Total TCDF	0.00000056	0.00001	0.00000026	ug/L				-			J, Q
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0016			ug/L	0.002		79	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0017			ug/L	0.002		84	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0017			ug/L	0.002		83	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0014			ug/L	0.002		70	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0015			ug/L	0.002		74	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0017			ug/L	0.002		85	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0016			ug/L	0.002		82	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0017			ug/L	0.002		85	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0016			ug/L	0.002		82	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0016			ug/L	0.002		80	24-185			

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1055418 Extracted: 02/24/11											
Blank Analyzed: 02/26/2011 (G1B240000418B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0017			ug/L	0.002		83	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0016			ug/L	0.002		82	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0015			ug/L	0.002		75	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0015			ug/L	0.002		75	24-169			
Surrogate: 13C-OCDD	0.0031			ug/L	0.004		78	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00086			ug/L	0.0008		108	35-197			
LCS Analyzed: 02/26/2011 (G1B240000418C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00115	0.00005	0.0000031	ug/L	0.001		115	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00111	0.00005	0.000002	ug/L	0.001		111	82-122			Ba
1,2,3,4,7,8,9-HpCDF	0.00109	0.00005	0.0000031	ug/L	0.001		109	78-138			Ba
1,2,3,4,7,8-HxCDD	0.00102	0.00005	0.0000012	ug/L	0.001		102	70-164			Ba
1,2,3,4,7,8-HxCDF	0.0011	0.00005	0.00000098	ug/L	0.001		110	72-134			Ba
1,2,3,6,7,8-HxCDD	0.00117	0.00005	0.00000097	ug/L	0.001		117	76-134			Ba
1,2,3,6,7,8-HxCDF	0.00114	0.00005	0.00000086	ug/L	0.001		114	84-130			Ba
1,2,3,7,8,9-HxCDD	0.00124	0.00005	0.0000011	ug/L	0.001		124	64-162			Ba
1,2,3,7,8,9-HxCDF	0.0011	0.00005	0.0000012	ug/L	0.001		110	78-130			Ba
1,2,3,7,8-PeCDD	0.00102	0.00005	0.000001	ug/L	0.001		102	70-142			
1,2,3,7,8-PeCDF	0.00113	0.00005	0.0000013	ug/L	0.001		113	80-134			
2,3,4,6,7,8-HxCDF	0.00108	0.00005	0.00000082	ug/L	0.001		108	70-156			Ba
2,3,4,7,8-PeCDF	0.00118	0.00005	0.0000014	ug/L	0.001		118	68-160			
2,3,7,8-TCDD	0.000194	0.00001	0.00000039	ug/L	0.0002		97	67-158			
2,3,7,8-TCDF	0.000222	0.00001	0.00000031	ug/L	0.0002		111	75-158			
OCDD	0.00206	0.0001	0.0000043	ug/L	0.002		103	78-144			Ba
OCDF	0.00204	0.0001	0.0000024	ug/L	0.002		102	63-170			Ba
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00137			ug/L	0.002		68	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00149			ug/L	0.002		75	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00148			ug/L	0.002		74	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00136			ug/L	0.002		68	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00145			ug/L	0.002		72	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00163			ug/L	0.002		82	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00156			ug/L	0.002		78	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00161			ug/L	0.002		81	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0015			ug/L	0.002		75	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00144			ug/L	0.002		72	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00158			ug/L	0.002		79	22-176			

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1055418 Extracted: 02/24/11											
LCS Analyzed: 02/26/2011 (G1B240000418C)											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00147			ug/L	0.002		73	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00153			ug/L	0.002		77	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00143			ug/L	0.002		72	22-152			
Surrogate: 13C-OCDD	0.00262			ug/L	0.004		66	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000822			ug/L	0.0008		103	31-191			

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Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2115-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.29	4.8	15
IUB2115-01	624-Reg-X-2+c12DCE, LOW	1,1-Dichloroethene	ug/l	0	0.50	6
IUB2115-01	624-Reg-X-2+c12DCE, LOW	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUB2115-01	624-Reg-X-2+c12DCE, LOW	Trichloroethene	ug/l	1.84	0.50	5
IUB2115-01	Settleable Solids - SM2540F	Total Settleable Solids	ml/l	0	0.10	0.3

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2115-02	624-Reg-X-2+c12DCE, LOW	1,1-Dichloroethene	ug/l	0	0.50	6
IUB2115-02	624-Reg-X-2+c12DCE, LOW	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUB2115-02	624-Reg-X-2+c12DCE, LOW	Trichloroethene	ug/l	0	0.50	5

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2115-03	608-Pesticides (LL)	alpha-BHC	ug/l	0	0.0050	0.03
IUB2115-03	625+NDMA, LL	2,4,6-Trichlorophenol	ug/l	0	0.943	13
IUB2115-03	625+NDMA, LL	2,4-Dinitrotoluene	ug/l	0	4.72	18
IUB2115-03	625+NDMA, LL	Bis(2-ethylhexyl)phthalate	ug/l	1.25	4.72	4
IUB2115-03	625+NDMA, LL	N-Nitrosodimethylamine	ug/l	0	1.89	16
IUB2115-03	625+NDMA, LL	Pentachlorophenol	ug/l	0	1.89	16.5
IUB2115-03	Ammonia-N, Titr 4500NH3-C (w/di:Ammonia-N (Distilled)	Ammonia-N	mg/l	0	0.500	10.1
IUB2115-03	Antimony-200.8	Antimony	ug/l	0.27	2.0	6
IUB2115-03	Arsenic-200.7	Arsenic	ug/l	-4	10	10
IUB2115-03	Barium-200.7	Barium	mg/l	0.034	0.010	1
IUB2115-03	Beryllium-200.7	Beryllium	ug/l	0.051	2.0	4
IUB2115-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	1.95	2.0	30
IUB2115-03	Cadmium-200.8	Cadmium	ug/l	0.033	1.0	3.1
IUB2115-03	Chloride - 300.0	Chloride	mg/l	16	0.50	150
IUB2115-03	Chromium VI-218.6	Chromium VI	ug/l	0	1.00	16
IUB2115-03	Copper-200.8	Copper	ug/l	4.63	2.00	14
IUB2115-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	1.43	5.0	8.5

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11

Received: 02/19/11

IUB2115-03	Fluoride SM4500F,C	Fluoride	mg/l	0.33	0.10	1.6
IUB2115-03	Iron-200.7	Iron	mg/l	0.97	0.040	0.3
IUB2115-03	Lead-200.8	Lead	ug/l	0.53	1.0	5.2
IUB2115-03	Manganese-200.7	Manganese	ug/l	32	20	50
IUB2115-03	MBAS - SM5540C	Surfactants (MBAS)	mg/l	0.037	0.10	0.5
IUB2115-03	Mercury - 245.1	Mercury	ug/l	0.083	0.20	0.1
IUB2115-03	Nickel-200.7	Nickel	ug/l	0.47	10	96
IUB2115-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.15	0.11	8
IUB2115-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUB2115-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.15	0.26	8
IUB2115-03	Perchlorate 314.0 (1ppb_IC6)	Perchlorate	ug/l	0	1.0	6
IUB2115-03	Selenium-200.8	Selenium	ug/l	0.42	2.0	5
IUB2115-03	Silver-200.8	Silver	ug/l	0.045	1.0	4.1
IUB2115-03	Sulfate-300.0	Sulfate	mg/l	84	5.0	300
IUB2115-03	TDS - SM2540C	Total Dissolved Solids	mg/l	306	10	950
IUB2115-03	Thallium-200.8	Thallium	ug/l	0.0024	1.0	2
IUB2115-03	TSS - SM2540D	Total Suspended Solids	mg/l	12	10	45
IUB2115-03	Zinc-200.7	Zinc	ug/l	7.68	20.0	119

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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Compliance Check

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LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
Ba	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
J	Estimated result. Result is less than the reporting limit.
Ja	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
Jb	The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
L6	Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
M2	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
MHA	Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
N2	See corrective action report.
Q	Estimated maximum possible concentration (EMPC).
R-3	The RPD exceeded the acceptance limit due to sample matrix effects.
R-7	LCS/LCSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
U	The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
Z2	Surrogate recovery was above the acceptance limits. Data not impacted.
Z6	Surrogate recovery was below acceptance limits.
ZX	Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For 1,2-Diphenylhydrazine:

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

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

TestAmerica Irvine

Debby Wilson
Project Manager

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 618 Michillinda Avenue, Suite 200
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
 Received: 02/19/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 120.1	Water	X	X
EPA 1664A	Water	X	X
EPA 180.1	Water	X	N/A
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 218.6	Water	X	X
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B-SIM	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM 4500-F-C	Water	X	N/A
SM2340B-Diss	Water		
SM2340B	Water	X	N/A
SM2540C	Water	X	N/A
SM2540F	Water	X	X
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5310B	Water	X	X
SM5540-C	Water	X	N/A
SM9221 A,B,C,E	Water		

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr
Samples: IUB2115-01

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Gross Alpha
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Gross Beta
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Level 4 Data Package
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Radium, Combined
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Strontium 90
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Tritium
Samples: IUB2115-03, IUB2115-04

Analysis Performed: Uranium, Combined
Samples: IUB2115-03, IUB2115-04

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IUB2115

Sampled: 02/19/11
Received: 02/19/11

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106 - Amherst, NY 14228

Method Performed: 8664
Samples: IUB2115-03, IUB2115-04

Method Performed: 900
Samples: IUB2115-03, IUB2115-04

Method Performed: 901.1
Samples: IUB2115-03, IUB2115-04

Method Performed: 903.1
Samples: IUB2115-03, IUB2115-04

Method Performed: 904
Samples: IUB2115-03, IUB2115-04

Method Performed: 905
Samples: IUB2115-03, IUB2115-04

Method Performed: 906
Samples: IUB2115-03

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: IUB2115-03, IUB2115-03RE

Truesdail Laboratories-SUB *California Cert #1237*

14201 Franklin Avenue - Tustin, CA 92680

Analysis Performed: Hydrazine
Samples: IUB2115-03

TestAmerica Irvine

Debby Wilson
Project Manager



EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION

2030 Wright Avenue

Richmond, California 94804-3849

Phone (510) 235-2633 Fax (510) 235-0438

Toll Free (800) 841-5487

www.eberlineservices.com

March 18, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUB2115
Eberline Analytical Report S102234-8664
Sample Delivery Group 8664**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUB2115. The samples were received on February 22, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8664 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Samples IUB2115-03 and IUB2115-04 (Trip Blank) were analyzed in a common prep batch with other outfall samples from this project. The QC samples from that common prep batch were assigned to SDG 8663 and are reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 **Tritium Analysis** – The tritium analysis for sample IUB2115-04 (Trip Blank) was cancelled. See attached client email. No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 **Strontium-90 Analysis** – Due to low chemical yield for the duplicate analysis of sample IUB1966-03 (SDG 8663), the entire analytical batch was realiquoted and reanalyzed, yielding acceptable results. No other problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 **Radium-226 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.5 **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.6 **Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 **Gamma Spectroscopy** – The K-40 MDA for the sample IUB1966-03 was 29.1 pCi/L, greater than the required detection limit of 25 pCi/L. No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0 Case Narrative Certification Statement

“I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.”



N. Joseph Verville
Client Services Manager

3/18/11

Date

EBERLINE ANALYTICAL
SDG 8664

SDG 8664
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2115

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	8
Lab Control Samples	.	.	.	10
Duplicates	.	.	.	12
Data Sheets	.	.	.	14
Method Summaries	.	.	.	16
Report Guides	.	.	.	24
End of Section	.	.	.	38

VB

Prepared by

N. Joseph Verville

Reviewed by

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2115

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

LAB SAMPLE SUMMARY

SDG 8664
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2115

LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S102233-03	Lab Control Sample		WATER				
S102233-04	Method Blank		WATER				
S102233-05	Duplicate (S102233-01)	Boeing - SSFL	WATER				02/18/11 15:31
S102233-06	Method Blank		WATER				
S102233-07	Duplicate (S102233-01)	Boeing - SSFL	WATER				02/18/11 15:31
S102233-08	Lab Control Sample		WATER				
S102234-01	IUB2115-03	Boeing - SSFL	WATER			IUB2115	02/19/11 18:41
S102234-02	IUB2115-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUB2115	02/19/11 17:00

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2115

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8663		Method Blank	WATER						S102233-04	8663-004
		Method Blank	WATER						S102233-06	8663-006
		Lab Control Sample	WATER						S102233-03	8663-003
		Lab Control Sample	WATER						S102233-08	8663-008
		Duplicate (S102233-01)	WATER		10.0 L		02/22/11	4	S102233-05	8663-005
		Duplicate (S102233-01)	WATER		10.0 L		02/22/11	4	S102233-07	8663-007
8664	IUB2115	IUB2115-03	WATER		10.0 L		02/22/11	3	S102234-01	8664-001
		IUB2115-04 (TRIP-BLANK)	WATER		10.0 L		02/22/11	3	S102234-02	8664-002

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
 Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
 Contract IUB2115

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI- FIERS	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS
Beta Counting										
AC	WATER	Radium-228 in Water	7281-033	10.4	2			1	1	1/0/1
SR	WATER	Strontium-90 in Water	7281-033	10.4	2			1	1	1/0/1
Gas Proportional Counting										
80A	WATER	Gross Alpha in Water	7281-033	20.6	2			1	1	1/0/1
80B	WATER	Gross Beta in Water	7281-033	11.0	2			1	1	1/0/1
Gamma Spectroscopy										
GAM	WATER	Gamma Emitters in Water	7281-033	7.0	2			1	1	1/0/1
Kinetic Phosphorimetry, ug										
U_T	WATER	Uranium, Total	7281-033		2			1	1	1/0/1
Liquid Scintillation Counting										
H	WATER	Tritium in Water	7281-033	10.0	1			1	1	1/0/1
Radon Counting										
RA	WATER	Radium-226 in Water	7281-033	16.4	2			1	1	1/0/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
 In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-PBS
 Version 3.06
 Report date 03/18/11

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SDG 8664

LAB WORK SUMMARY

SDG 8664
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2115

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S102233-03	Lab Control Sample	WATER	8663-003	80A/80		03/04/11	03/07/11	BW	Gross Alpha in Water	
			8663-003	80B/80		03/04/11	03/07/11	BW	Gross Beta in Water	
			8663-003	AC		03/09/11	03/16/11	BW	Radium-228 in Water	
			8663-003	GAM		02/28/11	03/05/11	MWT	Gamma Emitters in Water	
			8663-003	H		03/10/11	03/14/11	BW	Tritium in Water	
			8663-003	RA		03/09/11	03/11/11	BW	Radium-226 in Water	
			8663-003	U_T		03/04/11	03/07/11	BW	Uranium, Total	
S102233-04	Method Blank	WATER	8663-004	80A/80		03/04/11	03/07/11	BW	Gross Alpha in Water	
			8663-004	80B/80		03/04/11	03/07/11	BW	Gross Beta in Water	
			8663-004	AC		03/09/11	03/16/11	BW	Radium-228 in Water	
			8663-004	GAM		02/28/11	03/05/11	MWT	Gamma Emitters in Water	
			8663-004	H		03/10/11	03/14/11	BW	Tritium in Water	
			8663-004	RA		03/09/11	03/11/11	BW	Radium-226 in Water	
			8663-004	U_T		03/04/11	03/07/11	BW	Uranium, Total	
S102233-05	Duplicate (S102233-01) 02/18/11 Boeing - SSFL 02/22/11	WATER	8663-005	80A/80		03/05/11	03/07/11	BW	Gross Alpha in Water	
			8663-005	80B/80		03/05/11	03/07/11	BW	Gross Beta in Water	
			8663-005	AC		03/09/11	03/16/11	BW	Radium-228 in Water	
			8663-005	GAM		02/28/11	03/05/11	MWT	Gamma Emitters in Water	
			8663-005	H		03/10/11	03/14/11	BW	Tritium in Water	
			8663-005	RA		03/09/11	03/11/11	BW	Radium-226 in Water	
			8663-005	U_T		03/04/11	03/07/11	BW	Uranium, Total	
S102233-06	Method Blank	WATER	8663-006	SR		03/12/11	03/17/11	BW	Strontium-90 in Water	
S102233-07	Duplicate (S102233-01) 02/18/11 Boeing - SSFL 02/22/11	WATER	8663-007	SR		03/12/11	03/17/11	BW	Strontium-90 in Water	
S102233-08	Lab Control Sample	WATER	8663-008	SR		03/12/11	03/17/11	BW	Strontium-90 in Water	

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

WORK SUMMARY, cont.

SDG 8664
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2115

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S102234-01	IUB2115-03		8664-001	80A/80		03/05/11	03/07/11	BW	Gross Alpha in Water	
02/19/11	Boeing - SSFL	WATER	8664-001	80B/80		03/05/11	03/07/11	BW	Gross Beta in Water	
02/22/11	IUB2115		8664-001	AC		03/09/11	03/16/11	BW	Radium-228 in Water	
			8664-001	GAM		02/28/11	03/14/11	MWT	Gamma Emitters in Water	
			8664-001	H		03/10/11	03/14/11	BW	Tritium in Water	
			8664-001	RA		03/09/11	03/11/11	BW	Radium-226 in Water	
			8664-001	SR	A1	03/12/11	03/17/11	BW	Strontium-90 in Water	
			8664-001	U_T		03/04/11	03/07/11	BW	Uranium, Total	
S102234-02	IUB2115-04 (TRIP-BLANK)		8664-002	80A/80		03/07/11	03/07/11	BW	Gross Alpha in Water	
02/19/11	Boeing - SSFL	WATER	8664-002	80B/80		03/07/11	03/07/11	BW	Gross Beta in Water	
02/22/11	IUB2115		8664-002	AC		03/09/11	03/16/11	BW	Radium-228 in Water	
			8664-002	GAM		03/01/11	03/14/11	MWT	Gamma Emitters in Water	
			8664-002	RA		03/09/11	03/11/11	BW	Radium-226 in Water	
			8664-002	SR	A1	03/12/11	03/17/11	BW	Strontium-90 in Water	
			8664-002	U_T		03/04/11	03/07/11	BW	Uranium, Total	

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0		2		1	1	1	5
80B/80		Gross Beta in Water	900.0		2		1	1	1	5
AC		Radium-228 in Water	904.0		2		1	1	1	5
GAM		Gamma Emitters in Water	901.1		2		1	1	1	5
H		Tritium in Water	906.0		1		1	1	1	4
RA		Radium-226 in Water	903.1		2		1	1	1	5
SR		Strontium-90 in Water	905.0		2		1	1	1	5
U_T		Uranium, Total	D5174		2		1	1	1	5
TOTALS					15		8	8	8	39

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

8663-005

IUB1966-03

DUPLICATE

SDG <u>8664</u>	Client <u>Test America, Inc.</u>	
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2115</u>	
DUPLICATE	ORIGINAL	
Lab sample id <u>S102233-05</u>	Lab sample id <u>S102233-01</u>	Client sample id <u>IUB1966-03</u>
Dept sample id <u>8663-005</u>	Dept sample id <u>8663-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
	Received <u>02/22/11</u>	Collected/Volume <u>02/18/11 15:31</u> <u>10.0 L</u>
		Chain of custody id <u>IUB1966</u>

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD %	3σ TOT	DER σ
Gross Alpha	-0.039	0.27	0.575	3.00	U	80A	0.490	0.30	0.367	J	200	236	2.5
Gross Beta	4.29	0.67	0.948	4.00		80B	3.70	0.71	1.01	J	15	43	1.0
Tritium	-9.08	130	219	500	U	H	-33.1	130	218	U	-		0.3
Radium-226	-0.111	0.25	0.490	1.00	U	RA	-0.028	0.32	0.583	U	-		0.4
Radium-228	-0.087	0.23	0.542	1.00	U	AC	-0.130	0.20	0.493	U	-		0.3
Uranium, Total	0.111	0.015	0.020	1.00	J	U_T	0.104	0.015	0.020	J	7	30	0.7
Potassium-40	U		22.1	25.0	U	GAM	U		29.1	U	-		0.4
Cesium-137	U		1.35	20.0	U	GAM	U		1.25	U	-		0.1

QC-DUP#1 77480

DUPLICATES

Page 1

SUMMARY DATA SECTION

Page 12

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/18/11</u>

EBERLINE ANALYTICAL

SDG 8664

8663-007

IUB1966-03

DUPLICATE

SDG <u>8664</u>	Client <u>Test America, Inc.</u>	
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2115</u>	
DUPLICATE	ORIGINAL	
Lab sample id <u>S102233-07</u>	Lab sample id <u>S102233-01</u>	Client sample id <u>IUB1966-03</u>
Dept sample id <u>8663-007</u>	Dept sample id <u>8663-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
	Received <u>02/22/11</u>	Collected/Volume <u>02/18/11 15:31</u> <u>10.0 L</u>
		Chain of custody id <u>IUB1966</u>

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD %	3σ TOT	DER σ
Strontium-90	-0.117	0.30	0.744	2.00	U	SR	-0.162	0.29	0.728	U	-	0.2	

QC-DUP#1 77702

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/18/11</u>

EBERLINE ANALYTICAL

SDG 8664

8664-001

IUB2115-03

DATA SHEET

SDG <u>8664</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2115</u>
Lab sample id <u>S102234-01</u>	Client sample id <u>IUB2115-03</u>
Dept sample id <u>8664-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>02/22/11</u>	Collected/Volume <u>02/19/11 18:41</u> <u>10.0 L</u>
	Chain of custody id <u>IUB2115</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	0.905	0.45	0.568	3.00	J	80A
Gross Beta	12587472	2.96	0.64	0.960	4.00	J	80B
Tritium	10028178	-67.1	120	211	500	U	H
Radium-226	13982633	0.373	0.37	0.601	1.00	U	RA
Radium-228	15262201	0.171	0.26	0.567	1.00	U	AC
Strontium-90	10098972	0.013	0.29	0.662	2.00	U	SR
Uranium, Total		0.594	0.068	0.020	1.00	J	U_T
Potassium-40	13966002	U		16.6	25.0	U	GAM
Cesium-137	10045973	U		1.05	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/18/11</u>

EBERLINE ANALYTICAL

SDG 8664

8664-002

IUB2115-04 (TRIP-BLANK)

DATA SHEET

SDG <u>8664</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2115</u>
Lab sample id <u>S102234-02</u>	Client sample id <u>IUB2115-04 (TRIP-BLANK)</u>
Dept sample id <u>8664-002</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>02/22/11</u>	Collected/Volume <u>02/19/11 17:00</u> <u>10.0 L</u>
	Chain of custody id <u>IUB2115</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	0.095	0.16	0.258	3.00	U	80A
Gross Beta	12587472	-0.118	0.49	0.821	4.00	U	80B
Radium-226	13982633	0.390	0.35	0.561	1.00	U	RA
Radium-228	15262201	-0.092	0.23	0.547	1.00	U	AC
Strontium-90	10098972	<u>-0.297</u>	0.22	0.689	2.00	U	SR
Uranium, Total		0	0.009	0.020	1.00	U	U_T
Potassium-40	13966002	U		19.0	25.0	U	GAM
Cesium-137	10045973	U		1.38	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/18/11</u>

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

RADIUM-228 IN WATER
BETA COUNTING

Test AC Matrix WATER
SDG 8664
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2115

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Radium-228

Preparation batch 7281-033

S102233-03	8663-003	Lab Control Sample	ok
S102233-04	8663-004	Method Blank	U
S102233-05	8663-005	Duplicate (S102233-01)	- U
S102234-01	8664-001	IUB2115-03	U
S102234-02	8664-002	IUB2115-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-033 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 033

S102233-03	Lab Control Sample	0.801	1.80	69	150								03/09/11	03/09	GRB-224
S102233-04	Method Blank	0.768	1.80	71	150								03/09/11	03/09	GRB-229
S102233-05	Duplicate (S102233-01)	0.542	1.80	74	150					19			03/09/11	03/09	GRB-230
S102234-01	IUB2115-03	0.567	1.80	78	150					18			03/09/11	03/09	GRB-231
S102234-02	IUB2115-04 (TRIP-BLANK)	0.547	1.80	73	150					18			03/09/11	03/09	GRB-232

Nominal values and limits from method 1.00 1.80 30-105 50 180

PROCEDURES REFERENCE 904.0
DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD MDA 0.645 ± 0.256
FOR 5 SAMPLES YIELD 73 ± 7

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER
BETA COUNTING

Test SR Matrix WATER
SDG 8664
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2115

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90

Preparation batch 7281-033

S102233-06		8663-006	Method Blank	U
S102233-07		8663-007	Duplicate (S102233-01)	- U
S102233-08		8663-008	Lab Control Sample	ok
S102234-01	A1	8664-001	IUB2115-03	U
S102234-02	A1	8664-002	IUB2115-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 2.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-033 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 033

S102233-06		Method Blank	0.718	0.500			88	50				03/12/11	03/12	GRB-203
S102233-07		Duplicate (S102233-01)	0.744	0.500			87	50	22	03/12/11	03/12	GRB-204		
S102233-08		Lab Control Sample	0.704	0.500			89	50		03/12/11	03/12	GRB-225		
S102234-01	A1	IUB2115-03	0.662	0.500			91	50	21	03/12/11	03/12	GRB-227		
S102234-02	A1	IUB2115-04 (TRIP-BLANK)	0.689	0.500			82	50	21	03/12/11	03/12	GRB-228		

Nominal values and limits from method 2.00 0.500 30-105 50 180

PROCEDURES REFERENCE 905.0
DWP-380 Strontium in Drinking Water, rev 8

AVERAGES ± 2 SD MDA 0.703 ± 0.062
FOR 5 SAMPLES YIELD 87 ± 7

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 17

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER
 SDG 8664
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2115

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha

Preparation batch 7281-033

S102233-03	80	8663-003	Lab Control Sample	ok
S102233-04	80	8663-004	Method Blank	U
S102233-05	80	8663-005	Duplicate (S102233-01)	ok U
S102234-01	80	8664-001	IUB2115-03	0.905 J
S102234-02	80	8664-002	IUB2115-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-033 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg 033

S102233-03	80	Lab Control Sample	1.78	0.100			60	400				03/02/11	03/04	GRB-214
S102233-04	80	Method Blank	1.25	0.100			58	400				03/02/11	03/04	GRB-216
S102233-05	80	Duplicate (S102233-01)	0.575	0.300			57	400				15 03/02/11	03/05	GRB-214
S102234-01	80	IUB2115-03	0.568	0.300			90	400				14 03/02/11	03/05	GRB-216
S102234-02	80	IUB2115-04 (TRIP-BLANK)	0.258	0.300			0	400				16 03/02/11	03/07	GRB-112

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 0.886 ± 1.23
 FOR 5 SAMPLES RESIDUE 53 ± 65

METHOD SUMMARIES

Page 3

SUMMARY DATA SECTION

Page 18

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
 SDG 8664
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2115

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta

Preparation batch 7281-033

S102233-03	80	8663-003	Lab Control Sample	ok
S102233-04	80	8663-004	Method Blank	U
S102233-05	80	8663-005	Duplicate (S102233-01)	ok
S102234-01	80	8664-001	IUB2115-03	2.96 J
S102234-02	80	8664-002	IUB2115-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR

Preparation batch 7281-033 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg 033

S102233-03	80	Lab Control Sample	2.85	0.100			60	400				03/02/11	03/04	GRB-214
S102233-04	80	Method Blank	2.81	0.100			58	400				03/02/11	03/04	GRB-216
S102233-05	80	Duplicate (S102233-01)	0.948	0.300			57	400			15	03/02/11	03/05	GRB-214
S102234-01	80	IUB2115-03	0.960	0.300			90	400			14	03/02/11	03/05	GRB-216
S102234-02	80	IUB2115-04 (TRIP-BLANK)	0.821	0.300			0	400			16	03/02/11	03/07	GRB-112

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 1.68 ± 2.11
 FOR 5 SAMPLES RESIDUE 53 ± 65

METHOD SUMMARIES

Page 4

SUMMARY DATA SECTION

Page 19

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8664
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2115

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7281-033					
S102233-03		8663-003	Lab Control Sample	ok	ok
S102233-04		8663-004	Method Blank		U
S102233-05		8663-005	Duplicate (S102233-01)		- U
S102234-01		8664-001	IUB2115-03		U
S102234-02		8664-002	IUB2115-04 (TRIP-BLANK)		U

Nominal values and limits from method RDLs (pCi/L) 10.0 20.0

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR
Preparation batch 7281-033			2σ prep error 7.0 %			Reference Lab Notebook No. 7281 pg 033								
S102233-03		Lab Control Sample	2.00									02/23/11	02/28	01,03,00
S102233-04		Method Blank	2.00									02/23/11	02/28	01,01,00
S102233-05		Duplicate (S102233-01)	2.00									10 02/23/11	02/28	01,04,00
S102234-01		IUB2115-03	2.00									9 02/26/11	02/28	MB,08,00
S102234-02		IUB2115-04 (TRIP-BLANK)	2.00									10 02/26/11	03/01	01,03,00

Nominal values and limits from method 6.00 2.00 400 180

PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-IMS
Version 3.06
Report date 03/18/11

METHOD SUMMARIES

Page 5

SUMMARY DATA SECTION

Page 20

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8664
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2115

RESULTS

LAB	RAW	SUF-		Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-033				
S102233-03		8663-003	Lab Control Sample	ok
S102233-04		8663-004	Method Blank	U
S102233-05		8663-005	Duplicate (S102233-01)	ok J
S102234-01		8664-001	IUB2115-03	0.594 J
S102234-02		8664-002	IUB2115-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-033			2σ prep error		Reference Lab Notebook No. 7281 pg 033										
S102233-03		Lab Control Sample	0.205	0.0200									03/04/11	03/04	KPA-001
S102233-04		Method Blank	0.020	0.0200									03/04/11	03/04	KPA-001
S102233-05		Duplicate (S102233-01)	0.020	0.0200					14				03/04/11	03/04	KPA-001
S102234-01		IUB2115-03	0.020	0.0200					13				03/04/11	03/04	KPA-001
S102234-02		IUB2115-04 (TRIP-BLANK)	0.020	0.0200					13				03/04/11	03/04	KPA-001

Nominal values and limits from method 1.00 0.0200 180

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.057 ± 0.165
 FOR 5 SAMPLES YIELD _____ ± _____

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/18/11

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SDG 8664

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
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RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Tritium

Preparation batch 7281-033

S102233-03		8663-003	Lab Control Sample	ok
S102233-04		8663-004	Method Blank	U
S102233-05		8663-005	Duplicate (S102233-01)	- U
S102234-01		8664-001	IUB2115-03	U

Nominal values and limits from method RDLs (pCi/L) 500

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-033 2σ prep error 10.0 % Reference Lab Notebook No. 7281 pg 033

S102233-03		Lab Control Sample	211	0.100			10			75		03/09/11 03/10	LSC-007
S102233-04		Method Blank	215	0.100			10			75		03/09/11 03/10	LSC-007
S102233-05		Duplicate (S102233-01)	219	0.0100			100			75	20	03/09/11 03/10	LSC-007
S102234-01		IUB2115-03	211	0.0100			100			75	19	03/09/11 03/10	LSC-007

Nominal values and limits from method 500 0.0100 100 180

PROCEDURES REFERENCE 906.0
 DWP-212 Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD MDA 214 ± 7.66
 FOR 4 SAMPLES YIELD 55 ± 104

METHOD SUMMARIES

Page 7

SUMMARY DATA SECTION

Page 22

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

LAB METHOD SUMMARY

RADIUM-226 IN WATER
RADON COUNTING

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RESULTS

LAB RAW SUP-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Radium-226

Preparation batch 7281-033

S102233-03	8663-003	Lab Control Sample	ok
S102233-04	8663-004	Method Blank	U
S102233-05	8663-005	Duplicate (S102233-01)	- U
S102234-01	8664-001	IUB2115-03	U
S102234-02	8664-002	IUB2115-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB RAW SUP- MDA ALIQ PREP DILU- YIELD EFF COUNT FWHM DRIFT DAYS ANAL-
SAMPLE ID TEST FIX CLIENT SAMPLE ID pCi/L L FAC TION % % min keV KeV HELD PREPARED YZED DETECTOR

Preparation batch 7281-033 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg 033

S102233-03	Lab Control Sample	0.800	0.100	100	152	03/09/11	03/09	RN-009
S102233-04	Method Blank	0.585	0.100	100	152	03/09/11	03/09	RN-010
S102233-05	Duplicate (S102233-01)	0.490	0.100	100	152	19 03/09/11	03/09	RN-012
S102234-01	IUB2115-03	0.601	0.100	100	152	18 03/09/11	03/09	RN-014
S102234-02	IUB2115-04 (TRIP-BLANK)	0.561	0.100	100	152	18 03/09/11	03/09	RN-015

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.607 ± 0.231
FOR 5 SAMPLES YIELD 100 ± 0

METHOD SUMMARIES

Page 8

SUMMARY DATA SECTION

Page 23

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/18/11

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SDG 8664

SDG 8664
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REPORT GUIDE

Client Test America, Inc.
 Contract IUB2115

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 24

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2115

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of plachets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one plachet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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SDG 8664

SDG 8664
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2115

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

REPORT GUIDES

Page 3

SUMMARY DATA SECTION

Page 26

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2115

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

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SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

DATA SHEET

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
- H Similar to 'L' except the recovery was high.
- P The RESULT is 'preliminary'.
- X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
- 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.
- Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 28

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 29

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUB2115

LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 30

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2115

DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 31

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 32

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2115

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 33

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 34

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUB2115

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

REPORT GUIDES

Page 12

SUMMARY DATA SECTION

Page 35

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

METHOD SUMMARY

correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
 - * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.
- MDAs are underlined if greater than the printed RDL.
- * Aliquots are underlined if less than the nominal value specified for the method.
 - * Preparation factors are underlined if greater than the nominal value specified for the method.
 - * Dilution factors are underlined if greater than the nominal value specified for the method.
 - * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
 - * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
 - * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
 - * Count times are underlined if less than the nominal value

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 36

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

METHOD SUMMARY

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

REPORT GUIDES

Page 14

SUMMARY DATA SECTION

Page 37

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

EBERLINE ANALYTICAL

SDG 8664

SDG 8664
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2115

METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 38

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/18/11

Subcontract Order - TestAmerica Irvine (IUB2115)

8664

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services - SUB
 2030 Wright Avenue
 Richmond, CA 94804
 Phone : (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: 8.0 °C

Ice: Y / N

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

Analysis	Units	Expires	Comments
----------	-------	---------	----------

Sample ID: IUB2115-03 (Outfall 002 (Composite) - Water)

Sampled: 02/19/11 18:41

Gamma Spec-O	pCi/L	02/19/12 18:41	Out eberline, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	08/18/11 18:41	Out eberline, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	08/18/11 18:41	Out eberline, Boeing permit, DO NOT FILTER!
Level 4 Data Package	N/A	03/19/11 18:41	
Radium, Combined-O	pCi/L	02/19/12 18:41	Out eberline Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/19/12 18:41	Out eberline Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/19/12 18:41	Out eberline, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/19/12 18:41	Out eberline, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (V) 500 mL Amber (W)

Sample ID: IUB2115-04 (Trip Blank - Water)

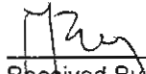
Sampled: 02/19/11 17:00

Gamma Spec-O	pCi/L	02/19/12 17:00	Out eberline, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	08/18/11 17:00	Out eberline, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	08/18/11 17:00	Out eberline, Boeing permit, DO NOT FILTER!
Level 4 Data Package	N/A	03/19/11 17:00	
Radium, Combined-O	pCi/L	02/19/12 17:00	Out eberline Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/19/12 17:00	Out eberline Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/19/12 17:00	Out eberline, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/19/12 17:00	Out eberline, Boeing permit, DO NOT FILTER!

Containers Supplied:

2.5 gal Poly (A) 500 mL Glass (B)

 Released By Date/Time



 Received By Date/Time

 Released By Date/Time

 Received By Date/Time Page 1 of 1



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA IRVINE City IRVINE State CA
 Date/Time received 02/22/11 09:30 CoC No. IUB2115
 Container I.D. No. 160 CTEST Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes [X] No [] N/A []
 2. Custody seals on shipping container dated & signed? Yes [X] No [] N/A []
 3. Custody seals on sample containers intact? Yes [] No [] N/A [X]
 4. Custody seals on sample containers dated & signed? Yes [] No [] N/A [X]
 5. Packing material is: Wet [] Dry [X]
 6. Number of samples in shipping container: 1 Sample Matrix W
 7. Number of containers per sample: 3 (Or see CoC _____)
 8. Samples are in correct container Yes [X] No []
 9. Paperwork agrees with samples? Yes [] No [X]
 10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels [X]
 11. Samples are: In good condition [X] Leaking [] Broken Container [] Missing [X]
 12. Samples are: Preserved [X] Not preserved [X] pH <2/N/A Preservative HN03
 13. Describe any anomalies:
500 ML AMBER BOTTLE, TRIP BLANK SAMPLE - MISSING
14. Was P.M. notified of any anomalies? Yes [] No [] Date _____
15. Inspected by [Signature] Date: 02/22/11 Time: 10:30

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>IUB2115</u>	<u>260</u>						

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. 100142 Calibration date 29 SEP 10

RE: Eberline Analytical - Questions on CoCs

Wilson, Debby [Debby.Wilson@testamericainc.com]

Sent: Monday, February 28, 2011 2:54 PM**To:** Joe Verville; Laura Bralts

What about ice preservation? Is that needed for all analyses?
thanks

DEBBY WILSON

From: Joe Verville [mailto:joe.verville@eberlineservices.com]**Sent:** Monday, February 28, 2011 10:53 AM**To:** Wilson, Debby; Laura Bralts**Subject:** RE: Eberline Analytical - Questions on CoCs

Hello Debby,

The tritium fraction should NOT be preserved. The acid will really mess with the distillation.

Regards,

Joseph Verville
Client Services Manager
Eberline Analytical Corp. Richmond Lab
(510) 235-2633 x264

From: Wilson, Debby [Debby.Wilson@testamericainc.com]**Sent:** Monday, February 28, 2011 10:44 AM**To:** Laura Bralts**Cc:** Joe Verville**Subject:** RE: Eberline Analytical - Questions on CoCs

Laura or Joe,

Boeing has requested that we start the preparation process by acidifying the samples before we send them to you since they are not allowed to acidify in the field and to help meet the 28 day TAT. They requested we prepare a trip blank with the same acid we are using and send it with the sample. We have not been acidifying the glass amber for tritium analysis. Can you confirm that tritium does not need the acidification with nitric acid? If it does, we will start acidifying that bottle too and send a corresponding trip blank in a glass container. If it doesn't, then tritium is not needed on trip blank so cancel the analysis and we will continue with the current process. Hope this makes sense. If not, call me to discuss.

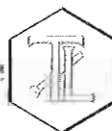
Also, do any of the analyses need to ship on ice?

Thanks

DEBBY WILSON

From: Laura Bralts [mailto:laura.bralts@eberlineservices.com]**Sent:** Friday, February 25, 2011 8:14 AM**To:** Wilson, Debby**Cc:** Joe Verville**Subject:** Eberline Analytical - Questions on CoCs

Hello,



Client: Test America - Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5817

REPORT

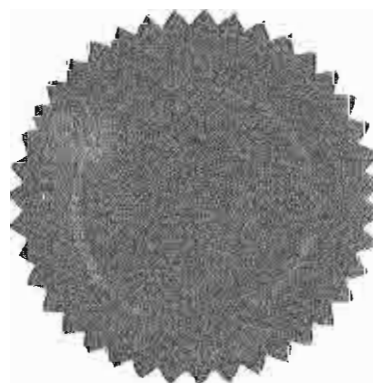
Attention: Debby Wilson
Sample: Water / 1 Sample
Project Name: IUB2115
Project Number: IUB2115
Method Number: EPA 8315 (Modified)
Investigation: Hydrazines

Laboratory No: 993770
Report Date: March 3, 2011
Sampling Date: February 19, 2011
Receiving Date: February 22, 2011
Extraction Date: February 22, 2011
Analysis Date: February 23, 2011
Units: µg/L
Reported By: JS

Analytical Results

Sample ID	Sample Description	Sample Amount (mL)	Dilution Factor	Monomethyl Hydrazine	u-Dimethyl Hydrazine	Hydrazine	Qualifier Codes
709287-MB	Method Blank	100	1	ND	ND	ND	None
993770	IUB2115-03	100	1	ND	ND	ND	None
MDL				1.77	1.13	0.439	
PQL				5.0	5.0	1.00	
Sample Reporting Limits				5.0	5.0	1.00	

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



Jeff Lee, Project Manager
Analytical Services, Truesdail Laboratories, Inc.



Client: Test America - Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5817

Client Contact: Debby Wilson
Sample: Water / 1 Sample
Project Number: IUB2115
Method Number: EPA 8315 (Modified)
Investigation: Hydrazines
Run Batch No.: Extraction: 5463; Analysis: 697

QC Lab. No.: 709287
Project Lab. No.: 993770
Spiked Sample ID: 993770
Report Date: March 3, 2011
Sampling Date: February 19, 2011
Receiving Date: February 22, 2011
Extraction Date: February 22, 2011
Analysis Date: February 23, 2011
Reported By: JS

Quality Control/Quality Assurance Calibration Report

ICV

Parameter	Theoretical Value (ug/L)	Measured Value (ug/L)	Percent Recovery	Control Limits	Flag
Monomethyl Hydrazine	25.0	24.3	97.3	85-115	PASS
u-Dimethyl Hydrazine	25.0	24.8	99.3	85-115	PASS
Hydrazine	5.0	4.91	98.3	85-115	PASS

QCS

Parameter	Theoretical Value (ug/L)	Measured Value (ug/L)	Percent Recovery	Control Limits	Flag
Monomethyl Hydrazine	50.0	45.5	91.0	85-115	PASS
u-Dimethyl Hydrazine	50.0	48.7	97.4	85-115	PASS
Hydrazine	10.0	10.1	101	85-115	PASS

Quality Control/Quality Assurance Spikes Report

LCS/LCSD

Parameter	Spiked Conc. ug/L	Recovered Concentration			Percent Recovery (%)		LCS/LCSD RPD	Flag	Control Limits	
		LCS	LCSD	MB	LCS	LCSD			%D	% Rec.
Monomethyl Hydrazine	50.0	45.6	48.5	0.0	91.2	97.0	6.17%	PASS	20	50-150
u-Dimethyl Hydrazine	50.0	46.6	51.0	0.0	93.2	102	8.98%	PASS	20	50-150
Hydrazine	10.0	10.0	11.1	0.0	100	111	10.0%	PASS	20	50-150

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

Jeff Lee, Project Manager
Analytical Services, Truesdail Laboratories, Inc.

