### **APPENDIX G**

## **Section 17**

Outfall 003 - BMP Effectiveness, January 21, 2010 Test America Analytical Laboratory Report





#### LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project: BMP Effectiveness

**Monitoring Program** 

Sampled: 01/21/10 Received: 01/22/10

Issued: 02/02/10 06:26

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

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

This entire report was reviewed and approved for release.

#### **CASE NARRATIVE**

SAMPLE RECEIPT: Samples were received intact, at 3°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: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
ITA1962-01	003 EFF-1	Water
ITA1962-02	003 INF-1	Water

Reviewed By:

TestAmerica Irvine

Debby Wilson For Joseph Doak Project Manager

Debby Wilson



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

MWH-Pasadena/Boeing Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200 Monitoring Program Sampled: 01/21/10

Arcadia, CA 91007 Report Number: ITA1962 Received: 01/22/10

Attention: Bronwyn Kelly

#### **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1962-01 (003 EFF-1 - W	ater)								
Reporting Units: g/cc Density	Displacement	10A2425	N/A	NA	1.0	1	01/26/10	01/26/10	
Sample ID: ITA1962-02 (003 INF-1 - Wa	ater)								
Reporting Units: g/cc Density	Displacement	10A2425	N/A	NA	0.99	1	01/26/10	01/26/10	
Sample ID: ITA1962-01 (003 EFF-1 - W	ater)								
Reporting Units: mg/l Sediment	ASTM D3977	10A2468	10	10	23	1	01/26/10	01/29/10	
Sample ID: ITA1962-02 (003 INF-1 - Wa	ater)								
Reporting Units: mg/l Sediment	ASTM D3977	10A2468	10	10	24	1	01/26/10	01/29/10	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: BMP Effectiveness

Monitoring Program

Report Number: ITA1962

Sampled: 01/21/10

Received: 01/22/10

#### METHOD BLANK/QC DATA

#### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10A2425 Extracted: 01/26/1	10										
<b>Duplicate Analyzed: 01/26/2010 (10A24</b>	125-DUP1)				Sou	rce: ITA	1595-01				
Density	1.00	NA	N/A	g/cc		1.00			0	20	



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

Project ID: BMP Effectiveness

Monitoring Program Sampled: 01/21/10

Report Number: ITA1962 Received: 01/22/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

### DATA QUALIFIERS AND DEFINITIONS

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

**RPD** Relative Percent Difference



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

Project ID: BMP Effectiveness

Monitoring Program Sampled: 01/21/10

Report Number: ITA1962 Received: 01/22/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

#### **Certification Summary**

#### **TestAmerica Irvine**

Displacement

Method	Matrix	Nelac	California
ASTM D3977	Water		

Water

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

Test America version 06/29/09	∍rica ∨	/ersion 06/29/C	6(	CHAIN	CHAIN OF CUST		ODY FORM	2741962	29	Page 1 of 1	
Client Name/Address	Address:			Project: Boeing BMP	ng BMP			ANALYSIS REQUII	IRED		
MWH-Pasadena 618 Michillinda Ave., Ste 200 Arcadia, CA 91007	adena Ave., Ste 1007	, 200		Effectiveness Monitoring Program	s Monitorinç	<b>D</b>	-MTS				
Test America contact: Joseph Doak	contact: Je	oseph Doak					ent C, A				
Project Manager: Bronwyn Kelly	ger: Bro	nwyn Kelly		Phone Number: (626) 568-6691	er. 91		SS) u			Comments	
Sampler: Shelby Dawson	elby Daw	vson		Fax Number: (626) 568-6515	15		S babna oitsatioa: 77-1997)				
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle *	Conc				
003 EFF-1	3	Poly-500 mL	1	1/21/10 1053	None	-	×			grab	
003 INF-1	8	Poly-500 mL	-	1/21/10 1055	None	-	×		3	grab	
	*	Poly41	+	1/21/10 0839	None	7	     			grap	
										1	
			_							, OD,	
			-						718	10 (1)	
									Б	2)(2	
									-		
			-								
Relinguished By	7/	1/1	Date/Time:	me:	Received By	5	1 Date	-	Turn around Time:	Time: (check) 5 Days	
1-1111		7	1-12-10	0:0	19	1/2 	MA	1-22-10 (6:0)	48 HOUR	10 Davs	
Reknauished By	Juni	1	Date/Time	٠,	Received By	7	Date.	Date/Time:	72 Hours	Normal X	
Relinquished By	0		Date/Time:	me:	Received By		Date	Date/Time:	Perchlorate (	Perchlorate Only 72 Hours	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	<b>\</b>					5	<del>\</del>	My OKU		72 Hours / C O	7
, i depend					7	\				Sample Integrity: (Check) Intact	