LABORATORY REPORT



"dedicated to providing quality aquatic toxicity testing"

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

Date: February 23, 2011

Client: Test America - Irvine
17461 Derian Ave., Suite 100
Irvine, CA 92614
Attn: Debby Wilson

Laboratory No.: A-11021902-001
Sample ID.: IUB2115-01

Sample Control: The sample was received by ATL in a chilled state, within the recommended hold time and with the chain of custody record attached.

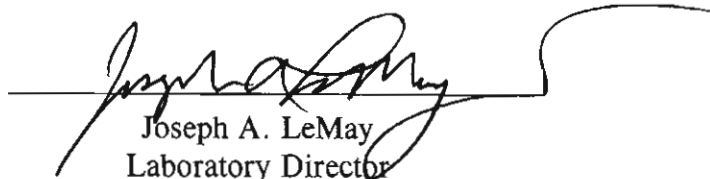
Date Sampled: 02/19/11
Date Received: 02/19/11
Temp. Received: 5.7°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 02/19/11 to 02/23/11

Sample Analysis: The following analyses were performed on your sample:
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).
Attached are the test data generated from the analysis of your sample.

Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IUB2115-01	100% Survival (TU _a = 0.0)

Quality Control: Reviewed and approved by:


Joseph A. LeMay
Laboratory Director

FATHEAD MINNOW PERCENT SURVIVAL TEST
EPA Method 2000.0



Lab No.: A-11021902-001
 Client/ID: TestAmerica Outfall 002

Start Date: 02/19/2011

TEST SUMMARY

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

Source: In-laboratory Culture.
 Test type: Static-Renewal.
 Test Protocol: EPA-821-R-02-012.
 Endpoints: Percent Survival at 96 hrs.
 Test chamber: 600 ml beakers.
 Temperature: 20 +/- 1°C.
 Number of fish per chamber: 10.
 QA/QC No.: RT-110201.

TEST DATA

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.3	8.7	8.1	0	0	11:20
	100%	20.4	8.9	7.8	0	0	
24 Hr	Control	20.1	8.6	7.8	0	0	11:30
	100%	20.0	8.4	8.0	0	0	
48 Hr	Control	20.0	7.8	7.8	0	0	11:00
	100%	20.0	8.1	8.0	0	0	
Renewal	Control	20.0	8.3	7.9	0	0	11:00
	100%	19.9	9.0	7.8	0	0	
72 Hr	Control	20.0	8.0	7.8	0	0	11:30
	100%	19.9	7.8	7.9	0	0	
96 Hr	Control	19.7	7.9	7.9	0	0	11:00
	100%	19.6	7.2	7.9	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.7; Conductivity: 506 umho; Temp: 5.9°C;
 DO: 10.8 mg/l; Alkalinity: 134 mg/l; Hardness: 172 mg/l; NH₃-N: 0.2 mg/l.
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No.
 Control: Alkalinity: 68 mg/l; Hardness: 90 mg/l; Conductivity: 346 umho.
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.
 Dissolved Oxygen (DO) readings in mg/l O₂.

RESULTS

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

Subcontract Order - TestAmerica Irvine (IUB2115)

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB
4350 Transport Street, Unit 107
Ventura, CA 93003
Phone: (805) 650-0546
Fax: (805) 650-0756
Project Location: California
Receipt Temperature: 5-6 °C

Ice: Y N


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

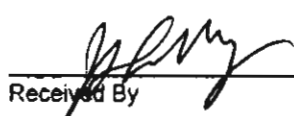
Analysis	Units	Expires	Comments
----------	-------	---------	----------

Sample ID: IUB2115-01 (Outfall 002 (Grab) - Water)		Sampled: 02/19/11 08:45	
--	--	-------------------------	--

Bioassay-Acute 96hr	% Survival	02/20/11 20:45	FH minnow, EPA/821-R02-012, Sub to AqTox Labs
---------------------	------------	----------------	---

Containers Supplied:
1 gal Poly (U)

 2/19/11
 Released By _____ Date/Time _____

 2/19/11 1040
 Received By _____ Date/Time _____

Released By _____ Date/Time _____

Received By _____ Date/Time _____

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007				Project: Boeing-SSFL NPDES Annual Outfall 002 GRAB			ANALYSIS REQUIRED											Field readings: (Log in and include in report Temp and pH) Temp °F = 44 pH = 7.1 DO = 8.45 mg Total Residual Chlorine = 0 Time of readings = 08:45	
Test America Contact: Debby Wilson				Project Manager: Bronwyn Kelly															
Sampler: Rick Branigan				Phone Number: (626) 568-6691															
				Fax Number: (626) 568-6515															
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	VOCs 624 + xylenes + Freon 113, Freon 123A, Cyclohexane + PP	VOCs 624 + A+A+2CVE	Settleable Solids	Conductivity	Oil & Grease (1664-HEM)	8015 - gas	8015 - diesel/jet fuel	Fecal coliform (SM9223)	E. coli (SM9223)	Acute Toxicity	Comments		
Outfall 002	W	VOAs	5	2-19-2011 08:45	HCl	1A, 1B, 1C, 1D, 1E	X												
Outfall 002	W	VOAs	3		None	2A, 2B, 2C		X											
Outfall 002	W	1L Poly	1		None	3			X										
Outfall 002	W	500 mL Poly	2		None	4A, 4B				X									
Outfall 002	W	1L Amber	2		HCl	5A, 5B					X								
Trip Blanks	W	VOAs	3		HCl	6A, 6B, 6C	X												
Trip Blanks	W	VOAs	3		None	7A, 7B, 7C		X											
Outfall 002	W	VOAs	1		HCl	8A					X								
Outfall 002 Dup	W	VOAs	2		HCl	8B, 8C					X								
Outfall 002	W	1L Amber	1		None	9A						X							
Outfall 002 Dup	W	1L Amber	1		None	9B						X							
Outfall 002	W	125mL Poly	1		Na2S2O3	10							X						
Outfall 002	W	125mL Poly	1		Na2S2O3	11								X					
Outfall 002	W	1 Gal Cube	2	2-19-2011 08:45	None	12									X				
These Samples are the Grab Portion of Outfall 002 for this storm event. Composite samples will follow and are to be added to this work order.																			
Relinquished By: <i>Rick Branigan</i>				Date/Time: 2-19-2011				Received By: <i>[Signature]</i>				Date/Time: 2/19/2011				Turn-around time (Check): 24 Hour _____ 72 Hour _____ 48 Hour _____ 5 Day _____ 10 Day _____ Normal <input checked="" type="checkbox"/>			
Relinquished By: <i>[Signature]</i>				Date/Time: 2/19/11				Received By: <i>[Signature]</i>				Date/Time: 2-19-11				Sample Integrity: (Check) Intact _____ On Ice _____			
Relinquished By: <i>[Signature]</i>				Date/Time: 2-19-2011				Received By: <i>[Signature]</i>				Date/Time: 2-19-11				Data Requirements (Check) No Level IV _____ All Level IV _____ NPDES Level IV <input checked="" type="checkbox"/>			



***REFERENCE
TOXICANT
DATA***

FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS



QA/QC Batch No.: RT-110201

TEST SUMMARY

Species: *Pimephales promelas*.
 Age: 13 days old.
 Regulations: NPDES.
 Test chamber volume: 250 ml.
 Feeding: Prior to renewal at 48 hrs.
 Temperature: 20 +/- 1°C.
 Number of replicates: 2.
 Dilution water: MHSF.

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

TEST DATA

Date/Time: Analyst:	INITIAL			24 Hr					48 Hr				
	<u>2-1-11 1100</u>			<u>2-2-11 1030</u>					<u>2-3-11 1030</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	19.2	9.2	8.2	19.2	7.9	8.0	0	0	19.2	8.2	7.8	0	0
1.0 mg/l	19.2	9.1	8.2	19.1	7.9	8.0	0	0	19.1	8.4	7.8	0	0
2.0 mg/l	19.3	9.1	8.2	19.2	8.1	7.9	0	0	19.2	8.5	7.8	0	0
4.0 mg/l	19.3	9.2	8.2	19.1	8.2	7.9	2	4	19.1	8.2	7.9	0	0
8.0 mg/l	19.3	9.2	8.2	19.2	7.9	7.8	10	10	-	-	-	-	-

Date/Time: Analyst:	RENEWAL			72 Hr					96 Hr				
	<u>2-3-11 1030</u>			<u>2-4-11 1030</u>					<u>2-5-11 1030</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	19.1	8.8	8.1	20.2	7.9	8.0	0	0	20.5	7.3	8.0	0	0
1.0 mg/l	19.2	9.1	8.1	20.2	8.0	8.0	0	0	20.5	7.7	8.0	0	0
2.0 mg/l	19.1	9.0	8.1	20.2	8.1	8.0	0	0	20.4	7.9	8.0	0	0
4.0 mg/l	19.2	9.2	8.2	20.2	8.1	8.0	0	0	20.3	7.9	8.0	0	0
8.0 mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments: Control: Alkalinity: 66 mg/l; Hardness: 92 mg/l; Conductivity: 325 umho.
 SDS: Alkalinity: 66 mg/l; Hardness: 93 mg/l; Conductivity: 329 umho.

Concentration-response relationship acceptable? (see attached computer analysis):

Yes (response curve normal)

No (dose interrupted indicated or non-normal)

TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL
(*Pimephales promelas*)

QA/QC BATCH NO.: RT-110201

SOURCE: In-Lab Culture

DATE HATCHED: (-18-11

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

MORTALITIES 48 HOURS PRIOR TO
TO USE IN TESTING: 0

DATE USED IN LAB: 2/1/11

AVERAGE FISH WEIGHT: 0.006 gm

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

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

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

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

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

ACCLIMATION WATER QUALITY:

Temp.: 19.2°C

pH: 8.2

Ammonia: 0.1 mg/l NH₃-N

DO: 9.2 mg/l

Alkalinity: 66 mg/l

Hardness: 2 mg/l

READINGS RECORDED BY: _____

DATE: 2-2-11

Acute Fish Test-96 Hr Survival

Start Date: 2/1/2011 11:00 Test ID: RT110201 Sample ID: REF-Ref Toxicant
 End Date: 2/5/2011 10:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate
 Sample Date: 2/1/2011 Protocol: ACUTE-EPA-821-R-02-012 Test Species: PP-Pimephales promelas

Comments:

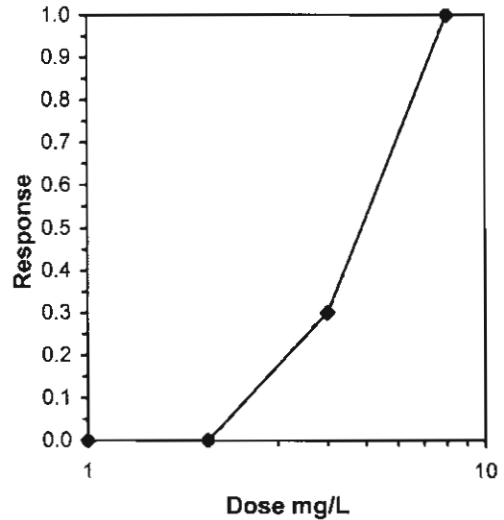
Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	0.8000	0.6000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root					N	Number Resp	Total Number
			Mean	Min	Max	CV%				
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
4	0.7000	0.7000	0.9966	0.8861	1.1071	15.685	2	6	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20	

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

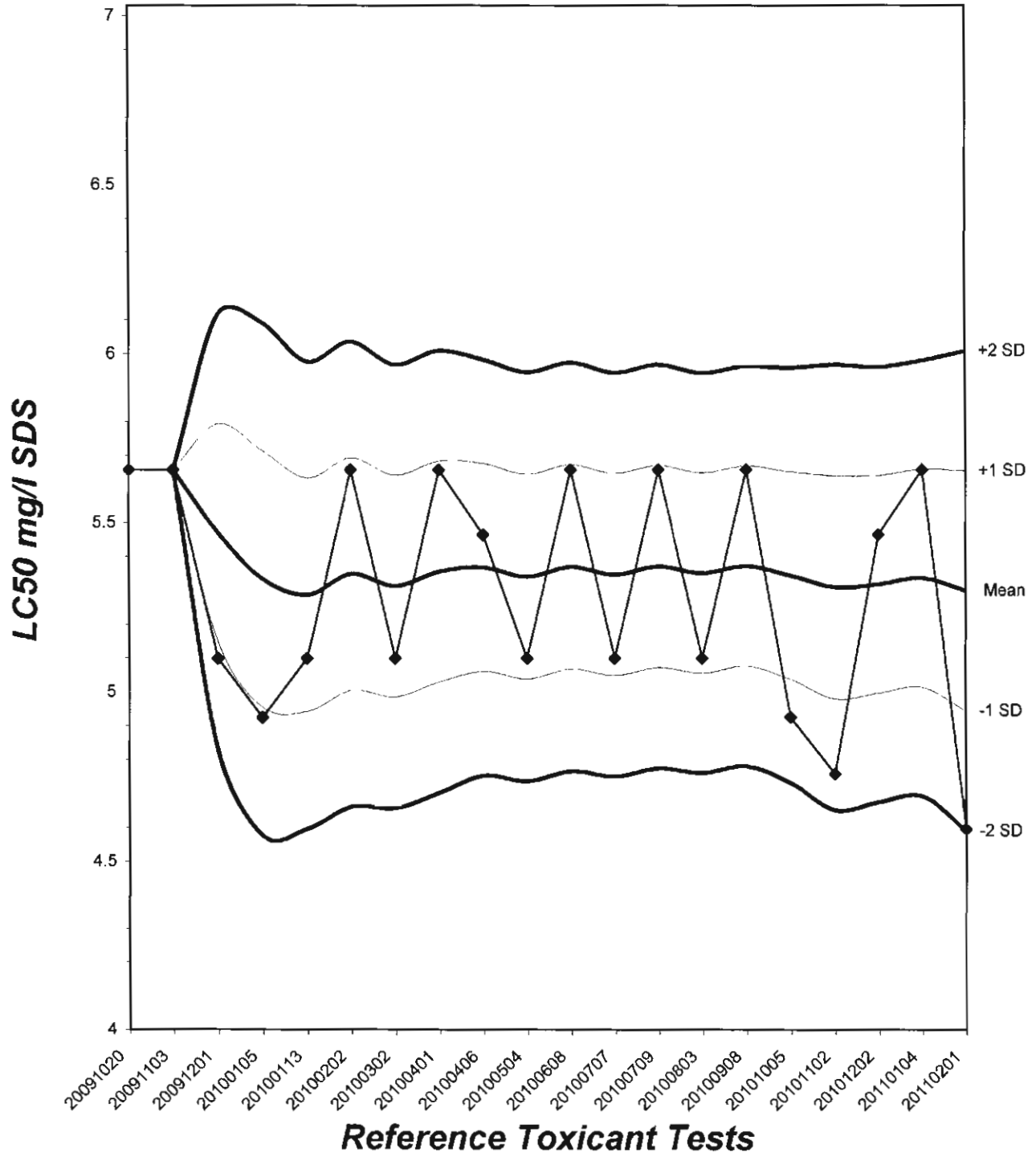
Trimmed Spearman-Kärber

Trim Level	EC50	95% CL	
0.0%	4.5948	3.9863	5.2961
5.0%	4.6576	3.9704	5.4637
10.0%	4.7177	3.9185	5.6800
20.0%	4.8227	3.6460	6.3792
Auto-0.0%	4.5948	3.9863	5.2961



Fathead Minnow Acute Laboratory Control Chart

CV% = 6.7

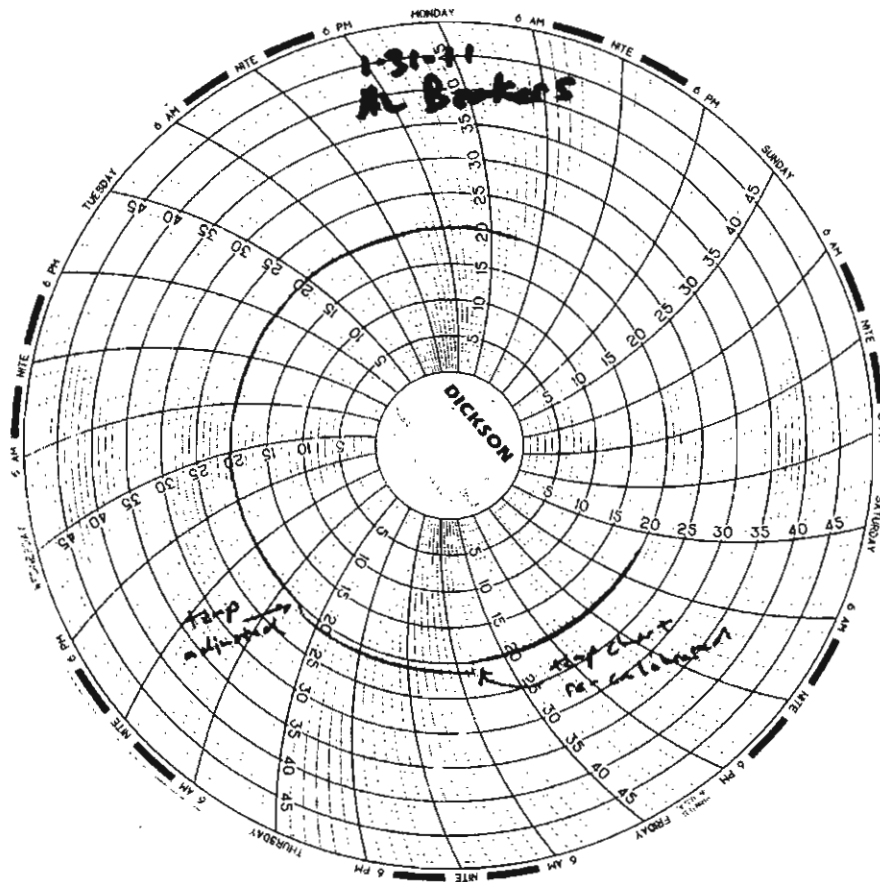


Test Temperature Chart

Test No: RT-110201

Date Tested: 02/01/11 to 02/05/11

Acceptable Range: $20 \pm 1^\circ\text{C}$



APPENDIX G

Section 11

Outfall 002 – February 25 & 26, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUB2817

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: IUB1966
 Project Manager: B. Kelly
 Matrix: Water
 QC Level: IV
 No. of Samples: 3
 No. of Reanalyses/Dilutions: 1
 Laboratory: TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 002 (Grab)	IUB2817-01	N/A	Water	2/25/10 14:55	120.1
Outfall 002 (Composite)	IUB2817-03	G1C010509, S103015-01	Water	2/26/10 11:54	180.1, 200.7, 200.7 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B-Diss, ASTM 5174

II. Sample Management

No anomalies were observed regarding sample management. The samples were received above the temperature limit at Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at Eberline and TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine, no custody seals were required. 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 or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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: L. Calvin

Date Reviewed: March 25, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8,9-HxCDD, and OCDD. The sample results for those isomers were qualified as nondetected, "U," at the level of contamination. The result for total HpCDF was qualified as nondetected, "U," as the total consisted only of the individual isomer also qualified as method blank contamination. Totals for HpCDD were

qualified as estimated, "J," as only a portion of the total result was considered method blank contamination.

- Blank Spikes and Laboratory Control Samples: LCS 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 rinse samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries in the sample were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. EMPCs previously qualified as method blank contamination were not further qualified as EMPCs. Reportable totals containing EMPCs were qualified as estimated, "J." Any detects reported between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

Reviewed By: P. Meeks

Date Reviewed: March 25, 2011

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP metals and 28 days for mercury, were met.
- Tuning: Not applicable to these analyses.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995

and all initial and continuing calibration recoveries were within 90-110% for the ICP metals and 85-115% for mercury. The CRDL/CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no applicable detects.
- Interference Check Samples: Recoveries were within 80-120% for all 200.7 analyses. Boron was detected in the ICSA associated with the total analysis at 76.7 µg/L and was reported in the ICSA associated with the dissolved analysis at -57.7 µg/L; however, the concentration of the primary interferent, iron, was not sufficient to cause matrix interference in the site sample.
- 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 for the methods was evaluated based on the LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to these analyses.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

Zinc was detected marginally above the MDL in the dissolved sample but was not detected in the reported total sample. The reviewer noted that total zinc was detected at a concentration marginally less than the dissolved result in an unreported analysis.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

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

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 6, 2011

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. The remaining aliquots were prepared within the five-day analytical 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." All remaining detector efficiencies were acceptable.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- Blanks: There were no analytes detected in the method blanks.
- Blank Spikes and Laboratory Control Samples: The strontium recovery was nominally above the control limit; however, strontium was not detected in the sample. The remaining recoveries were within laboratory-established control limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are

valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

A notation in the preparation logs indicated that a portion of the aliquots for this sample were filtered and that the filtrate was dissolved and added to the sample aliquot.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: March 25, 2011

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 120.1, 180.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times were met.
- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥ 0.995 . All initial and continuing calibration recoveries were within 90-110%.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for turbidity. The RPD was within the laboratory-established control limit.
- 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either “J+” or “J-“;

otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms IUB2817

Analysis Method 8667

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2817-03 **Sample Date:** 2/26/2011 11:54:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total		0.941	1	0.022	pCi/L	Jb	J	DNQ

Analysis Method 900

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2817-03 **Sample Date:** 2/26/2011 11:54:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	1.34	3	0.795	pCi/L	Jb	J	C, DNQ
Gross Beta	12587472	2.56	4	1.13	pCi/L	Jb	J	DNQ

Analysis Method 901.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2817-03 **Sample Date:** 2/26/2011 11:54:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.6	pCi/L	U	U	
Potassium-40	13966002	ND	25	18	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2817-03 **Sample Date:** 2/26/2011 11:54:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.239	1	0.827	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUB2817-03 **Sample Date:** 2/26/2011 11:54:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	-0.028	1	0.451	pCi/L	U	U	

Analysis Method 905

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	-0.155	2	1.22	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	11.9	500	169	pCi/L	U	U	

Analysis Method EPA 200.7

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	0.49	0.040	0.015	mg/l			
Zinc	7440-66-6	ND	20.0	6.00	ug/l		U	

Analysis Method EPA 200.7-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	0.063	0.040	0.015	mg/l			
Zinc	7440-66-6	7.68	20.0	6.00	ug/l	J	J	DNQ

Analysis Method EPA 245.1

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 245.1-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUB2817-03	Sample Date:	2/26/2011 11:54:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.000002	ug/L	J, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000017	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000026	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000042	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000025	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000033	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000023	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000031	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000032	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.000007	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000081	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000022	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000089	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000028	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000038	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000072	ug/L	J, Ba	U	B
OCDF	39001-02-0	8.8e-006	0.0001	0.0000056	ug/L	J	J	DNQ
Total HpCDD	37871-00-4	1.1e-005	0.00005	0.000002	ug/L	J, Ba	J	B, DNQ
Total HpCDF	38998-75-3	ND	0.00005	0.0000021	ug/L	J, Q, Ba	U	B
Total HxCDD	34465-46-8	ND	0.00005	0.0000031	ug/L		U	
Total HxCDF	55684-94-1	ND	0.00005	0.0000022	ug/L		U	
Total PeCDD	36088-22-9	ND	0.00005	0.000007	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000051	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000028	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000038	ug/L		U	

Analysis Method SM2130B

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUB2817-03 **Sample Date:** 2/26/2011 11:54:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	9.8	1.0	0.040	NTU			

Analysis Method SM2510B

Sample Name Outfall 002 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUB2817-01 **Sample Date:** 2/25/2011 2:55:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	440	1.0	1.0	umhos/c	B-1		

APPENDIX G

Section 12

Outfall 002 – February 25 & 26, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Routine Outfall 002 2010
Routine Outfall 002

Sampled: 02/25/11-02/26/11
Received: 02/26/11
Issued: 04/04/11 12:46

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

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 1°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

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

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals
Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.
Some analytes are reported at a concentration below the estimated detection limit (EDL). The data is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.
The ion abundance ratio for the internal standard 13C-1,2,3,4,7,8 HxCDD is outside of the acceptance criteria. The theoretical area for the internal standard is used to quantitate the recovery and to quantitate related target analytes. There is no adverse impact on the data quality as a result of this anomaly.

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

LABORATORY ID

IUB2817-01
IUB2817-02
IUB2817-03
IUB2817-04

CLIENT ID

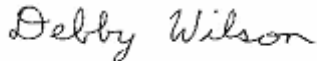
Outfall 002 (Grab)
Trip Blanks
Outfall 002 (Composite)
Trip Blanks

MATRIX

Water
Water
Water
Water

I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-01 (Outfall 002 (Grab) - Water)					Sampled: 02/25/11				
Reporting Units: ug/l									
1,2-Dichloroethane	EPA 624	11C0786	0.28	0.50	ND	1	MB	03/06/11	
1,1-Dichloroethene	EPA 624	11C0786	0.42	2.0	ND	1	MB	03/06/11	
Trichloroethene	EPA 624	11C0786	0.26	2.0	0.86	1	MB	03/06/11	J
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					101 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				
Sample ID: IUB2817-02 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: ug/l									
1,2-Dichloroethane	EPA 624	11C0786	0.28	0.50	ND	1	MB	03/06/11	
1,1-Dichloroethene	EPA 624	11C0786	0.42	2.0	ND	1	MB	03/06/11	
Trichloroethene	EPA 624	11C0786	0.26	2.0	ND	1	MB	03/06/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					104 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	11B3517	1.60	4.72	ND	0.943	up	03/02/11	
2,4-Dinitrotoluene	EPA 625	11B3517	0.189	4.72	ND	0.943	up	03/02/11	
N-Nitrosodimethylamine	EPA 625	11B3517	0.0943	4.72	ND	0.943	up	03/02/11	
Pentachlorophenol	EPA 625	11B3517	0.0943	4.72	ND	0.943	up	03/02/11	
2,4,6-Trichlorophenol	EPA 625	11B3517	0.0943	5.66	ND	0.943	up	03/02/11	
<i>Surrogate: 2,4,6-Tribromophenol (40-120%)</i>					92 %				
<i>Surrogate: 2-Fluorobiphenyl (50-120%)</i>					85 %				
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					79 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					82 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					85 %				
<i>Surrogate: Terphenyl-d14 (50-125%)</i>					96 %				

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 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 02/26/11				
Reporting Units: ug/l									
alpha-BHC	EPA 608	11C0141	0.0024	0.0094	ND	0.943	CN	03/11/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					62 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					75 %				

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Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-01 (Outfall 002 (Grab) - Water)					Sampled: 02/25/11				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C0978	1.3	4.8	ND	1	DA	03/08/11	

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IUB2817 <Page 6 of 51>

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: mg/l									
Iron	EPA 200.7	11C0647	0.015	0.040	0.49	1	LL	03/14/11	
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: ug/l									
Mercury	EPA 245.1	11C0167	0.10	0.20	ND	1	DB	03/02/11	
Cadmium	EPA 200.8	11C0501	0.10	1.0	ND	1	RDC	03/04/11	
Zinc	EPA 200.7	11C0647	6.00	20.0	ND	1	DT	03/08/11	
Copper	EPA 200.8	11C0501	0.50	2.0	2.3	1	RDC	03/04/11	
Lead	EPA 200.8	11C0501	0.20	1.0	0.24	1	RDC	03/04/11	J
Selenium	EPA 200.8	11C0501	0.50	2.0	ND	1	RDC	03/04/11	

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 02/26/11				
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	11B3548	0.015	0.040	0.063	1	DP	03/09/11	
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11C0168	0.10	0.20	ND	1	DB	03/02/11	
Cadmium	EPA 200.8-Diss	11C0285	0.10	1.0	ND	1	RDC	03/03/11	
Zinc	EPA 200.7-Diss	11B3548	6.00	20.0	7.68	1	LL	03/09/11	J
Copper	EPA 200.8-Diss	11C0285	0.50	2.0	0.77	1	RDC	03/03/11	J
Lead	EPA 200.8-Diss	11C0285	0.20	1.0	ND	1	RDC	03/03/11	
Selenium	EPA 200.8-Diss	11C0285	0.50	2.0	ND	1	RDC	03/03/11	

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 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 02/26/11				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11C0150	0.500	0.500	ND	1	TMK	03/01/11	
Biochemical Oxygen Demand	SM5210B	11B3539	0.50	2.0	ND	1	XL	03/05/11	
Chloride	EPA 300.0	11B3360	3.0	5.0	20	10	KS	02/26/11	
Nitrate-N	EPA 300.0	11B3360	0.060	0.11	0.14	1	KS	02/26/11	
Nitrite-N	EPA 300.0	11B3360	0.090	0.15	ND	1	KS	02/26/11	
Nitrate/Nitrite-N	EPA 300.0	11B3360	0.15	0.26	ND	1	KS	02/26/11	
Sulfate	EPA 300.0	11B3360	3.0	5.0	92	10	KS	02/26/11	
Surfactants (MBAS)	SM5540-C	11B3430	0.050	0.10	0.20	1	EL	02/26/11	
Total Dissolved Solids	SM2540C	11C0204	1.0	10	370	1	MC	03/02/11	
Total Suspended Solids	SM 2540D	11C0529	1.0	10	3.0	1	DK1	03/03/11	J

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 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-01 (Outfall 002 (Grab) - Water)					Sampled: 02/25/11				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	11B3432	0.10	0.10	ND	1	AC1	02/26/11	
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: NTU									
Turbidity	SM2130B	11B3525	0.040	1.0	9.8	1	RRZ	02/28/11	
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11C0021	0.90	4.0	ND	1	mn	03/01/11	
Total Cyanide	SM4500CN-E	11C0158	2.2	5.0	ND	1	HH	03/01/11	
Sample ID: IUB2817-01 (Outfall 002 (Grab) - Water)					Sampled: 02/25/11				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	SM2510B	11C0016	1.0	1.0	440	1	MC	03/01/11	B-1

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 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

8667

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Uranium, Total	8667	8667		1	0.941	1	TSC	03/15/11	Jb
Sample ID: IUB2817-04 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: pCi/L									
Uranium, Total	8667	8667		1	-0.005	1	TSC	03/15/11	U

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Gross Alpha	900	8667		3	1.34	1	LS	03/14/11	Jb
Gross Beta	900	8667		4	2.56	1	LS	03/14/11	Jb
Sample ID: IUB2817-04 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: pCi/L									
Gross Alpha	900	8667		3	-0.078	1	LS	03/14/11	U
Gross Beta	900	8667		4	-0.174	1	LS	03/14/11	U

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8667		20	ND	1	LS	03/10/11	U
Potassium-40	901.1	8667		25	ND	1	LS	03/10/11	U
Sample ID: IUB2817-04 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8667		20	ND	1	LS	03/10/11	U
Potassium-40	901.1	8667		25	ND	1	LS	03/10/11	U

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Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Radium-226	903.1	8667		1	0.239	1	ASM	03/19/11	U
Sample ID: IUB2817-04 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: pCi/L									
Radium-226	903.1	8667		1	-0.006	1	ASM	03/19/11	U

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Radium-228	904	8667		1	-0.028	1	ASM	03/18/11	U
Sample ID: IUB2817-04 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: pCi/L									
Radium-228	904	8667		1	-0.005	1	ASM	03/18/11	U

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Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Strontium-90	905	8667		2	-0.155	1	ASM	03/16/11	U
Sample ID: IUB2817-04 (Trip Blanks - Water)					Sampled: 02/25/11				
Reporting Units: pCi/L									
Strontium-90	905	8667		2	0.252	1	ASM	03/16/11	U

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Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)					Sampled: 02/26/11				
Reporting Units: pCi/L									
Tritium	906	8667		500	11.9	1	WL	03/22/11	U

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 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 02/26/11				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1062414	0.000002	0.00005	5.3e-006	1.02	SO	03/07/11	J, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1062414	0.0000017	0.00005	1.9e-006	1.02	SO	03/07/11	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1062414	0.0000026	0.00005	ND	1.02	SO	03/07/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1062414	0.0000042	0.00005	ND	1.02	SO	03/07/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1062414	0.0000025	0.00005	ND	1.02	SO	03/07/11	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1062414	0.0000033	0.00005	ND	1.02	SO	03/07/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1062414	0.0000023	0.00005	ND	1.02	SO	03/07/11	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1062414	0.0000031	0.00005	ND	1.02	SO	03/07/11	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1062414	0.0000032	0.00005	ND	1.02	SO	03/07/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1062414	0.000007	0.00005	ND	1.02	SO	03/07/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1062414	0.0000081	0.00005	ND	1.02	SO	03/07/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1062414	0.0000022	0.00005	ND	1.02	SO	03/07/11	
2,3,4,7,8-PeCDF	EPA-5 1613B	1062414	0.0000089	0.00005	ND	1.02	SO	03/07/11	
2,3,7,8-TCDD	EPA-5 1613B	1062414	0.0000028	0.00001	ND	1.02	SO	03/07/11	
2,3,7,8-TCDF	EPA-5 1613B	1062414	0.0000038	0.00001	ND	1.02	SO	03/07/11	
OCDD	EPA-5 1613B	1062414	0.0000072	0.0001	3.5e-005	1.02	SO	03/07/11	J, Ba
OCDF	EPA-5 1613B	1062414	0.0000056	0.0001	8.8e-006	1.02	SO	03/07/11	J
Total HpCDD	EPA-5 1613B	1062414	0.000002	0.00005	1.1e-005	1.02	SO	03/07/11	J, Ba
Total HpCDF	EPA-5 1613B	1062414	0.0000021	0.00005	1.9e-006	1.02	SO	03/07/11	J, Q, Ba
Total HxCDD	EPA-5 1613B	1062414	0.0000031	0.00005	ND	1.02	SO	03/07/11	
Total HxCDF	EPA-5 1613B	1062414	0.0000022	0.00005	ND	1.02	SO	03/07/11	
Total PeCDD	EPA-5 1613B	1062414	0.000007	0.00005	ND	1.02	SO	03/07/11	
Total PeCDF	EPA-5 1613B	1062414	0.0000051	0.00005	ND	1.02	SO	03/07/11	
Total TCDD	EPA-5 1613B	1062414	0.0000028	0.00001	ND	1.02	SO	03/07/11	
Total TCDF	EPA-5 1613B	1062414	0.0000038	0.00001	ND	1.02	SO	03/07/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%) 96 %
 Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%) 119 %
 Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%) 110 %
 Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%) 72 %
 Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%) 111 %
 Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%) 99 %
 Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%) 116 %
 Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%) 109 %
 Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%) 67 %
 Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%) 80 %
 Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%) 120 %
 Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%) 80 %
 Surrogate: 13C-2,3,7,8-TCDD (25-164%) 80 %
 Surrogate: 13C-2,3,7,8-TCDF (24-169%) 89 %
 Surrogate: 13C-OCDD (17-157%) 80 %
 Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%) 89 %

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 002 (Grab) (IUB2817-01) - Water					
SM2540F	2	02/25/2011 14:55	02/26/2011 14:40	02/26/2011 18:00	02/26/2011 18:00
Sample ID: Outfall 002 (Composite) (IUB2817-03) - Water					
EPA 300.0	2	02/26/2011 11:54	02/26/2011 14:40	02/26/2011 19:00	02/26/2011 19:03
Filtration	1	02/26/2011 11:54	02/26/2011 14:40	02/27/2011 10:00	02/27/2011 10:00
SM2130B	2	02/26/2011 11:54	02/26/2011 14:40	02/28/2011 08:40	02/28/2011 08:40
SM5210B	2	02/26/2011 11:54	02/26/2011 14:40	02/28/2011 09:36	03/05/2011 12:00
SM5540-C	2	02/26/2011 11:54	02/26/2011 14:40	02/26/2011 19:31	02/26/2011 19:45

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IUB2817 <Page 19 of 51>

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 Routine Outfall 002
 Report Number: IUB2817

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 Received: 02/26/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0786 Extracted: 03/06/11											
Blank Analyzed: 03/06/2011 (11C0786-BLK1)											
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	2.0	0.42	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Surrogate: 4-Bromofluorobenzene	23.6			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	24.7			ug/l	25.0		99	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
LCS Analyzed: 03/06/2011 (11C0786-BS1)											
1,2-Dichloroethane	28.9	0.50	0.28	ug/l	25.0		115	60-140			
1,1-Dichloroethene	25.8	2.0	0.42	ug/l	25.0		103	70-125			
Trichloroethene	27.4	2.0	0.26	ug/l	25.0		109	70-125			
Surrogate: 4-Bromofluorobenzene	23.7			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	24.9			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Matrix Spike Analyzed: 03/06/2011 (11C0786-MS1)						Source: IUB2819-01					
1,2-Dichloroethane	29.5	0.50	0.28	ug/l	25.0	ND	118	60-140			
1,1-Dichloroethene	26.4	2.0	0.42	ug/l	25.0	ND	105	60-130			
Trichloroethene	26.7	2.0	0.26	ug/l	25.0	ND	107	65-125			
Surrogate: 4-Bromofluorobenzene	23.8			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	25.9			ug/l	25.0		104	80-120			
Matrix Spike Dup Analyzed: 03/06/2011 (11C0786-MSD1)						Source: IUB2819-01					
1,2-Dichloroethane	27.8	0.50	0.28	ug/l	25.0	ND	111	60-140	6	20	
1,1-Dichloroethene	25.6	2.0	0.42	ug/l	25.0	ND	103	60-130	3	20	
Trichloroethene	26.1	2.0	0.26	ug/l	25.0	ND	104	65-125	2	20	
Surrogate: 4-Bromofluorobenzene	23.8			ug/l	25.0		95	80-120			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3517 Extracted: 02/28/11											
Blank Analyzed: 03/02/2011 (11B3517-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.00	1.70	ug/l							
2,4-Dinitrotoluene	ND	5.00	0.200	ug/l							
N-Nitrosodimethylamine	ND	5.00	0.100	ug/l							
Pentachlorophenol	ND	5.00	0.100	ug/l							
2,4,6-Trichlorophenol	ND	6.00	0.100	ug/l							
Surrogate: 2,4,6-Tribromophenol	18.7			ug/l	20.0		94	40-120			
Surrogate: 2-Fluorobiphenyl	8.02			ug/l	10.0		80	50-120			
Surrogate: 2-Fluorophenol	16.3			ug/l	20.0		81	30-120			
Surrogate: Nitrobenzene-d5	8.20			ug/l	10.0		82	45-120			
Surrogate: Phenol-d6	16.3			ug/l	20.0		81	35-120			
Surrogate: Terphenyl-d14	9.98			ug/l	10.0		100	50-125			
LCS Analyzed: 03/02/2011 (11B3517-BS1)											
Bis(2-ethylhexyl)phthalate	10.7	5.00	1.70	ug/l	10.0		107	65-130			MNR1
2,4-Dinitrotoluene	8.58	5.00	0.200	ug/l	10.0		86	65-120			
N-Nitrosodimethylamine	7.26	5.00	0.100	ug/l	10.0		73	45-120			
Pentachlorophenol	7.48	5.00	0.100	ug/l	10.0		75	24-121			
2,4,6-Trichlorophenol	8.14	6.00	0.100	ug/l	10.0		81	55-120			
Surrogate: 2,4,6-Tribromophenol	17.3			ug/l	20.0		86	40-120			
Surrogate: 2-Fluorobiphenyl	7.46			ug/l	10.0		75	50-120			
Surrogate: 2-Fluorophenol	13.3			ug/l	20.0		67	30-120			
Surrogate: Nitrobenzene-d5	7.28			ug/l	10.0		73	45-120			
Surrogate: Phenol-d6	14.5			ug/l	20.0		72	35-120			
Surrogate: Terphenyl-d14	9.32			ug/l	10.0		93	50-125			
LCS Dup Analyzed: 03/02/2011 (11B3517-BSD1)											
Bis(2-ethylhexyl)phthalate	9.22	5.00	1.70	ug/l	10.0		92	65-130	15	20	
2,4-Dinitrotoluene	7.78	5.00	0.200	ug/l	10.0		78	65-120	10	20	
N-Nitrosodimethylamine	6.92	5.00	0.100	ug/l	10.0		69	45-120	5	20	
Pentachlorophenol	5.94	5.00	0.100	ug/l	10.0		59	24-121	23	25	
2,4,6-Trichlorophenol	7.52	6.00	0.100	ug/l	10.0		75	55-120	8	30	
Surrogate: 2,4,6-Tribromophenol	14.9			ug/l	20.0		74	40-120			
Surrogate: 2-Fluorobiphenyl	6.72			ug/l	10.0		67	50-120			
Surrogate: 2-Fluorophenol	12.7			ug/l	20.0		63	30-120			
Surrogate: Nitrobenzene-d5	6.62			ug/l	10.0		66	45-120			
Surrogate: Phenol-d6	14.1			ug/l	20.0		70	35-120			

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Routine Outfall 002
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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3517 Extracted: 02/28/11											
LCS Dup Analyzed: 03/02/2011 (11B3517-BSD1)											
Surrogate: Terphenyl-d14	8.24			ug/l	10.0		82	50-125			

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IUB2817 <Page 22 of 51>

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0141 Extracted: 03/01/11											
Blank Analyzed: 03/11/2011 (11C0141-BLK1)											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	0.340			ug/l	0.500		68	45-120			
Surrogate: Tetrachloro-m-xylene	0.323			ug/l	0.500		65	35-115			
LCS Analyzed: 03/11/2011 (11C0141-BS1)											
alpha-BHC	0.354	0.010	0.0025	ug/l	0.500		71	45-115			MNR1
Surrogate: Decachlorobiphenyl	0.319			ug/l	0.500		64	45-120			
Surrogate: Tetrachloro-m-xylene	0.296			ug/l	0.500		59	35-115			
LCS Dup Analyzed: 03/11/2011 (11C0141-BSD1)											
alpha-BHC	0.403	0.010	0.0025	ug/l	0.500		81	45-115	13	30	
Surrogate: Decachlorobiphenyl	0.402			ug/l	0.500		80	45-120			
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0978 Extracted: 03/08/11											
Blank Analyzed: 03/08/2011 (11C0978-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/08/2011 (11C0978-BS1)											
Hexane Extractable Material (Oil & Grease)	18.9	5.0	1.4	mg/l	20.0		94	78-114			MNR1
LCS Dup Analyzed: 03/08/2011 (11C0978-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.2	5.0	1.4	mg/l	20.0		96	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0167 Extracted: 03/01/11</u>											
Blank Analyzed: 03/02/2011 (11C0167-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/02/2011 (11C0167-BS1)											
Mercury	7.70	0.20	0.10	ug/l	8.00		96	85-115			
Matrix Spike Analyzed: 03/02/2011 (11C0167-MS1)											
						Source: IUB2630-01					
Mercury	5.72	0.20	0.10	ug/l	8.00	ND	71	70-130			
Matrix Spike Dup Analyzed: 03/02/2011 (11C0167-MSD1)											
						Source: IUB2630-01					
Mercury	5.81	0.20	0.10	ug/l	8.00	ND	73	70-130	2	20	
<u>Batch: 11C0501 Extracted: 03/03/11</u>											
Blank Analyzed: 03/04/2011 (11C0501-BLK1)											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
LCS Analyzed: 03/04/2011 (11C0501-BS1)											
Cadmium	83.9	1.0	0.10	ug/l	80.0		105	85-115			
Copper	79.1	2.0	0.50	ug/l	80.0		99	85-115			
Lead	87.9	1.0	0.20	ug/l	80.0		110	85-115			
Selenium	76.0	2.0	0.50	ug/l	80.0		95	85-115			
Matrix Spike Analyzed: 03/04/2011 (11C0501-MS1)											
						Source: IUC0095-07					
Cadmium	80.6	1.0	0.10	ug/l	80.0	ND	101	70-130			
Copper	72.3	2.0	0.50	ug/l	80.0	2.55	87	70-130			
Lead	85.0	1.0	0.20	ug/l	80.0	ND	106	70-130			
Selenium	75.8	2.0	0.50	ug/l	80.0	0.659	94	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0501 Extracted: 03/03/11											
Matrix Spike Analyzed: 03/04/2011 (11C0501-MS2)						Source: IUC0095-01					
Cadmium	80.3	1.0	0.10	ug/l	80.0	0.112	100	70-130			
Copper	71.1	2.0	0.50	ug/l	80.0	2.29	86	70-130			
Lead	86.4	1.0	0.20	ug/l	80.0	ND	108	70-130			
Selenium	78.9	2.0	0.50	ug/l	80.0	2.23	96	70-130			
Matrix Spike Dup Analyzed: 03/04/2011 (11C0501-MSD1)						Source: IUC0095-07					
Cadmium	80.9	1.0	0.10	ug/l	80.0	ND	101	70-130	0.4	20	
Copper	73.0	2.0	0.50	ug/l	80.0	2.55	88	70-130	1	20	
Lead	85.5	1.0	0.20	ug/l	80.0	ND	107	70-130	0.7	20	
Selenium	74.7	2.0	0.50	ug/l	80.0	0.659	93	70-130	1	20	
Batch: 11C0647 Extracted: 03/04/11											
Blank Analyzed: 03/07/2011 (11C0647-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20.0	6.00	ug/l							
LCS Analyzed: 03/07/2011 (11C0647-BS1)											
Iron	0.559	0.040	0.015	mg/l	0.500		112	85-115			
Zinc	548	20.0	6.00	ug/l	500		110	85-115			
Matrix Spike Analyzed: 03/07/2011 (11C0647-MS1)						Source: IUC0168-01					
Iron	1.12	0.040	0.015	mg/l	0.500	0.512	122	70-130			
Zinc	544	20.0	6.00	ug/l	500	ND	109	70-130			
Matrix Spike Analyzed: 03/07/2011 (11C0647-MS2)						Source: IUC0168-04					
Iron	0.619	0.040	0.015	mg/l	0.500	0.119	100	70-130			
Zinc	494	20.0	6.00	ug/l	500	ND	99	70-130			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0647 Extracted: 03/04/11											
Matrix Spike Dup Analyzed: 03/07/2011 (11C0647-MSD1)						Source: IUC0168-01					
Iron	1.01	0.040	0.015	mg/l	0.500	0.512	100	70-130	10	20	
Zinc	494	20.0	6.00	ug/l	500	ND	99	70-130	10	20	

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IUB2817 <Page 27 of 51>

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B3548 Extracted: 02/28/11</u>											
Blank Analyzed: 03/02/2011 (11B3548-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20.0	6.00	ug/l							
LCS Analyzed: 03/02/2011 (11B3548-BS1)											
Iron	0.510	0.040	0.015	mg/l	0.500		102	85-115			
Zinc	507	20.0	6.00	ug/l	500		101	85-115			
Matrix Spike Analyzed: 03/02/2011 (11B3548-MS1) Source: IUB2647-01											
Iron	0.501	0.040	0.015	mg/l	0.500	ND	100	70-130			
Zinc	496	20.0	6.00	ug/l	500	ND	99	70-130			
Matrix Spike Analyzed: 03/07/2011 (11B3548-MS2) Source: IUB2630-01											
Iron	0.431	0.080	0.030	mg/l	0.500	ND	86	70-130			
Zinc	461	40.0	12.0	ug/l	500	ND	92	70-130			
Matrix Spike Dup Analyzed: 03/02/2011 (11B3548-MSD1) Source: IUB2647-01											
Iron	0.500	0.040	0.015	mg/l	0.500	ND	100	70-130	0.3	20	
Zinc	492	20.0	6.00	ug/l	500	ND	98	70-130	0.8	20	
<u>Batch: 11C0168 Extracted: 03/01/11</u>											
Blank Analyzed: 03/02/2011 (11C0168-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/02/2011 (11C0168-BS1)											
Mercury	7.30	0.20	0.10	ug/l	8.00		91	85-115			

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0168 Extracted: 03/01/11</u>											
Matrix Spike Analyzed: 03/02/2011 (11C0168-MS1)						Source: IUB2647-01					
Mercury	7.27	0.20	0.10	ug/l	8.00	ND	91	70-130			
Matrix Spike Dup Analyzed: 03/02/2011 (11C0168-MSD1)						Source: IUB2647-01					
Mercury	7.31	0.20	0.10	ug/l	8.00	ND	91	70-130	0.4	20	
<u>Batch: 11C0285 Extracted: 03/02/11</u>											
Blank Analyzed: 03/03/2011 (11C0285-BLK1)											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
LCS Analyzed: 03/03/2011 (11C0285-BS1)											
Cadmium	81.9	1.0	0.10	ug/l	80.0		102	85-115			
Copper	80.2	2.0	0.50	ug/l	80.0		100	85-115			
Lead	82.5	1.0	0.20	ug/l	80.0		103	85-115			
Selenium	80.8	2.0	0.50	ug/l	80.0		101	85-115			
Matrix Spike Analyzed: 03/03/2011 (11C0285-MS1)						Source: IUB2862-01					
Cadmium	80.4	1.0	0.10	ug/l	80.0	ND	101	70-130			
Copper	79.3	2.0	0.50	ug/l	80.0	ND	99	70-130			
Lead	77.4	1.0	0.20	ug/l	80.0	ND	97	70-130			
Selenium	80.9	2.0	0.50	ug/l	80.0	ND	101	70-130			
Matrix Spike Analyzed: 03/03/2011 (11C0285-MS2)						Source: IUB2647-01					
Cadmium	80.1	1.0	0.10	ug/l	80.0	ND	100	70-130			
Copper	79.0	2.0	0.50	ug/l	80.0	ND	99	70-130			
Lead	78.3	1.0	0.20	ug/l	80.0	ND	98	70-130			
Selenium	79.1	2.0	0.50	ug/l	80.0	ND	99	70-130			

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0285 Extracted: 03/02/11											
Matrix Spike Dup Analyzed: 03/03/2011 (11C0285-MSD1)						Source: IUB2862-01					
Cadmium	80.5	1.0	0.10	ug/l	80.0	ND	101	70-130	0.04	20	
Copper	78.4	2.0	0.50	ug/l	80.0	ND	98	70-130	1	20	
Lead	78.6	1.0	0.20	ug/l	80.0	ND	98	70-130	1	20	
Selenium	80.6	2.0	0.50	ug/l	80.0	ND	101	70-130	0.3	20	

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Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11B3360 Extracted: 02/26/11											
Blank Analyzed: 02/26/2011 (11B3360-BLK1)											
Chloride	ND	0.50	0.30	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.30	mg/l							
LCS Analyzed: 02/26/2011 (11B3360-BS1)											
Chloride	4.79	0.50	0.30	mg/l	5.00		96	90-110			
Nitrate-N	1.10	0.11	0.060	mg/l	1.13		97	90-110			
Nitrite-N	1.54	0.15	0.090	mg/l	1.52		101	90-110			
Sulfate	9.47	0.50	0.30	mg/l	10.0		95	90-110			
Matrix Spike Analyzed: 02/26/2011 (11B3360-MS1) Source: IUB2783-13											
Chloride	113	10	6.0	mg/l	50.0	69.6	87	80-120			
Nitrate-N	13.3	2.2	1.2	mg/l	11.3	2.39	97	80-120			
Nitrite-N	15.8	3.0	1.8	mg/l	15.2	ND	104	80-120			
Sulfate	253	10	6.0	mg/l	100	165	88	80-120			
Matrix Spike Dup Analyzed: 02/26/2011 (11B3360-MSD1) Source: IUB2783-13											
Chloride	111	10	6.0	mg/l	50.0	69.6	83	80-120	2	20	
Nitrate-N	13.2	2.2	1.2	mg/l	11.3	2.39	96	80-120	0.8	20	
Nitrite-N	14.9	3.0	1.8	mg/l	15.2	ND	98	80-120	6	20	
Sulfate	256	10	6.0	mg/l	100	165	91	80-120	1	20	

Batch: 11B3430 Extracted: 02/26/11

Blank Analyzed: 02/26/2011 (11B3430-BLK1)

Surfactants (MBAS) ND 0.10 0.050 mg/l

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B3430 Extracted: 02/26/11</u>											
LCS Analyzed: 02/26/2011 (11B3430-BS1)											
Surfactants (MBAS)	0.251	0.10	0.050	mg/l	0.250		100	90-110			
Matrix Spike Analyzed: 02/26/2011 (11B3430-MS1)											
Surfactants (MBAS)	0.303	0.10	0.050	mg/l	0.250	ND	121	50-125			
Matrix Spike Dup Analyzed: 02/26/2011 (11B3430-MSD1)											
Surfactants (MBAS)	0.289	0.10	0.050	mg/l	0.250	ND	115	50-125	5	20	
<u>Batch: 11B3525 Extracted: 02/28/11</u>											
Blank Analyzed: 02/28/2011 (11B3525-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 02/28/2011 (11B3525-DUP1)											
Turbidity	9.62	1.0	0.040	NTU		9.81			2	20	
Duplicate Analyzed: 02/28/2011 (11B3525-DUP2)											
Turbidity	7.15	1.0	0.040	NTU		7.44			4	20	
<u>Batch: 11B3539 Extracted: 02/28/11</u>											
Blank Analyzed: 03/05/2011 (11B3539-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l							
LCS Analyzed: 03/05/2011 (11B3539-BS1)											
Biochemical Oxygen Demand	186	100	25	mg/l	198		94	85-115			

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Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11B3539 Extracted: 02/28/11</u>											
LCS Dup Analyzed: 03/05/2011 (11B3539-BSD1)											
Biochemical Oxygen Demand	185	100	25	mg/l	198		93	85-115	0.3	20	
<u>Batch: 11C0016 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0016-BLK1)											
Specific Conductance	1.14	1.0	1.0	hos/cm @ 2							B
LCS Analyzed: 03/01/2011 (11C0016-BS1)											
Specific Conductance	1390	1.0	1.0	hos/cm @ 2	1410		98	90-110			
Duplicate Analyzed: 03/01/2011 (11C0016-DUP1)											
Specific Conductance	735	1.0	1.0	hos/cm @ 2		Source: IUB2878-01 735			0	5	
<u>Batch: 11C0021 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0021-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/01/2011 (11C0021-BS1)											
Perchlorate	26.1	4.0	0.90	ug/l	25.0		105	85-115			
Matrix Spike Analyzed: 03/01/2011 (11C0021-MS1)											
Perchlorate	29.7	4.0	0.90	ug/l	25.0	Source: IUB2737-03 3.55	105	80-120			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0021-MSD1)											
Perchlorate	29.8	4.0	0.90	ug/l	25.0	Source: IUB2737-03 3.55	105	80-120	0.5	20	

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0150 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0150-BLK1)											
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l							
LCS Analyzed: 03/01/2011 (11C0150-BS1)											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/01/2011 (11C0150-MS1)											
						Source: IUB2621-03					
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0150-MSD1)											
						Source: IUB2621-03					
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120	0	15	
<u>Batch: 11C0158 Extracted: 03/01/11</u>											
Blank Analyzed: 03/01/2011 (11C0158-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/01/2011 (11C0158-BS1)											
Total Cyanide	196	5.0	2.2	ug/l	196		100	90-110			
Matrix Spike Analyzed: 03/01/2011 (11C0158-MS1)											
						Source: IUB2819-03					
Total Cyanide	201	5.0	2.2	ug/l	196	ND	102	70-115			
Matrix Spike Dup Analyzed: 03/01/2011 (11C0158-MSD1)											
						Source: IUB2819-03					
Total Cyanide	199	5.0	2.2	ug/l	196	ND	101	70-115	0.9	15	
<u>Batch: 11C0204 Extracted: 03/02/11</u>											
Blank Analyzed: 03/02/2011 (11C0204-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0204 Extracted: 03/02/11											
LCS Analyzed: 03/02/2011 (11C0204-BS1)											
Total Dissolved Solids	1020	10	1.0	mg/l	1000		102	90-110			
Duplicate Analyzed: 03/02/2011 (11C0204-DUP1)											
Total Dissolved Solids	365	10	1.0	mg/l		352			4	10	
Batch: 11C0529 Extracted: 03/03/11											
Blank Analyzed: 03/03/2011 (11C0529-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/03/2011 (11C0529-BS1)											
Total Suspended Solids	987	10	1.0	mg/l	1000		99	85-115			
Duplicate Analyzed: 03/03/2011 (11C0529-DUP1)											
Total Suspended Solids	19.0	10	1.0	mg/l		19.0			0	10	

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

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8667

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/15/11											
LCS Analyzed: 03/15/2011 (S103013-03)											
Uranium, Total	53.9	1	N/A	pCi/L	56.5		95	80-120			
Blank Analyzed: 03/15/2011 (S103013-04)											
Uranium, Total	ND	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/15/2011 (S103013-05)											
Uranium, Total	0.574	1	N/A	pCi/L				-	7		Jb

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/11/11											
LCS Analyzed: 03/14/2011 (S103013-03)						Source:					
Gross Alpha	107	3	N/A	pCi/L	101		106	70-130			
Gross Beta	86.8	4	N/A	pCi/L	87.2		100	70-130			
Blank Analyzed: 03/14/2011 (S103013-04)						Source:					
Gross Alpha	0.089	3	N/A	pCi/L			-				U
Gross Beta	0.136	4	N/A	pCi/L			-				U
Duplicate Analyzed: 03/14/2011 (S103013-05)						Source:					
Gross Alpha	1.44	3	N/A	pCi/L			-		32		Jb
Gross Beta	3.86	4	N/A	pCi/L			-		12		Jb

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/03/11											
LCS Analyzed: 03/08/2011 (S103013-03)						Source:					
Cobalt-60	123	10	N/A	pCi/L	126		98	80-120			
Cesium-137	116	20	N/A	pCi/L	110		106	80-120			
Blank Analyzed: 03/08/2011 (S103013-04)						Source:					
Cesium-137	ND	20	N/A	pCi/L				-			U
Potassium-40	ND	25	N/A	pCi/L				-			U
Duplicate Analyzed: 03/10/2011 (S103013-05)						Source:					
Cesium-137	ND	20	N/A	pCi/L				-	0		U
Potassium-40	ND	25	N/A	pCi/L				-	0		U

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 Received: 02/26/11

METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/25/11											
LCS Analyzed: 03/25/2011 (S103013-03)											
Radium-226	59.5	1	N/A	pCi/L	55.7		107	80-120			
Blank Analyzed: 03/19/2011 (S103013-04)											
Radium-226	0.156	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/19/2011 (S103013-05)											
Radium-226	0.467	1	N/A	pCi/L				-	0		U

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/18/11											
LCS Analyzed: 03/18/2011 (S103013-03)											
Radium-228	16.1	1	N/A	pCi/L	15.1		107	60-140			
Blank Analyzed: 03/18/2011 (S103013-04)											
Radium-228	-0.11	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/18/2011 (S103013-05)											
Radium-228	0.062	1	N/A	pCi/L				-	0		U

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/15/11											
LCS Analyzed: 03/16/2011 (S103013-03)											
Strontium-90	20.3	2	N/A	pCi/L	17.4		117	80-120			
Blank Analyzed: 03/16/2011 (S103013-04)											
Strontium-90	-0.258	2	N/A	pCi/L				-			U
Duplicate Analyzed: 03/16/2011 (S103013-05)											
Strontium-90	-0.199	2	N/A	pCi/L				-	0		U

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 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

906

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8667 Extracted: 03/19/11											
LCS Analyzed: 03/22/2011 (S103013-03)											
Tritium	2780	500	N/A	pCi/L	2940		95	80-120			
Blank Analyzed: 03/22/2011 (S103013-04)											
Tritium	-28	500	N/A	pCi/L							U
Duplicate Analyzed: 03/22/2011 (S103013-05)											
Tritium	-42.1	500	N/A	pCi/L					0		U

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1062414 Extracted: 03/03/11											
Blank Analyzed: 03/07/2011 (G1C030000414B)						Source:					
1,2,3,4,6,7,8-HpCDD	3.5e-006	0.00005	0.0000023	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	3e-006	0.00005	0.0000019	ug/L				-			J
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000031	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.0000027	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.0000026	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000023	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.0000023	ug/L				-			
1,2,3,7,8,9-HxCDD	2.8e-006	0.00005	0.000002	ug/L				-			J, Q
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000033	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.0000069	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000091	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.0000022	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000098	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000026	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.0000039	ug/L				-			
OCDD	8.9e-006	0.0001	0.0000075	ug/L				-			J, Q
OCDF	ND	0.0001	0.0000049	ug/L				-			
Total HpCDD	5.7e-006	0.00005	0.0000023	ug/L				-			J
Total HpCDF	3e-006	0.00005	0.0000024	ug/L				-			J
Total HxCDD	2.8e-006	0.00005	0.0000023	ug/L				-			J, Q
Total HxCDF	ND	0.00005	0.0000022	ug/L				-			
Total PeCDD	ND	0.00005	0.0000069	ug/L				-			
Total PeCDF	ND	0.00005	0.0000046	ug/L				-			
Total TCDD	ND	0.00001	0.0000026	ug/L				-			
Total TCDF	ND	0.00001	0.0000039	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018			ug/L	0.002		91	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0023			ug/L	0.002		116	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0021			ug/L	0.002		107	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0018			ug/L	0.002		91	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.002			ug/L	0.002		102	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.002			ug/L	0.002		99	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0023			ug/L	0.002		115	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0022			ug/L	0.002		112	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0013			ug/L	0.002		66	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0015			ug/L	0.002		78	24-185			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1062414 Extracted: 03/03/11											
Blank Analyzed: 03/07/2011 (G1C030000414B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0024			ug/L	0.002		118	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0016			ug/L	0.002		79	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0015			ug/L	0.002		77	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0016			ug/L	0.002		81	24-169			
Surrogate: 13C-OCDD	0.0031			ug/L	0.004		78	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00072			ug/L	0.0008		90	35-197			
LCS Analyzed: 03/07/2011 (G1C030000414C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00114	0.00005	0.0000076	ug/L	0.001		114	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00104	0.00005	0.0000068	ug/L	0.001		104	82-122			Ba
1,2,3,4,7,8,9-HpCDF	0.00105	0.00005	0.00001	ug/L	0.001		105	78-138			
1,2,3,4,7,8-HxCDD	0.0012	0.00005	0.0000026	ug/L	0.001		120	70-164			
1,2,3,4,7,8-HxCDF	0.00113	0.00005	0.0000023	ug/L	0.001		113	72-134			
1,2,3,6,7,8-HxCDD	0.00116	0.00005	0.0000024	ug/L	0.001		116	76-134			
1,2,3,6,7,8-HxCDF	0.00112	0.00005	0.000002	ug/L	0.001		112	84-130			
1,2,3,7,8,9-HxCDD	0.00115	0.00005	0.0000021	ug/L	0.001		115	64-162			Ba
1,2,3,7,8,9-HxCDF	0.00121	0.00005	0.000003	ug/L	0.001		121	78-130			
1,2,3,7,8-PeCDD	0.00118	0.00005	0.0000068	ug/L	0.001		118	70-142			
1,2,3,7,8-PeCDF	0.00109	0.00005	0.000013	ug/L	0.001		109	80-134			
2,3,4,6,7,8-HxCDF	0.0011	0.00005	0.0000021	ug/L	0.001		110	70-156			
2,3,4,7,8-PeCDF	0.0011	0.00005	0.000014	ug/L	0.001		110	68-160			
2,3,7,8-TCDD	0.000221	0.00001	0.0000029	ug/L	0.0002		110	67-158			
2,3,7,8-TCDF	0.000186	0.00001	0.0000039	ug/L	0.0002		93	75-158			
OCDD	0.00235	0.0001	0.000013	ug/L	0.002		117	78-144			Ba
OCDF	0.00281	0.0001	0.0000071	ug/L	0.002		140	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00202			ug/L	0.002		101	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00245			ug/L	0.002		123	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00228			ug/L	0.002		114	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00178			ug/L	0.002		89	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00228			ug/L	0.002		114	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00201			ug/L	0.002		100	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00234			ug/L	0.002		117	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00221			ug/L	0.002		111	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00127			ug/L	0.002		64	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00156			ug/L	0.002		78	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00243			ug/L	0.002		122	22-176			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1062414 Extracted: 03/03/11											
LCS Analyzed: 03/07/2011 (G1C030000414C)											
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00156			ug/L	0.002		78	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.0015			ug/L	0.002		75	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00161			ug/L	0.002		80	22-152			
Surrogate: 13C-OCDD	0.00345			ug/L	0.004		86	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000689			ug/L	0.0008		86	31-191			

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Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2817-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.8	15
IUB2817-01	624-(601list)	1,1-Dichloroethene	ug/l	0	2.0	6
IUB2817-01	624-(601list)	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUB2817-01	624-(601list)	Trichloroethene	ug/l	0.86	2.0	5
IUB2817-01	Settleable Solids - SM2540F	Total Settleable Solids	ml/l	0	0.10	0.3

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2817-02	624-(601list)	1,1-Dichloroethene	ug/l	0	2.0	6
IUB2817-02	624-(601list)	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUB2817-02	624-(601list)	Trichloroethene	ug/l	0	2.0	5

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUB2817-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0094	0.03
IUB2817-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.66	13
IUB2817-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	4.72	18
IUB2817-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.19	4.72	4
IUB2817-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	4.72	16
IUB2817-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	4.72	16.5
IUB2817-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.500	10.1
IUB2817-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	0	2.0	30
IUB2817-03	Cadmium-200.8	Cadmium	ug/l	0.054	1.0	3.1
IUB2817-03	Chloride - 300.0	Chloride	mg/l	20	5.0	150
IUB2817-03	Copper-200.8	Copper	ug/l	2.34	2.0	14
IUB2817-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	-5	5.0	8.5
IUB2817-03	Iron-200.7	Iron	mg/l	0.49	0.040	0.3
IUB2817-03	Lead-200.8	Lead	ug/l	0.24	1.0	5.2
IUB2817-03	MBAS - SM5540C	Surfactants (MBAS)	mg/l	0.20	0.10	0.5
IUB2817-03	Mercury - 245.1	Mercury	ug/l	0	0.20	0.1
IUB2817-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.14	0.11	8

TestAmerica Irvine

Debby Wilson
Project Manager

MWH-Pasadena/Boeing
 618 Michillinda Avenue, Suite 200
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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUB2817

Sampled: 02/25/11-02/26/11
 Received: 02/26/11

IUB2817-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUB2817-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.14	0.26	8
IUB2817-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
IUB2817-03	Selenium-200.8	Selenium	ug/l	0.46	2.0	5
IUB2817-03	Sulfate-300.0	Sulfate	mg/l	92	5.0	300
IUB2817-03	TDS - SM2540C	Total Dissolved Solids	mg/l	374	10	950
IUB2817-03	TSS - SM2540D	Total Suspended Solids	mg/l	3.00	10	45
IUB2817-03	Zinc-200.7	Zinc	ug/l	4.73	20.0	119

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- B-1** Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
- Ba** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- Jb** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- Q** Estimated maximum possible concentration (EMPC).
- U** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

TestAmerica Irvine

Debby Wilson
Project Manager

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IUB2817 <Page 48 of 51>

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2130B	Water	X	X
SM2510B	Water	X	N/A
SM2540C	Water	X	N/A
SM2540F	Water	X	X
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5540-C	Water	X	N/A

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUB2817-03, IUB2817-04

Analysis Performed: Gross Alpha
Samples: IUB2817-03, IUB2817-04

Analysis Performed: Gross Beta
Samples: IUB2817-03, IUB2817-04

Analysis Performed: Radium, Combined
Samples: IUB2817-03, IUB2817-04

Analysis Performed: Strontium 90
Samples: IUB2817-03, IUB2817-04

Analysis Performed: Tritium
Samples: IUB2817-03

Analysis Performed: Uranium, Combined
Samples: IUB2817-03, IUB2817-04

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106 - Amherst, NY 14228

Method Performed: 8667
Samples: IUB2817-03, IUB2817-04

Method Performed: 900
Samples: IUB2817-03, IUB2817-04

Method Performed: 901.1
Samples: IUB2817-03, IUB2817-04

Method Performed: 903.1
Samples: IUB2817-03, IUB2817-04

Method Performed: 904
Samples: IUB2817-03, IUB2817-04

Method Performed: 905
Samples: IUB2817-03, IUB2817-04

Method Performed: 906
Samples: IUB2817-03

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUB2817

Sampled: 02/25/11-02/26/11
Received: 02/26/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: IUB2817-03

TestAmerica Irvine

Debby Wilson
Project Manager

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson							Project: Boeing-SSFL NPDES Routine Outfall 002 COMPOSITE - <i>HCH</i>							ANALYSIS REQUIRED																		
Project Manager: Bronwyn Kelly Sampler: <i>R. Banaga</i>							Phone Number: (626) 568-6691 Fax Number: (626) 568-6515							Total Recoverable Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn TCDD (and all congeners) BOD ₅ (20 degrees C) Surfactants (MBAS) Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N, Perchlorate Nitrate-N, Nitrite-N Turbidity, TDS, TSS Ammonia-N (350.2) Alpha BHC (608) 2,4,6 TCP, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, PCP (SVOCs 625)																		
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Comments																									
Outfall 002	W	1L Poly	1	2-26-11	HNO ₃	6A	X																									
Outfall 002 Dup	W	1L Poly	1	11:54	HNO ₃	6B	X																									
Outfall 002	W	1L Amber	2	↓	None	7A, 7B		X																								
Outfall 002	W	1L Poly	1		None	8		X																								
Outfall 002	W	500 mL Poly	2		None	9A, 9B		X																								
Outfall 002	W	500 mL Poly	2		None	10A, 10B		X																								
Outfall 002	W	500 mL Poly	1		None	11		X																								
Outfall 002	W	500 mL Poly	2		None	12A, 12B		X																								
Outfall 002	W	500 mL Poly	1		H ₂ SO ₄	13		X																								
Outfall 002	W	1L Amber	2		None	14A, 14B		X																								
Outfall 002	W	1L Amber	2		None	15A, 15B		X																								

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 002 for this storm event.

These must be added to the same work order for COC Page 1 of 3 for Outfall 002 for the same event.

Relinquished By: <i>Rin Ben</i> Date/Time: 2-26-11 14:45	Received By: <i>Max Crump</i> Date/Time: 2-26-11 14:45	Turn-around time: (Check) 24 Hour: _____ 72 Hour: _____ 10 Day: _____ 48 Hour: _____ 5 Day: _____ Normal: <input checked="" type="checkbox"/>
Relinquished By: <i>Max Crump</i> Date/Time: 2-26-11 17:50	Received By: _____ Date/Time: _____	Sample Integrity: (Check) Intact: <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> 2.9
Relinquished By: _____ Date/Time: _____	Received By: <i>22</i> Date/Time: 2/26/11 17:50	Data Requirements: (Check) No Level IV: _____ All Level IV: _____ NPDES Level IV: <input checked="" type="checkbox"/>

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Debby Wilson							Project: Boeing-SSFL NPDES Routine Outfall 002 COMPOSITE HIGH							ANALYSIS REQUIRED												Comments	
Project Manager: Bronwyn Kelly Sampler: R. Banaga							Phone Number: (626) 568-6691 Fax Number: (626) 568-6515							Total Dissolved Metals: Cu, Pb, Hg, Cd, Se, Zn, Fe, Mn Gross Alpha (900.0), Gross Beta (900.0), Tritium (H-3) (906.0), Sr-90 (905.0), Total Combined Radium 226 (903.0 or 903.1) & Radium 228 (904.0), Uranium (908.0), K-40, CS-137 (901.0 or 901.1) Chronic Toxicity Cyanide													
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #																					
Outfall 002	W	1L Poly	1	2-26-11	None	16	X													Filter w/in 24hrs of receipt at lab							
Outfall 002	W	.25 Gal Cube	✓	11:54	None	17A		X													Unfiltered and unpreserved analysis						
		500 mL Amber	✓		None	17B																					
Outfall 002	W	1 Gal Cube	✓	↓	None	18															Only test if first or second rain events of the year						
Outfall 002	W	500 mL Poly	1	↓	NaOH	19				X																	

COC Page 2 of 3 and Page 3 of 3 are the composite samples for Outfall 002 for this storm event.

These must be added to the same work order for COC Page 1 of 3 for Outfall 002 for the same event.

Relinquished By <i>Rain Bung</i>	Date/Time: 2-26-2011 14:45	Received By <i>Matt Cronk</i>	Date/Time: 2-26-11 14:45	Turn-around time: (Check) 24 Hour: ___ 72 Hour: ___ 10 Day: ___ 48 Hour: ___ 5 Day: ___ Normal: X
Relinquished By <i>Matt Cronk</i>	Date/Time: 2-26-11 17:50	Received By <i>RD</i>	Date/Time: 2/26/11 17:50	Sample Integrity: (Check) Intact: X On ice: X 2-9
Relinquished By (Blank)	Date/Time: (Blank)	Received By (Blank)	Date/Time: (Blank)	Data Requirements: (Check) No Level IV: ___ All Level IV: ___ NPDES Level IV: X



EBERLINE

SERVICES

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Richmond, California 94804-3848
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Toll Free (800) 841-5487
www.eberlineservices.com

March 30, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUB2817
Eberline Analytical Report S103015-8667
Sample Delivery Group 8667**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUB2817. The samples were received on March 1, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: *Level IV CLP-like Data Package CD*

1.0 General Comments

Sample delivery group 8667 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Samples IUB2817-03 and IUB2817-04 (Trip Blank) were analyzed in a common prep batch with other outfall samples from this project. The QC samples from that common prep batch were assigned to SDG 8665 and are also reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 Strontium-90 Analysis** – No other problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 Radium-226 Analysis** - The initial Ra-226 QC LCS recovery was less than the lower control limit of 80% therefore the LCS was re-emanated and recounted. The LCS recovery after the rework was within control limits and is reported herein. No other problems were encountered during the processing of the samples.
- 4.5 Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits
- 4.6 Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 Gamma Spectroscopy** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.

5.0 Case Narrative Certification Statement

“I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.”



N. Joseph Verville
Client Services Manager

3/30/11

Date

EBERLINE ANALYTICAL
SDG 8667

SDG 8667
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2817

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	8
Lab Control Samples	.	.	.	9
Duplicates	.	.	.	10
Data Sheets	.	.	.	11
Method Summaries	.	.	.	13
Report Guides	.	.	.	21
End of Section	.	.	.	35

UB

Prepared by

N. Joseph Verville

Reviewed by

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2817

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
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GUIDE, cont.

Client Test America, Inc.
 Contract IUB2817

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

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SDG 8667

LAB SAMPLE SUMMARY

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Client Test America, Inc.
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LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S103013-03	Lab Control Sample		WATER				
S103013-04	Method Blank		WATER				
S103013-05	Duplicate (S103013-01)	Boeing - SSFL	WATER				02/26/11 20:26
S103015-01	IUB2817-03	Boeing - SSFL	WATER			IUB2817	02/26/11 11:54
S103015-02	IUB2817-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUB2817	02/25/11 00:00

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2817

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8665		Method Blank	WATER						S103013-04	8665-004
		Lab Control Sample	WATER						S103013-03	8665-003
		Duplicate (S103013-01)	WATER		10.0 L		03/01/11	3	S103013-05	8665-005
8667	IUB2817	IUB2817-03	WATER		10.0 L		03/01/11	3	S103015-01	8667-001
		IUB2817-04 (TRIP-BLANK)	WATER		10.0 L		03/01/11	4	S103015-02	8667-002

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
Contract IUB2817

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI-	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS
Beta Counting										
AC	WATER	Radium-228 in Water	7281-046	10.4	2			1	1	1/0/1
SR	WATER	Strontium-90 in Water	7281-046	10.4	2			1	1	1/0/1
Gas Proportional Counting										
80A	WATER	Gross Alpha in Water	7281-046	20.6	2			1	1	1/0/1
80B	WATER	Gross Beta in Water	7281-046	11.0	2			1	1	1/0/1
Gamma Spectroscopy										
GAM	WATER	Gamma Emitters in Water	7281-046	7.0	2			1	1	1/0/1
Kinetic Phosphorimetry, ug										
U_T	WATER	Uranium, Total	7281-046		2			1	1	1/0/1
Liquid Scintillation Counting										
H	WATER	Tritium in Water	7281-046	10.0	1			1	1	1/0/1
Radon Counting										
RA	WATER	Radium-226 in Water	7281-046	16.4	2			1	1	1/0/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB WORK SUMMARY

Client Test America, Inc.
Contract IUB2817

SDG 8667
Contact N. Joseph Verville

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103013-03	Lab Control Sample	WATER	8665-003	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8665-003	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8665-003	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8665-003	GAM		03/08/11	03/15/11	MWT	Gamma Emitters in Water	
			8665-003	H		03/22/11	03/25/11	BW	Tritium in Water	
			8665-003	RA	R1	03/25/11	03/28/11	BW	Radium-226 in Water	
			8665-003	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8665-003	U_T		03/15/11	03/16/11	BW	Uranium, Total	
S103013-04	Method Blank	WATER	8665-004	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8665-004	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8665-004	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8665-004	GAM		03/08/11	03/15/11	MWT	Gamma Emitters in Water	
			8665-004	H		03/22/11	03/25/11	BW	Tritium in Water	
			8665-004	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8665-004	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8665-004	U_T		03/15/11	03/16/11	BW	Uranium, Total	
S103013-05	Duplicate (S103013-01) 02/26/11 Boeing - SSFL 03/01/11	WATER	8665-005	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8665-005	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8665-005	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8665-005	GAM		03/10/11	03/15/11	MWT	Gamma Emitters in Water	
			8665-005	H		03/22/11	03/25/11	BW	Tritium in Water	
			8665-005	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8665-005	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8665-005	U_T		03/15/11	03/16/11	BW	Uranium, Total	
S103015-01	IUB2817-03 02/26/11 Boeing - SSFL 03/01/11 IUB2817	WATER	8667-001	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
			8667-001	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
			8667-001	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8667-001	GAM		03/10/11	03/15/11	MWT	Gamma Emitters in Water	
			8667-001	H		03/22/11	03/25/11	BW	Tritium in Water	
			8667-001	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8667-001	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8667-001	U_T		03/15/11	03/16/11	BW	Uranium, Total	

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/30/11

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SDG 8667

Client Test America, Inc.

SDG 8667

Contact N. Joseph Verville

WORK SUMMARY, cont.

Contract IUB2817

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUP-					
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103015-02	IUB2817-04 (TRIP-BLANK)		8667-002	80A/80		03/14/11	03/15/11	BW	Gross Alpha in Water	
02/25/11	Boeing - SSFL	WATER	8667-002	80B/80		03/14/11	03/15/11	BW	Gross Beta in Water	
03/01/11	IUB2817		8667-002	AC		03/18/11	03/21/11	BW	Radium-228 in Water	
			8667-002	GAM		03/10/11	03/15/11	MWT	Gamma Emitters in Water	
			8667-002	RA		03/19/11	03/28/11	BW	Radium-226 in Water	
			8667-002	SR		03/16/11	03/22/11	BW	Strontium-90 in Water	
			8667-002	U_T		03/15/11	03/16/11	BW	Uranium, Total	

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP	SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	2			1	1	1		5
80B/80		Gross Beta in Water	900.0	2			1	1	1		5
AC		Radium-228 in Water	904.0	2			1	1	1		5
GAM		Gamma Emitters in Water	901.1	2			1	1	1		5
H		Tritium in Water	906.0	1			1	1	1		4
RA		Radium-226 in Water	903.1	2			1	1	1		5
SR		Strontium-90 in Water	905.0	2			1	1	1		5
U_T		Uranium, Total	D5174	2			1	1	1		5
TOTALS				15			8	8	8		39

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

8665-004

Method Blank

METHOD BLANK

SDG <u>8667</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2817</u>
Lab sample id <u>S103013-04</u>	Client sample id <u>Method Blank</u>
Dept sample id <u>8665-004</u>	Material/Matrix <u>WATER</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	0.089	0.90	1.62	3.00	U	80A
Gross Beta	12587472	0.136	1.7	2.78	4.00	U	80B
Tritium	10028178	-28.0	98	167	500	U	H
Radium-226	13982633	0.156	0.38	0.661	1.00	U	RA
Radium-228	15262201	-0.110	0.17	0.430	1.00	U	AC
Strontium-90	10098972	-0.258	0.38	1.04	2.00	U	SR
Uranium, Total		0	0.010	0.022	1.00	U	U_T
Potassium-40	13966002	U		23.0	25.0	U	GAM
Cesium-137	10045973	U		1.53	20.0	U	GAM

QC-BLANK #77580

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8667

8665-005

IUB2814-03

DUPLICATE

SDG <u>8667</u>	Client <u>Test America, Inc.</u>	
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2817</u>	
DUPLICATE	ORIGINAL	
Lab sample id <u>S103013-05</u>	Lab sample id <u>S103013-01</u>	Client sample id <u>IUB2814-03</u>
Dept sample id <u>8665-005</u>	Dept sample id <u>8665-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
	Received <u>03/01/11</u>	Collected/Volume <u>02/26/11 20:26</u> <u>10.0 L</u>
		Chain of custody id <u>IUB2814</u>

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD %	3σ TOT	DER σ
Gross Alpha	1.44	0.58	0.572	3.00	J	80A	1.04	0.53	0.645	J	32	105	0.9
Gross Beta	3.86	0.91	1.35	4.00	J	80B	4.34	0.69	0.934		12	48	0.7
Tritium	-42.1	99	170	500	U	H	-106	98	172	U	-		0.9
Radium-226	0.467	0.39	0.618	1.00	U	RA	0.436	0.36	0.562	U	-		0.1
Radium-228	0.062	0.16	0.406	1.00	U	AC	0.016	0.17	0.421	U	-		0.4
Strontium-90	-0.199	0.43	1.10	2.00	U	SR	-0.031	0.62	1.35	U	-		0.4
Uranium, Total	0.574	0.065	0.022	1.00	J	U_T	0.618	0.070	0.022	J	7	24	0.9
Potassium-40	U		24.8	25.0	U	GAM	U		19.0	U	-		0.4
Cesium-137	U		1.52	20.0	U	GAM	U		1.67	U	-		0.1

QC-DUP#1 77581

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8667

8667-001

IUB2817-03

DATA SHEET

SDG <u>8667</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2817</u>
Lab sample id <u>S103015-01</u>	Client sample id <u>IUB2817-03</u>
Dept sample id <u>8667-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/01/11</u>	Collected/Volume <u>02/26/11 11:54</u> <u>10.0 L</u>
	Chain of custody id <u>IUB2817</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	1.34	0.69	0.795	3.00	J	80A
Gross Beta	12587472	2.56	0.76	1.13	4.00	J	80B
Tritium	10028178	11.9	100	169	500	U	H
Radium-226	13982633	0.239	0.48	0.827	1.00	U	RA
Radium-228	15262201	-0.028	0.18	0.451	1.00	U	AC
Strontium-90	10098972	-0.155	0.48	1.22	2.00	U	SR
Uranium, Total		0.941	0.11	0.022	1.00	J	U_T
Potassium-40	13966002	U		18.0	25.0	U	GAM
Cesium-137	10045973	U		1.60	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8667

8667-002

IUB2817-04 (TRIP-BLANK)

DATA SHEET

SDG <u>8667</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUB2817</u>
Lab sample id <u>S103015-02</u>	Client sample id <u>IUB2817-04 (TRIP-BLANK)</u>
Dept sample id <u>8667-002</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/01/11</u>	Collected/Volume <u>02/25/11 00:00</u> <u>10.0 L</u>
	Chain of custody id <u>IUB2817</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	-0.078	0.11	0.279	3.00	U	80A
Gross Beta	12587472	-0.174	0.53	0.918	4.00	U	80B
Radium-226	13982633	-0.006	0.32	0.611	1.00	U	RA
Radium-228	15262201	-0.005	0.16	0.421	1.00	U	AC
Strontium-90	10098972	0.252	0.52	1.10	2.00	U	SR
Uranium, Total		-0.005	0.010	0.022	1.00	U	U_T
Potassium-40	13966002	U		14.2	25.0	U	GAM
Cesium-137	10045973	U		1.20	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/30/11</u>

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

Test AC Matrix WATER
 SDG 8667
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2817

RESULTS

LAB RAW SUP-
 SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Radium-228

Preparation batch 7281-046

S103013-03	8665-003	Lab Control Sample	ok
S103013-04	8665-004	Method Blank	U
S103013-05	8665-005	Duplicate (S103013-01)	- U
S103015-01	8667-001	IUB2817-03	U
S103015-02	8667-002	IUB2817-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB RAW SUP- MDA ALIQ PREP DILU- YIELD EPF COUNT FWHM DRIFT DAYS ANAL-
 SAMPLE ID TEST FIX CLIENT SAMPLE ID pCi/L L PAC TION % % min keV KeV HELD PREPARED YZED DETECTOR

Preparation batch 7281-046 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 046

S103013-03	Lab Control Sample	0.429	1.80	81	150	03/18/11	03/18	GRB-220
S103013-04	Method Blank	0.430	1.80	78	150	03/18/11	03/18	GRB-221
S103013-05	Duplicate (S103013-01)	0.406	1.80	78	150	20 03/18/11	03/18	GRB-222
S103015-01	IUB2817-03	0.451	1.80	77	150	20 03/18/11	03/18	GRB-229
S103015-02	IUB2817-04 (TRIP-BLANK)	0.421	1.80	80	150	21 03/18/11	03/18	GRB-230

Nominal values and limits from method 1.00 1.80 30-105 50 180

PROCEDURES REFERENCE 904.0
 DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD MDA 0.427 ± 0.033
 FOR 5 SAMPLES YIELD 79 ± 3

METHOD SUMMARIES

Page 1

SUMMARY DATA SECTION

Page 13

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-IMS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER
BETA COUNTING

Test SR Matrix WATER
SDG 8667
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2817

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90

Preparation batch 7281-046

S103013-03	8665-003	Lab Control Sample	ok
S103013-04	8665-004	Method Blank	U
S103013-05	8665-005	Duplicate (S103013-01)	- U
S103015-01	8667-001	IUB2817-03	U
S103015-02	8667-002	IUB2817-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 2.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-046 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 046

S103013-03	Lab Control Sample	0.961	0.500				76	50				03/15/11	03/16	GRB-229
S103013-04	Method Blank	1.04	0.500				82	50				03/15/11	03/16	GRB-230
S103013-05	Duplicate (S103013-01)	1.10	0.500				84	50	18	03/15/11	03/16	03/16	03/16	GRB-231
S103015-01	IUB2817-03	1.22	0.500				79	50	18	03/16/11	03/16	03/16	03/16	GRB-218
S103015-02	IUB2817-04 (TRIP-BLANK)	1.10	0.500				80	50	19	03/16/11	03/16	03/16	03/16	GRB-229

Nominal values and limits from method 2.00 0.500 30-105 50 180

PROCEDURES REFERENCE 905.0
DWP-380 Strontium in Drinking Water, rev 8

AVERAGES ± 2 SD MDA 1.08 ± 0.190
FOR 5 SAMPLES YIELD 80 ± 6

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 14

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER

SDG 8667

Contact N. Joseph Verville

Client Test America, Inc.

Contract IUB2817

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha	
Preparation batch 7281-046					
S103013-03	80	8665-003	Lab Control Sample	ok	
S103013-04	80	8665-004	Method Blank	U	
S103013-05	80	8665-005	Duplicate (S103013-01)	ok J	
S103015-01	80	8667-001	IUB2817-03	1.34 J	
S103015-02	80	8667-002	IUB2817-04 (TRIP-BLANK)	U	

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	PAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-046 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg 046															
S103013-03	80	Lab Control Sample	1.56	0.100			59	400				03/11/11	03/14	GRB-104	
S103013-04	80	Method Blank	1.62	0.100			58	400				03/11/11	03/14	GRB-105	
S103013-05	80	Duplicate (S103013-01)	0.572	0.300			91	400			16	03/11/11	03/14	GRB-107	
S103015-01	80	IUB2817-03	0.795	0.235			97	400			16	03/11/11	03/14	GRB-112	
S103015-02	80	IUB2817-04 (TRIP-BLANK)	0.279	0.300			0	400			17	03/11/11	03/14	GRB-214	

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
DWP-121 Gross Alpha and Gross Beta in Drinking Water,
rev 10

AVERAGES ± 2 SD MDA 0.965 ± 1.20
FOR 5 SAMPLES RESIDUE 61 ± 77

METHOD SUMMARIES

Page 3

SUMMARY DATA SECTION

Page 15

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
SDG 8667
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2817

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7281-046				
S103013-03	80	8665-003	Lab Control Sample	ok
S103013-04	80	8665-004	Method Blank	U
S103013-05	80	8665-005	Duplicate (S103013-01)	ok J
S103015-01	80	8667-001	IUB2817-03	2.56 J
S103015-02	80	8667-002	IUB2817-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EPF	COUNT	PWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-046 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg 046															
S103013-03	80	Lab Control Sample	2.39	0.100			59		400				03/11/11	03/14	GRB-104
S103013-04	80	Method Blank	2.78	0.100			58		400				03/11/11	03/14	GRB-105
S103013-05	80	Duplicate (S103013-01)	1.35	0.300			91		400			16	03/11/11	03/14	GRB-107
S103015-01	80	IUB2817-03	1.13	0.235			97		400			16	03/11/11	03/14	GRB-112
S103015-02	80	IUB2817-04 (TRIP-BLANK)	0.918	0.300			0		400			17	03/11/11	03/14	GRB-214

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
DWP-121 Gross Alpha and Gross Beta in Drinking Water,
rev 10

AVERAGES ± 2 SD MDA 1.71 ± 1.64
FOR 5 SAMPLES RESIDUE 61 ± 77

METHOD SUMMARIES

Page 4

SUMMARY DATA SECTION

Page 16

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8667
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2817

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7281-046					
S103013-03		8665-003	Lab Control Sample	ok	ok
S103013-04		8665-004	Method Blank		U
S103013-05		8665-005	Duplicate (S103013-01)		- U
S103015-01		8667-001	IUB2817-03		U
S103015-02		8667-002	IUB2817-04 (TRIP-BLANK)		U

Nominal values and limits from method RDLs (pCi/L) 10.0 20.0

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-046 2σ prep error 7.0 % Reference Lab Notebook No. 7281 pg 046															
S103013-03		Lab Control Sample	2.00						508				03/03/11	03/08	01,02,00
S103013-04		Method Blank	2.00						508				03/03/11	03/08	01,04,00
S103013-05		Duplicate (S103013-01)	2.00						402			12	03/03/11	03/10	01,03,00
S103015-01		IUB2817-03	2.00						602			12	03/03/11	03/10	01,01,00
S103015-02		IUB2817-04 (TRIP-BLANK)	2.00						592			13	03/03/11	03/10	MB,08,00

Nominal values and limits from method 6.00 2.00 400 180

PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

METHOD SUMMARIES

Page 5

SUMMARY DATA SECTION

Page 17

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

URANIUM, TOTAL
KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
SDG 8667
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2817

RESULTS

LAB	RAW SUP-			Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-046				
S103013-03		8665-003	Lab Control Sample	ok
S103013-04		8665-004	Method Blank	U
S103013-05		8665-005	Duplicate (S103013-01)	ok J
S103015-01		8667-001	IUB2817-03	0.941 J
S103015-02		8667-002	IUB2817-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW SUP-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR
Preparation batch 7281-046		2σ prep error	Reference Lab Notebook No. 7281 pg 046										
S103013-03		Lab Control Sample	0.223	0.0200								03/15/11	03/15 KPA-001
S103013-04		Method Blank	0.022	0.0200								03/15/11	03/15 KPA-001
S103013-05		Duplicate (S103013-01)	0.022	0.0200								17 03/15/11	03/15 KPA-001
S103015-01		IUB2817-03	0.022	0.0200								17 03/15/11	03/15 KPA-001
S103015-02		IUB2817-04 (TRIP-BLANK)	0.022	0.0200								18 03/15/11	03/15 KPA-001

Nominal values and limits from method 1.00 0.0200 180

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.062 ± 0.180
FOR 5 SAMPLES YIELD _____ ± _____

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
 SDG 8667
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2817

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Tritium	
Preparation batch 7281-046					
S103013-03		8665-003	Lab Control Sample	ok	
S103013-04		8665-004	Method Blank	U	
S103013-05		8665-005	Duplicate (S103013-01)	-	U
S103015-01		8667-001	IUB2817-03	U	

Nominal values and limits from method RDLs (pCi/L) 500

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-046			2σ prep error 10.0 %		Reference Lab Notebook No. 7281 pg 046										
S103013-03		Lab Control Sample	168	0.100			10		150				03/19/11	03/22	LSC-004
S103013-04		Method Blank	167	0.100			10		150				03/19/11	03/22	LSC-004
S103013-05		Duplicate (S103013-01)	170	0.0100			100		150			24	03/19/11	03/22	LSC-004
S103015-01		IUB2817-03	169	0.0100			100		150			24	03/19/11	03/22	LSC-004

Nominal values and limits from method 500 0.0100 100 180

PROCEDURES REFERENCE 906.0
 DWP-212 Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD MDA 168 ± 2.58
 FOR 4 SAMPLES YIELD 55 ± 104

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

LAB METHOD SUMMARY

RADIUM-226 IN WATER
RADON COUNTING

Test RA Matrix WATER
SDG 8667
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUB2817

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226

Preparation batch 7281-046

S103013-03	R1	8665-003	Lab Control Sample	ok
S103013-04		8665-004	Method Blank	U
S103013-05		8665-005	Duplicate (S103013-01)	- U
S103015-01		8667-001	IUB2817-03	U
S103015-02		8667-002	IUB2817-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-046 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg 046

S103013-03	R1	Lab Control Sample	0.867	0.100				100	140				03/25/11	03/25	RN-009
S103013-04		Method Blank	0.661	0.100				100	103				03/19/11	03/19	RN-010
S103013-05		Duplicate (S103013-01)	0.618	0.100				100	103				21 03/19/11	03/19	RN-016
S103015-01		IUB2817-03	0.827	0.100				100	100				21 03/19/11	03/19	RN-009
S103015-02		IUB2817-04 (TRIP-BLANK)	0.611	0.100				100	100				22 03/19/11	03/19	RN-010

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.717 ± 0.242
FOR 5 SAMPLES YIELD 100 ± 0

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2817

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 21

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
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REPORT GUIDE

Client Test America, Inc.
Contract IUB2817

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
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REPORT GUIDE

Client Test America, Inc.
 Contract IUB2817

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

REPORT GUIDES

Page 3

SUMMARY DATA SECTION

Page 23

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2817

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2817

DATA SHEET

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
- H Similar to 'L' except the recovery was high.
- P The RESULT is 'preliminary'.
- X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
- 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.
- Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 25

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2817

DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 26

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUB2817

LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 27

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2817

DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:

1. A fixed percentage specified in the protocol.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 28

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2817

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 29

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUB2817

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 30

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2817

MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 31

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUB2817

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2817

METHOD SUMMARY

correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

* Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.

* If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

* Aliquots are underlined if less than the nominal value specified for the method.

* Preparation factors are underlined if greater than the nominal value specified for the method.

* Dilution factors are underlined if greater than the nominal value specified for the method.

* Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.

* Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.

* Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

* Count times are underlined if less than the nominal value

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 33

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUB2817

GUIDE, cont.

METHOD SUMMARY

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

EBERLINE ANALYTICAL

SDG 8667

SDG 8667
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUB2817

METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 35

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/30/11

Subcontract Order - TestAmerica Irvine (IUB2817)

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services - SUB
 2030 Wright Avenue
 Richmond, CA 94804
 Phone: (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: _____ °C

8667

Ice: Y / N

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

Analysis	Units	Expires	Comments
----------	-------	---------	----------

Sample ID: IUB2817-03 (Outfall 002 (Composite) - Water)

Sampled: 02/26/11 11:54

Gamma Spec-O	mg/kg	02/26/12 11:54	jflags; Cs 137 + K 40; do not filter
Gross Alpha-O	pCi/L	08/25/11 11:54	jflags; do not filter
Gross Beta-O	pCi/L	08/25/11 11:54	jflags; do not filter
Radium, Combined-O	pCi/L	02/26/12 11:54	jflags; do not filter
Strontium 90-O	pCi/L	02/26/12 11:54	jflags; do not filter
Tritium-O	pCi/L	02/26/12 11:54	jflags; do not filter
Uranium, Combined-O	pCi/L	02/26/12 11:54	jflags; do not filter

Containers Supplied:

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

Sample ID: IUB2817-04 (Trip Blanks - Water)

Sampled: 02/25/11 00:00

Gamma Spec-O	mg/kg	02/25/12 00:00	jflags; Cs 137 + K 40; do not filter
Gross Alpha-O	pCi/L	08/24/11 00:00	jflags; do not filter
Gross Beta-O	pCi/L	08/24/11 00:00	jflags; do not filter
Radium, Combined-O	pCi/L	02/25/12 00:00	jflags; do not filter
Strontium 90-O	pCi/L	02/25/12 00:00	jflags; do not filter
Uranium, Combined-O	pCi/L	02/25/12 00:00	jflags; do not filter

Containers Supplied:

2.5 gal Poly (A) 500 mL Amber (B)



Released By _____ Date/Time _____



Received By _____ Date/Time _____

02/01/11 0940

Released By _____ Date/Time _____

Received By _____ Date/Time _____



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 03/01/11 0940 CoC No. 1032817

Container I.D. No. CE TEST #6 Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes No [] N/A []
2. Custody seals on shipping container dated & signed? Yes No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A
5. Packing material is: Wet [] Dry
6. Number of samples in shipping container: 2 Sample Matrix W
7. Number of containers per sample: 2 (Or see CoC _____)
8. Samples are in correct container Yes No []
9. Paperwork agrees with samples? Yes No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels
11. Samples are: In good condition Leaking [] Broken Container [] Missing []
12. Samples are: Preserved Not preserved pH <2 / N/A Preservative HNO3
13. Describe any anomalies: _____

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____

15. Inspected by [Signature] Date: 03/02/11 Time: 1120

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>See samples</u>	<u>262</u>						

Ion Chamber Ser. No. _____

Calibration date _____

Alpha Meter Ser. No. _____

Calibration date _____

Beta/Gamma Meter Ser. No. 100482

Calibration date 24 SEP 10

APPENDIX G

Section 13

Outfall 002 – March 3, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUC0563

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: IUC0563
 Project Manager: B. Kelly
 Matrix: Water
 QC Level: IV
 No. of Samples: 2
 No. of Reanalyses/Dilutions: 0
 Laboratory: TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 002 (Grab)	IUC0563-01	N/A	Water	3/3/10 08:40	SM2510B
Outfall 002 (Composite)	IUC0563-03	G1C080516-001, S103059-01	Water	3/3/10 17:18	245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2130B, ASTM 5174

II. Sample Management

No anomalies were observed regarding sample management. The samples were received above the temperature limit at Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at Eberline and TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine, no custody seals were required. 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 or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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: L. Calvin

Date Reviewed: April 7, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for numerous target compounds. All target compounds detected in the associated sample were also detected in the method blank. The sample results between the EDL and the RL for the individual isomers were qualified as nondetected, "U," at the level of contamination. The results for

total HpCDF and total HpCDD were also qualified as nondetected, “U,” as the totals consisted of the same peaks present in the method blank totals.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613, and RPDs were within the laboratory control limit of ≤50%.
- 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 in the sample were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. EMPCs previously qualified as method blank contamination were not further qualified as EMPCs. Any detects reported between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Nondetects are valid to the EDL.

B. EPA METHOD 245.1—Mercury

Reviewed By: P. Meeks

Date Reviewed: April 7, 2011

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: The analytical holding time, 28 days for mercury, was met.
- Tuning: Not applicable to these analyses.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 85-115%. The CRI recoveries were within the control limits of 70-130%.
- Blanks: Method blanks and CCBs had no applicable detects.
- Interference Check Samples: Not applicable to this analysis.
- 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 for the methods was evaluated based on the LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to these analyses.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 7, 2011

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

- **Holding Times:** The tritium sample was analyzed within 180 days of collection. The remaining aliquots were prepared within the five-day analytical 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." All remaining detector efficiencies were acceptable.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- **Blanks:** There were no analytes detected in the method blanks.
- **Blank Spikes and Laboratory Control Samples:** The strontium recovery was nominally above the control limit; however, strontium was not detected in the sample. The remaining recoveries were within laboratory-established control limits.
- **Laboratory Duplicates:** A laboratory duplicate analyses were performed on the sample in this SDG for all analytes. The RPDs were within the laboratory-established control limits
- **Matrix Spike/Matrix Spike Duplicate:** No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- **Sample Result Verification:** An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - **Field Blanks and Equipment Rinsates:** This SDG had no identified field blank or equipment rinsate samples.
 - **Field Duplicates:** There were no field duplicate samples identified for this SDG.

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks

Date Reviewed: April 7, 2011

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *Standard Methods SM2310B and SM2510B*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- **Holding Times:** Analytical holding times were met.
- **Calibration:** Calibration criteria were met. Initial calibration r^2 values were ≥ 0.995 . All initial and continuing calibration recoveries were within 90-110%.
- **Blanks:** The method blanks and CCBs had no detects.
- **Blank Spikes and Laboratory Control Samples:** The recoveries were within laboratory-established QC limits.
- **Laboratory Duplicates:** A laboratory duplicate analysis was performed on the sample in this SDG for turbidity. The RPD was within the laboratory-established control limit.
- **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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms IUC0563

Analysis Method 8671

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total		0.859	1	0.025	pCi/L	Jb	J	DNQ

Analysis Method 900

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	1.17	3	0.883	pCi/L	Jb	J	C, DNQ
Gross Beta	12587472	1.94	4	1.25	pCi/L	Jb	J	DNQ

Analysis Method 901.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.36	pCi/L	U	U	
Potassium-40	13966002	ND	25	17.4	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	-0.017	1	0.811	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.214	1	0.455	pCi/L	U	U	

Analysis Method 905

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC0563-03	Sample Date:	3/3/2011 5:18:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.018	2	0.892	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC0563-03	Sample Date:	3/3/2011 5:18:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	16.1	500	144	pCi/L	U	U	

Analysis Method EPA 245.1

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0563-03	Sample Date:	3/3/2011 5:18:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 245.1-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0563-03	Sample Date:	3/3/2011 5:18:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.0000021	ug/L	J, Q, Ba	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000025	ug/L	J, Q, Ba	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000038	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000018	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000011	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000017	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000009	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000015	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000013	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000024	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000017	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000009	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000019	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000018	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000017	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000035	ug/L	J, Ba	U	B
OCDF	39001-02-0	ND	0.0001	0.0000035	ug/L	J, Ba	U	B
Total HpCDD	37871-00-4	ND	0.00005	0.0000021	ug/L	J, Q, Ba	U	B
Total HpCDF	38998-75-3	ND	0.00005	0.0000031	ug/L	J, Q, Ba	U	B
Total HxCDD	34465-46-8	ND	0.00005	0.0000015	ug/L		U	
Total HxCDF	55684-94-1	ND	0.00005	0.0000009	ug/L		U	
Total PeCDD	36088-22-9	ND	0.00005	0.0000024	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000017	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000018	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000017	ug/L		U	

Analysis Method SM2130B

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC0563-03 **Sample Date:** 3/3/2011 5:18:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	1.3	1.0	0.040	NTU			

Analysis Method *SM2510B*

Sample Name Outfall 002 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0563-01 **Sample Date:** 3/3/2011 8:40:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	590	1.0	1.0	umhos/c			

APPENDIX G

Section 14

Outfall 002 – March 3, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Routine Outfall 002 2010
Routine Outfall 002

Sampled: 03/03/11-03/04/11
Received: 03/03/11
Issued: 04/05/11 07:56

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

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 1°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

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

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals
Sample: 1
Some analytes in this sample and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.
Some analytes are reported at a concentration below the estimated detection limit (EDL). The data is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

LABORATORY ID

IUC0563-01
IUC0563-02
IUC0563-03
IUC0563-04

CLIENT ID

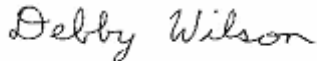
Outfall 002 (Grab)
Trip Blanks
Outfall 002 (Composite)
Trip Blanks

MATRIX

Water
Water
Water
Water

I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-01 (Outfall 002 (Grab) - Water)					Sampled: 03/03/11				
Reporting Units: ug/l									
1,2-Dichloroethane	EPA 624	11C0738	0.28	0.50	ND	1	ALE	03/05/11	
1,1-Dichloroethene	EPA 624	11C0738	0.42	2.0	ND	1	ALE	03/05/11	
Trichloroethene	EPA 624	11C0738	0.26	2.0	0.43	1	ALE	03/05/11	Ja
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					95 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					101 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				
Sample ID: IUC0563-02 (Trip Blanks - Water)					Sampled: 03/03/11				
Reporting Units: ug/l									
1,2-Dichloroethane	EPA 624	11C0738	0.28	0.50	ND	1	ALE	03/05/11	
1,1-Dichloroethene	EPA 624	11C0738	0.42	2.0	ND	1	ALE	03/05/11	
Trichloroethene	EPA 624	11C0738	0.26	2.0	ND	1	ALE	03/05/11	
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					94 %				
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					104 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				

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 Project Manager

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	11C0910	1.60	4.72	ND	0.943	LB	03/09/11	
2,4-Dinitrotoluene	EPA 625	11C0910	0.189	4.72	ND	0.943	LB	03/09/11	
N-Nitrosodimethylamine	EPA 625	11C0910	0.0943	4.72	ND	0.943	LB	03/09/11	
Pentachlorophenol	EPA 625	11C0910	0.0943	4.72	ND	0.943	LB	03/09/11	
2,4,6-Trichlorophenol	EPA 625	11C0910	0.0943	5.66	ND	0.943	LB	03/09/11	
<i>Surrogate: 2,4,6-Tribromophenol (40-120%)</i>					80 %				
<i>Surrogate: 2-Fluorobiphenyl (50-120%)</i>					76 %				
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					69 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					72 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					73 %				
<i>Surrogate: Terphenyl-d14 (50-125%)</i>					88 %				

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/03/11				
Reporting Units: ug/l									
alpha-BHC	EPA 608	11C1073	0.0024	0.0094	ND	0.943	CN	03/13/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					88 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					59 %				

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-01 (Outfall 002 (Grab) - Water)					Sampled: 03/03/11				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C1404	1.3	4.7	ND	1	DA	03/10/11	

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IUC0563 <Page 6 of 50>

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: mg/l									
Iron	EPA 200.7	11C1057	0.015	0.040	0.042	1	DP	03/11/11	B
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: ug/l									
Mercury	EPA 245.1	11C0917	0.10	0.20	ND	1	DB	03/08/11	
Cadmium	EPA 200.8	11C1274	0.10	1.0	ND	1	RDC	03/09/11	
Zinc	EPA 200.7	11C1057	6.00	20.0	ND	1	DP	03/11/11	
Copper	EPA 200.8	11C1274	0.50	2.0	2.3	1	RDC	03/09/11	
Lead	EPA 200.8	11C1274	0.20	1.0	ND	1	RDC	03/09/11	
Selenium	EPA 200.8	11C1274	0.50	2.0	ND	1	RDC	03/09/11	

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/03/11				
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	11C0903	0.015	0.040	ND	1	DP	03/11/11	
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11C1254	0.10	0.20	ND	1	DB	03/10/11	
Cadmium	EPA 200.8-Diss	11C1470	0.10	1.0	ND	1	RDC	03/11/11	
Zinc	EPA 200.7-Diss	11C0903	6.0	20	6.2	1	DP	03/11/11	Ja
Copper	EPA 200.8-Diss	11C1470	0.50	2.0	1.4	1	kb1	03/11/11	Ja
Lead	EPA 200.8-Diss	11C1470	0.20	1.0	ND	1	RDC	03/11/11	C
Selenium	EPA 200.8-Diss	11C1470	0.50	2.0	ND	1	RDC	03/11/11	

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/03/11				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11C0689	0.500	0.500	ND	1	TMK	03/04/11	
Biochemical Oxygen Demand	SM5210B	11C0770	0.50	2.0	1.2	1	XL	03/10/11	Ja
Chloride	EPA 300.0	11C0635	1.5	2.5	21	5	NN	03/04/11	MHA
Nitrate-N	EPA 300.0	11C0635	0.060	0.11	0.096	1	NN	03/04/11	Ja
Nitrite-N	EPA 300.0	11C0635	0.090	0.15	ND	1	NN	03/04/11	
Nitrate/Nitrite-N	EPA 300.0	11C0635	0.15	0.26	ND	1	NN	03/04/11	
Sulfate	EPA 300.0	11C0635	1.5	2.5	110	5	NN	03/04/11	MHA
Surfactants (MBAS)	SM5540-C	11C0711	0.050	0.10	ND	1	SLA	03/04/11	
Total Dissolved Solids	SM2540C	11C0973	1.0	10	380	1	MC	03/08/11	
Total Suspended Solids	SM 2540D	11C1136	1.0	10	1.0	1	DK1	03/08/11	Ja

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 Project Manager

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-01 (Outfall 002 (Grab) - Water)					Sampled: 03/03/11				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	11C0641	0.10	0.10	ND	1	RRZ	03/04/11	
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: NTU									
Turbidity	SM2130B	11C0762	0.040	1.0	1.3	1	AC1	03/05/11	
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11C1015	0.90	4.0	ND	1	mn	03/08/11	
Total Cyanide	SM4500CN-E	11C1280	2.2	5.0	ND	1	HH	03/09/11	
Sample ID: IUC0563-01 (Outfall 002 (Grab) - Water)					Sampled: 03/03/11				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	SM2510B	11C0592	1.0	1.0	590	1	MC	03/04/11	

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

8671

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Uranium, Total	8671	8671		1	0.859	1	TSC	03/21/11	Jb
Sample ID: IUC0563-04 (Trip Blanks - Water)					Sampled: 03/04/11				
Reporting Units: pCi/L									
Uranium, Total	8671	8671		1	-0.001	1	TSC	03/21/11	U

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Gross Alpha	900	8671		3	1.17	1	LS	03/22/11	Jb
Gross Beta	900	8671		4	1.94	1	LS	03/22/11	Jb
Sample ID: IUC0563-04 (Trip Blanks - Water)					Sampled: 03/04/11				
Reporting Units: pCi/L									
Gross Alpha	900	8671		3	-0.074	1	LS	03/22/11	U
Gross Beta	900	8671		4	0.051	1	LS	03/22/11	U

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8671		20	ND	1	LS	03/15/11	U
Potassium-40	901.1	8671		25	ND	1	LS	03/15/11	U
Sample ID: IUC0563-04 (Trip Blanks - Water)					Sampled: 03/04/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8671		20	ND	1	LS	03/15/11	U
Potassium-40	901.1	8671		25	ND	1	LS	03/15/11	U

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Radium-226	903.1	8671		1	-0.017	1	TM	03/25/11	U
Sample ID: IUC0563-04 (Trip Blanks - Water)					Sampled: 03/04/11				
Reporting Units: pCi/L									
Radium-226	903.1	8671		1	0.052	1	TM	03/25/11	U

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IUC0563 <Page 14 of 50>

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Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Radium-228	904	8671		1	0.214	1	ASM	03/23/11	U
Sample ID: IUC0563-04 (Trip Blanks - Water)					Sampled: 03/04/11				
Reporting Units: pCi/L									
Radium-228	904	8671		1	-0.018	1	ASM	03/23/11	U

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Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Strontium-90	905	8671		2	0.018	1	ASM	03/24/11	U
Sample ID: IUC0563-04 (Trip Blanks - Water)					Sampled: 03/04/11				
Reporting Units: pCi/L									
Strontium-90	905	8671		2	0.037	1	ASM	03/24/11	U

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water)					Sampled: 03/03/11				
Reporting Units: pCi/L									
Tritium	906	8671		500	16.1	1	JO	03/26/11	U

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IUC0563 <Page 17 of 50>

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/03/11				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1070198	0.0000021	0.00005	3.2e-006	0.98	GV	03/14/11	J, Q, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1070198	0.0000025	0.00005	2.1e-006	0.98	GV	03/14/11	J, Q, Ba
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1070198	0.0000038	0.00005	ND	0.98	GV	03/14/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1070198	0.0000018	0.00005	ND	0.98	GV	03/14/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1070198	0.0000011	0.00005	ND	0.98	GV	03/14/11	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1070198	0.0000017	0.00005	ND	0.98	GV	03/14/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1070198	0.00000099	0.00005	ND	0.98	GV	03/14/11	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1070198	0.0000015	0.00005	ND	0.98	GV	03/14/11	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1070198	0.0000013	0.00005	ND	0.98	GV	03/14/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1070198	0.0000024	0.00005	ND	0.98	GV	03/14/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1070198	0.0000017	0.00005	ND	0.98	GV	03/14/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1070198	0.00000096	0.00005	ND	0.98	GV	03/14/11	
2,3,4,7,8-PeCDF	EPA-5 1613B	1070198	0.0000019	0.00005	ND	0.98	GV	03/14/11	
2,3,7,8-TCDD	EPA-5 1613B	1070198	0.0000018	0.00001	ND	0.98	GV	03/14/11	
2,3,7,8-TCDF	EPA-5 1613B	1070198	0.0000017	0.00001	ND	0.98	GV	03/14/11	
OCDD	EPA-5 1613B	1070198	0.0000035	0.0001	2.8e-005	0.98	GV	03/14/11	J, Ba
OCDF	EPA-5 1613B	1070198	0.0000035	0.0001	3.5e-006	0.98	GV	03/14/11	J, Ba
Total HpCDD	EPA-5 1613B	1070198	0.0000021	0.00005	7e-006	0.98	GV	03/14/11	J, Q, Ba
Total HpCDF	EPA-5 1613B	1070198	0.0000031	0.00005	2.1e-006	0.98	GV	03/14/11	J, Q, Ba
Total HxCDD	EPA-5 1613B	1070198	0.0000015	0.00005	ND	0.98	GV	03/14/11	
Total HxCDF	EPA-5 1613B	1070198	0.00000096	0.00005	ND	0.98	GV	03/14/11	
Total PeCDD	EPA-5 1613B	1070198	0.0000024	0.00005	ND	0.98	GV	03/14/11	
Total PeCDF	EPA-5 1613B	1070198	0.0000017	0.00005	ND	0.98	GV	03/14/11	
Total TCDD	EPA-5 1613B	1070198	0.0000018	0.00001	ND	0.98	GV	03/14/11	
Total TCDF	EPA-5 1613B	1070198	0.0000017	0.00001	ND	0.98	GV	03/14/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	40 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	42 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	37 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	46 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	45 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	46 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	49 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	46 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	46 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	40 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	49 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	40 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	46 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	50 %
Surrogate: 13C-OCDD (17-157%)	39 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	83 %

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 002 (Grab) (IUC0563-01) - Water					
SM2540F	2	03/03/2011 08:40	03/03/2011 16:25	03/04/2011 07:05	03/04/2011 07:05
Sample ID: Outfall 002 (Composite) (IUC0563-03) - Water					
EPA 300.0	2	03/03/2011 17:18	03/03/2011 16:25	03/04/2011 10:00	03/04/2011 20:16
Filtration	1	03/03/2011 17:18	03/03/2011 16:25	03/04/2011 23:30	03/04/2011 23:30
SM2130B	2	03/03/2011 17:18	03/03/2011 16:25	03/05/2011 13:00	03/05/2011 13:00
SM5210B	2	03/03/2011 17:18	03/03/2011 16:25	03/05/2011 15:19	03/10/2011 10:00
SM5540-C	2	03/03/2011 17:18	03/03/2011 16:25	03/04/2011 17:35	03/04/2011 20:29

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IUC0563 <Page 19 of 50>

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0738 Extracted: 03/05/11											
Blank Analyzed: 03/05/2011 (11C0738-BLK1)											
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	2.0	0.42	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	24.5			ug/l	25.0		98	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
LCS Analyzed: 03/05/2011 (11C0738-BS1)											
1,2-Dichloroethane	28.7	0.50	0.28	ug/l	25.0		115	60-140			
1,1-Dichloroethene	26.1	2.0	0.42	ug/l	25.0		104	70-125			
Trichloroethene	27.1	2.0	0.26	ug/l	25.0		108	70-125			
Surrogate: 4-Bromofluorobenzene	23.4			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	24.5			ug/l	25.0		98	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
Matrix Spike Analyzed: 03/05/2011 (11C0738-MS1)						Source: IUC0255-01					
1,2-Dichloroethane	31.4	0.50	0.28	ug/l	25.0	ND	126	60-140			
1,1-Dichloroethene	27.1	2.0	0.42	ug/l	25.0	ND	108	60-130			
Trichloroethene	28.9	2.0	0.26	ug/l	25.0	ND	116	65-125			
Surrogate: 4-Bromofluorobenzene	23.4			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	25.3			ug/l	25.0		101	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Matrix Spike Dup Analyzed: 03/05/2011 (11C0738-MSD1)						Source: IUC0255-01					
1,2-Dichloroethane	31.0	0.50	0.28	ug/l	25.0	ND	124	60-140	1	20	
1,1-Dichloroethene	27.1	2.0	0.42	ug/l	25.0	ND	108	60-130	0.04	20	
Trichloroethene	28.3	2.0	0.26	ug/l	25.0	ND	113	65-125	2	20	
Surrogate: 4-Bromofluorobenzene	23.3			ug/l	25.0		93	80-120			
Surrogate: Dibromofluoromethane	25.3			ug/l	25.0		101	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			

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Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0910 Extracted: 03/07/11											
Blank Analyzed: 03/09/2011 (11C0910-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.00	1.70	ug/l							
2,4-Dinitrotoluene	ND	5.00	0.200	ug/l							
N-Nitrosodimethylamine	ND	5.00	0.100	ug/l							
Pentachlorophenol	ND	5.00	0.100	ug/l							
2,4,6-Trichlorophenol	ND	6.00	0.100	ug/l							
Surrogate: 2,4,6-Tribromophenol	16.0			ug/l	20.0		80	40-120			
Surrogate: 2-Fluorobiphenyl	7.76			ug/l	10.0		78	50-120			
Surrogate: 2-Fluorophenol	14.9			ug/l	20.0		74	30-120			
Surrogate: Nitrobenzene-d5	6.50			ug/l	10.0		65	45-120			
Surrogate: Phenol-d6	15.2			ug/l	20.0		76	35-120			
Surrogate: Terphenyl-d14	9.02			ug/l	10.0		90	50-125			
LCS Analyzed: 03/09/2011 (11C0910-BS1)											
Bis(2-ethylhexyl)phthalate	10.0	5.00	1.70	ug/l	10.0		100	65-130			MNR1
2,4-Dinitrotoluene	8.54	5.00	0.200	ug/l	10.0		85	65-120			
N-Nitrosodimethylamine	7.62	5.00	0.100	ug/l	10.0		76	45-120			
Pentachlorophenol	8.32	5.00	0.100	ug/l	10.0		83	24-121			
2,4,6-Trichlorophenol	8.32	6.00	0.100	ug/l	10.0		83	55-120			
Surrogate: 2,4,6-Tribromophenol	16.5			ug/l	20.0		83	40-120			
Surrogate: 2-Fluorobiphenyl	7.84			ug/l	10.0		78	50-120			
Surrogate: 2-Fluorophenol	13.4			ug/l	20.0		67	30-120			
Surrogate: Nitrobenzene-d5	7.16			ug/l	10.0		72	45-120			
Surrogate: Phenol-d6	14.7			ug/l	20.0		73	35-120			
Surrogate: Terphenyl-d14	9.30			ug/l	10.0		93	50-125			
LCS Dup Analyzed: 03/09/2011 (11C0910-BSD1)											
Bis(2-ethylhexyl)phthalate	9.32	5.00	1.70	ug/l	10.0		93	65-130	7	20	
2,4-Dinitrotoluene	8.16	5.00	0.200	ug/l	10.0		82	65-120	5	20	
N-Nitrosodimethylamine	7.44	5.00	0.100	ug/l	10.0		74	45-120	2	20	
Pentachlorophenol	8.46	5.00	0.100	ug/l	10.0		85	24-121	2	25	
2,4,6-Trichlorophenol	8.18	6.00	0.100	ug/l	10.0		82	55-120	2	30	
Surrogate: 2,4,6-Tribromophenol	16.4			ug/l	20.0		82	40-120			
Surrogate: 2-Fluorobiphenyl	7.64			ug/l	10.0		76	50-120			
Surrogate: 2-Fluorophenol	13.6			ug/l	20.0		68	30-120			
Surrogate: Nitrobenzene-d5	7.00			ug/l	10.0		70	45-120			
Surrogate: Phenol-d6	14.8			ug/l	20.0		74	35-120			

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Sampled: 03/03/11-03/04/11
Received: 03/03/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0910 Extracted: 03/07/11											
LCS Dup Analyzed: 03/09/2011 (11C0910-BSD1)											
Surrogate: Terphenyl-d14	9.04			ug/l	10.0		90	50-125			

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IUC0563 <Page 22 of 50>

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1073 Extracted: 03/08/11											
Blank Analyzed: 03/13/2011 (11C1073-BLK1)											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	0.466			ug/l	0.500		93	45-120			
Surrogate: Tetrachloro-m-xylene	0.281			ug/l	0.500		56	35-115			
LCS Analyzed: 03/13/2011 (11C1073-BS1)											
alpha-BHC	0.412	0.010	0.0025	ug/l	0.500		82	45-115			MNR1
Surrogate: Decachlorobiphenyl	0.487			ug/l	0.500		97	45-120			
Surrogate: Tetrachloro-m-xylene	0.363			ug/l	0.500		73	35-115			
LCS Dup Analyzed: 03/13/2011 (11C1073-BSD1)											
alpha-BHC	0.374	0.010	0.0025	ug/l	0.500		75	45-115	10	30	
Surrogate: Decachlorobiphenyl	0.462			ug/l	0.500		92	45-120			
Surrogate: Tetrachloro-m-xylene	0.325			ug/l	0.500		65	35-115			

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 Received: 03/03/11

METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1404 Extracted: 03/10/11											
Blank Analyzed: 03/10/2011 (11C1404-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/10/2011 (11C1404-BS1)											
Hexane Extractable Material (Oil & Grease)	19.0	5.0	1.4	mg/l	20.0		95	78-114			MNR1
LCS Dup Analyzed: 03/10/2011 (11C1404-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.3	5.0	1.4	mg/l	20.0		96	78-114	2	11	

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Received: 03/03/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0917 Extracted: 03/07/11</u>											
Blank Analyzed: 03/08/2011 (11C0917-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/08/2011 (11C0917-BS1)											
Mercury	8.28	0.20	0.10	ug/l	8.00		104	85-115			
Matrix Spike Analyzed: 03/08/2011 (11C0917-MS1)											
						Source: IUC0499-01					
Mercury	8.41	0.20	0.10	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/08/2011 (11C0917-MSD1)											
						Source: IUC0499-01					
Mercury	8.37	0.20	0.10	ug/l	8.00	ND	105	70-130	0.5	20	
<u>Batch: 11C1057 Extracted: 03/08/11</u>											
Blank Analyzed: 03/09/2011 (11C1057-BLK1)											
Iron	0.0178	0.040	0.015	mg/l							Ja
Zinc	ND	20.0	6.00	ug/l							
LCS Analyzed: 03/09/2011 (11C1057-BS1)											
Iron	0.508	0.040	0.015	mg/l	0.500		102	85-115			
Zinc	477	20.0	6.00	ug/l	500		95	85-115			
Matrix Spike Analyzed: 03/09/2011 (11C1057-MS1)											
						Source: IUC0694-07					
Iron	0.639	0.040	0.015	mg/l	0.500	0.134	101	70-130			
Zinc	475	20.0	6.00	ug/l	500	ND	95	70-130			
Matrix Spike Analyzed: 03/09/2011 (11C1057-MS2)											
						Source: IUC0694-08					
Iron	0.618	0.040	0.015	mg/l	0.500	0.126	99	70-130			
Zinc	466	20.0	6.00	ug/l	500	ND	93	70-130			

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1057 Extracted: 03/08/11</u>											
Matrix Spike Dup Analyzed: 03/09/2011 (11C1057-MSD1)						Source: IUC0694-07					
Iron	0.647	0.040	0.015	mg/l	0.500	0.134	103	70-130	1	20	
Zinc	491	20.0	6.00	ug/l	500	ND	98	70-130	3	20	
<u>Batch: 11C1274 Extracted: 03/09/11</u>											
Blank Analyzed: 03/09/2011 (11C1274-BLK1)											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
LCS Analyzed: 03/09/2011 (11C1274-BS1)											
Cadmium	82.1	1.0	0.10	ug/l	80.0		103	85-115			
Copper	84.6	2.0	0.50	ug/l	80.0		106	85-115			
Lead	81.9	1.0	0.20	ug/l	80.0		102	85-115			
Selenium	82.0	2.0	0.50	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 03/09/2011 (11C1274-MS1)						Source: IUC1076-01					
Cadmium	79.1	5.0	0.50	ug/l	80.0	ND	99	70-130			
Copper	85.5	10	2.5	ug/l	80.0	5.71	100	70-130			
Lead	75.6	5.0	1.0	ug/l	80.0	ND	94	70-130			
Selenium	350	10	2.5	ug/l	80.0	246	129	70-130			
Matrix Spike Dup Analyzed: 03/09/2011 (11C1274-MSD1)						Source: IUC1076-01					
Cadmium	78.7	5.0	0.50	ug/l	80.0	ND	98	70-130	0.5	20	
Copper	86.2	10	2.5	ug/l	80.0	5.71	101	70-130	0.9	20	
Lead	75.2	5.0	1.0	ug/l	80.0	ND	94	70-130	0.5	20	
Selenium	355	10	2.5	ug/l	80.0	246	135	70-130	1	20	MI

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Received: 03/03/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0903 Extracted: 03/07/11											
Blank Analyzed: 03/11/2011 (11C0903-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 03/11/2011 (11C0903-BS1)											
Iron	0.489	0.040	0.015	mg/l	0.500		98	85-115			
Zinc	479	20	6.0	ug/l	500		96	85-115			
Matrix Spike Analyzed: 03/11/2011 (11C0903-MS1) Source: IUC0171-01											
Iron	1.79	0.040	0.015	mg/l	0.500	1.37	85	70-130			
Zinc	520	20	6.0	ug/l	500	ND	104	70-130			
Matrix Spike Analyzed: 03/11/2011 (11C0903-MS2) Source: IUC0532-14											
Iron	0.495	0.040	0.015	mg/l	0.500	ND	99	70-130			
Zinc	464	20	6.0	ug/l	500	ND	93	70-130			
Matrix Spike Dup Analyzed: 03/11/2011 (11C0903-MSD1) Source: IUC0171-01											
Iron	1.62	0.040	0.015	mg/l	0.500	1.37	50	70-130	10	20	M2
Zinc	549	20	6.0	ug/l	500	ND	110	70-130	5	20	
Batch: 11C1254 Extracted: 03/09/11											
Blank Analyzed: 03/10/2011 (11C1254-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/10/2011 (11C1254-BS1)											
Mercury	8.22	0.20	0.10	ug/l	8.00		103	85-115			

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Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1254 Extracted: 03/09/11											
Matrix Spike Analyzed: 03/10/2011 (11C1254-MS1)						Source: IUC0798-01					
Mercury	8.40	0.20	0.10	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/10/2011 (11C1254-MSD1)						Source: IUC0798-01					
Mercury	8.17	0.20	0.10	ug/l	8.00	ND	102	70-130	3	20	
Batch: 11C1470 Extracted: 03/10/11											
Blank Analyzed: 03/11/2011 (11C1470-BLK1)											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
LCS Analyzed: 03/11/2011 (11C1470-BS1)											
Cadmium	78.3	1.0	0.10	ug/l	80.0		98	85-115			
Copper	77.9	2.0	0.50	ug/l	80.0		97	85-115			
Lead	87.0	1.0	0.20	ug/l	80.0		109	85-115			
Selenium	75.4	2.0	0.50	ug/l	80.0		94	85-115			
Matrix Spike Analyzed: 03/11/2011 (11C1470-MS1)						Source: IUC0563-03					
Cadmium	77.5	1.0	0.10	ug/l	80.0	ND	97	70-130			
Copper	77.7	2.0	0.50	ug/l	80.0	1.44	95	70-130			
Lead	88.7	1.0	0.20	ug/l	80.0	ND	111	70-130			
Selenium	70.8	2.0	0.50	ug/l	80.0	ND	89	70-130			
Matrix Spike Dup Analyzed: 03/11/2011 (11C1470-MSD1)						Source: IUC0563-03					
Cadmium	77.6	1.0	0.10	ug/l	80.0	ND	97	70-130	0.04	20	
Copper	77.4	2.0	0.50	ug/l	80.0	1.44	95	70-130	0.4	20	
Lead	88.8	1.0	0.20	ug/l	80.0	ND	111	70-130	0.1	20	
Selenium	70.9	2.0	0.50	ug/l	80.0	ND	89	70-130	0.07	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0592 Extracted: 03/04/11											
Blank Analyzed: 03/04/2011 (11C0592-BLK1)											
Specific Conductance	ND	1.0	1.0	hos/cm @ 2							
LCS Analyzed: 03/04/2011 (11C0592-BS1)											
Specific Conductance	1460	1.0	1.0	hos/cm @ 2	1410		103	90-110			
Duplicate Analyzed: 03/04/2011 (11C0592-DUP1)											
						Source: IUC0072-04					
Specific Conductance	425	1.0	1.0	hos/cm @ 2		421			0.9	5	
Batch: 11C0635 Extracted: 03/04/11											
Blank Analyzed: 03/04/2011 (11C0635-BLK1)											
Chloride	ND	0.50	0.30	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.30	mg/l							
LCS Analyzed: 03/04/2011 (11C0635-BS1)											
Chloride	4.96	0.50	0.30	mg/l	5.00		99	90-110			
Nitrate-N	1.19	0.11	0.060	mg/l	1.13		106	90-110			
Nitrite-N	1.51	0.15	0.090	mg/l	1.52		99	90-110			
Sulfate	9.78	0.50	0.30	mg/l	10.0		98	90-110			
Matrix Spike Analyzed: 03/04/2011 (11C0635-MS1)											
						Source: IUC0603-16					
Chloride	15.0	0.50	0.30	mg/l	5.00	9.71	106	80-120			
Nitrate-N	1.20	0.11	0.060	mg/l	1.13	0.205	88	80-120			
Nitrite-N	1.40	0.15	0.090	mg/l	1.52	ND	92	80-120			
Sulfate	38.4	0.50	0.30	mg/l	10.0	27.4	110	80-120			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0635 Extracted: 03/04/11											
Matrix Spike Analyzed: 03/04/2011 (11C0635-MS2)						Source: IUC0563-03					
Chloride	25.7	2.5	1.5	mg/l	5.00	21.5	85	80-120			MHA
Nitrate-N	1.37	0.55	0.30	mg/l	1.13	0.0961	113	80-120			
Nitrite-N	1.72	0.75	0.45	mg/l	1.52	ND	113	80-120			
Sulfate	116	2.5	1.5	mg/l	10.0	107	94	80-120			MHA
Matrix Spike Dup Analyzed: 03/04/2011 (11C0635-MSD1)						Source: IUC0603-16					
Chloride	14.3	0.50	0.30	mg/l	5.00	9.71	91	80-120	5	20	
Nitrate-N	1.12	0.11	0.060	mg/l	1.13	0.205	81	80-120	7	20	
Nitrite-N	1.30	0.15	0.090	mg/l	1.52	ND	85	80-120	8	20	
Sulfate	36.8	0.50	0.30	mg/l	10.0	27.4	94	80-120	4	20	
Batch: 11C0689 Extracted: 03/04/11											
Blank Analyzed: 03/04/2011 (11C0689-BLK1)											
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l							
LCS Analyzed: 03/04/2011 (11C0689-BS1)											
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0		98	80-115			
Matrix Spike Analyzed: 03/04/2011 (11C0689-MS1)						Source: IUC0563-03					
Ammonia-N (Distilled)	9.52	0.500	0.500	mg/l	10.0	ND	95	70-120			
Matrix Spike Dup Analyzed: 03/04/2011 (11C0689-MSD1)						Source: IUC0563-03					
Ammonia-N (Distilled)	9.52	0.500	0.500	mg/l	10.0	ND	95	70-120	0	15	
Batch: 11C0711 Extracted: 03/04/11											
Blank Analyzed: 03/04/2011 (11C0711-BLK1)											
Surfactants (MBAS)	ND	0.10	0.050	mg/l							

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Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0711 Extracted: 03/04/11</u>											
LCS Analyzed: 03/04/2011 (11C0711-BS1)											
Surfactants (MBAS)	0.259	0.10	0.050	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 03/04/2011 (11C0711-MS1)											
						Source: IUC0563-03					
Surfactants (MBAS)	0.301	0.10	0.050	mg/l	0.250	ND	120	50-125			
Matrix Spike Dup Analyzed: 03/04/2011 (11C0711-MSD1)											
						Source: IUC0563-03					
Surfactants (MBAS)	0.286	0.10	0.050	mg/l	0.250	ND	114	50-125	5	20	
<u>Batch: 11C0762 Extracted: 03/05/11</u>											
Blank Analyzed: 03/05/2011 (11C0762-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 03/05/2011 (11C0762-DUP1)											
						Source: IUC0563-03					
Turbidity	1.32	1.0	0.040	NTU		1.29			2	20	
<u>Batch: 11C0770 Extracted: 03/05/11</u>											
Blank Analyzed: 03/10/2011 (11C0770-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l							
LCS Analyzed: 03/10/2011 (11C0770-BS1)											
Biochemical Oxygen Demand	198	100	25	mg/l	198		100	85-115			
LCS Dup Analyzed: 03/10/2011 (11C0770-BSD1)											
Biochemical Oxygen Demand	201	100	25	mg/l	198		102	85-115	1	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C0973 Extracted: 03/08/11</u>											
Blank Analyzed: 03/08/2011 (11C0973-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/08/2011 (11C0973-BS1)											
Total Dissolved Solids	1000	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/08/2011 (11C0973-DUP1)											
						Source: IUC0545-01					
Total Dissolved Solids	1570	10	1.0	mg/l		1560			0.8	10	
<u>Batch: 11C1015 Extracted: 03/08/11</u>											
Blank Analyzed: 03/08/2011 (11C1015-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/08/2011 (11C1015-BS1)											
Perchlorate	27.3	4.0	0.90	ug/l	25.0		109	85-115			
Matrix Spike Analyzed: 03/08/2011 (11C1015-MS1)											
						Source: IUC0745-01					
Perchlorate	27.0	4.0	0.90	ug/l	25.0	ND	108	80-120			
Matrix Spike Dup Analyzed: 03/08/2011 (11C1015-MSD1)											
						Source: IUC0745-01					
Perchlorate	26.4	4.0	0.90	ug/l	25.0	ND	106	80-120	2	20	
<u>Batch: 11C1136 Extracted: 03/08/11</u>											
Blank Analyzed: 03/08/2011 (11C1136-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1136 Extracted: 03/08/11</u>											
LCS Analyzed: 03/08/2011 (11C1136-BS1)											
Total Suspended Solids	995	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/08/2011 (11C1136-DUP1)											
						Source: IUC0738-10					
Total Suspended Solids	8.00	10	1.0	mg/l		8.00			0	10	Ja
<u>Batch: 11C1280 Extracted: 03/09/11</u>											
Blank Analyzed: 03/09/2011 (11C1280-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/09/2011 (11C1280-BS1)											
Total Cyanide	203	5.0	2.2	ug/l	196		104	90-110			
Matrix Spike Analyzed: 03/09/2011 (11C1280-MS1)											
						Source: IUC1016-01					
Total Cyanide	202	5.0	2.2	ug/l	196	ND	103	70-115			
Matrix Spike Dup Analyzed: 03/09/2011 (11C1280-MSD1)											
						Source: IUC1016-01					
Total Cyanide	200	5.0	2.2	ug/l	196	ND	102	70-115	1	15	

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 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
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METHOD BLANK/QC DATA

8671

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/15/11											
LCS Analyzed: 03/21/2011 (S103059-03)											
Uranium, Total	53.2	1	N/A	pCi/L	56.5		94	80-120			
Blank Analyzed: 03/21/2011 (S103059-04)											
Uranium, Total	ND	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/21/2011 (S103059-05)											
Uranium, Total	0.852	1	N/A	pCi/L		0.859		-	1		Jb

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Sampled: 03/03/11-03/04/11
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METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/22/11											
LCS Analyzed: 03/23/2011 (S103059-03)						Source:					
Gross Alpha	117	3	N/A	pCi/L	101		116	70-130			
Gross Beta	84.7	4	N/A	pCi/L	87.2		97	70-130			
Blank Analyzed: 03/22/2011 (S103059-04)						Source:					
Gross Alpha	0.111	3	N/A	pCi/L				-			U
Gross Beta	-0.057	4	N/A	pCi/L				-			U
Duplicate Analyzed: 03/22/2011 (S103059-05)						Source: IUC0563-03					
Gross Alpha	0.322	3	N/A	pCi/L		1.17		-	114		U
Gross Beta	2.37	4	N/A	pCi/L		1.94		-	20		Jb

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 Received: 03/03/11

METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/14/11											
LCS Analyzed: 03/15/2011 (S103059-03)						Source:					
Cobalt-60	128	10	N/A	pCi/L	125		102	80-120			
Cesium-137	117	20	N/A	pCi/L	110		106	80-120			
Blank Analyzed: 03/15/2011 (S103059-04)						Source:					
Cesium-137	ND	20	N/A	pCi/L			-				U
Potassium-40	ND	25	N/A	pCi/L			-				U
Duplicate Analyzed: 03/18/2011 (S103059-05)						Source: IUC0563-03					
Cesium-137	ND	20	N/A	pCi/L		0	-		0		U
Potassium-40	ND	25	N/A	pCi/L		0	-		0		U

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/25/11											
LCS Analyzed: 03/25/2011 (S103059-03)											
Radium-226	61.9	1	N/A	pCi/L	55.7		111	80-120			
Blank Analyzed: 03/25/2011 (S103059-04)											
Radium-226	0.064	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/25/2011 (S103059-05)											
Radium-226	0.027	1	N/A	pCi/L				-	0		U

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Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/23/11											
LCS Analyzed: 03/23/2011 (S103059-03)											
Radium-228	4.37	1	N/A	pCi/L	5.04		87	60-140			
Blank Analyzed: 03/23/2011 (S103059-04)											
Radium-228	-0.027	1	N/A	pCi/L							U
Duplicate Analyzed: 03/23/2011 (S103059-05)											
Radium-228	0.183	1	N/A	pCi/L		0.214			0		U

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 Received: 03/03/11

METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/24/11											
LCS Analyzed: 03/24/2011 (S103059-03)											
Strontium-90	18.8	2	N/A	pCi/L	17.4		108	80-120			
Blank Analyzed: 03/24/2011 (S103059-04)											
Strontium-90	0.023	2	N/A	pCi/L				-			U
Duplicate Analyzed: 03/24/2011 (S103059-05)											
Strontium-90	0.32	2	N/A	pCi/L		0.018		-	0		U

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 Received: 03/03/11

METHOD BLANK/QC DATA

906

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8671 Extracted: 03/25/11											
LCS Analyzed: 03/26/2011 (S103059-03)											
Tritium	2750	500	N/A	pCi/L	2940		94	80-120			
Blank Analyzed: 03/26/2011 (S103059-04)											
Tritium	-34.3	500	N/A	pCi/L							U
Duplicate Analyzed: 03/26/2011 (S103059-05)											
Tritium	49.7	500	N/A	pCi/L		16.1			0		U

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 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 1070198 Extracted: 03/11/11

Blank Analyzed: 03/14/2011 (G1C110000198B)

Source:

1,2,3,4,6,7,8-HpCDD	2.8e-006	0.00005	0.0000017	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	1.9e-006	0.00005	0.0000014	ug/L				-			J, Q
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000021	ug/L				-			
1,2,3,4,7,8-HxCDD	1.9e-006	0.00005	0.0000012	ug/L				-			J
1,2,3,4,7,8-HxCDF	1.7e-006	0.00005	0.0000011	ug/L				-			J
1,2,3,6,7,8-HxCDD	2.2e-006	0.00005	0.000001	ug/L				-			J, Q
1,2,3,6,7,8-HxCDF	1.9e-006	0.00005	0.000001	ug/L				-			J, Q
1,2,3,7,8,9-HxCDD	ND	0.00005	0.0000013	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000013	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.0000022	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000021	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000096	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000022	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000018	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.0000019	ug/L				-			
OCDD	1.2e-005	0.0001	0.000002	ug/L				-			J
OCDF	3.6e-006	0.0001	0.0000017	ug/L				-			J, Q
Total HpCDD	6e-006	0.00005	0.0000017	ug/L				-			J
Total HpCDF	1.9e-006	0.00005	0.0000017	ug/L				-			J, Q
Total HxCDD	4e-006	0.00005	0.000001	ug/L				-			J, Q
Total HxCDF	3.6e-006	0.00005	0.0000011	ug/L				-			J, Q
Total PeCDD	ND	0.00005	0.0000022	ug/L				-			
Total PeCDF	ND	0.00005	0.0000021	ug/L				-			
Total TCDD	ND	0.00001	0.0000018	ug/L				-			
Total TCDF	ND	0.00001	0.0000019	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00094			ug/L	0.002		47	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00094			ug/L	0.002		47	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00089			ug/L	0.002		44	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.001			ug/L	0.002		52	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00097			ug/L	0.002		49	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.001			ug/L	0.002		52	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0011			ug/L	0.002		53	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.001			ug/L	0.002		52	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0011			ug/L	0.002		55	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00088			ug/L	0.002		44	24-185			

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 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1070198 Extracted: 03/11/11											
Blank Analyzed: 03/14/2011 (G1C110000198B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0011			ug/L	0.002		55	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00091			ug/L	0.002		45	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.00092			ug/L	0.002		46	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.00099			ug/L	0.002		50	24-169			
Surrogate: 13C-OCDD	0.0019			ug/L	0.004		48	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00069			ug/L	0.0008		86	35-197			
LCS Analyzed: 03/14/2011 (G1C110000198C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00107	0.00005	0.000007	ug/L	0.001		107	70-140			Ba
1,2,3,4,6,7,8-HpCDF	0.00115	0.00005	0.0000074	ug/L	0.001		115	82-122			Ba
1,2,3,4,7,8,9-HpCDF	0.00115	0.00005	0.000011	ug/L	0.001		115	78-138			
1,2,3,4,7,8-HxCDD	0.000984	0.00005	0.0000011	ug/L	0.001		98	70-164			Ba
1,2,3,4,7,8-HxCDF	0.00105	0.00005	0.00000083	ug/L	0.001		105	72-134			Ba
1,2,3,6,7,8-HxCDD	0.00114	0.00005	0.000001	ug/L	0.001		114	76-134			Ba
1,2,3,6,7,8-HxCDF	0.00106	0.00005	0.00000078	ug/L	0.001		106	84-130			Ba
1,2,3,7,8,9-HxCDD	0.00109	0.00005	0.00000093	ug/L	0.001		109	64-162			
1,2,3,7,8,9-HxCDF	0.00104	0.00005	0.00000098	ug/L	0.001		104	78-130			
1,2,3,7,8-PeCDD	0.000977	0.00005	0.0000028	ug/L	0.001		98	70-142			
1,2,3,7,8-PeCDF	0.00113	0.00005	0.0000035	ug/L	0.001		113	80-134			
2,3,4,6,7,8-HxCDF	0.00107	0.00005	0.00000081	ug/L	0.001		107	70-156			
2,3,4,7,8-PeCDF	0.00113	0.00005	0.0000039	ug/L	0.001		113	68-160			
2,3,7,8-TCDD	0.00023	0.00001	0.0000017	ug/L	0.0002		115	67-158			
2,3,7,8-TCDF	0.000253	0.00001	0.0000017	ug/L	0.0002		126	75-158			
OCDD	0.00202	0.0001	0.0000091	ug/L	0.002		101	78-144			Ba
OCDF	0.00206	0.0001	0.000011	ug/L	0.002		103	63-170			Ba
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.000988			ug/L	0.002		49	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.001			ug/L	0.002		50	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00091			ug/L	0.002		46	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00121			ug/L	0.002		61	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00114			ug/L	0.002		57	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00111			ug/L	0.002		56	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00117			ug/L	0.002		59	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00116			ug/L	0.002		58	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00111			ug/L	0.002		55	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00101			ug/L	0.002		51	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00119			ug/L	0.002		59	22-176			

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Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1070198 Extracted: 03/11/11											
LCS Analyzed: 03/14/2011 (G1C110000198C)						Source:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.000976			ug/L	0.002		49	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00107			ug/L	0.002		53	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00115			ug/L	0.002		58	22-152			
Surrogate: 13C-OCDD	0.00204			ug/L	0.004		51	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000661			ug/L	0.0008		83	31-191			
LCS Dup Analyzed: 03/14/2011 (G1C110000198L)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00107	0.00005	0.0000077	ug/L	0.001		107	70-140	0.34	50	Ba
1,2,3,4,6,7,8-HpCDF	0.00109	0.00005	0.0000013	ug/L	0.001		109	82-122	5.2	50	Ba
1,2,3,4,7,8,9-HpCDF	0.00113	0.00005	0.0000019	ug/L	0.001		113	78-138	2	50	
1,2,3,4,7,8-HxCDD	0.00096	0.00005	0.0000014	ug/L	0.001		96	70-164	2.5	50	Ba
1,2,3,4,7,8-HxCDF	0.00106	0.00005	0.0000013	ug/L	0.001		106	72-134	0.8	50	Ba
1,2,3,6,7,8-HxCDD	0.00112	0.00005	0.0000014	ug/L	0.001		112	76-134	1.7	50	Ba
1,2,3,6,7,8-HxCDF	0.00108	0.00005	0.0000012	ug/L	0.001		108	84-130	1.8	50	Ba
1,2,3,7,8,9-HxCDD	0.00106	0.00005	0.0000012	ug/L	0.001		106	64-162	3.4	50	
1,2,3,7,8,9-HxCDF	0.0011	0.00005	0.0000015	ug/L	0.001		110	78-130	5.1	50	
1,2,3,7,8-PeCDD	0.000974	0.00005	0.0000032	ug/L	0.001		97	70-142	0.29	50	
1,2,3,7,8-PeCDF	0.00113	0.00005	0.0000041	ug/L	0.001		113	80-134	0.53	50	
2,3,4,6,7,8-HxCDF	0.00109	0.00005	0.0000012	ug/L	0.001		109	70-156	1.2	50	
2,3,4,7,8-PeCDF	0.00111	0.00005	0.0000046	ug/L	0.001		111	68-160	1.3	50	
2,3,7,8-TCDD	0.000222	0.00001	0.0000019	ug/L	0.0002		111	67-158	3.3	50	
2,3,7,8-TCDF	0.000244	0.00001	0.0000017	ug/L	0.0002		122	75-158	3.3	50	
OCDD	0.00198	0.0001	0.000011	ug/L	0.002		99	78-144	2.4	50	Ba
OCDF	0.00202	0.0001	0.00001	ug/L	0.002		101	63-170	1.7	50	Ba
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00109			ug/L	0.002		55	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00116			ug/L	0.002		58	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00102			ug/L	0.002		51	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0014			ug/L	0.002		70	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00126			ug/L	0.002		63	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00123			ug/L	0.002		62	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00129			ug/L	0.002		64	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00122			ug/L	0.002		61	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00122			ug/L	0.002		61	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00107			ug/L	0.002		54	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00131			ug/L	0.002		66	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00106			ug/L	0.002		53	13-328			

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Received: 03/03/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1070198 Extracted: 03/11/11											
LCS Dup Analyzed: 03/14/2011 (G1C110000198L)											
Surrogate: 13C-2,3,7,8-TCDD	0.00114			ug/L	0.002		57	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00123			ug/L	0.002		61	22-152			
Surrogate: 13C-OCDD	0.00225			ug/L	0.004		56	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000676			ug/L	0.0008		85	31-191			

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IUC0563 <Page 44 of 50>

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Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC0563-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.7	15
IUC0563-01	624-(601list)	1,1-Dichloroethene	ug/l	0	2.0	6
IUC0563-01	624-(601list)	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUC0563-01	624-(601list)	Trichloroethene	ug/l	0.43	2.0	5
IUC0563-01	Settleable Solids - SM2540F	Total Settleable Solids	ml/l	0	0.10	0.3

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC0563-02	624-(601list)	1,1-Dichloroethene	ug/l	0	2.0	6
IUC0563-02	624-(601list)	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUC0563-02	624-(601list)	Trichloroethene	ug/l	0	2.0	5

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC0563-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.00063	0.0094	0.03
IUC0563-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.66	13
IUC0563-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	4.72	18
IUC0563-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.30	4.72	4
IUC0563-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	4.72	16
IUC0563-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	4.72	16.5
IUC0563-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.500	10.1
IUC0563-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	1.18	2.0	30
IUC0563-03	Cadmium-200.8	Cadmium	ug/l	0.0049	1.0	3.1
IUC0563-03	Chloride - 300.0	Chloride	mg/l	21	2.5	150
IUC0563-03	Copper-200.8	Copper	ug/l	2.30	2.0	14
IUC0563-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	-4	5.0	8.5
IUC0563-03	Iron-200.7	Iron	mg/l	0.042	0.040	0.3
IUC0563-03	Lead-200.8	Lead	ug/l	0.023	1.0	5.2
IUC0563-03	MBAS - SM5540C	Surfactants (MBAS)	mg/l	0.039	0.10	0.5
IUC0563-03	Mercury - 245.1	Mercury	ug/l	0.033	0.20	0.1
IUC0563-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0.096	0.11	8

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
 Routine Outfall 002
 Report Number: IUC0563

Sampled: 03/03/11-03/04/11
 Received: 03/03/11

IUC0563-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUC0563-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0.096	0.26	8
IUC0563-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
IUC0563-03	Selenium-200.8	Selenium	ug/l	0.37	2.0	5
IUC0563-03	Sulfate-300.0	Sulfate	mg/l	107	2.5	300
IUC0563-03	TDS - SM2540C	Total Dissolved Solids	mg/l	375	10	950
IUC0563-03	TSS - SM2540D	Total Suspended Solids	mg/l	1.00	10	45
IUC0563-03	Zinc-200.7	Zinc	ug/l	1.94	20.0	119

Compliance Check

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

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

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- Ba** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- J** Estimated result. Result is less than the reporting limit.
- Ja** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- Jb** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- Q** Estimated maximum possible concentration (EMPC).
- U** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2130B	Water	X	X
SM2510B	Water	X	N/A
SM2540C	Water	X	N/A
SM2540F	Water	X	X
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5540-C	Water	X	N/A

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUC0563-03, IUC0563-04

Analysis Performed: Gross Alpha
Samples: IUC0563-03, IUC0563-04

Analysis Performed: Gross Beta
Samples: IUC0563-03, IUC0563-04

Analysis Performed: Radium, Combined
Samples: IUC0563-03, IUC0563-04

Analysis Performed: Strontium 90
Samples: IUC0563-03, IUC0563-04

Analysis Performed: Tritium
Samples: IUC0563-03

Analysis Performed: Uranium, Combined
Samples: IUC0563-03, IUC0563-04

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106 - Amherst, NY 14228

Method Performed: 8671
Samples: IUC0563-03, IUC0563-04

Method Performed: 900
Samples: IUC0563-03, IUC0563-04

Method Performed: 901.1
Samples: IUC0563-03, IUC0563-04

Method Performed: 903.1
Samples: IUC0563-03, IUC0563-04

Method Performed: 904
Samples: IUC0563-03, IUC0563-04

Method Performed: 905
Samples: IUC0563-03, IUC0563-04

Method Performed: 906
Samples: IUC0563-03

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002 2010
Routine Outfall 002
Report Number: IUC0563

Sampled: 03/03/11-03/04/11
Received: 03/03/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B
Samples: IUC0563-03

TestAmerica Irvine

Debby Wilson
Project Manager

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IUC0563 <Page 50 of 50>

IVC 0563

Client Name/Address: MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007		Project: Boeing-SSFL NPOES Routine Outfall 002 GRAB								
Test America Contact: Debby Wilson		Phone Number: (626) 568-6691								
Project Manager: Bronwyn Kelly		Fax Number: (626) 568-6515								
Sampler: RICK BARRAGA										
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Oil & Grease (1664-HEM)	Settleable Solids	Conductivity	Field readings: (Log in and include in report Temp and pH) Temp °F = 49.0 pH = 7.4 DO = 7.96 mg/L Time of readings = 08:40	Comments
Outfall 002	W	VOAs	5	3-3-2011 08:40	HCl	X				
Outfall 002	W	1L Amber	2		HCl	X				
Outfall 002	W	1L Poly	1		None		X			
Outfall 002	W	500 mL Poly	2		None			X		
Trip Blanks	W	VOAs	3	3-3-2011 08:40	HCl	X				

These Samples are the Grab Portion of Outfall 002 for this storm event. Composite samples will follow and are to be added to this work order.

Relinquished By <i>Rick Barraga</i>	Date/Time: 3-3-2011 13:45	Received By <i>Max Conroy</i>	Date/Time: 3-3-11 13:45
Relinquished By <i>Max Conroy</i>	Date/Time: 3-3-11 16:25	Received By <i>Susan Pigeon</i>	Date/Time: 3-3-11 16:25

Turn-around time: (Check)
24 Hour: ___ 72 Hour: ___ 10 Day:
48 Hour: ___ 5 Day: ___ Normal: ___

Sample Integrity (Check)
Intact: On Ice:

Data Requirements: (Check)
No Level IV: ___ All Level IV: ___ NPOES Level IV:

KM 3-3-11
1540

OSM03

3.9

✓



EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION
2030 Wright Avenue
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Phone (510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

March 31, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUC0563
Eberline Analytical Report S103059-8671
Sample Delivery Group 8671**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUC0563. The samples were received on March 8, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8671 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

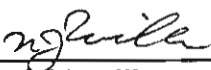
Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 **Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 **Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 **Strontium-90 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 **Radium-226 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.5 **Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.6 **Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 **Gamma Spectroscopy** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits. The gamma spectroscopy planchets were counted for sufficient time to meet the required Cs-137 detection limit of 20 pCi/L. As a consequence of keying to the Cs-137 RDL, the detection limits for K-40 were not achieved for all samples.

5.0 Case Narrative Certification Statement

“I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.”



N. Joseph Verville
Client Services Manager

3/31/11

Date

EBERLINE ANALYTICAL
SDG 8671

SDG 8671
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0563

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	8
Lab Control Samples	.	.	.	9
Duplicates	.	.	.	10
Data Sheets	.	.	.	11
Method Summaries	.	.	.	13
Report Guides	.	.	.	21
End of Section	.	.	.	35

VB

Prepared by

njv

Reviewed by

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0563

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0563

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB SAMPLE SUMMARY

SDG 8671
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0563

LAB SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S103059-01	IUC0563-03	Boeing - SSFL	WATER			IUC0563	03/03/11 17:18
S103059-02	IUC0563-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUC0563	03/04/11 00:00
S103059-03	Lab Control Sample		WATER				
S103059-04	Method Blank		WATER				
S103059-05	Duplicate (S103059-01)	Boeing - SSFL	WATER				03/03/11 17:18

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0563

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	‡ MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8671	IUC0563	IUC0563-03	WATER		10.0 L		03/08/11 5	S103059-01	8671-001
		IUC0563-04 (TRIP-BLANK)	WATER		20.0 L		03/08/11 4	S103059-02	8671-002
		Method Blank	WATER					S103059-04	8671-004
		Lab Control Sample	WATER					S103059-03	8671-003
		Duplicate (S103059-01)	WATER		10.0 L		03/08/11 5	S103059-05	8671-005

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
Contract IUC0563

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI-
			BATCH	2σ %	CLIENT	MORE	RE BLANK	LCS	
Beta Counting									
AC	WATER	Radium-228 in Water	7281-053	10.4	2		1	1	1/1
SR	WATER	Strontium-90 in Water	7281-053	10.4	2		1	1	1/1
Gas Proportional Counting									
80A	WATER	Gross Alpha in Water	7281-053	20.6	2		1	1	1/1
80B	WATER	Gross Beta in Water	7281-053	11.0	2		1	1	1/1
Gamma Spectroscopy									
GAM	WATER	Gamma Emitters in Water	7281-053	7.0	2		1	1	1/1
Kinetic Phosphorimetry, ug									
U_T	WATER	Uranium, Total	7281-053		2		1	1	1/1
Liquid Scintillation Counting									
H	WATER	Tritium in Water	7281-053	10.0	1		1	1	1/1
Radon Counting									
RA	WATER	Radium-226 in Water	7281-053	16.4	2		1	1	1/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-FBS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671

Contact N. Joseph Verville

Client Test America, Inc.

Contract IUC0563

LAB WORK SUMMARY

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX		SUF-						
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103059-01	IUC0563-03		8671-001	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water	
03/03/11	Boeing - SSFL	WATER	8671-001	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
03/08/11	IUC0563		8671-001	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
			8671-001	GAM		03/15/11	03/22/11	MWT	Gamma Emitters in Water	
			8671-001	H		03/26/11	03/29/11	BW	Tritium in Water	
			8671-001	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
			8671-001	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8671-001	U_T		03/21/11	03/23/11	BW	Uranium, Total	
S103059-02	IUC0563-04 (TRIP-BLANK)		8671-002	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water	
03/04/11	Boeing - SSFL	WATER	8671-002	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
03/08/11	IUC0563		8671-002	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
			8671-002	GAM		03/15/11	03/22/11	MWT	Gamma Emitters in Water	
			8671-002	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
			8671-002	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8671-002	U_T		03/21/11	03/23/11	BW	Uranium, Total	
S103059-03	Lab Control Sample		8671-003	80A/80		03/23/11	03/28/11	BW	Gross Alpha in Water	
		WATER	8671-003	80B/80		03/23/11	03/28/11	BW	Gross Beta in Water	
			8671-003	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
			8671-003	GAM		03/15/11	03/22/11	MWT	Gamma Emitters in Water	
			8671-003	H		03/26/11	03/29/11	BW	Tritium in Water	
			8671-003	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
			8671-003	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8671-003	U_T		03/21/11	03/23/11	BW	Uranium, Total	
S103059-04	Method Blank		8671-004	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water	
		WATER	8671-004	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
			8671-004	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
			8671-004	GAM		03/15/11	03/22/11	MWT	Gamma Emitters in Water	
			8671-004	H		03/26/11	03/29/11	BW	Tritium in Water	
			8671-004	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
			8671-004	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8671-004	U_T		03/21/11	03/23/11	BW	Uranium, Total	

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LWS

Version 3.06

Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

Client Test America, Inc.

Contract IUC0563

SDG 8671
Contact N. Joseph Verville

WORK SUMMARY, cont.

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX			SUF-					
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103059-05	Duplicate (S103059-01)		8671-005	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water	
03/03/11	Boeing - SSFL	WATER	8671-005	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
03/08/11			8671-005	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
			8671-005	GAM		03/18/11	03/22/11	MWT	Gamma Emitters in Water	
			8671-005	H		03/26/11	03/29/11	BW	Tritium in Water	
			8671-005	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
			8671-005	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8671-005	U_T		03/21/11	03/23/11	BW	Uranium, Total	

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP	SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	2			1	1	1		5
80B/80		Gross Beta in Water	900.0	2			1	1	1		5
AC		Radium-228 in Water	904.0	2			1	1	1		5
GAM		Gamma Emitters in Water	901.1	2			1	1	1		5
H		Tritium in Water	906.0	1			1	1	1		4
RA		Radium-226 in Water	903.1	2			1	1	1		5
SR		Strontium-90 in Water	905.0	2			1	1	1		5
U_T		Uranium, Total	D5174	2			1	1	1		5
TOTALS				15			8	8	8		39

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

8671-003

Lab Control Sample

LAB CONTROL SAMPLE

SDG <u>8671</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0563</u>
Lab sample id <u>S103059-03</u>	Client sample id <u>Lab Control Sample</u>
Dept sample id <u>8671-003</u>	Material/Matrix <u>WATER</u>

ANALYTE	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	REC ‡	2σ LMITS (TOTAL)	PROTOCOL LIMITS
Gross Alpha	117	6.5	1.39	3.00	80A		101	4.0	116	75-125	70-130
Gross Beta	84.7	3.6	2.70	4.00	80B		87.2	3.5	97	88-112	70-130
Tritium	2750	150	144	500	H		2940	120	94	89-111	80-120
Radium-226	61.9	2.8	0.885	1.00	RA		55.7	2.2	111	81-119	80-120
Radium-228	4.37	0.49	0.442	1.00	AC		5.04	0.20	87	86-114	60-140
Strontium-90	18.8	1.1	0.496	2.00	SR		17.4	0.70	108	86-114	80-120
Uranium, Total	53.2	6.1	0.250	1.00	U_T		56.5	2.3	94	88-112	80-120
Cobalt-60	128	4.4	1.79	10.0	GAM		125	5.0	102	91-109	80-120
Cesium-137	117	4.0	2.73	20.0	GAM		110	4.4	106	91-109	80-120

QC-LCS #77718

EBERLINE ANALYTICAL

SDG 8671

8671-005

IUC0563-03

DUPLICATE

SDG <u>8671</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0563</u>
DUPLICATE	ORIGINAL
Lab sample id <u>S103059-05</u>	Lab sample id <u>S103059-01</u>
Dept sample id <u>8671-005</u>	Dept sample id <u>8671-001</u>
	Received <u>03/08/11</u>
	Client sample id <u>IUC0563-03</u>
	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
	Collected/Volume <u>03/03/11 17:18</u> <u>10.0 L</u>
	Chain of custody id <u>IUC0563</u>

ANALYTE	DUPLICATE	2σ ERR	MDA	RDL	QUALI-	TEST	ORIGINAL	2σ ERR	MDA	QUALI-	RPD	3σ	DER
	pCi/L	(COUNT)	pCi/L	pCi/L	FIERS		pCi/L	(COUNT)	pCi/L	FIERS	%	TOT	σ
Gross Alpha	0.322	0.54	0.901	3.00	U	80A	1.17	0.69	0.883	J	114	183	1.9
Gross Beta	2.37	0.89	1.35	4.00	J	80B	1.94	0.81	1.25	J	20	87	0.7
Tritium	49.7	89	148	500	U	H	16.1	85	144	U	-	-	0.5
Radium-226	0.027	0.38	0.710	1.00	U	RA	-0.017	0.43	0.811	U	-	-	0.2
Radium-228	0.183	0.27	0.493	1.00	U	AC	0.214	0.21	0.455	U	-	-	0.2
Strontium-90	0.320	0.54	1.14	2.00	U	SR	0.018	0.39	0.892	U	-	-	0.9
Uranium, Total	0.852	0.092	0.025	1.00	J	U_T	0.859	0.093	0.025	J	1	23	0.1
Potassium-40	U		23.1	25.0	U	GAM	U		17.4	U	-	-	0.4
Cesium-137	U		1.98	20.0	U	GAM	U		1.36	U	-	-	0.5

QC-DUP#1 77720

DUPLICATES

Page 1

SUMMARY DATA SECTION

Page 10

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/31/11</u>

EBERLINE ANALYTICAL

SDG 8671

8671-001

IUC0563-03

DATA SHEET

SDG <u>8671</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0563</u>
Lab sample id <u>S103059-01</u>	Client sample id <u>IUC0563-03</u>
Dept sample id <u>8671-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/08/11</u>	Collected/Volume <u>03/03/11 17:18</u> <u>10.0 L</u>
	Chain of custody id <u>IUC0563</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	1.17	0.69	0.883	3.00	J	80A
Gross Beta	12587472	1.94	0.81	1.25	4.00	J	80B
Tritium	10028178	16.1	85	144	500	U	H
Radium-226	13982633	-0.017	0.43	0.811	1.00	U	RA
Radium-228	15262201	0.214	0.21	0.455	1.00	U	AC
Strontium-90	10098972	0.018	0.39	0.892	2.00	U	SR
Uranium, Total		0.859	0.093	0.025	1.00	J	U_T
Potassium-40	13966002	U		17.4	25.0	U	GAM
Cesium-137	10045973	U		1.36	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/31/11</u>

EBERLINE ANALYTICAL

SDG 8671

8671-002

IUC0563-04 (TRIP-BLANK)

DATA SHEET

SDG <u>8671</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0563</u>
Lab sample id <u>S103059-02</u>	Client sample id <u>IUC0563-04 (TRIP-BLANK)</u>
Dept sample id <u>8671-002</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/08/11</u>	Collected/Volume <u>03/04/11 00:00</u> <u>20.0 L</u>
	Chain of custody id <u>IUC0563</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	-0.074	0.15	0.302	3.00	U	80A
Gross Beta	12587472	0.051	0.50	0.824	4.00	U	80B
Radium-226	13982633	0.052	0.37	0.679	1.00	U	RA
Radium-228	15262201	-0.018	0.18	0.432	1.00	U	AC
Strontium-90	10098972	0.037	0.56	1.29	2.00	U	SR
Uranium, Total		-0.001	0.011	0.025	1.00	U	U_T
Potassium-40	13966002	U		<u>35.7</u>	25.0	U	GAM
Cesium-137	10045973	U		1.63	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/31/11</u>

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

RADIUM-228 IN WATER

BETA COUNTING

Test AC Matrix WATER
 SDG 8671
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0563

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Radium-228

Preparation batch 7281-053

S103059-01	8671-001	IUC0563-03	U
S103059-02	8671-002	IUC0563-04 (TRIP-BLANK)	U
S103059-03	8671-003	Lab Control Sample	ok
S103059-04	8671-004	Method Blank	U
S103059-05	8671-005	Duplicate (S103059-01)	- U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-053 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 053

S103059-01	IUC0563-03	0.455	1.80	84	150	20	03/23/11	03/23	GRB-221
S103059-02	IUC0563-04 (TRIP-BLANK)	0.432	1.80	83	150	19	03/23/11	03/23	GRB-222
S103059-03	Lab Control Sample	0.442	1.80	83	150		03/23/11	03/23	GRB-223
S103059-04	Method Blank	0.495	1.80	89	150		03/23/11	03/23	GRB-224
S103059-05	Duplicate (S103059-01)	0.493	1.80	82	150	20	03/23/11	03/23	GRB-201

Nominal values and limits from method 1.00 1.80 30-105 50 180

PROCEDURES REFERENCE 904.0
 DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD MDA 0.463 ± 0.058
 FOR 5 SAMPLES YIELD 84 ± 6

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER
BETA COUNTING

Test SR Matrix WATER
SDG 8671
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0563

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90

Preparation batch 7281-053

S103059-01	8671-001	IUC0563-03	U
S103059-02	8671-002	IUC0563-04 (TRIP-BLANK)	U
S103059-03	8671-003	Lab Control Sample	ok
S103059-04	8671-004	Method Blank	U
S103059-05	8671-005	Duplicate (S103059-01)	- U

Nominal values and limits from method RDLs (pCi/L) 2.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-053 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 053

S103059-01	IUC0563-03	0.892	0.500	83	50	21	03/24/11	03/24	GRB-227
S103059-02	IUC0563-04 (TRIP-BLANK)	1.29	0.500	68	50	20	03/24/11	03/24	GRB-221
S103059-03	Lab Control Sample	0.496	0.500	78	100		03/24/11	03/24	GRB-228
S103059-04	Method Blank	1.12	0.500	83	50		03/24/11	03/24	GRB-229
S103059-05	Duplicate (S103059-01)	1.14	0.500	76	50	21	03/24/11	03/24	GRB-230

Nominal values and limits from method 2.00 0.500 30-105 50 180

PROCEDURES REFERENCE 905.0
DWP-380 Strontium in Drinking Water, rev 8

AVERAGES ± 2 SD MDA 0.988 ± 0.619
FOR 5 SAMPLES YIELD 78 ± 12

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 14

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER
 SDG 8671
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0563

RESULTS

LAB	RAW	SUP-			Gross Alpha
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID		
Preparation batch 7281-053					
S103059-01	80	8671-001	IUC0563-03		1.17 J
S103059-02	80	8671-002	IUC0563-04 (TRIP-BLANK)		U
S103059-03	80	8671-003	Lab Control Sample		ok
S103059-04	80	8671-004	Method Blank		U
S103059-05	80	8671-005	Duplicate (S103059-01)		ok U

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUP-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-053 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg 053															
S103059-01	80	IUC0563-03	0.883	0.205			87		400			19	03/22/11	03/22	GRB-111
S103059-02	80	IUC0563-04 (TRIP-BLANK)	0.302	0.300			0		400			18	03/22/11	03/22	GRB-112
S103059-03	80	Lab Control Sample	1.39	0.100			60		400				03/22/11	03/23	GRB-101
S103059-04	80	Method Blank	0.739	0.100			56		400				03/22/11	03/22	GRB-216
S103059-05	80	Duplicate (S103059-01)	0.901	0.205			89		400			19	03/22/11	03/22	GRB-101

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 0.843 ± 0.780
 FOR 5 SAMPLES RESIDUE 58 ± 72

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER

SDG 8671

Contact N. Joseph Verville

Client Test America, Inc.

Contract IUC0563

RESULTS

LAB	RAW	SUP-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta
Preparation batch 7281-053				
S103059-01	80	8671-001	IUC0563-03	1.94 J
S103059-02	80	8671-002	IUC0563-04 (TRIP-BLANK)	U
S103059-03	80	8671-003	Lab Control Sample	ok
S103059-04	80	8671-004	Method Blank	U
S103059-05	80	8671-005	Duplicate (S103059-01)	ok J

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUP-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-053 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg 053															
S103059-01	80	IUC0563-03	1.25	0.205			87	400	19	03/22/11	03/22	GRB-111			
S103059-02	80	IUC0563-04 (TRIP-BLANK)	0.824	0.300			0	400	18	03/22/11	03/22	GRB-112			
S103059-03	80	Lab Control Sample	2.70	0.100			60	400		03/22/11	03/23	GRB-101			
S103059-04	80	Method Blank	2.79	0.100			56	400		03/22/11	03/22	GRB-216			
S103059-05	80	Duplicate (S103059-01)	1.35	0.205			89	400	19	03/22/11	03/22	GRB-101			

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
DWP-121 Gross Alpha and Gross Beta in Drinking Water,
rev 10

AVERAGES ± 2 SD MDA 1.78 ± 1.80
FOR 5 SAMPLES RESIDUE 58 ± 72

METHOD SUMMARIES

Page 4

SUMMARY DATA SECTION

Page 16

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8671
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0563

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7281-053					
S103059-01		8671-001	IUC0563-03		U
S103059-02		8671-002	IUC0563-04 (TRIP-BLANK)		U
S103059-03		8671-003	Lab Control Sample	ok	ok
S103059-04		8671-004	Method Blank		U
S103059-05		8671-005	Duplicate (S103059-01)		- U

Nominal values and limits from method RDLs (pCi/L) 10.0 20.0

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR
Preparation batch 7281-053 2σ prep error 7.0 % Reference Lab Notebook No. 7281 pg 053														
S103059-01		IUC0563-03		2.00					548		12	03/14/11	03/15	MB,08,00
S103059-02		IUC0563-04 (TRIP-BLANK)		2.00					548		11	03/14/11	03/15	01,01,00
S103059-03		Lab Control Sample		2.00					549			03/14/11	03/15	01,02,00
S103059-04		Method Blank		2.00					549			03/14/11	03/15	01,04,00
S103059-05		Duplicate (S103059-01)		2.00					403		15	03/14/11	03/18	01,01,00

Nominal values and limits from method 6.00 2.00 400 180

PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8671
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0563

RESULTS

LAB	RAW	SUF-		Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-053				
S103059-01		8671-001	IUC0563-03	0.859 J
S103059-02		8671-002	IUC0563-04 (TRIP-BLANK)	U
S103059-03		8671-003	Lab Control Sample	ok
S103059-04		8671-004	Method Blank	U
S103059-05		8671-005	Duplicate (S103059-01)	ok J
Nominal values and limits from method				RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR
Preparation batch 7281-053			2σ prep error		Reference Lab Notebook No. 7281 pg 053								
S103059-01		IUC0563-03	0.025	0.0200								18 03/15/11	03/21 KPA-001
S103059-02		IUC0563-04 (TRIP-BLANK)	0.025	0.0200								17 03/15/11	03/21 KPA-001
S103059-03		Lab Control Sample	0.250	0.0200								03/15/11	03/21 KPA-001
S103059-04		Method Blank	0.025	0.0200								03/15/11	03/21 KPA-001
S103059-05		Duplicate (S103059-01)	0.025	0.0200								18 03/15/11	03/21 KPA-001
Nominal values and limits from method			1.00	0.0200	180								

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.070 ± 0.201
 FOR 5 SAMPLES YIELD _____ ± _____

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
 SDG 8671
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0563

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Tritium

Preparation batch 7281-053

S103059-01		8671-001	IUC0563-03	U
S103059-03		8671-003	Lab Control Sample	ok
S103059-04		8671-004	Method Blank	U
S103059-05		8671-005	Duplicate (S103059-01)	- U

Nominal values and limits from method RDLs (pCi/L) 500

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-053 2σ prep error 10.0 % Reference Lab Notebook No. 7281 pg 053

S103059-01		IUC0563-03	144	0.0100			100	150			23	03/25/11	03/26	LSC-007
S103059-03		Lab Control Sample	144	0.100			10	150				03/25/11	03/26	LSC-007
S103059-04		Method Blank	146	0.100			10	150				03/25/11	03/26	LSC-007
S103059-05		Duplicate (S103059-01)	148	0.0100			100	150			23	03/25/11	03/26	LSC-007

Nominal values and limits from method 500 0.0100 100 180

PROCEDURES REFERENCE 906.0
 DWP-212 Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD MDA 146 ± 3.83
 FOR 4 SAMPLES YIELD 55 ± 104

METHOD SUMMARIES

Page 7

SUMMARY DATA SECTION

Page 19

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

LAB METHOD SUMMARY

RADIUM-226 IN WATER
RADON COUNTING

Test RA Matrix WATER
SDG 8671
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Client Test America, Inc.
Contract IUC0563

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226

Preparation batch 7281-053

S103059-01	8671-001	IUC0563-03	U
S103059-02	8671-002	IUC0563-04 (TRIP-BLANK)	U
S103059-03	8671-003	Lab Control Sample	ok
S103059-04	8671-004	Method Blank	U
S103059-05	8671-005	Duplicate (S103059-01)	- U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-053 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg 053

S103059-01	IUC0563-03	0.811	0.100	100	<u>93</u>	22	03/25/11	03/25	RN-011
S103059-02	IUC0563-04 (TRIP-BLANK)	0.679	0.100	100	<u>93</u>	21	03/25/11	03/25	RN-013
S103059-03	Lab Control Sample	0.885	0.100	100	<u>93</u>		03/25/11	03/25	RN-009
S103059-04	Method Blank	0.699	0.100	100	<u>93</u>		03/25/11	03/25	RN-010
S103059-05	Duplicate (S103059-01)	0.710	0.100	100	<u>93</u>	22	03/25/11	03/25	RN-012

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.757 ± 0.176
FOR 5 SAMPLES YIELD 100 ± 0

METHOD SUMMARIES

Page 8

SUMMARY DATA SECTION

Page 20

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0563

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 21

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
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REPORT GUIDE

Client Test America, Inc.
 Contract IUC0563

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 22

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0563

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUC0563

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
 Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
 Contract IUC0563

DATA SHEET

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
 - B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
 - H Similar to 'L' except the recovery was high.
 - P The RESULT is 'preliminary'.
 - X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
 - 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 25

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0563

DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 26

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUC0563

LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 27

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

E B E R L I N E A N A L Y T I C A L

SDG 8671

SDG 8671
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R E P O R T G U I D E

Client Test America, Inc.
 Contract IUC0563

D U P L I C A T E

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 28

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0563

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 29

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0563

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 30

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0563

MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 31

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUC0563

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0563

METHOD SUMMARY

correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.
- * MDAs are underlined if greater than the printed RDL.
- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
- * Count times are underlined if less than the nominal value

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 33

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
 Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
 Contract IUC0563

METHOD SUMMARY

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

REPORT GUIDES

Page 14

SUMMARY DATA SECTION

Page 34

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8671

SDG 8671
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0563

METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 35

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

SUBCONTRACT ORDER

TestAmerica Irvine

IUC0563

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: IUC0563-03	Water	Sampled: 03/03/11 17:18		
Uranium, Combined-O	03/14/11 12:00	03/02/12 17:18		jflags; do not filter
Tritium-O	03/14/11 12:00	03/02/12 17:18		jflags; do not filter
Strontium 90-O	03/14/11 12:00	03/02/12 17:18		jflags; do not filter
Radium, Combined-O	03/14/11 12:00	03/02/12 17:18		jflags; do not filter
Gross Beta-O	03/14/11 12:00	08/30/11 17:18		jflags; do not filter
Gross Alpha-O	03/14/11 12:00	08/30/11 17:18		jflags; do not filter
Gamma Spec-O	03/14/11 12:00	03/02/12 17:18		jflags; Cs 137 + K 40; do not filter
<i>Containers Supplied:</i>				
2.5 gal Poly (T)	500 mL Amber (U)			
Sample ID: IUC0563-04	Water	Sampled: 03/04/11 00:00		
Uranium, Combined-O	03/14/11 12:00	03/03/12 00:00		jflags; do not filter
Strontium 90-O	03/14/11 12:00	03/03/12 00:00		jflags; do not filter
Radium, Combined-O	03/14/11 12:00	03/03/12 00:00		jflags; do not filter
Gross Beta-O	03/14/11 12:00	08/31/11 00:00		jflags; do not filter
Gross Alpha-O	03/14/11 12:00	08/31/11 00:00		jflags; do not filter
Gamma Spec-O	03/14/11 12:00	03/03/12 00:00		jflags; Cs 137 + K 40; do not filter
<i>Containers Supplied:</i>				
2.5 gal Poly (A)	500 mL Amber (B)			

Released By	Date	Received By	Date

Subcontract Order - TestAmerica Irvine (IUC0563)

8671

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services
 2030 Wright Avenue
 Richmond, CA 94804
 Phone: (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: 14 °C

MELTED ICE

Ice: (Y) / N

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

Analysis	Units	Expires	Comments
----------	-------	---------	----------

Sample ID: IUC0563-03 (Outfall 002 (Composite) - Water) Sampled: 03/03/11 17:18

Gamma Spec-O	mg/kg	03/02/12 17:18	jflags; Cs 137 + K 40; do not filter
Gross Alpha-O	pCi/L	08/30/11 17:18	jflags; do not filter
Gross Beta-O	pCi/L	08/30/11 17:18	jflags; do not filter
Radium, Combined-O	pCi/L	03/02/12 17:18	jflags; do not filter
Strontium 90-O	pCi/L	03/02/12 17:18	jflags; do not filter
Tritium-O	pCi/L	03/02/12 17:18	jflags; do not filter
Uranium, Combined-O	pCi/L	03/02/12 17:18	jflags; do not filter

Containers Supplied:

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

Sample ID: IUC0563-04 (Trip Blanks - Water) Sampled: 03/04/11 00:00

Gamma Spec-O	mg/kg	03/03/12 00:00	jflags; Cs 137 + K 40; do not filter
Gross Alpha-O	pCi/L	08/31/11 00:00	jflags; do not filter
Gross Beta-O	pCi/L	08/31/11 00:00	jflags; do not filter
Radium, Combined-O	pCi/L	03/03/12 00:00	jflags; do not filter
Tritium-O	pCi/L	03/03/12 00:00	jflags; do not filter
Uranium, Combined-O	pCi/L	03/03/12 00:00	jflags; do not filter

Containers Supplied:

2.5 gal Poly (A) 500 mL Amber (B)

 Released By Date/Time

03/08/11 0930
 Received By Date/Time

 Released By Date/Time

 Received By Date/Time Page 1 of 1



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA IRVINE City IRVINE State CA

Date/Time received 03/08/11 0930 CoC No. IUC0563

Container I.D. No. 16 C1CST Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

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

TRIP BLANK IN 5.0 GAL CUBITAINER, 2.5 GAL ON COC

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____

15. Inspected by [Signature] Date: 03/08/11 Time: 1045

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>All samples</u>	<u>160</u>						

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. 100482 Calibration date 24 SEP 10

APPENDIX G

Section 15

Outfall 002 – March 7, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUC0822

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: IUC0822
 Project Manager: B. Kelly
 Matrix: Water
 QC Level: IV
 No. of Samples: 2
 No. of Reanalyses/Dilutions: 0
 Laboratory: TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 002	IUC0822-01	N/A	Water	3/7/11 19:51	624, 1664A
Trip Blanks	IUC0822-02	N/A	Water	3/7/11 10:00	624
Outfall 002	IUC0822-03	G1C100567-001, S103080-01	Water	3/7/11 10:00	200.7, 200.7 (diss), 200.8, 200.8 (diss), 245.1, 245.1 (diss), 300.0, 314.0, 608, 625, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, ASTM 5174, SM2130B, SM2510B, SM2540C, SM2540D, SM2540F, SM4500CN-E, SM4500NH3-C, SM5540C, SM

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at Eberline above the temperature limit; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at Eberline and TestAmerica-West Sacramento. As the sample was couriered to TestAmerica-Irvine, no custody seals were required. 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 or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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: L. Calvin

Date Reviewed: April 8, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
 - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for numerous target compounds. All target compounds detected in the associated sample were also detected in the method blank. The sample results between the EDL and the RL for the individual isomers were qualified as nondetected, "U," at the level of contamination. The results for

total HpCDF and total HpCDD were also qualified as nondetected, "U," as the totals consisted of the same peaks present in the method blank totals.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613, and RPDs were within the laboratory control limit of ≤50%.
- 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 in the sample were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. EMPCs previously qualified as method blank contamination were not further qualified as EMPCs. Any detects reported between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

Reviewed By: P. Meeks

Date Reviewed: April 7, 2011

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 200.8, and 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

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

- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were $\leq 5\%$, and all masses of interest were calibrated to ≤ 0.1 amu and ≤ 0.9 amu at 10% peak height.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury. CRDL/CRI recoveries were within the control limits of 70-130%.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Recoveries were within 80-120%. Cadmium and copper were detected above the reporting limit in the ICSA; however, the reviewer was unable to determine if these detects were a result of contamination in the ICSA solution.
- 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: MS/MSD analyses were performed on the sample in this SDG for the total 200.7 analytes and dissolved mercury. The recoveries and RPDs were within the method-established control limits. Method accuracy for 200.8 was evaluated based on LCS results.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: All sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration. Lead was not bracketed by a higher mass internal standard; therefore, the nondetected lead results were qualified as estimated, "UJ."
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

The total copper result was nominally more than the dissolved copper result.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicates: There were no field duplicate samples identified for this SDG.

C. EPA METHOD 608—Pesticides

Reviewed By: L. Calvin

Date Reviewed: April 11, 2011

The sample listed in Table 1 for this analysis 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: Extraction and analytical holding times were met. The sample was extracted within seven days of collection and analyzed within 40 days of extraction.
- Calibration: The initial calibration had %RSD of $\leq 10\%$ or r^2 of ≥ 0.995 on both columns. The ICV and CCVs had %Ds within the QC limit of $\leq 15\%$. The breakdown totals for endrin and 4,4-DDT were $\leq 15\%$.
- Blanks: The method blank had no confirmed target compound detect above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries and the RPD for alpha-BHC were within the laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within the laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample from this SDG. Evaluation of method accuracy was based on the LCS 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: This SDG had no identified field duplicate samples.
- Compound Identification: Compound identification was verified. Review of the sample

chromatograms and retention times indicated no problems with target compound identification. The laboratory analyzed for pesticide alpha-BHC by Method 608.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limit was supported by the low point of the initial calibration and the laboratory MDL. 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. Any reported nondetect is valid to the reporting limit.

D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 7, 2011

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

- Holding Times: The tritium sample was analyzed within 180 days of collection. The remaining aliquots were prepared within the five-day analytical 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, nondetected gross alpha in the sample was qualified as estimated, "UJ." The remaining detector efficiencies were $\geq 20\%$.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- Blanks: There were no analytes detected in the method blanks.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established control limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.

- **Sample Result Verification:** An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.
- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - **Field Blanks and Equipment Rinsates:** This SDG had no identified field blank or equipment rinsate samples.
 - **Field Duplicates:** There were no field duplicate samples identified for this SDG.

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

Reviewed By: L. Calvin

Date Reviewed: April 11, 2011

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 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. The sample was analyzed within 12 hours of the DFTPP injection time.
- **Calibration:** Calibration criteria were met. The initial calibration average RRFs and the ICV and continuing calibration RRFs were ≥ 0.05 for the applicable target compounds. The initial calibration %RSDs were $\leq 35\%$, or r^2 values ≥ 0.995 . The ICV and CCV %Ds were $\leq 20\%$.
- **Blanks:** The method blank had no target compound detects above the MDL.
- **Blank Spikes and Laboratory Control Samples:** Recoveries and RPDs for applicable target compounds were within laboratory-established QC limits.
- **Surrogate Recovery:** Recoveries were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample in this SDG. Method accuracy and precision was 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: This SDG had no identified field duplicate samples.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ± 30 seconds for retention times.
- Compound Identification: Compound identification was verified. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any 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.

F. EPA METHOD 624—Volatile Organic Compounds (VOCs)

Reviewed By: L. Calvin

Date Reviewed: April 11, 2011

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (10/99)*.

- Holding Times: Extraction and analytical holding times were met. The preserved water samples were analyzed within 14 days of collection.

- GC/MS Tuning: The BFB tunes met the method abundance criteria. The samples were analyzed within 12 hours of the BFB injection time.
- Calibration: The applicable initial calibration average RRFs and the ICV and continuing calibration RRFs were ≥ 0.05 for all applicable target compounds. The initial calibration %RSDs were $\leq 35\%$, or r^2 values ≥ 0.995 . The second source ICV and CCV recoveries were within the method control limits.
- Blanks: The method blank had no applicable target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the site sample in this SDG. Recoveries and RPDs were within the laboratory-established QC limits.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Trip Blanks: Sample Trip Blanks was the trip blank associated with the site sample in this SDG. The trip blank analysis had no target compounds detected above the MDL.
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: This SDG had no identified field duplicate samples.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: $-50\%/+100\%$ for internal standard areas and ± 30 seconds for retention times.
- Compound Identification: Compound identification was verified. Review of the sample chromatograms, 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: April 8, 2011

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)*, 300.0, 314.0, 1664A, SM2130B, SM2510B, SM2540C, SM2540D, SM2540F, SM4500NH3-C, SM4500CN-E, SM5210B, SM5540C, and the *National Functional Guidelines for Inorganic Data Review (7102)*.

- Holding Times: The analytical holding times were met.
- Calibration: Initial calibration r^2 values were >0.995 . The perchlorate IPC-MA and reporting limit check standards were recovered within 80-120% and 75-125%, respectively. The closing perchlorate CCV was recovered at 116%; however, perchlorate was not detected in the sample. All remaining ICV and CCV recoveries were within 90-110%. The balance calibration logs were acceptable.
- Blanks: The method blanks had no detects.
- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs were within laboratory-established QC limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for turbidity. The RPD was within the laboratory-established control limit.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for ammonia. The recoveries and RPD were within the laboratory-established control limits. Method accuracy for the remaining methods 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms IUC0822

Analysis Method 900

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	1.2	3	1.4	pCi/L	U	UJ	C
Gross Beta	12587472	2.92	4	1.78	pCi/L	Jb	J	DNQ

Analysis Method 901.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	1.66	pCi/L	U	U	
Potassium-40	13966002	ND	25	34.8	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.249	1	0.577	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	0.104	1	0.52	pCi/L	U	U	

Analysis Method 905

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.068	2	1.21	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	49	500	146	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	1.47	1	0.025	pCi/L			

Analysis Method EPA 1664A

Sample Name	Outfall 002 (Grab)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-01	Sample Date:	3/7/2011 10:00:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hexane Extractable Material (Oil & Grease)	HEM	ND	4.7	1.3	mg/l		U	

Analysis Method EPA 200.7

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	ND	0.040	0.015	mg/l		U	
Zinc	7440-66-6	ND	20.0	6.00	ug/l		U	

Analysis Method EPA 200.7-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	ND	0.040	0.015	mg/l		U	
Zinc	7440-66-6	ND	20.0	6.00	ug/l		U	

Analysis Method EPA 200.8

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		U	
Copper	7440-50-8	1.4	2.0	0.50	ug/l	J	J	DNQ
Lead	7439-92-1	ND	1.0	0.20	ug/l		UJ	*III
Selenium	7782-49-2	ND	2.0	0.50	ug/l		U	

Analysis Method EPA 200.8-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		U	
Copper	7440-50-8	1.9	2.0	0.50	ug/l	J	J	DNQ
Lead	7439-92-1	ND	1.0	0.20	ug/l		UJ	*III
Selenium	7782-49-2	ND	2.0	0.50	ug/l		U	

Analysis Method EPA 245.1

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 245.1-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method EPA 300.0

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chloride	16887-00-6	26	5.0	3.0	mg/l			
Nitrate/Nitrite-N	NA	ND	0.26	0.15	mg/l		U	
Nitrate-N	14797-55-8	ND	0.11	0.060	mg/l		U	
Nitrite-N	14797-65-0	ND	0.15	0.090	mg/l		U	
Sulfate	14808-79-8	130	5.0	3.0	mg/l			

Analysis Method EPA 314.0

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	ND	4.0	0.90	ug/l	C	U	

Analysis Method EPA 608

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
alpha-BHC	319-84-6	ND	0.0094	0.0024	ug/l		U	

Analysis Method EPA 624

Sample Name Outfall 002 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0822-01 **Sample Date:** 3/7/2011 10:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1-Dichloroethene	75-35-4	ND	2.0	0.42	ug/l		U	
1,2-Dichloroethane	107-06-2	ND	0.50	0.28	ug/l		U	
Trichloroethene	79-01-6	ND	2.0	0.26	ug/l		U	

Sample Name Trip Blanks **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0822-02 **Sample Date:** 3/7/2011 10:00:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1-Dichloroethene	75-35-4	ND	2.0	0.42	ug/l		U	
1,2-Dichloroethane	107-06-2	ND	0.50	0.28	ug/l		U	
Trichloroethene	79-01-6	ND	2.0	0.26	ug/l		U	

Analysis Method EPA 625

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
2,4,6-Trichlorophenol	88-06-2	ND	5.66	0.0943	ug/l		U	
2,4-Dinitrotoluene	121-14-2	ND	4.72	0.189	ug/l		U	
Bis(2-ethylhexyl)phthalate	117-81-7	ND	4.72	1.60	ug/l		U	
N-Nitrosodimethylamine	62-75-9	ND	4.72	0.0943	ug/l		U	
Pentachlorophenol	87-86-5	ND	4.72	0.0943	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	ND	0.00005	0.0000019	ug/L	J, B	U	B
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.00005	0.0000028	ug/L	J, B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000041	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000015	ug/L		U	
1,2,3,4,7,8-HxCDF	70648-26-9	ND	0.00005	0.0000011	ug/L		U	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000014	ug/L		U	
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.000001	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000013	ug/L		U	
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000013	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000023	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000019	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000009	ug/L		U	
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000019	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000017	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000017	ug/L		U	
OCDD	3268-87-9	ND	0.0001	0.0000036	ug/L	J, B	U	B
OCDF	39001-02-0	ND	0.0001	0.0000024	ug/L	J, Q, B	U	B
Total HpCDD	37871-00-4	ND	0.00005	0.0000019	ug/L	J, B	U	B
Total HpCDF	38998-75-3	ND	0.00005	0.0000034	ug/L	J, B	U	B
Total HxCDD	34465-46-8	ND	0.00005	0.0000013	ug/L		U	
Total HxCDF	55684-94-1	ND	0.00005	0.0000009	ug/L		U	
Total PeCDD	36088-22-9	ND	0.00005	0.0000023	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000019	ug/L		U	
Total TCDD	41903-57-5	ND	0.00001	0.0000017	ug/L		U	
Total TCDF	55722-27-5	ND	0.00001	0.0000017	ug/L		U	

Analysis Method SM 2540D

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	ND	10	1.0	mg/l		U	

Analysis Method SM2130B

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	0.47	1.0	0.040	NTU	J	J	DNQ

Analysis Method SM2510B

Sample Name	Outfall 002 (Grab)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-01	Sample Date:	3/7/2011 10:00:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	660	1.0	1.0	umhos/c			

Analysis Method SM2540C

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Dissolved Solids	NA	470	10	1.0	mg/l			

Analysis Method SM2540F

Sample Name	Outfall 002 (Grab)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-01	Sample Date:	3/7/2011 10:00:00 AM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Settleable Solids	Set Solids	ND	0.10	0.10	ml/l		U	

Analysis Method SM4500CN-E

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC0822-03	Sample Date:	3/7/2011 7:51:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Cyanide	57-12-5	ND	5.0	2.2	ug/l		U	

Analysis Method SM4500NH3-C

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Ammonia-N (Distilled)	7664-41-7	ND	0.500	0.500	mg/l		U	

Analysis Method SM5210B

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Biochemical Oxygen Demand	BOD	0.50	2.0	0.50	mg/l	J	J	DNQ

Analysis Method SM5540-C

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC0822-03 **Sample Date:** 3/7/2011 7:51:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Surfactants (MBAS)	MBAS	ND	0.10	0.050	mg/l		U	

APPENDIX G

Section 16

Outfall 002 – March 7, 2011

Test America Analytical Laboratory Report

LABORATORY REPORT

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

Project: Routine Outfall 002

Sampled: 03/07/11
Received: 03/07/11
Issued: 04/13/11 17:20

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

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

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 6°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis. Results were qualified where the sample container did not meet the method preservation requirements.

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

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

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

ADDITIONAL INFORMATION: WATER, 1613B, Dioxins/Furans with Totals
Some analytes in these samples and the associated method blank have an ion abundance ratio that is outside of criteria. The analytes are considered as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio. Analytical results are reported with a "Q" flag.

Some analytes are reported at a concentration below the estimated detection limit (EDL). The data is reported as a positive detection because the peaks elute at the correct retention time for both characteristic ions and have a signal to noise ratio greater than the method required 2.5:1.

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

LABORATORY ID

IUC0822-01
IUC0822-02
IUC0822-03
IUC0822-04

CLIENT ID

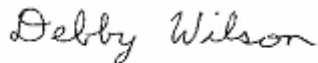
Outfall 002 (Grab)
Trip Blanks
Outfall 002 (Composite)
Trip Blank

MATRIX

Water
Water
Water
Water

I certify under penalty of perjury that the information contained in this report and all attachments was produced in accordance with the indicated methods and laboratory standard operating procedures, except as noted, and are complete and accurate to the best of my knowledge and belief. Subcontract laboratory reports that are attached have been evaluated for completeness and quality control acceptability.

Reviewed By:



TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers	
Sample ID: IUC0822-01 (Outfall 002 (Grab) - Water)					Sampled: 03/07/11					
Reporting Units: ug/l										
1,2-Dichloroethane	EPA 624	11C0986	0.28	0.50	ND	1	LB	03/08/11		
1,1-Dichloroethene	EPA 624	11C0986	0.42	2.0	ND	1	LB	03/08/11		
Trichloroethene	EPA 624	11C0986	0.26	2.0	ND	1	LB	03/08/11		
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					91 %					
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					83 %					
<i>Surrogate: Toluene-d8 (80-120%)</i>					98 %					
Sample ID: IUC0822-02 (Trip Blanks - Water)					Sampled: 03/07/11					P-HS
Reporting Units: ug/l										
1,2-Dichloroethane	EPA 624	11C0986	0.28	0.50	ND	1	LB	03/08/11		
1,1-Dichloroethene	EPA 624	11C0986	0.42	2.0	ND	1	LB	03/08/11		
Trichloroethene	EPA 624	11C0986	0.26	2.0	ND	1	LB	03/08/11		
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					92 %					
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					85 %					
<i>Surrogate: Toluene-d8 (80-120%)</i>					100 %					

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Sampled: 03/07/11

Received: 03/07/11

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	11C1433	1.60	4.72	ND	0.943	LB\	03/14/11	
2,4-Dinitrotoluene	EPA 625	11C1433	0.189	4.72	ND	0.943	LB\	03/14/11	
N-Nitrosodimethylamine	EPA 625	11C1433	0.0943	4.72	ND	0.943	LB\	03/14/11	
Pentachlorophenol	EPA 625	11C1433	0.0943	4.72	ND	0.943	LB\	03/14/11	
2,4,6-Trichlorophenol	EPA 625	11C1433	0.0943	5.66	ND	0.943	LB\	03/14/11	
<i>Surrogate: 2,4,6-Tribromophenol (40-120%)</i>					94 %				
<i>Surrogate: 2-Fluorobiphenyl (50-120%)</i>					77 %				
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					72 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					77 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					77 %				
<i>Surrogate: Terphenyl-d14 (50-125%)</i>					97 %				

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Debby Wilson
 Project Manager

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Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/07/11				
Reporting Units: ug/l									
alpha-BHC	EPA 608	11C1868	0.0024	0.0094	ND	0.943	CN	03/15/11	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					87 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					75 %				

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Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

HEXANE EXTRACTABLE MATERIAL

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-01 (Outfall 002 (Grab) - Water)					Sampled: 03/07/11				
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	11C2189	1.3	4.7	ND	1	DA	03/16/11	

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IUC0822 <Page 6 of 51>

MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: mg/l									
Iron	EPA 200.7	11C1918	0.015	0.040	ND	1	DP	03/16/11	
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: ug/l									
Mercury	EPA 245.1	11C1260	0.10	0.20	ND	1	DB	03/10/11	
Cadmium	EPA 200.8	11C1924	0.10	1.0	ND	1	RDC	03/14/11	
Zinc	EPA 200.7	11C1918	6.00	20.0	ND	1	DP	03/16/11	
Copper	EPA 200.8	11C1924	0.50	2.0	1.4	1	RDC	03/14/11	J
Lead	EPA 200.8	11C1924	0.20	1.0	ND	1	RDC	03/14/11	
Selenium	EPA 200.8	11C1924	0.50	2.0	ND	1	RDC	03/14/11	

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/07/11				
Reporting Units: mg/l									
Iron	EPA 200.7-Diss	11C2065	0.015	0.040	ND	1	LL	03/16/11	
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	11C1508	0.10	0.20	ND	1	DB	03/11/11	
Cadmium	EPA 200.8-Diss	11C2067	0.10	1.0	ND	1	RDC	03/15/11	
Zinc	EPA 200.7-Diss	11C2065	6.00	20.0	ND	1	LL	03/16/11	
Copper	EPA 200.8-Diss	11C2067	0.50	2.0	1.9	1	RDC	03/15/11	J
Lead	EPA 200.8-Diss	11C2067	0.20	1.0	ND	1	RDC	03/15/11	
Selenium	EPA 200.8-Diss	11C2067	0.50	2.0	ND	1	RDC	03/15/11	

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/07/11				
Reporting Units: mg/l									
Ammonia-N (Distilled)	SM4500NH3-C	11C1315	0.500	0.500	ND	1	TMK	03/09/11	
Biochemical Oxygen Demand	SM5210B	11C1258	0.50	2.0	0.50	1	XL	03/14/11	J
Chloride	EPA 300.0	11C1044	3.0	5.0	26	10	NN	03/09/11	
Nitrate-N	EPA 300.0	11C1044	0.060	0.11	ND	1	NN	03/09/11	
Nitrite-N	EPA 300.0	11C1044	0.090	0.15	ND	1	NN	03/09/11	
Nitrate/Nitrite-N	EPA 300.0	11C1044	0.15	0.26	ND	1	NN	03/09/11	
Sulfate	EPA 300.0	11C1044	3.0	5.0	130	10	NN	03/09/11	
Surfactants (MBAS)	SM5540-C	11C1129	0.050	0.10	ND	1	SLA	03/08/11	
Total Dissolved Solids	SM2540C	11C1151	1.0	10	470	1	MC	03/09/11	
Total Suspended Solids	SM 2540D	11C1498	1.0	10	ND	1	DC	03/10/11	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
 Received: 03/07/11

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-01 (Outfall 002 (Grab) - Water)					Sampled: 03/07/11				
Reporting Units: ml/l									
Total Settleable Solids	SM2540F	11C1024	0.10	0.10	ND	1	RRZ	03/08/11	
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: NTU									
Turbidity	SM2130B	11C1213	0.040	1.0	0.47	1	RRZ	03/09/11	J
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	11C1215	0.90	4.0	ND	1	mn	03/09/11	C
Total Cyanide	SM4500CN-E	11C1486	2.2	5.0	ND	1	HH	03/10/11	
Sample ID: IUC0822-01 (Outfall 002 (Grab) - Water)					Sampled: 03/07/11				
Reporting Units: umhos/cm @ 25C									
Specific Conductance	SM2510B	11C0972	1.0	1.0	660	1	MC	03/08/11	

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

8673

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Uranium, Total	8673	8673		1	1.47	1	TSC	03/21/11	
Sample ID: IUC0822-04 (Trip Blank - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Uranium, Total	8673	8673		1	ND	1	TSC	03/21/11	U

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
 Received: 03/07/11

900

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Gross Alpha	900	8673		3	1.2	1	LS	03/22/11	U
Gross Beta	900	8673		4	2.92	1	LS	03/22/11	Jb
Sample ID: IUC0822-04 (Trip Blank - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Gross Alpha	900	8673		3	-0.059	1	LS	03/22/11	U
Gross Beta	900	8673		4	-0.118	1	LS	03/22/11	U

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

901.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8673		20	ND	1	LS	03/18/11	U
Potassium-40	901.1	8673		25	ND	1	LS	03/18/11	U
Sample ID: IUC0822-04 (Trip Blank - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Cesium-137	901.1	8673		20	ND	1	LS	03/18/11	U
Potassium-40	901.1	8673		25	ND	1	LS	03/18/11	U

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
 Received: 03/07/11

903.1

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Radium-226	903.1	8673		1	0.249	1	TM	03/25/11	U
Sample ID: IUC0822-04 (Trip Blank - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Radium-226	903.1	8673		1	-0.109	1	TM	03/25/11	U

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Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

904

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Radium-228	904	8673		1	0.104	1	ASM	03/23/11	U
Sample ID: IUC0822-04 (Trip Blank - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Radium-228	904	8673		1	-0.06	1	ASM	03/23/11	U

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

905

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Strontium-90	905	8673		2	0.068	1	ASM	03/24/11	U
Sample ID: IUC0822-04 (Trip Blank - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Strontium-90	905	8673		2	0.121	1	ASM	03/24/11	U

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

906

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)					Sampled: 03/07/11				
Reporting Units: pCi/L									
Tritium	906	8673		500	49	1	JO	03/26/11	U

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IUC0822 <Page 17 of 51>

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
 Received: 03/07/11

EPA-5 1613Bx

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Analyst	Date Analyzed	Data Qualifiers
Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water) - cont.					Sampled: 03/07/11				
Reporting Units: ug/L									
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	1070198	0.0000019	0.00005	3.5e-006	0.98	SY	03/14/11	J, B
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	1070198	0.0000028	0.00005	1.1e-006	0.98	SY	03/14/11	J, B
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	1070198	0.0000041	0.00005	ND	0.98	SY	03/14/11	
1,2,3,4,7,8-HxCDD	EPA-5 1613B	1070198	0.0000015	0.00005	ND	0.98	SY	03/14/11	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	1070198	0.0000011	0.00005	ND	0.98	SY	03/14/11	
1,2,3,6,7,8-HxCDD	EPA-5 1613B	1070198	0.0000014	0.00005	ND	0.98	SY	03/14/11	
1,2,3,6,7,8-HxCDF	EPA-5 1613B	1070198	0.0000001	0.00005	ND	0.98	SY	03/14/11	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	1070198	0.0000013	0.00005	ND	0.98	SY	03/14/11	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	1070198	0.0000013	0.00005	ND	0.98	SY	03/14/11	
1,2,3,7,8-PeCDD	EPA-5 1613B	1070198	0.0000023	0.00005	ND	0.98	SY	03/14/11	
1,2,3,7,8-PeCDF	EPA-5 1613B	1070198	0.0000019	0.00005	ND	0.98	SY	03/14/11	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	1070198	0.00000099	0.00005	ND	0.98	SY	03/14/11	
2,3,4,7,8-PeCDF	EPA-5 1613B	1070198	0.0000019	0.00005	ND	0.98	SY	03/14/11	
2,3,7,8-TCDD	EPA-5 1613B	1070198	0.0000017	0.00001	ND	0.98	SY	03/14/11	
2,3,7,8-TCDF	EPA-5 1613B	1070198	0.0000017	0.00001	ND	0.98	SY	03/14/11	
OCDD	EPA-5 1613B	1070198	0.0000036	0.0001	2.6e-005	0.98	SY	03/14/11	J, B
OCDF	EPA-5 1613B	1070198	0.0000024	0.0001	2.8e-006	0.98	SY	03/14/11	J, Q, B
Total HpCDD	EPA-5 1613B	1070198	0.0000019	0.00005	6.7e-006	0.98	SY	03/14/11	J, B
Total HpCDF	EPA-5 1613B	1070198	0.0000034	0.00005	1.1e-006	0.98	SY	03/14/11	J, B
Total HxCDD	EPA-5 1613B	1070198	0.0000013	0.00005	ND	0.98	SY	03/14/11	
Total HxCDF	EPA-5 1613B	1070198	0.00000099	0.00005	ND	0.98	SY	03/14/11	
Total PeCDD	EPA-5 1613B	1070198	0.0000023	0.00005	ND	0.98	SY	03/14/11	
Total PeCDF	EPA-5 1613B	1070198	0.0000019	0.00005	ND	0.98	SY	03/14/11	
Total TCDD	EPA-5 1613B	1070198	0.0000017	0.00001	ND	0.98	SY	03/14/11	
Total TCDF	EPA-5 1613B	1070198	0.0000017	0.00001	ND	0.98	SY	03/14/11	

Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (23-140%)	37 %
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (28-143%)	39 %
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (26-138%)	35 %
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-141%)	45 %
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-152%)	43 %
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-130%)	43 %
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-123%)	44 %
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-147%)	43 %
Surrogate: 13C-1,2,3,7,8-PeCDD (25-181%)	42 %
Surrogate: 13C-1,2,3,7,8-PeCDF (24-185%)	36 %
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-136%)	45 %
Surrogate: 13C-2,3,4,7,8-PeCDF (21-178%)	36 %
Surrogate: 13C-2,3,7,8-TCDD (25-164%)	40 %
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	42 %
Surrogate: 13C-OCDD (17-157%)	45 %
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197%)	83 %

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 002 (Grab) (IUC0822-01) - Water					
SM2540F	2	03/07/2011 10:00	03/07/2011 17:05	03/08/2011 07:40	03/08/2011 07:40
Sample ID: Outfall 002 (Composite) (IUC0822-03) - Water					
EPA 300.0	2	03/07/2011 19:51	03/07/2011 17:05	03/08/2011 20:00	03/09/2011 00:32
Filtration	1	03/07/2011 19:51	03/07/2011 17:05	03/08/2011 23:30	03/08/2011 23:30
SM2130B	2	03/07/2011 19:51	03/07/2011 17:05	03/09/2011 08:00	03/09/2011 08:00
SM5210B	2	03/07/2011 19:51	03/07/2011 17:05	03/09/2011 15:00	03/14/2011 10:30
SM5540-C	2	03/07/2011 19:51	03/07/2011 17:05	03/08/2011 20:55	03/08/2011 21:43

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0986 Extracted: 03/08/11											
Blank Analyzed: 03/08/2011 (11C0986-BLK1)											
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	2.0	0.42	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Surrogate: 4-Bromofluorobenzene	23.0			ug/l	25.0		92	80-120			
Surrogate: Dibromofluoromethane	21.0			ug/l	25.0		84	80-120			
Surrogate: Toluene-d8	25.3			ug/l	25.0		101	80-120			
LCS Analyzed: 03/08/2011 (11C0986-BS1)											
1,2-Dichloroethane	19.4	0.50	0.28	ug/l	25.0		77	60-140			
1,1-Dichloroethene	21.3	2.0	0.42	ug/l	25.0		85	70-125			
Trichloroethene	27.1	2.0	0.26	ug/l	25.0		109	70-125			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	20.9			ug/l	25.0		84	80-120			
Surrogate: Toluene-d8	25.1			ug/l	25.0		100	80-120			
Matrix Spike Analyzed: 03/08/2011 (11C0986-MS1)						Source: IUC0822-01					
1,2-Dichloroethane	19.5	0.50	0.28	ug/l	25.0	ND	78	60-140			
1,1-Dichloroethene	20.7	2.0	0.42	ug/l	25.0	ND	83	60-130			
Trichloroethene	26.4	2.0	0.26	ug/l	25.0	ND	106	65-125			
Surrogate: 4-Bromofluorobenzene	22.8			ug/l	25.0		91	80-120			
Surrogate: Dibromofluoromethane	21.4			ug/l	25.0		86	80-120			
Surrogate: Toluene-d8	24.9			ug/l	25.0		100	80-120			
Matrix Spike Dup Analyzed: 03/08/2011 (11C0986-MSD1)						Source: IUC0822-01					
1,2-Dichloroethane	19.3	0.50	0.28	ug/l	25.0	ND	77	60-140	1	20	
1,1-Dichloroethene	19.8	2.0	0.42	ug/l	25.0	ND	79	60-130	4	20	
Trichloroethene	25.6	2.0	0.26	ug/l	25.0	ND	102	65-125	3	20	
Surrogate: 4-Bromofluorobenzene	23.1			ug/l	25.0		92	80-120			
Surrogate: Dibromofluoromethane	21.5			ug/l	25.0		86	80-120			
Surrogate: Toluene-d8	25.4			ug/l	25.0		102	80-120			

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Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1433 Extracted: 03/10/11											
Blank Analyzed: 03/14/2011 (11C1433-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.00	1.70	ug/l							
2,4-Dinitrotoluene	ND	5.00	0.200	ug/l							
N-Nitrosodimethylamine	ND	5.00	0.100	ug/l							
Pentachlorophenol	ND	5.00	0.100	ug/l							
2,4,6-Trichlorophenol	ND	6.00	0.100	ug/l							
Surrogate: 2,4,6-Tribromophenol	18.7			ug/l	20.0		93	40-120			
Surrogate: 2-Fluorobiphenyl	9.04			ug/l	10.0		90	50-120			
Surrogate: 2-Fluorophenol	15.4			ug/l	20.0		77	30-120			
Surrogate: Nitrobenzene-d5	7.16			ug/l	10.0		72	45-120			
Surrogate: Phenol-d6	15.7			ug/l	20.0		78	35-120			
Surrogate: Terphenyl-d14	10.1			ug/l	10.0		101	50-125			
LCS Analyzed: 03/14/2011 (11C1433-BS1)											
Bis(2-ethylhexyl)phthalate	7.72	5.00	1.70	ug/l	10.0		77	65-130			MNR1
2,4-Dinitrotoluene	8.62	5.00	0.200	ug/l	10.0		86	65-120			
N-Nitrosodimethylamine	7.38	5.00	0.100	ug/l	10.0		74	45-120			
Pentachlorophenol	7.46	5.00	0.100	ug/l	10.0		75	24-121			
2,4,6-Trichlorophenol	7.86	6.00	0.100	ug/l	10.0		79	55-120			
Surrogate: 2,4,6-Tribromophenol	16.6			ug/l	20.0		83	40-120			
Surrogate: 2-Fluorobiphenyl	7.78			ug/l	10.0		78	50-120			
Surrogate: 2-Fluorophenol	13.4			ug/l	20.0		67	30-120			
Surrogate: Nitrobenzene-d5	7.12			ug/l	10.0		71	45-120			
Surrogate: Phenol-d6	14.6			ug/l	20.0		73	35-120			
Surrogate: Terphenyl-d14	9.32			ug/l	10.0		93	50-125			
LCS Dup Analyzed: 03/14/2011 (11C1433-BSD1)											
Bis(2-ethylhexyl)phthalate	8.94	5.00	1.70	ug/l	10.0		89	65-130	15	20	
2,4-Dinitrotoluene	8.46	5.00	0.200	ug/l	10.0		85	65-120	2	20	
N-Nitrosodimethylamine	6.98	5.00	0.100	ug/l	10.0		70	45-120	6	20	
Pentachlorophenol	7.96	5.00	0.100	ug/l	10.0		80	24-121	6	25	
2,4,6-Trichlorophenol	7.76	6.00	0.100	ug/l	10.0		78	55-120	1	30	
Surrogate: 2,4,6-Tribromophenol	17.0			ug/l	20.0		85	40-120			
Surrogate: 2-Fluorobiphenyl	7.50			ug/l	10.0		75	50-120			
Surrogate: 2-Fluorophenol	12.0			ug/l	20.0		60	30-120			
Surrogate: Nitrobenzene-d5	6.78			ug/l	10.0		68	45-120			
Surrogate: Phenol-d6	13.6			ug/l	20.0		68	35-120			

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1433 Extracted: 03/10/11											
LCS Dup Analyzed: 03/14/2011 (11C1433-BSD1)											
Surrogate: Terphenyl-d14	9.68			ug/l	10.0		97	50-125			

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IUC0822 <Page 22 of 51>

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1868 Extracted: 03/14/11											
Blank Analyzed: 03/15/2011 (11C1868-BLK1)											
alpha-BHC	ND	0.010	0.0025	ug/l							
Surrogate: Decachlorobiphenyl	0.427			ug/l	0.500		85	45-120			
Surrogate: Tetrachloro-m-xylene	0.371			ug/l	0.500		74	35-115			
LCS Analyzed: 03/15/2011 (11C1868-BS1)											
alpha-BHC	0.481	0.010	0.0025	ug/l	0.500		96	45-115			
Surrogate: Decachlorobiphenyl	0.459			ug/l	0.500		92	45-120			
Surrogate: Tetrachloro-m-xylene	0.425			ug/l	0.500		85	35-115			
Matrix Spike Analyzed: 03/15/2011 (11C1868-MS1)						Source: IUC1047-01					
alpha-BHC	0.368	0.028	0.0071	ug/l	0.472	ND	78	40-120			
Surrogate: Decachlorobiphenyl	0.417			ug/l	0.472		88	45-120			
Surrogate: Tetrachloro-m-xylene	0.310			ug/l	0.472		66	35-115			
Matrix Spike Analyzed: 03/15/2011 (11C1868-MS3)						Source: IUC1022-07					
alpha-BHC	0.426	0.028	0.0071	ug/l	0.472	ND	90	40-120			
Surrogate: Decachlorobiphenyl	0.422			ug/l	0.472		90	45-120			
Surrogate: Tetrachloro-m-xylene	0.388			ug/l	0.472		82	35-115			
Matrix Spike Dup Analyzed: 03/15/2011 (11C1868-MSD1)						Source: IUC1047-01					
alpha-BHC	0.379	0.028	0.0071	ug/l	0.472	ND	80	40-120	3	30	
Surrogate: Decachlorobiphenyl	0.433			ug/l	0.472		92	45-120			
Surrogate: Tetrachloro-m-xylene	0.323			ug/l	0.472		68	35-115			
Matrix Spike Dup Analyzed: 03/15/2011 (11C1868-MSD3)						Source: IUC1022-07					
alpha-BHC	0.428	0.028	0.0071	ug/l	0.472	ND	91	40-120	0.6	30	
Surrogate: Decachlorobiphenyl	0.425			ug/l	0.472		90	45-120			
Surrogate: Tetrachloro-m-xylene	0.390			ug/l	0.472		83	35-115			

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METHOD BLANK/QC DATA

HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2189 Extracted: 03/16/11											
Blank Analyzed: 03/16/2011 (11C2189-BLK1)											
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 03/16/2011 (11C2189-BS1)											
Hexane Extractable Material (Oil & Grease)	18.8	5.0	1.4	mg/l	20.0		94	78-114			MNR1
LCS Dup Analyzed: 03/16/2011 (11C2189-BSD1)											
Hexane Extractable Material (Oil & Grease)	19.2	5.0	1.4	mg/l	20.0		96	78-114	2	11	

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1260 Extracted: 03/09/11</u>											
Blank Analyzed: 03/10/2011 (11C1260-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/10/2011 (11C1260-BS1)											
Mercury	7.71	0.20	0.10	ug/l	8.00		96	85-115			
Matrix Spike Analyzed: 03/10/2011 (11C1260-MS1)											
						Source: IUC1001-01					
Mercury	7.69	0.20	0.10	ug/l	8.00	ND	96	70-130			
Matrix Spike Dup Analyzed: 03/10/2011 (11C1260-MSD1)											
						Source: IUC1001-01					
Mercury	7.92	0.20	0.10	ug/l	8.00	ND	99	70-130	3	20	
<u>Batch: 11C1918 Extracted: 03/14/11</u>											
Blank Analyzed: 03/16/2011 (11C1918-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20.0	6.00	ug/l							
LCS Analyzed: 03/16/2011 (11C1918-BS1)											
Iron	0.544	0.040	0.015	mg/l	0.500		109	85-115			
Zinc	530	20.0	6.00	ug/l	500		106	85-115			
Matrix Spike Analyzed: 03/16/2011 (11C1918-MS1)											
						Source: IUC0822-03					
Iron	0.559	0.040	0.015	mg/l	0.500	ND	112	70-130			
Zinc	530	20.0	6.00	ug/l	500	ND	106	70-130			
Matrix Spike Analyzed: 03/16/2011 (11C1918-MS2)											
						Source: IUC0838-02					
Iron	0.590	0.040	0.015	mg/l	0.500	0.0260	113	70-130			
Zinc	585	20.0	6.00	ug/l	500	48.1	107	70-130			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 11C1918 Extracted: 03/14/11

Matrix Spike Dup Analyzed: 03/16/2011 (11C1918-MSD1)

Source: IUC0822-03

Iron	0.568	0.040	0.015	mg/l	0.500	ND	114	70-130	1	20	
Zinc	539	20.0	6.00	ug/l	500	ND	108	70-130	2	20	

Batch: 11C1924 Extracted: 03/14/11

Blank Analyzed: 03/14/2011 (11C1924-BLK1)

Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							

LCS Analyzed: 03/14/2011 (11C1924-BS1)

Cadmium	78.9	1.0	0.10	ug/l	80.0		99	85-115			
Copper	80.0	2.0	0.50	ug/l	80.0		100	85-115			
Lead	80.9	1.0	0.20	ug/l	80.0		101	85-115			
Selenium	76.4	2.0	0.50	ug/l	80.0		96	85-115			

Matrix Spike Analyzed: 03/14/2011 (11C1924-MS1)

Source: IUC1524-01

Cadmium	81.5	5.0	0.50	ug/l	80.0	ND	102	70-130			
Copper	89.2	10	2.5	ug/l	80.0	5.91	104	70-130			
Lead	81.3	5.0	1.0	ug/l	80.0	ND	102	70-130			
Selenium	339	10	2.5	ug/l	80.0	243	121	70-130			

Matrix Spike Analyzed: 03/14/2011 (11C1924-MS2)

Source: IUC1524-02

Cadmium	79.1	5.0	0.50	ug/l	80.0	ND	99	70-130			
Copper	87.6	10	2.5	ug/l	80.0	5.18	103	70-130			
Lead	78.2	5.0	1.0	ug/l	80.0	ND	98	70-130			
Selenium	350	10	2.5	ug/l	80.0	264	107	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1924 Extracted: 03/14/11											
Matrix Spike Dup Analyzed: 03/14/2011 (11C1924-MSD1)						Source: IUC1524-01					
Cadmium	78.6	5.0	0.50	ug/l	80.0	ND	98	70-130	4	20	
Copper	85.5	10	2.5	ug/l	80.0	5.91	100	70-130	4	20	
Lead	78.2	5.0	1.0	ug/l	80.0	ND	98	70-130	4	20	
Selenium	328	10	2.5	ug/l	80.0	243	107	70-130	3	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1508 Extracted: 03/10/11</u>											
Blank Analyzed: 03/11/2011 (11C1508-BLK1)											
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 03/11/2011 (11C1508-BS1)											
Mercury	8.54	0.20	0.10	ug/l	8.00		107	85-115			
Matrix Spike Analyzed: 03/11/2011 (11C1508-MS1)											
						Source: IUC0822-03					
Mercury	8.53	0.20	0.10	ug/l	8.00	ND	107	70-130			
Matrix Spike Dup Analyzed: 03/11/2011 (11C1508-MSD1)											
						Source: IUC0822-03					
Mercury	8.67	0.20	0.10	ug/l	8.00	ND	108	70-130	2	20	
<u>Batch: 11C2065 Extracted: 03/15/11</u>											
Blank Analyzed: 03/16/2011 (11C2065-BLK1)											
Iron	ND	0.040	0.015	mg/l							
Zinc	ND	20.0	6.00	ug/l							
LCS Analyzed: 03/16/2011 (11C2065-BS1)											
Iron	0.537	0.040	0.015	mg/l	0.500		107	85-115			
Zinc	520	20.0	6.00	ug/l	500		104	85-115			
Matrix Spike Analyzed: 03/16/2011 (11C2065-MS1)											
						Source: IUC1001-01					
Iron	24.4	0.040	0.015	mg/l	0.500	23.6	159	70-130			MHA
Zinc	522	20.0	6.00	ug/l	500	6.79	103	70-130			
Matrix Spike Dup Analyzed: 03/16/2011 (11C2065-MSD1)											
						Source: IUC1001-01					
Iron	24.5	0.040	0.015	mg/l	0.500	23.6	187	70-130	0.6	20	MHA
Zinc	529	20.0	6.00	ug/l	500	6.79	104	70-130	1	20	

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DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C2067 Extracted: 03/15/11											
Blank Analyzed: 03/15/2011 (11C2067-BLK1)											
Cadmium	ND	1.0	0.10	ug/l							
Copper	ND	2.0	0.50	ug/l							
Lead	ND	1.0	0.20	ug/l							
Selenium	ND	2.0	0.50	ug/l							
LCS Analyzed: 03/15/2011 (11C2067-BS1)											
Cadmium	83.1	1.0	0.10	ug/l	80.0		104	85-115			
Copper	81.0	2.0	0.50	ug/l	80.0		101	85-115			
Lead	86.2	1.0	0.20	ug/l	80.0		108	85-115			
Selenium	78.2	2.0	0.50	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 03/15/2011 (11C2067-MS1) Source: IUC0829-02											
Cadmium	81.2	1.0	0.10	ug/l	80.0	0.143	101	70-130			
Copper	79.6	2.0	0.50	ug/l	80.0	2.86	96	70-130			
Lead	87.8	1.0	0.20	ug/l	80.0	0.340	109	70-130			
Selenium	73.9	2.0	0.50	ug/l	80.0	ND	92	70-130			
Matrix Spike Dup Analyzed: 03/15/2011 (11C2067-MSD1) Source: IUC0829-02											
Cadmium	81.6	1.0	0.10	ug/l	80.0	0.143	102	70-130	0.4	20	
Copper	78.4	2.0	0.50	ug/l	80.0	2.86	94	70-130	2	20	
Lead	86.9	1.0	0.20	ug/l	80.0	0.340	108	70-130	1	20	
Selenium	73.5	2.0	0.50	ug/l	80.0	ND	92	70-130	0.6	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C0972 Extracted: 03/08/11											
Blank Analyzed: 03/08/2011 (11C0972-BLK1)											
Specific Conductance	ND	1.0	1.0	hos/cm @ 2							
LCS Analyzed: 03/08/2011 (11C0972-BS1)											
Specific Conductance	1390	1.0	1.0	hos/cm @ 2	1410		98	90-110			
Duplicate Analyzed: 03/08/2011 (11C0972-DUP1)											
						Source: IUC0545-01					
Specific Conductance	2000	1.0	1.0	hos/cm @ 2		1990			0.5	5	
Batch: 11C1044 Extracted: 03/08/11											
Blank Analyzed: 03/08/2011 (11C1044-BLK1)											
Chloride	ND	0.50	0.30	mg/l							
Nitrate-N	ND	0.11	0.060	mg/l							
Nitrite-N	ND	0.15	0.090	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.30	mg/l							
LCS Analyzed: 03/08/2011 (11C1044-BS1)											
Chloride	5.22	0.50	0.30	mg/l	5.00		104	90-110			M-3
Nitrate-N	1.20	0.11	0.060	mg/l	1.13		106	90-110			
Nitrite-N	1.60	0.15	0.090	mg/l	1.52		105	90-110			
Sulfate	10.6	0.50	0.30	mg/l	10.0		106	90-110			
Matrix Spike Analyzed: 03/08/2011 (11C1044-MS1)											
						Source: IUC0859-08					
Nitrate-N	12.4	1.1	0.60	mg/l	11.3	ND	110	80-120			
Nitrite-N	20.8	1.5	0.90	mg/l	15.2	ND	137	80-120			MI
Sulfate	103	5.0	3.0	mg/l	100	5.60	97	80-120			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 11C1044 Extracted: 03/08/11											
Matrix Spike Analyzed: 03/08/2011 (11C1044-MS2)						Source: IUC0942-08					
Chloride	724	25	15	mg/l	50.0	717	14	80-120			MHA
Nitrate-N	22.2	5.5	3.0	mg/l	11.3	14.0	73	80-120			M2
Nitrite-N	16.4	7.5	4.5	mg/l	15.2	ND	108	80-120			
Sulfate	564	25	15	mg/l	100	506	58	80-120			MHA
Matrix Spike Dup Analyzed: 03/08/2011 (11C1044-MSD1)						Source: IUC0859-08					
Nitrate-N	12.3	1.1	0.60	mg/l	11.3	ND	109	80-120	0.4	20	
Nitrite-N	20.9	1.5	0.90	mg/l	15.2	ND	138	80-120	0.5	20	MI
Sulfate	106	5.0	3.0	mg/l	100	5.60	101	80-120	3	20	
Batch: 11C1129 Extracted: 03/08/11											
Blank Analyzed: 03/08/2011 (11C1129-BLK1)											
Surfactants (MBAS)	ND	0.10	0.050	mg/l							
LCS Analyzed: 03/08/2011 (11C1129-BS1)											
Surfactants (MBAS)	0.260	0.10	0.050	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 03/08/2011 (11C1129-MS1)						Source: IUC0831-05					
Surfactants (MBAS)	0.427	0.10	0.050	mg/l	0.250	0.172	102	50-125			
Matrix Spike Dup Analyzed: 03/08/2011 (11C1129-MSD1)						Source: IUC0831-05					
Surfactants (MBAS)	0.407	0.10	0.050	mg/l	0.250	0.172	94	50-125	5	20	
Batch: 11C1151 Extracted: 03/09/11											
Blank Analyzed: 03/09/2011 (11C1151-BLK1)											
Total Dissolved Solids	ND	10	1.0	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1151 Extracted: 03/09/11</u>											
LCS Analyzed: 03/09/2011 (11C1151-BS1)											
Total Dissolved Solids	1000	10	1.0	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/09/2011 (11C1151-DUP1)											
Total Dissolved Solids	1100	10	1.0	mg/l		Source: IUC0783-01 1100			0.3	10	
<u>Batch: 11C1213 Extracted: 03/09/11</u>											
Blank Analyzed: 03/09/2011 (11C1213-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 03/09/2011 (11C1213-DUP1)											
Turbidity	0.530	1.0	0.040	NTU		Source: IUC0822-03 0.470			12	20	J
Duplicate Analyzed: 03/09/2011 (11C1213-DUP2)											
Turbidity	ND	1.0	0.040	NTU		Source: IUC0938-01 ND				20	
<u>Batch: 11C1215 Extracted: 03/09/11</u>											
Blank Analyzed: 03/09/2011 (11C1215-BLK1)											
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 03/09/2011 (11C1215-BS1)											
Perchlorate	27.9	4.0	0.90	ug/l	25.0		112	85-115			
Matrix Spike Analyzed: 03/09/2011 (11C1215-MS1)											
Perchlorate	32.7	4.0	0.90	ug/l	25.0	Source: IUC0899-03 3.50	117	80-120			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1215 Extracted: 03/09/11</u>											
Matrix Spike Dup Analyzed: 03/09/2011 (11C1215-MSD1)						Source: IUC0899-03					
Perchlorate	33.2	4.0	0.90	ug/l	25.0	3.50	119	80-120	2	20	
<u>Batch: 11C1258 Extracted: 03/09/11</u>											
Blank Analyzed: 03/14/2011 (11C1258-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.50	mg/l							
LCS Analyzed: 03/14/2011 (11C1258-BS1)											
Biochemical Oxygen Demand	216	100	25	mg/l	198		109	85-115			
LCS Dup Analyzed: 03/14/2011 (11C1258-BSD1)											
Biochemical Oxygen Demand	209	100	25	mg/l	198		106	85-115	3	20	
<u>Batch: 11C1315 Extracted: 03/09/11</u>											
Blank Analyzed: 03/09/2011 (11C1315-BLK1)											
Ammonia-N (Distilled)	ND	0.500	0.500	mg/l							
LCS Analyzed: 03/09/2011 (11C1315-BS1)											
Ammonia-N (Distilled)	10.1	0.500	0.500	mg/l	10.0		101	80-115			
Matrix Spike Analyzed: 03/09/2011 (11C1315-MS1)						Source: IUC0822-03					
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120			
Matrix Spike Dup Analyzed: 03/09/2011 (11C1315-MSD1)						Source: IUC0822-03					
Ammonia-N (Distilled)	9.80	0.500	0.500	mg/l	10.0	ND	98	70-120	0	15	

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Sampled: 03/07/11

Received: 03/07/11

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 11C1486 Extracted: 03/10/11</u>											
Blank Analyzed: 03/10/2011 (11C1486-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/10/2011 (11C1486-BS1)											
Total Cyanide	195	5.0	2.2	ug/l	196		99	90-110			
Matrix Spike Analyzed: 03/10/2011 (11C1486-MS1)											
						Source: IUC0838-03					
Total Cyanide	195	5.0	2.2	ug/l	196	ND	99	70-115			
Matrix Spike Dup Analyzed: 03/10/2011 (11C1486-MSD1)											
						Source: IUC0838-03					
Total Cyanide	198	5.0	2.2	ug/l	196	ND	101	70-115	1	15	
<u>Batch: 11C1498 Extracted: 03/10/11</u>											
Blank Analyzed: 03/10/2011 (11C1498-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 03/10/2011 (11C1498-BS1)											
Total Suspended Solids	998	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 03/10/2011 (11C1498-DUP1)											
						Source: IUC1282-01					
Total Suspended Solids	7.00	10	1.0	mg/l		7.00			0	10	J

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 Received: 03/07/11

METHOD BLANK/QC DATA

8673

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/15/11											
LCS Analyzed: 03/21/2011 (S103059-03)											
Uranium, Total	53.2	1	N/A	pCi/L	56.5		94	80-120			
Blank Analyzed: 03/21/2011 (S103059-04)											
Uranium, Total	ND	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/21/2011 (S103059-05)											
Uranium, Total	0.852	1	N/A	pCi/L				-	1		Jb

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METHOD BLANK/QC DATA

900

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/22/11											
LCS Analyzed: 03/23/2011 (S103059-03)						Source:					
Gross Alpha	117	3	N/A	pCi/L	101		116	70-130			
Gross Beta	84.7	4	N/A	pCi/L	87.2		97	70-130			
Blank Analyzed: 03/22/2011 (S103059-04)						Source:					
Gross Alpha	0.111	3	N/A	pCi/L			-				U
Gross Beta	-0.057	4	N/A	pCi/L			-				U
Duplicate Analyzed: 03/22/2011 (S103059-05)						Source:					
Gross Alpha	0.322	3	N/A	pCi/L			-		114		U
Gross Beta	2.37	4	N/A	pCi/L			-		20		Jb

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Report Number: IUC0822

Sampled: 03/07/11
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METHOD BLANK/QC DATA

901.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/14/11											
LCS Analyzed: 03/15/2011 (S103059-03)						Source:					
Cobalt-60	128	10	N/A	pCi/L	125		102	80-120			
Cesium-137	117	20	N/A	pCi/L	110		106	80-120			
Blank Analyzed: 03/15/2011 (S103059-04)						Source:					
Cesium-137	ND	20	N/A	pCi/L			-				U
Potassium-40	ND	25	N/A	pCi/L			-				U
Duplicate Analyzed: 03/18/2011 (S103059-05)						Source:					
Cesium-137	ND	20	N/A	pCi/L			-		0		U
Potassium-40	ND	25	N/A	pCi/L			-		0		U

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METHOD BLANK/QC DATA

903.1

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/25/11											
LCS Analyzed: 03/25/2011 (S103059-03)											
Radium-226	61.9	1	N/A	pCi/L	55.7		111	80-120			
Blank Analyzed: 03/25/2011 (S103059-04)											
Radium-226	0.064	1	N/A	pCi/L				-			U
Duplicate Analyzed: 03/25/2011 (S103059-05)											
Radium-226	0.027	1	N/A	pCi/L				-	0		U

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METHOD BLANK/QC DATA

904

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/23/11											
LCS Analyzed: 03/23/2011 (S103059-03)											
Radium-228	4.37	1	N/A	pCi/L	5.04		87	60-140			
Blank Analyzed: 03/23/2011 (S103059-04)											
Radium-228	-0.027	1	N/A	pCi/L							U
Duplicate Analyzed: 03/23/2011 (S103059-05)											
Radium-228	0.183	1	N/A	pCi/L					0		U

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Report Number: IUC0822

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METHOD BLANK/QC DATA

905

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/24/11											
LCS Analyzed: 03/24/2011 (S103059-03)											
Strontium-90	18.8	2	N/A	pCi/L	17.4		108	80-120			
Blank Analyzed: 03/24/2011 (S103059-04)											
Strontium-90	0.023	2	N/A	pCi/L				-			U
Duplicate Analyzed: 03/24/2011 (S103059-05)											
Strontium-90	0.32	2	N/A	pCi/L				-	0		U

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METHOD BLANK/QC DATA

906

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8673 Extracted: 03/25/11											
LCS Analyzed: 03/26/2011 (S103059-03)											
Tritium	2750	500	N/A	pCi/L	2940		94	80-120			
Blank Analyzed: 03/26/2011 (S103059-04)											
Tritium	-34.3	500	N/A	pCi/L				-			U
Duplicate Analyzed: 03/26/2011 (S103059-05)											
Tritium	49.7	500	N/A	pCi/L				-	0		U

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Report Number: IUC0822

Sampled: 03/07/11
 Received: 03/07/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 1070198 Extracted: 03/11/11

Blank Analyzed: 03/14/2011 (G1C110000198B)

Source:

1,2,3,4,6,7,8-HpCDD	2.8e-006	0.00005	0.0000017	ug/L				-			J
1,2,3,4,6,7,8-HpCDF	1.9e-006	0.00005	0.0000014	ug/L				-			J, Q
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.0000021	ug/L				-			
1,2,3,4,7,8-HxCDD	1.9e-006	0.00005	0.0000012	ug/L				-			J
1,2,3,4,7,8-HxCDF	1.7e-006	0.00005	0.0000011	ug/L				-			J
1,2,3,6,7,8-HxCDD	2.2e-006	0.00005	0.000001	ug/L				-			J, Q
1,2,3,6,7,8-HxCDF	1.9e-006	0.00005	0.000001	ug/L				-			J, Q
1,2,3,7,8,9-HxCDD	ND	0.00005	0.0000013	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000013	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.0000022	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.0000021	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000096	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.0000022	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.0000018	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	0.0000019	ug/L				-			
OCDD	1.2e-005	0.0001	0.000002	ug/L				-			J
OCDF	3.6e-006	0.0001	0.0000017	ug/L				-			J, Q
Total HpCDD	6e-006	0.00005	0.0000017	ug/L				-			J
Total HpCDF	1.9e-006	0.00005	0.0000017	ug/L				-			J, Q
Total HxCDD	4e-006	0.00005	0.000001	ug/L				-			J, Q
Total HxCDF	3.6e-006	0.00005	0.0000011	ug/L				-			J, Q
Total PeCDD	ND	0.00005	0.0000022	ug/L				-			
Total PeCDF	ND	0.00005	0.0000021	ug/L				-			
Total TCDD	ND	0.00001	0.0000018	ug/L				-			
Total TCDF	ND	0.00001	0.0000019	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00094			ug/L	0.002		47	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00094			ug/L	0.002		47	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00089			ug/L	0.002		44	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.001			ug/L	0.002		52	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00097			ug/L	0.002		49	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.001			ug/L	0.002		52	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0011			ug/L	0.002		53	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.001			ug/L	0.002		52	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0011			ug/L	0.002		55	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00088			ug/L	0.002		44	24-185			

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1070198 Extracted: 03/11/11											
Blank Analyzed: 03/14/2011 (G1C110000198B)						Source:					
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0011			ug/L	0.002		55	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00091			ug/L	0.002		45	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.00092			ug/L	0.002		46	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.00099			ug/L	0.002		50	24-169			
Surrogate: 13C-OCDD	0.0019			ug/L	0.004		48	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00069			ug/L	0.0008		86	35-197			
LCS Analyzed: 03/14/2011 (G1C110000198C)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00107	0.00005	0.000007	ug/L	0.001		107	70-140			B
1,2,3,4,6,7,8-HpCDF	0.00115	0.00005	0.0000074	ug/L	0.001		115	82-122			B
1,2,3,4,7,8,9-HpCDF	0.00115	0.00005	0.000011	ug/L	0.001		115	78-138			
1,2,3,4,7,8-HxCDD	0.000984	0.00005	0.0000011	ug/L	0.001		98	70-164			B
1,2,3,4,7,8-HxCDF	0.00105	0.00005	0.00000083	ug/L	0.001		105	72-134			B
1,2,3,6,7,8-HxCDD	0.00114	0.00005	0.000001	ug/L	0.001		114	76-134			B
1,2,3,6,7,8-HxCDF	0.00106	0.00005	0.00000078	ug/L	0.001		106	84-130			B
1,2,3,7,8,9-HxCDD	0.00109	0.00005	0.00000093	ug/L	0.001		109	64-162			
1,2,3,7,8,9-HxCDF	0.00104	0.00005	0.00000098	ug/L	0.001		104	78-130			
1,2,3,7,8-PeCDD	0.000977	0.00005	0.0000028	ug/L	0.001		98	70-142			
1,2,3,7,8-PeCDF	0.00113	0.00005	0.0000035	ug/L	0.001		113	80-134			
2,3,4,6,7,8-HxCDF	0.00107	0.00005	0.00000081	ug/L	0.001		107	70-156			
2,3,4,7,8-PeCDF	0.00113	0.00005	0.0000039	ug/L	0.001		113	68-160			
2,3,7,8-TCDD	0.00023	0.00001	0.0000017	ug/L	0.0002		115	67-158			
2,3,7,8-TCDF	0.000253	0.00001	0.0000017	ug/L	0.0002		126	75-158			
OCDD	0.00202	0.0001	0.0000091	ug/L	0.002		101	78-144			B
OCDF	0.00206	0.0001	0.000011	ug/L	0.002		103	63-170			B
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.000988			ug/L	0.002		49	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.001			ug/L	0.002		50	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00091			ug/L	0.002		46	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00121			ug/L	0.002		61	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00114			ug/L	0.002		57	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00111			ug/L	0.002		56	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00117			ug/L	0.002		59	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00116			ug/L	0.002		58	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00111			ug/L	0.002		55	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00101			ug/L	0.002		51	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00119			ug/L	0.002		59	22-176			

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METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1070198 Extracted: 03/11/11											
LCS Analyzed: 03/14/2011 (G1C110000198C)						Source:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.000976			ug/L	0.002		49	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00107			ug/L	0.002		53	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00115			ug/L	0.002		58	22-152			
Surrogate: 13C-OCDD	0.00204			ug/L	0.004		51	13-199			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000661			ug/L	0.0008		83	31-191			
LCS Dup Analyzed: 03/14/2011 (G1C110000198L)						Source:					
1,2,3,4,6,7,8-HpCDD	0.00107	0.00005	0.0000077	ug/L	0.001		107	70-140	0.34	50	B
1,2,3,4,6,7,8-HpCDF	0.00109	0.00005	0.0000013	ug/L	0.001		109	82-122	5.2	50	B
1,2,3,4,7,8,9-HpCDF	0.00113	0.00005	0.0000019	ug/L	0.001		113	78-138	2	50	
1,2,3,4,7,8-HxCDD	0.00096	0.00005	0.0000014	ug/L	0.001		96	70-164	2.5	50	B
1,2,3,4,7,8-HxCDF	0.00106	0.00005	0.0000013	ug/L	0.001		106	72-134	0.8	50	B
1,2,3,6,7,8-HxCDD	0.00112	0.00005	0.0000014	ug/L	0.001		112	76-134	1.7	50	B
1,2,3,6,7,8-HxCDF	0.00108	0.00005	0.0000012	ug/L	0.001		108	84-130	1.8	50	B
1,2,3,7,8,9-HxCDD	0.00106	0.00005	0.0000012	ug/L	0.001		106	64-162	3.4	50	
1,2,3,7,8,9-HxCDF	0.0011	0.00005	0.0000015	ug/L	0.001		110	78-130	5.1	50	
1,2,3,7,8-PeCDD	0.000974	0.00005	0.0000032	ug/L	0.001		97	70-142	0.29	50	
1,2,3,7,8-PeCDF	0.00113	0.00005	0.0000041	ug/L	0.001		113	80-134	0.53	50	
2,3,4,6,7,8-HxCDF	0.00109	0.00005	0.0000012	ug/L	0.001		109	70-156	1.2	50	
2,3,4,7,8-PeCDF	0.00111	0.00005	0.0000046	ug/L	0.001		111	68-160	1.3	50	
2,3,7,8-TCDD	0.000222	0.00001	0.0000019	ug/L	0.0002		111	67-158	3.3	50	
2,3,7,8-TCDF	0.000244	0.00001	0.0000017	ug/L	0.0002		122	75-158	3.3	50	
OCDD	0.00198	0.0001	0.000011	ug/L	0.002		99	78-144	2.4	50	B
OCDF	0.00202	0.0001	0.00001	ug/L	0.002		101	63-170	1.7	50	B
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00109			ug/L	0.002		55	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00116			ug/L	0.002		58	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00102			ug/L	0.002		51	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0014			ug/L	0.002		70	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00126			ug/L	0.002		63	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00123			ug/L	0.002		62	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00129			ug/L	0.002		64	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00122			ug/L	0.002		61	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00122			ug/L	0.002		61	21-227			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00107			ug/L	0.002		54	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00131			ug/L	0.002		66	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00106			ug/L	0.002		53	13-328			

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

METHOD BLANK/QC DATA

EPA-5 1613Bx

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 1070198 Extracted: 03/11/11											
LCS Dup Analyzed: 03/14/2011 (G1C110000198L)											
Surrogate: 13C-2,3,7,8-TCDD	0.00114			ug/L	0.002		57	20-175			
Surrogate: 13C-2,3,7,8-TCDF	0.00123			ug/L	0.002		61	22-152			
Surrogate: 13C-OCDD	0.00225			ug/L	0.004		56	13-199			
Surrogate: 37C14-2,3,7,8-TCDD	0.000676			ug/L	0.0008		85	31-191			

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Debby Wilson
Project Manager

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IUC0822 <Page 45 of 51>

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC0822-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0.095	4.7	15
IUC0822-01	624-(601list)	1,1-Dichloroethene	ug/l	0	2.0	6
IUC0822-01	624-(601list)	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUC0822-01	624-(601list)	Trichloroethene	ug/l	0	2.0	5
IUC0822-01	Settleable Solids - SM2540F	Total Settleable Solids	ml/l	0	0.10	0.3

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC0822-02	624-(601list)	1,1-Dichloroethene	ug/l	0	2.0	6
IUC0822-02	624-(601list)	1,2-Dichloroethane	ug/l	0	0.50	0.5
IUC0822-02	624-(601list)	Trichloroethene	ug/l	0	2.0	5

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IUC0822-03	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.00036	0.0094	0.03
IUC0822-03	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.66	13
IUC0822-03	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	4.72	18
IUC0822-03	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.26	4.72	4
IUC0822-03	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	4.72	16
IUC0822-03	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	4.72	16.5
IUC0822-03	Ammonia-N, Titr 4500NH3-C (w/di	Ammonia-N (Distilled)	mg/l	0	0.500	10.1
IUC0822-03	BOD - SM5210B	Biochemical Oxygen Demand	mg/l	0.50	2.0	30
IUC0822-03	Cadmium-200.8	Cadmium	ug/l	0.022	1.0	3.1
IUC0822-03	Chloride - 300.0	Chloride	mg/l	26	5.0	150
IUC0822-03	Copper-200.8	Copper	ug/l	1.39	2.0	14
IUC0822-03	Cyanide, Total-4500CN-E (5ppb)	Total Cyanide	ug/l	-2	5.0	8.5
IUC0822-03	Iron-200.7	Iron	mg/l	0.014	0.040	0.3
IUC0822-03	Lead-200.8	Lead	ug/l	0	1.0	5.2
IUC0822-03	MBAS - SM5540C	Surfactants (MBAS)	mg/l	0.036	0.10	0.5
IUC0822-03	Mercury - 245.1	Mercury	ug/l	0.052	0.20	0.1
IUC0822-03	Nitrate-N, 300.0	Nitrate-N	mg/l	0	0.11	8

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Project Manager

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Report Number: IUC0822

Sampled: 03/07/11

Received: 03/07/11

IUC0822-03	Nitrite-N, 300.0	Nitrite-N	mg/l	0	0.15	1
IUC0822-03	Nitrogen, NO3+NO2 -N EPA 300.0	Nitrate/Nitrite-N	mg/l	0	0.26	8
IUC0822-03	Perchlorate 314.0 - Default	Perchlorate	ug/l	0	4.0	6
IUC0822-03	Selenium-200.8	Selenium	ug/l	0.28	2.0	5
IUC0822-03	Sulfate-300.0	Sulfate	mg/l	135	5.0	300
IUC0822-03	TDS - SM2540C	Total Dissolved Solids	mg/l	467	10	950
IUC0822-03	TSS - SM2540D	Total Suspended Solids	mg/l	0	10	45
IUC0822-03	Zinc-200.7	Zinc	ug/l	5.82	20.0	119

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
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TestAmerica Irvine

Debby Wilson
 Project Manager

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IUC0822 <Page 47 of 51>

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

DATA QUALIFIERS AND DEFINITIONS

- B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- J** Estimated result. Result is less than the reporting limit.
- Jb** The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MHA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- P-HS** Sample container contained headspace.
- Q** Estimated maximum possible concentration (EMPC).
- U** The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

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 Arcadia, CA 91007
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
 Received: 03/07/11

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.7-Diss	Water	X	N/A
EPA 200.7	Water	X	N/A
EPA 200.8-Diss	Water	X	N/A
EPA 200.8	Water	X	N/A
EPA 245.1-Diss	Water	X	N/A
EPA 245.1	Water	X	N/A
EPA 300.0	Water	X	N/A
EPA 314.0	Water	X	N/A
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM2130B	Water	X	X
SM2510B	Water	X	N/A
SM2540C	Water	X	N/A
SM2540F	Water	X	X
SM4500CN-E	Water	X	N/A
SM4500NH3-C	Water	X	X
SM5210B	Water	X	X
SM5540-C	Water	X	N/A

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

Subcontracted Laboratories

TestAmerica Irvine

Debby Wilson
 Project Manager

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

Eberline Services - SUB

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gamma Spec
Samples: IUC0822-03, IUC0822-04

Analysis Performed: Gross Alpha
Samples: IUC0822-03, IUC0822-04

Analysis Performed: Gross Beta
Samples: IUC0822-03, IUC0822-04

Analysis Performed: Radium, Combined
Samples: IUC0822-03, IUC0822-04

Analysis Performed: Strontium 90
Samples: IUC0822-03, IUC0822-04

Analysis Performed: Tritium
Samples: IUC0822-03

Analysis Performed: Uranium, Combined
Samples: IUC0822-03, IUC0822-04

TestAmerica Buffalo

10 Hazelwood Drive, Suite 106 - Amherst, NY 14228

Method Performed: 8673
Samples: IUC0822-03, IUC0822-04

Method Performed: 900
Samples: IUC0822-03, IUC0822-04

Method Performed: 901.1
Samples: IUC0822-03, IUC0822-04

Method Performed: 903.1
Samples: IUC0822-03, IUC0822-04

Method Performed: 904
Samples: IUC0822-03, IUC0822-04

Method Performed: 905
Samples: IUC0822-03, IUC0822-04

Method Performed: 906
Samples: IUC0822-03

TestAmerica Irvine

Debby Wilson
Project Manager

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

Project ID: Routine Outfall 002

Report Number: IUC0822

Sampled: 03/07/11
Received: 03/07/11

TestAmerica West Sacramento *NELAC Cert #1119CA, Nevada Cert #CA44*

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B

Samples: IUC0822-03

TestAmerica Irvine

Debby Wilson
Project Manager

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IUC0822 <Page 51 of 51>



EBERLINE

SERVICES

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2830 Wright Avenue
Richmond, California 94804-3849
Phone (510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

March 31, 2011

Ms. Debby Wilson
Test America Irvine
17461 Derian Ave., Ste. 100
Irvine, CA 92614

**Reference: Test America-Irvine IUC0822
Eberline Analytical Report S103080-8673
Sample Delivery Group 8673**

Dear Ms. Wilson:

Enclosed is a Level IV CLP-like data package (on CD) for two water samples received under Test America Job No. IUC0822. The samples were received on March 10, 2011.

Please call me, if you have any questions concerning the enclosed report.

Sincerely,

N. Joseph Verville
Client Services Manager

NJV/ljb

Enclosure: Level IV CLP-like Data Package CD

1.0 General Comments

Sample delivery group 8673 consists of the analytical results and supporting documentation for two water samples. Sample ID's and reference dates/times are given in the Sample Summary section of the Summary Data report. The sample was received as stated on the chain-of-custody document. Any discrepancies are noted on the Eberline Analytical Sample Receipt Checklist. No holding times were exceeded.

Tritium and gamma analyses were performed on the sample as received i.e. the sample was not filtered. The analytical volumes for all other analyses were subjected to a full nitric acid/hydrofluoric acid dissolution, and analyses were performed on the dissolution volumes.

2.0 Quality Control

Samples IUC0822-03 and IUC0822-04 (Trip Blank) were analyzed in a common prep batch with other outfall samples from this project. The QC samples from that common prep batch were assigned to SDG 8671 and are also reported herein. Quality Control Samples consisted of laboratory control samples (LCS), method blanks, duplicate analyses and matrix spike analyses. Included in the data package are copies of the Eberline Analytical radiometrics data sheets. The radiometrics data sheets for the QC LCS and QC blank samples indicate Eberline Analytical's standard QC aliquot of 1.0 sample; results for those QC types are calculated as pCi/sample. The QC LCS and QC blank sample results reported in the Summary Data Section have been divided by the appropriate method specific aliquot (see the Lab Method Summaries for specific aliquots) in order to make the results comparable to the field sample results. All QC sample results were within required control limits.

3.0 Method Errors

The error for each result is an estimate of the significant random uncertainties incurred in the measurement process. These are propagated to each final result. They include the counting (Poisson) uncertainty, as well as those intrinsic errors due to carrier or tracer standardization, aliquoting, counter efficiencies, weights, or volumes. The following method errors were propagated to the count error to calculate the 2σ error (Total):

Analysis	Method Error
Gross alpha	20.6%
Gross beta	11.0%
Tritium	10.0%
Sr-90	10.4%
Ra-226	16.4%
Ra-228	10.4%
Uranium, Total	
Gamma Spec.	7.0%

4.0 Analysis Notes

- 4.1 Gross Alpha/Gross Beta Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.2 Tritium Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.3 Strontium-90 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.4 Radium-226 Analysis** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.5 Radium-228 Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.6 Total Uranium Analysis** - No problems were encountered during the processing of the samples. All quality control sample results were within required control limits.
- 4.7 Gamma Spectroscopy** – No problems were encountered during the processing of the samples. All quality control sample results were within required control limits. The gamma spectroscopy planchets were counted for sufficient time to meet the required Cs-137 detection limit of 20 pCi/L. As a consequence of keying to the Cs-137 RDL, the detection limits for K-40 were not achieved for all samples.

5.0 Case Narrative Certification Statement

"I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data obtained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."



N. Joseph Verville
Client Services Manager

3/31/11

Date

EBERLINE ANALYTICAL
SDG 8673

SDG 8673
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0822

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S				
About this section	.	.	.	1
Sample Summaries	.	.	.	3
Prep Batch Summary	.	.	.	5
Work Summary	.	.	.	6
Method Blanks	.	.	.	8
Lab Control Samples	.	.	.	9
Duplicates	.	.	.	10
Data Sheets	.	.	.	11
Method Summaries	.	.	.	13
Report Guides	.	.	.	21
End of Section	.	.	.	35

VB

Prepared by _____

Reviewed by *ngf* _____

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0822

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DUPLICATES

REPORT GUIDES

Page 1

SUMMARY DATA SECTION

Page 1

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0822

ABOUT THE DATA SUMMARY SECTION

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

Page 2

SUMMARY DATA SECTION

Page 2

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB SAMPLE SUMMARY

SDG 8673
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0822

LAB	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAS NO	CHAIN OF CUSTODY	COLLECTED
S103059-03	Lab Control Sample		WATER				
S103059-04	Method Blank		WATER				
S103059-05	Duplicate (S103059-01)	Boeing - SSFL	WATER				03/03/11 17:18
S103080-01	IUC0822-03	Boeing - SSFL	WATER			IUC0822	03/07/11 19:51
S103080-02	IUC0822-04 (TRIP-BLANK)	Boeing - SSFL	WATER			IUC0822	03/07/11 19:51

LAB SUMMARY

Page 1

SUMMARY DATA SECTION

Page 3

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
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Client Test America, Inc.
 Contract IUC0822

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% MOIST	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
8671		Method Blank	WATER						S103059-04	8671-004
		Lab Control Sample	WATER						S103059-03	8671-003
		Duplicate (S103059-01)	WATER		10.0 L		03/08/11 5		S103059-05	8671-005
8673	IUC0822	IUC0822-03	WATER		10.0 L		03/10/11 3		S103080-01	8673-001
		IUC0822-04 (TRIP-BLANK)	WATER		10.0 L		03/10/11 3		S103080-02	8673-002

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

PREP BATCH SUMMARY

Client Test America, Inc.
Contract IUC0822

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI- FIERS	
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS
Beta Counting										
AC	WATER	Radium-228 in Water	7281-053	10.4	2			1	1	1/0/1
SR	WATER	Strontium-90 in Water	7281-053	10.4	2			1	1	1/0/1
Gas Proportional Counting										
80A	WATER	Gross Alpha in Water	7281-053	20.6	2			1	1	1/0/1
80B	WATER	Gross Beta in Water	7281-053	11.0	2			1	1	1/0/1
Gamma Spectroscopy										
GAM	WATER	Gamma Emitters in Water	7281-053	7.0	2			1	1	1/0/1
Kinetic Phosphorimetry, ug										
U_T	WATER	Uranium, Total	7281-053		2			1	1	1/0/1
Liquid Scintillation Counting										
H	WATER	Tritium in Water	7281-053	10.0	1			1	1	1/0/1
Radon Counting										
RA	WATER	Radium-226 in Water	7281-053	16.4	2			1	1	1/0/1

Blank, LCS, Duplicate and Spike planchets are those in the same preparation batch as some Client sample.
In counts like 'a/b/c', 'a' = QC planchets, 'b' = Originals in this SDG, 'c' = Originals in other SDGs.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-FBS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

Client Test America, Inc.

SDG 8673
Contact N. Joseph Verville

LAB WORK SUMMARY

Contract IUC0822

LAB SAMPLE	CLIENT SAMPLE ID											
COLLECTED	LOCATION	MATRIX			SUF-							
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD			
S103059-03	Lab Control Sample	WATER	8671-003	80A/80		03/23/11	03/28/11	BW	Gross Alpha in Water			
			8671-003	80B/80		03/23/11	03/28/11	BW	Gross Beta in Water			
			8671-003	AC		03/23/11	03/29/11	BW	Radium-228 in Water			
			8671-003	GAM		03/15/11	03/22/11	MWT	Gamma Emitters in Water			
			8671-003	H		03/26/11	03/29/11	BW	Tritium in Water			
			8671-003	RA		03/25/11	03/28/11	BW	Radium-226 in Water			
			8671-003	SR		03/24/11	03/29/11	BW	Strontium-90 in Water			
			8671-003	U_T		03/21/11	03/23/11	BW	Uranium, Total			
S103059-04	Method Blank	WATER	8671-004	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water			
			8671-004	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water			
			8671-004	AC		03/23/11	03/29/11	BW	Radium-228 in Water			
			8671-004	GAM		03/15/11	03/22/11	MWT	Gamma Emitters in Water			
			8671-004	H		03/26/11	03/29/11	BW	Tritium in Water			
			8671-004	RA		03/25/11	03/28/11	BW	Radium-226 in Water			
			8671-004	SR		03/24/11	03/29/11	BW	Strontium-90 in Water			
			8671-004	U_T		03/21/11	03/23/11	BW	Uranium, Total			
S103059-05	Duplicate (S103059-01)	WATER	8671-005	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water			
			03/03/11	Boeing - SSFL	8671-005	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
			03/08/11		8671-005	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
					8671-005	GAM		03/18/11	03/22/11	MWT	Gamma Emitters in Water	
					8671-005	H		03/26/11	03/29/11	BW	Tritium in Water	
					8671-005	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
					8671-005	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8671-005	U_T		03/21/11	03/23/11	BW	Uranium, Total			
S103080-01	IUC0822-03	WATER	8673-001	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water			
			03/07/11	Boeing - SSFL	8673-001	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
			03/10/11	IUC0822	8673-001	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
					8673-001	GAM		03/18/11	03/22/11	MWT	Gamma Emitters in Water	
					8673-001	H		03/26/11	03/29/11	BW	Tritium in Water	
					8673-001	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
					8673-001	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8673-001	U_T		03/21/11	03/23/11	BW	Uranium, Total			

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LWS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

WORK SUMMARY, cont.

SDG 8673
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0822

LAB SAMPLE	CLIENT SAMPLE ID									
COLLECTED	LOCATION	MATRIX		SUP-						
RECEIVED	CUSTODY	SAS no	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
S103080-02	IUC0822-04 (TRIP-BLANK)		8673-002	80A/80		03/22/11	03/28/11	BW	Gross Alpha in Water	
03/07/11	Boeing - SSFL	WATER	8673-002	80B/80		03/22/11	03/28/11	BW	Gross Beta in Water	
03/10/11	IUC0822		8673-002	AC		03/23/11	03/29/11	BW	Radium-228 in Water	
			8673-002	GAM		03/18/11	03/22/11	MWT	Gamma Emitters in Water	
			8673-002	RA		03/25/11	03/28/11	BW	Radium-226 in Water	
			8673-002	SR		03/24/11	03/29/11	BW	Strontium-90 in Water	
			8673-002	U_T		03/21/11	03/23/11	BW	Uranium, Total	

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAS no	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
80A/80		Gross Alpha in Water	900.0	2			1	1	1	5
80B/80		Gross Beta in Water	900.0	2			1	1	1	5
AC		Radium-228 in Water	904.0	2			1	1	1	5
GAM		Gamma Emitters in Water	901.1	2			1	1	1	5
H		Tritium in Water	906.0	1			1	1	1	4
RA		Radium-226 in Water	903.1	2			1	1	1	5
SR		Strontium-90 in Water	905.0	2			1	1	1	5
U_T		Uranium, Total	D5174	2			1	1	1	5
TOTALS				15			8	8	8	39

WORK SUMMARY

Page 2

SUMMARY DATA SECTION

Page 7

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LWS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

8671-005

IUC0563-03

DUPLICATE

SDG <u>8673</u>	Client <u>Test America, Inc.</u>	
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0822</u>	
DUPLICATE	ORIGINAL	
Lab sample id <u>S103059-05</u>	Lab sample id <u>S103059-01</u>	Client sample id <u>IUC0563-03</u>
Dept sample id <u>8671-005</u>	Dept sample id <u>8671-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
	Received <u>03/08/11</u>	Collected/Volume <u>03/03/11 17:18</u> <u>10.0 L</u>
		Chain of custody id <u>IUC0563</u>

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD %	3σ TOT	DER σ
Gross Alpha	0.322	0.54	0.901	3.00	U	80A	1.17	0.69	0.883	J	114	183	1.9
Gross Beta	2.37	0.89	1.35	4.00	J	80B	1.94	0.81	1.25	J	20	87	0.7
Tritium	49.7	89	148	500	U	H	16.1	85	144	U	-	-	0.5
Radium-226	0.027	0.38	0.710	1.00	U	RA	-0.017	0.43	0.811	U	-	-	0.2
Radium-228	0.183	0.27	0.493	1.00	U	AC	0.214	0.21	0.455	U	-	-	0.2
Strontium-90	0.320	0.54	1.14	2.00	U	SR	0.018	0.39	0.892	U	-	-	0.9
Uranium, Total	0.852	0.092	0.025	1.00	J	U_T	0.859	0.093	0.025	J	1	23	0.1
Potassium-40	U		23.1	25.0	U	GAM	U		17.4	U	-	-	0.4
Cesium-137	U		1.98	20.0	U	GAM	U		1.36	U	-	-	0.5

QC-DUP#1 77720

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>03/31/11</u>

EBERLINE ANALYTICAL

SDG 8673

8673-001

IUC0822-03

DATA SHEET

SDG <u>8673</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0822</u>
Lab sample id <u>S103080-01</u>	Client sample id <u>IUC0822-03</u>
Dept sample id <u>8673-001</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/10/11</u>	Collected/Volume <u>03/07/11 19:51</u> <u>10.0 L</u>
	Chain of custody id <u>IUC0822</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	1.20	0.98	1.40	3.00	U	80A
Gross Beta	12587472	2.92	1.2	1.78	4.00	J	80B
Tritium	10028178	49.0	88	146	500	U	H
Radium-226	13982633	0.249	0.34	0.577	1.00	U	RA
Radium-228	15262201	0.104	0.23	0.520	1.00	U	AC
Strontium-90	10098972	0.068	0.52	1.21	2.00	U	SR
Uranium, Total		1.47	0.16	0.025	1.00		U_T
Potassium-40	13966002	U		<u>34.8</u>	25.0	U	GAM
Cesium-137	10045973	U		1.66	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/31/11</u>

EBERLINE ANALYTICAL

SDG 8673

8673-002

IUC0822-04 (TRIP-BLANK)

DATA SHEET

SDG <u>8673</u>	Client <u>Test America, Inc.</u>
Contact <u>N. Joseph Verville</u>	Contract <u>IUC0822</u>
Lab sample id <u>S103080-02</u>	Client sample id <u>IUC0822-04 (TRIP-BLANK)</u>
Dept sample id <u>8673-002</u>	Location/Matrix <u>Boeing - SSFL</u> <u>WATER</u>
Received <u>03/10/11</u>	Collected/Volume <u>03/07/11 19:51</u> <u>10.0 L</u>
	Chain of custody id <u>IUC0822</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Gross Alpha	12587461	-0.059	0.16	0.317	3.00	U	80A
Gross Beta	12587472	-0.118	0.77	1.26	4.00	U	80B
Radium-226	13982633	-0.109	0.33	0.644	1.00	U	RA
Radium-228	15262201	-0.060	0.21	0.500	1.00	U	AC
Strontium-90	10098972	0.121	0.50	1.10	2.00	U	SR
Uranium, Total		0	0.011	0.025	1.00	U	U_T
Potassium-40	13966002	U		<u>25.6</u>	25.0	U	GAM
Cesium-137	10045973	U		1.68	20.0	U	GAM

Lab id <u>EAS</u>
Protocol <u>TA</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>03/31/11</u>

DATA SHEETS

Page 2

SUMMARY DATA SECTION

Page 12

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

RADIUM-228 IN WATER
BETA COUNTING

Test AC Matrix WATER
SDG 8673
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0822

RESULTS

LAB **RAW** **SUF-**
SAMPLE ID **TEST FIX** **PLANCHET** **CLIENT SAMPLE ID** **Radium-228**

Preparation batch 7281-053

S103059-03	8671-003	Lab Control Sample	ok
S103059-04	8671-004	Method Blank	U
S103059-05	8671-005	Duplicate (S103059-01)	- U
S103080-01	8673-001	IUC0822-03	U
S103080-02	8673-002	IUC0822-04 (TRIP-BLANK)	U

Nominal values and limits from method **RDLs (pCi/L)** **1.00**

METHOD PERFORMANCE

LAB **RAW** **SUF-** **MDA** **ALIQ** **PREP** **DILU-** **YIELD** **EFF** **COUNT** **FWHM** **DRIFT** **DAYS** **ANAL-**
SAMPLE ID **TEST FIX** **CLIENT SAMPLE ID** **pCi/L** **L** **FAC** **TION** **%** **%** **min** **keV** **KeV** **HELD** **PREPARED** **YZED** **DETECTOR**

Preparation batch 7281-053 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 053

S103059-03	Lab Control Sample	0.442	1.80	83	150	03/23/11	03/23	GRB-223
S103059-04	Method Blank	0.495	1.80	89	150	03/23/11	03/23	GRB-224
S103059-05	Duplicate (S103059-01)	0.493	1.80	82	150	20 03/23/11	03/23	GRB-201
S103080-01	IUC0822-03	0.520	1.80	84	150	16 03/23/11	03/23	GRB-229
S103080-02	IUC0822-04 (TRIP-BLANK)	0.500	1.80	82	150	16 03/23/11	03/23	GRB-230

Nominal values and limits from method **1.00** **1.80** **30-105** **50** **180**

PROCEDURES REFERENCE 904.0
DWP-894 Sequential Separation of Actinium-228 and Radium-226 in Drinking Water (>1 Liter Aliquot), rev 5

AVERAGES ± 2 SD MDA 0.490 ± 0.058
FOR 5 SAMPLES YIELD 84 ± 6

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

STRONTIUM-90 IN WATER
BETA COUNTING

Test SR Matrix WATER
SDG 8673
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0822

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Strontium-90

Preparation batch 7281-053

S103059-03		8671-003	Lab Control Sample	ok
S103059-04		8671-004	Method Blank	U
S103059-05		8671-005	Duplicate (S103059-01)	- U
S103080-01		8673-001	IUC0822-03	U
S103080-02		8673-002	IUC0822-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 2.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-053 2σ prep error 10.4 % Reference Lab Notebook No. 7281 pg 053

S103059-03		Lab Control Sample	0.496	0.500			78	100				03/24/11	03/24	GRB-228
S103059-04		Method Blank	1.12	0.500			83	50				03/24/11	03/24	GRB-229
S103059-05		Duplicate (S103059-01)	1.14	0.500			76	50	21	03/24/11	03/24	03/24	03/24	GRB-230
S103080-01		IUC0822-03	1.21	0.500			73	50	17	03/24/11	03/24	03/24	03/24	GRB-232
S103080-02		IUC0822-04 (TRIP-BLANK)	1.10	0.500			84	50	17	03/24/11	03/24	03/24	03/24	GRB-225

Nominal values and limits from method 2.00 0.500 30-105 50 180

PROCEDURES REFERENCE 905.0
DWP-380 Strontium in Drinking Water, rev 8

AVERAGES ± 2 SD MDA 1.01 ± 0.584
FOR 5 SAMPLES YIELD 79 ± 9

METHOD SUMMARIES

Page 2

SUMMARY DATA SECTION

Page 14

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

GROSS ALPHA IN WATER

GAS PROPORTIONAL COUNTING

Test 80A Matrix WATER

SDG 8673

Contact N. Joseph Verville

Client Test America, Inc.

Contract IUC0822

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Alpha

Preparation batch 7281-053

S103059-03	80	8671-003	Lab Control Sample	ok
S103059-04	80	8671-004	Method Blank	U
S103059-05	80	8671-005	Duplicate (S103059-01)	ok U
S103080-01	80	8673-001	IUC0822-03	U
S103080-02	80	8673-002	IUC0822-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 3.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED	DETECTOR

Preparation batch 7281-053 2σ prep error 20.6 % Reference Lab Notebook No. 7281 pg 053

S103059-03	80	Lab Control Sample	1.39	0.100			60	400				03/22/11	03/23	GRB-101
S103059-04	80	Method Blank	0.739	0.100			56	400				03/22/11	03/22	GRB-216
S103059-05	80	Duplicate (S103059-01)	0.901	0.205			89	400	19	03/22/11	03/22	03/22/11	03/22	GRB-101
S103080-01	80	IUC0822-03	1.40	0.160			82	400	15	03/22/11	03/22	03/22/11	03/22	GRB-105
S103080-02	80	IUC0822-04 (TRIP-BLANK)	0.317	0.300			1	400	15	03/22/11	03/22	03/22/11	03/22	GRB-107

Nominal values and limits from method 3.00 0.100 0-200 100 180

PROCEDURES	REFERENCE	900.0
	DWP-121	Gross Alpha and Gross Beta in Drinking Water, rev 10

AVERAGES ± 2 SD	MDA	<u>0.949</u> ± <u>0.919</u>
FOR 5 SAMPLES	RESIDUE	<u>58</u> ± <u>69</u>

METHOD SUMMARIES

Page 3

SUMMARY DATA SECTION

Page 15

Lab id EAS

Protocol TA

Version Ver 1.0

Form DVD-LMS

Version 3.06

Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

GROSS BETA IN WATER

GAS PROPORTIONAL COUNTING

Test 80B Matrix WATER
 SDG 8673
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0822

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Gross Beta	
Preparation batch 7281-053					
S103059-03	80	8671-003	Lab Control Sample	ok	
S103059-04	80	8671-004	Method Blank	U	
S103059-05	80	8671-005	Duplicate (S103059-01)	ok J	
S103080-01	80	8673-001	IUC0822-03	2.92 J	
S103080-02	80	8673-002	IUC0822-04 (TRIP-BLANK)	U	

Nominal values and limits from method RDLs (pCi/L) 4.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	RESID	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	mg	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR
Preparation batch 7281-053 2σ prep error 11.0 % Reference Lab Notebook No. 7281 pg 053													
S103059-03	80	Lab Control Sample	2.70	0.100			60	400				03/22/11	03/23 GRB-101
S103059-04	80	Method Blank	2.79	0.100			56	400				03/22/11	03/22 GRB-216
S103059-05	80	Duplicate (S103059-01)	1.35	0.205			89	400			19	03/22/11	03/22 GRB-101
S103080-01	80	IUC0822-03	1.78	0.160			82	400			15	03/22/11	03/22 GRB-105
S103080-02	80	IUC0822-04 (TRIP-BLANK)	1.26	0.300			1	400			15	03/22/11	03/22 GRB-107

Nominal values and limits from method 4.00 0.100 0-200 100 180

PROCEDURES REFERENCE 900.0
 DWP-121 Gross Alpha and Gross Beta in Drinking Water,
 rev 10

AVERAGES ± 2 SD MDA 1.98 ± 1.46
 FOR 5 SAMPLES RESIDUE 58 ± 69

METHOD SUMMARIES

Page 4

SUMMARY DATA SECTION

Page 16

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

GAMMA EMITTERS IN WATER
GAMMA SPECTROSCOPY

Test GAM Matrix WATER
SDG 8673
Contact N. Joseph Verville

Client Test America, Inc.
Contract IUC0822

RESULTS

LAB	RAW	SUF-			
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Cobalt-60	Cesium-137
Preparation batch 7281-053					
S103059-03		8671-003	Lab Control Sample	ok	ok
S103059-04		8671-004	Method Blank		U
S103059-05		8671-005	Duplicate (S103059-01)		- U
S103080-01		8673-001	IUC0822-03		U
S103080-02		8673-002	IUC0822-04 (TRIP-BLANK)		U

Nominal values and limits from method RDLs (pCi/L) 10.0 20.0

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-053			2σ prep error 7.0 %			Reference Lab Notebook No. 7281 pg 053									
S103059-03		Lab Control Sample	2.00						549			03/14/11	03/15	01,02,00	
S103059-04		Method Blank	2.00						549			03/14/11	03/15	01,04,00	
S103059-05		Duplicate (S103059-01)	2.00						403		15	03/14/11	03/18	01,01,00	
S103080-01		IUC0822-03	2.00						403		11	03/14/11	03/18	01,02,00	
S103080-02		IUC0822-04 (TRIP-BLANK)	2.00						404		11	03/14/11	03/18	01,04,00	

Nominal values and limits from method 6.00 2.00 400 180

PROCEDURES REFERENCE 901.1
DWP-100 Preparation of Drinking Water Samples for Gamma Spectroscopy, rev 5

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

URANIUM, TOTAL

KINETIC PHOSPHORIMETRY, UG

Test U T Matrix WATER
 SDG 8673
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0822

RESULTS

LAB	RAW	SUF-		Uranium,
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Total
Preparation batch 7281-053				
S103059-03		8671-003	Lab Control Sample	ok
S103059-04		8671-004	Method Blank	U
S103059-05		8671-005	Duplicate (S103059-01)	ok J
S103080-01		8673-001	IUC0822-03	1.47
S103080-02		8673-002	IUC0822-04 (TRIP-BLANK)	U
Nominal values and limits from method				
			RDs (pCi/L)	1.00

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 7281-053			2σ prep error		Reference Lab Notebook No. 7281 pg 053										
S103059-03		Lab Control Sample	0.250	0.0200									03/15/11	03/21	KPA-001
S103059-04		Method Blank	0.025	0.0200									03/15/11	03/21	KPA-001
S103059-05		Duplicate (S103059-01)	0.025	0.0200					18				03/15/11	03/21	KPA-001
S103080-01		IUC0822-03	0.025	0.0200					14				03/15/11	03/21	KPA-001
S103080-02		IUC0822-04 (TRIP-BLANK)	0.025	0.0200					14				03/15/11	03/21	KPA-001
Nominal values and limits from method			1.00	0.0200									180		

PROCEDURES REFERENCE D5174

AVERAGES ± 2 SD MDA 0.070 ± 0.201
 FOR 5 SAMPLES YIELD _____ ± _____

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

TRITIUM IN WATER

LIQUID SCINTILLATION COUNTING

Test H Matrix WATER
 SDG 8673
 Contact N. Joseph Verville

Client Test America, Inc.
 Contract IUC0822

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Tritium

Preparation batch 7281-053

S103059-03	8671-003	Lab Control Sample	ok
S103059-04	8671-004	Method Blank	U
S103059-05	8671-005	Duplicate (S103059-01)	- U
S103080-01	8673-001	IUC0822-03	U

Nominal values and limits from method RDLs (pCi/L) 500

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD PREPARED	YZED DETECTOR

Preparation batch 7281-053 2σ prep error 10.0 % Reference Lab Notebook No. 7281 pg 053

S103059-03	Lab Control Sample	144	0.100	10	150	03/25/11	03/26	LSC-007
S103059-04	Method Blank	146	0.100	10	150	03/25/11	03/26	LSC-007
S103059-05	Duplicate (S103059-01)	148	0.0100	100	150	23	03/25/11	03/26 LSC-007
S103080-01	IUC0822-03	146	0.0100	100	150	19	03/25/11	03/26 LSC-007

Nominal values and limits from method 500 0.0100 100 180

PROCEDURES REFERENCE 906.0
 DWP-212 Tritium in Drinking Water by Distillation, rev 8

AVERAGES ± 2 SD MDA 146 ± 3.27
 FOR 4 SAMPLES YIELD 55 ± 104

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-LMS
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

LAB METHOD SUMMARY

RADIUM-226 IN WATER
RADON COUNTING

Test RA Matrix WATER
SDG 8673
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Contract IUC0822

RESULTS

LAB	RAW	SUF-		
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	Radium-226

Preparation batch 7281-053

S103059-03	8671-003	Lab Control Sample	ok
S103059-04	8671-004	Method Blank	U
S103059-05	8671-005	Duplicate (S103059-01)	- U
S103080-01	8673-001	IUC0822-03	U
S103080-02	8673-002	IUC0822-04 (TRIP-BLANK)	U

Nominal values and limits from method RDLs (pCi/L) 1.00

METHOD PERFORMANCE

LAB	RAW	SUF-		MDA	ALIQ	PREP	DILU-	YIELD	EPF	COUNT	FWHM	DRIFT	DAYS		ANAL-	
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID		pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR

Preparation batch 7281-053 2σ prep error 16.4 % Reference Lab Notebook No. 7281 pg 053

S103059-03	Lab Control Sample	0.885	0.100					100		<u>93</u>			03/25/11	03/25	RN-009	
S103059-04	Method Blank	0.699	0.100					100		<u>93</u>			03/25/11	03/25	RN-010	
S103059-05	Duplicate (S103059-01)	0.710	0.100					100		<u>93</u>		22	03/25/11	03/25	RN-012	
S103080-01	IUC0822-03	0.577	0.100					100		101			18	03/25/11	03/25	RN-010
S103080-02	IUC0822-04 (TRIP-BLANK)	0.644	0.100					100		101			18	03/25/11	03/25	RN-012

Nominal values and limits from method 1.00 0.100 100 180

PROCEDURES REFERENCE 903.1
DWP-881A Ra-226 Screening in Drinking Water, rev 6

AVERAGES ± 2 SD MDA 0.703 ± 0.229
FOR 5 SAMPLES YIELD 100 ± 0

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 03/31/11

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SDG 8673

SDG 8673
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REPORT GUIDE

Client Test America, Inc.
 Contract IUC0822

SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

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SDG 8673

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REPORT GUIDE

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 Contract IUC0822

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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REPORT GUIDE

Client Test America, Inc.
Contract IUC0822

WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
 Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
 Contract IUC0822

DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity). If the MDA is blank, the ERROR is used as the limit.

REPORT GUIDES

Page 4

SUMMARY DATA SECTION

Page 24

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0822

DATA SHEET

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.

Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.

For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
- H Similar to 'L' except the recovery was high.
- P The RESULT is 'preliminary'.
- X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
- 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.
- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA

REPORT GUIDES

Page 5

SUMMARY DATA SECTION

Page 25

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0822

DATA SHEET

may not be a good estimate of the 'real' minimum detectable activity.

- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

REPORT GUIDES

Page 6

SUMMARY DATA SECTION

Page 26

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0822

LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

REPORT GUIDES

Page 7

SUMMARY DATA SECTION

Page 27

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0822

DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:

1. A fixed percentage specified in the protocol.

REPORT GUIDES

Page 8

SUMMARY DATA SECTION

Page 28

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
 Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
 Contract IUC0822

DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

REPORT GUIDES

Page 9

SUMMARY DATA SECTION

Page 29

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0822

MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits for the recovery.

REPORT GUIDES

Page 10

SUMMARY DATA SECTION

Page 30

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0822

MATRIX SPIKE

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

REPORT GUIDES

Page 11

SUMMARY DATA SECTION

Page 31

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

REPORT GUIDE

Client Test America, Inc.
Contract IUC0822

METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data' means no amount ADDED was specified. 'LOW' and 'HIGH'

REPORT GUIDES

Page 12

SUMMARY DATA SECTION

Page 32

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
 Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
 Contract IUC0822

METHOD SUMMARY

correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.
- * Count times are underlined if less than the nominal value

REPORT GUIDES

Page 13

SUMMARY DATA SECTION

Page 33

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
Contract IUC0822

METHOD SUMMARY

specified for the method.

- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included.

REPORT GUIDES

Page 14

SUMMARY DATA SECTION

Page 34

Lab id EAS
Protocol TA
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 03/31/11

EBERLINE ANALYTICAL

SDG 8673

SDG 8673
 Contact N. Joseph Verville

GUIDE, cont.

Client Test America, Inc.
 Contract IUC0822

METHOD SUMMARY

No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

Page 15

SUMMARY DATA SECTION

Page 35

Lab id EAS
 Protocol TA
 Version Ver 1.0
 Form DVD-RG
 Version 3.06
 Report date 03/31/11

Subcontract Order - TestAmerica Irvine (IUC0822)

8673

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services
 2030 Wright Avenue
 Richmond, CA 94804
 Phone: (510) 235-2633
 Fax: (510) 235-0438
 Project Location: California
 Receipt Temperature: _____ °C Ice: Y / N

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

Analysis	Units	Expires	Comments
----------	-------	---------	----------

Sample ID: IUC0822-03 (Outfall 002 (Composite) - Water)

Sampled: 03/07/11 19:51

Gamma Spec-O	mg/kg	03/06/12 19:51	jflags; Cs 137 + K 40; do not filter
Gross Alpha-O	pCi/L	09/03/11 19:51	jflags; do not filter
Gross Beta-O	pCi/L	09/03/11 19:51	jflags; do not filter
Radium, Combined-O	pCi/L	03/06/12 19:51	jflags; do not filter
Strontium 90-O	pCi/L	03/06/12 19:51	jflags; do not filter
Tritium-O	pCi/L	03/06/12 19:51	jflags; do not filter
Uranium, Combined-O	pCi/L	03/06/12 19:51	jflags; do not filter

Containers Supplied:

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

Sample ID: IUC0822-04 (Trip Blank - Water)

Sampled: 03/07/11 19:51

Gamma Spec-O	mg/kg	03/06/12 19:51	jflags; Cs 137 + K 40; do not filter
Gross Alpha-O	pCi/L	09/03/11 19:51	jflags; do not filter
Gross Beta-O	pCi/L	09/03/11 19:51	jflags; do not filter
Radium, Combined-O	pCi/L	03/06/12 19:51	jflags; do not filter
Strontium 90-O	pCi/L	03/06/12 19:51	jflags; do not filter
Uranium, Combined-O	pCi/L	03/06/12 19:51	jflags; do not filter

Containers Supplied:

2.5 gal Poly (A) 500 mL Amber (B)

Released By: [Signature] Date/Time: _____

Received By: [Signature] Date/Time: 03/10/11 09:30

Released By: _____ Date/Time: _____

Received By: _____ Date/Time: _____



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: TEST AMERICA City IRVINE State CA

Date/Time received 03/10/11 0930 CoC No. UC0822

Container I.D. No. ICE CHEST Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes No [] N/A []
2. Custody seals on shipping container dated & signed? Yes No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A
5. Packing material is: Wet [] Dry
6. Number of samples in shipping container: 2 Sample Matrix U
7. Number of containers per sample: 2 (Or see CoC _____)
8. Samples are in correct container Yes No []
9. Paperwork agrees with samples? Yes No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels
11. Samples are: In good condition Leaking [] Broken Container [] Missing []
12. Samples are: Preserved Not preserved pH 2/4 Preservative HNO₃
13. Describe any anomalies:

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____

15. Inspected by [Signature] Date 03/10/11 Time: 1030

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>All samples</u>	<u>660</u>						

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. 100482 Calibration date 24 SEP 10

APPENDIX G

Section 17

Outfall 002 – March 20, 2011

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IUC2140

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: IUC2140
 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 002	IUC2140-03	G1C230577-001, S103138-01	Water	3/20/2011 16:41	200.7, 200.7 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM2340B, SM2340B-Diss, ASTM 5174

II. Sample Management

No anomalies were observed regarding sample management. The samples were received above the temperature limit at Eberline; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. Custody seals were intact upon receipt at Eberline and TestAmerica-West Sacramento. 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 or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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: L. Calvin

Date Reviewed: April 10, 2011

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
 - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed prior to the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
 - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
 - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs $\leq 20\%$ for the 15 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the two 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 a detect between the EDL and the reporting limit for OCDD; however, the method blank concentration was insufficient to qualify the associated sample result for OCDD.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613, and RPDs were within the laboratory control limit of ≤50%.
- 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 in the sample were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. Individual isomers reported as EMPCs were qualified as estimated nondetects, “UJ,” at the level of the EMPC. Totals including EMPCs were qualified as estimated, “J.” Any detects reported between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0)*, *EPA Methods 200.7, 245.1*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: Not applicable to these analyses.
- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥ 0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. CRDL/CRI recoveries were within the control limits of 70-130%.

- Blanks: Zinc was detected in the dissolved method blank at 11.1 µg/L; therefore, dissolved zinc detected in the sample was qualified as nondetected, “U,” at the reporting limit. Method blanks and CCBs had no other detects.
- Interference Check Samples: Recoveries were within 80-120%.
- Blank Spikes and Laboratory Control Samples: Recoveries were within method-established control limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for dissolved zinc and copper. Recoveries and RPDs were within method-established control limits.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: Not applicable to these analyses.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either “J+” or “J-”; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: April 15, 2011

The samples listed in Table 1 for these analyses were 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 remaining aliquots were prepared within the five-day analytical 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 remaining detector efficiencies were $\geq 20\%$.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis.

- **Blanks:** There were no analytes detected in the method blanks.
- **Blank Spikes and Laboratory Control Samples:** The strontium recovery was nominally above the control limit; however, strontium was not detected in the sample. The remaining recoveries were within laboratory-established control limits.
- **Laboratory Duplicates:** Laboratory duplicate analyses were performed on the sample in this SDG for all analytes. The RPDs were within the laboratory-established control limits.
- **Matrix Spike/Matrix Spike Duplicate:** No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.
- **Sample Result Verification:** An EPA Level IV review was performed for the sample in this data package. The sample results and MDAs reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. Any detects between the MDA and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDA. Total uranium, normally reported in aqueous units, was converted to pCi/L using the conversion factor of 0.67 for naturally occurring uranium.

A notation in the preparation log indicated that a portion of the aliquots were filtered and that the filtrate was dissolved and added back to the aliquot.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: April 8, 2011

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *EPA Methods 314.0, SM2510B, SM2130B, and SM2540F*, and the *National Functional Guidelines for Inorganic Data Review (7/02)*.

- Holding Times: Analytical holding times 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%. The perchlorate IPC and reporting limit check standards were recovered within 80-120% and 75-125%, respectively.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the method-established control limits for perchlorate. Remaining recoveries were within laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: Due to significant matrix interference in the perchlorate chromatogram, the reviewer requested that the sample be pre-treated, reanalyzed and spiked with a 10 $\mu\text{g/L}$ matrix spike. The MS/MSD performed by the laboratory confirmed that perchlorate was not detected in the sample. As the reanalysis confirmed the original result, the reanalysis was rejected, "R," in favor of the original result. Although both spike recoveries were well over 200%, no qualifications were required as perchlorate was not detected in the sample. Method accuracy for the remaining methods 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. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either “J+” or “J-”; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, “J,” and coded with “DNQ,” in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

Turbidity was reported from a 5× dilution in order to report the result within the linear range of the calibration.

- **Field QC Samples:** Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - **Field Blanks and Equipment Rinsates:** This SDG had no identified field blank or equipment rinsate samples.
 - **Field Duplicates:** There were no field duplicate samples identified for this SDG.

Validated Sample Result Forms IUC2140

Analysis Method 900

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587461	2.64	3	0.41	pCi/L	Jb	J	C, DNQ
Gross Beta	12587472	7.4	4	1.02	pCi/L			

Analysis Method 901.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium-137	10045973	ND	20	2.01	pCi/L	U	U	
Potassium-40	13966002	ND	25	22.6	pCi/L	U	U	

Analysis Method 903.1

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-226	13982633	0.193	1	0.676	pCi/L	U	U	

Analysis Method 904

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium-228	15262201	-0.02	1	0.469	pCi/L	U	U	

Analysis Method 905

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium-90	10098972	0.101	2	0.701	pCi/L	U	U	

Analysis Method 906

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC2140-03	Sample Date:	3/20/2011 4:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028178	-54.7	500	164	pCi/L	U	U	

Analysis Method ASTM 5174-91

Sample Name	Outfall 002 (Composite)	Matrix Type:	WATER	Validation Level:	IV			
Lab Sample Name:	IUC2140-03	Sample Date:	3/20/2011 4:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Uranium, Total	NA	0.634	1	0.02	pCi/L	Jb	J	DNQ

Analysis Method EPA 200.7

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC2140-03	Sample Date:	3/20/2011 4:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	5.4	0.040	0.015	mg/l			
Zinc	7440-66-6	30.4	20.0	6.00	ug/l			

Analysis Method EPA 200.7-Diss

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC2140-03	Sample Date:	3/20/2011 4:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	0.058	0.040	0.015	mg/l			
Zinc	7440-66-6	ND	20.0	6.00	ug/l	B, Ja	U	B

Analysis Method EPA 245.1

Sample Name	Outfall 002 (Composite)	Matrix Type:	Water	Validation Level:	IV			
Lab Sample Name:	IUC2140-03	Sample Date:	3/20/2011 4:41:00 PM					
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method *EPA 245.1-Diss*

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.20	0.10	ug/l		U	

Analysis Method *EPA 314.0*

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: IUC2140-03RE1 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Perchlorate	14797-73-0	ND	4.0	0.90	ug/l		R	D
Perchlorate	14797-73-0	ND	4.0	0.90	ug/l		U	

Analysis Method EPA-5 1613B

Sample Name Outfall 002 (Composite) **Matrix Type:** WATER **Validation Level:** IV
Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	9.7e-005	0.00005	0.0000029	ug/L			
1,2,3,4,6,7,8-HpCDF	67562-39-4	2.1e-005	0.00005	0.0000017	ug/L	J	J	DNQ
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000025	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.000001	ug/L	J, Q	UJ	*III
1,2,3,4,7,8-HxCDF	70648-26-9	8.7e-007	0.00005	0.0000004	ug/L	J	J	DNQ
1,2,3,6,7,8-HxCDD	57653-85-7	3.2e-006	0.00005	0.0000009	ug/L	J	J	DNQ
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.00005	0.0000004	ug/L		U	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000008	ug/L	J, Q	UJ	*III
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.00005	0.0000005	ug/L		U	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.000001	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.000001	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.00005	0.0000004	ug/L	J, Q	UJ	*III
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000011	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.00001	0.0000006	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000009	ug/L		U	
OCDD	3268-87-9	0.0013	0.0001	0.0000098	ug/L	Ba		
OCDF	39001-02-0	5.1e-005	0.0001	0.0000045	ug/L	J	J	DNQ
Total HpCDD	37871-00-4	0.00021	0.00005	0.0000029	ug/L			
Total HpCDF	38998-75-3	5.1e-005	0.00005	0.000002	ug/L	J	J	DNQ
Total HxCDD	34465-46-8	3e-005	0.00005	0.0000009	ug/L	J, Q	J	DNQ, *III
Total HxCDF	55684-94-1	1.4e-005	0.00005	0.0000004	ug/L	J, Q	J	DNQ, *III
Total PeCDD	36088-22-9	ND	0.00005	0.000001	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.000001	ug/L		U	
Total TCDD	41903-57-5	1.2e-006	0.00001	0.0000006	ug/L	J	J	DNQ
Total TCDF	55722-27-5	2.7e-006	0.00001	0.0000009	ug/L	J, Q	J	DNQ, *III

Analysis Method SM 2540D

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	63	10	1.0	mg/l			

Analysis Method SM2130B

Sample Name Outfall 002 (Composite) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC2140-03 **Sample Date:** 3/20/2011 4:41:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	130	5.0	0.20	NTU			

Analysis Method SM2510B

Sample Name Outfall 002 (Grab) **Matrix Type:** Water **Validation Level:** IV
Lab Sample Name: IUC2140-01 **Sample Date:** 3/20/2011 9:50:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	580	1.0	1.0	umhos/c			