## **APPENDIX G**

# **Section 18**

Outfall 003 - February 6 & 7, 2010

MECX Data Validation Report





# DATA VALIDATION REPORT

# **Boeing SSFL NPDES**

SAMPLE DELIVERY GROUP: ITB0890/ITB0894

Prepared by

MEC<sup>X</sup>, 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: ITB0890/ITB0894

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 003	ITB0890-01	N/A	Water	2/6/10 11:50 AM	EPA 1664A, EPA 218.6, EPA 624
Outfall 003	ITB0894-01	G0B100427- 001, F090484-001	Water		ASTM 5174-91, 200.7, 200.7 (Diss), 200.8, 200.8 (Diss), 245.1, 245.1 (Diss), 1613B, 300.0, 314.0, 525.2, 608, 625, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD, SM 2540D, SM 4500-F-C, SM2340B, SM2340B-Diss, SM2540C, SM4500CN-E
Outfall 003	ITB0894-01RE1	G0B100427- 001	Water	2/7/10 10:28 AM	1613B
Trip Blank	ITB0890-02		Water	2/6/10 11:50 AM	624

#### **II. Sample Management**

No anomalies were observed regarding sample management. The samples were received at ambient temperature at TestAmerica-St. Louis; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the remaining laboratories within the temperature limits of 4°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 TestAmerica-St. Louis 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.

1

Project: SSFL NPDES SDG: ITB0890/ITB0894

### **Data Qualifier Reference Table**

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

Project: SSFL NPDES
DATA VALIDATION REPORT SDG: ITB0890/ITB0894

### **Qualification Code Reference Table**

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

#### **Qualification Code Reference Table Cont.**

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

#### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: March 27, 2010

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - o GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - o Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for 1,2,3,4,6,7,8-HpCDD and total HpCDD, OCDD, 1,2,3,4,6,7,8-HpCDF and total HpCDF, and OCDF. Most detects in the method blank did not meet ratio criteria and were reported as EMPCs; however, due to the extent of contamination present in the method blank, it was the reviewer's professional opinion that those results be utilized to qualify applicable sample

results. Isomers present in the sample between the EDLs and RLs were qualified as nondetected, "U," at the levels of contamination. The sample results for total HpCDD and total HpCDF were qualified as nondetected, "U," as all peaks comprising the totals were present in the method blank.

- Blank Spikes and Laboratory Control Samples: OPR recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed
  for polychlorinated dioxins/furans by EPA Method 1613. The laboratory performed a
  confirmation analysis for 2,3,7,8-TCDF. As the initial result was identified as an EMPC
  and qualified as nondetected, the confirmation result was rejected, "R," in favor of the
  initial result.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample results. The EMPCs for 1,2,3,4,6,7,8-HpCDF and total HpCDF qualified as nondetected for method blank contamination were not further qualified as EMPCs. Any remaining isomers reported as EMPCs were qualified as estimated and nondetected, "UJ," at the level of the EMPC. The concentration of total HxCDD was equal to the sum of the isomers reported as EMPC; therefore, total HxCDD was also qualified as nondetected, "UJ," at the level of the EMPC. Any remaining total results reported as EMPCs or including EMPCs were qualified as estimated, "J." Any detects reported below the EDL, or between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

Project: SSFL NPDES SDG: ITB0890/ITB0894

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

Reviewed By: P. Meeks

Date Reviewed: March 26, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the MEC<sup>x</sup> Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 200.7, 200.8, 245.1, and the National Functional Guidelines for Inorganic Data Review (7/02).

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.
- Tuning: The measured beryllium mass associated with the dissolved copper analysis exceeded the true value by >0.1 amu; however, the magnesium mass calibration was acceptable. As the mass of copper is nearer in value to magnesium, no qualifications were required. The remaining mass calibration and resolution checks criteria were met. All tuning solution %RSDs were ≤5%, and all remaining masses of interest were calibrated to ≤ 0.1 amu and ≤0.9 amu at 10% peak height.
- Calibration: Calibration criteria were met. Mercury initial calibration r² values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. The nickel 5 ppb CRDL recovery associated with the total nickel analysis was 66%; therefore, nondetected total nickel in the sample was qualified as estimated, "UJ." The cadmium 0.2 ppb check standard associated with the total analyses was recovered at 50%; therefore, nondetected total cadmium was qualified as estimated, "UJ." The remaining CRDL/CRI recoveries were within the control limits of 70-130%.
- Blanks: Boron was detected in both the total and dissolved method blanks and iron was detected in the dissolved method blank at 24.3, 45.3, and 21.9 µg/L, respectively, therefore, both boron detects and dissolved iron detected in the sample were qualified as nondetected, "U," at the levels of contamination. Cadmium and antimony were reported in the total method blank at -0.156 and -0.631 µg/L; therefore, the nondetected total results for both analytes were qualified as estimated, "UJ." Method blanks and CCBs had no other applicable detects.
- Interference Check Samples: Recoveries were within 80-120% for all 200.7 analyses and the 200.8 dissolved analyses (ISCA/ICAB analyses were performed only in associated with the dissolved 200.8 analyses). Boron was reported in both ICSA analyses at -75 μg/L; however, the concentration of the primary interferent, iron, was not sufficient to cause matrix interference in the site sample. Copper and cadmium were detected in the 200.8 ICSA; however, the reviewer was not able to determine if the detects were due to low-level contamination of the ICSA standard.

 Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the dissolved 200.7 analytes. Recoveries and RPDs were within laboratory-established QC limits. Method accuracy for the remaining 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: All sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration blank. Copper was not bracketed by an internal standard of lower mass; therefore, copper detected in the sample was qualified as estimated, "J."
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- 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 and PCBs

Reviewed By: P. Meeks

Date Reviewed: March 25, 2010

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC<sup>X</sup> 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 water samples were extracted within seven days of collection and analyzed within 40 days of extraction.

- Calibration: The %RSD exceeded the control limit for heptachlor on both channels, endrin ketone on channel A and endosulfan II on channel B; therefore, the results for these analytes were qualified as estimated, "UJ." The remaining initial calibrations had average %RSDs of ≤10% and r² values ≥0.995. %Ds exceeded 15% for endrin, heptachlor, and toxaphene on one or both columns in the closing CCV; therefore, the nondetected results for these compounds were qualified as estimated, "UJ." The remaining ICV and CCVs bracketing the sample analyses had %Ds within the QC limit of ≤15%.
- Blanks: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits. All results were acceptable when calculated using the correct volume.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy 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:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Compound Identification: Compound identification was verified. Review of the sample chromatograms and retention times indicated no problems with target compound identification.
- Compound Quantification and Reported Detection Limits: Compound quantification was verified from the raw data. The reporting limits were supported by the lower level of the initial calibration. Any result reported between the MDL and the reporting limit was qualified as estimated, "J," and coded with "DNQ" in order to comply with the NPDES permit. Reported nondetects are valid to the reporting limit.

Project: SSFL NPDES SDG: ITB0890/ITB0894

#### D. VARIOUS EPA METHODS — Radionuclides

Reviewed By: P. Meeks

Date Reviewed: March 26, 2010

The sample 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 aliquots for total uranium and radium-228 were reanalyzed more than 3x beyond the holding time for unpreserved samples; therefore, total uranium detected in the sample was qualified as estimated, "J," and nondetected radium-228 was rejected, "R." The tritium sample was analyzed within 180 days of collection. Aliquots for gamma spectroscopy, gross alpha, gross beta, radium-226, and strontium-90 were prepared within the five-day holding time for unpreserved aqueous samples.
- Calibration: The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability.

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

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. The strontium chemical yield was less than 40%; therefore, nondetected strontium in the sample was qualified as estimated, "UJ." All remaining chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: Tritium was detected in the method blank at 165 pCi/L; therefore, tritium detected
  in the sample was qualified as nondetected, "U." There were no other analytes detected in
  the method blanks or the KPA CCBs.
- Blank Spikes and Laboratory Control Samples: The recoveries and the radium-228 RPD were within laboratory-established control limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed for the sample in this SDG. Method accuracy was evaluated based on the LCS results.

Sample Result Verification: An EPA Level IV review was performed for the sample in this
data package. The sample results and MDAs reported on the sample result form were
verified against the raw data and no calculation or transcription errors were noted. Any
detects between the MDA and the reporting limit were qualified as estimated, "J," and
coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are
valid to the MDA.

The reviewer noted that the total uranium preparation log was not signed as reviewed.

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

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

Reviewed By: P. Meeks

Date Reviewed: March 25. 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the  $MEC^{\times}$  Data Validation Procedure for 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 r<sup>2</sup> value for pentachlorophenol was less than the control limit; therefore, the nondetected result pentachlorophenol was qualified as estimated, "UJ." Initial calibration average RRFs were ≥0.05 and %RSDs ≤35% and the remaining r<sup>2</sup> values were ≥0.995. The second source ICV had %Ds above 20% for benzyl hexachlorocyclopentadiene. 2.4-dinitrophenol. n-nitrosodiphenvlamine. pentachlorophenol, and benzidine; therefore, the nondetected results for these compound were qualified as estimated, "UJ." The ICV RRFs were ≥0.05 and the remaining %Ds ≤20%. The continuing calibration associated with the sample analysis had %Ds above 20% hexachlorocyclopentadiene, benzyl alcohol, n-nitrosodiphenylamine, pentachlorophenol, benzidine, and 2,4-dinitrophenol; therefore, the nondetected results for

these compounds were qualified as estimated, "UJ." The continuing calibration RRFs were  $\geq 0.05$  and the remaining %Ds  $\leq 20$ %.

- Blanks: Method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: Both recoveries for hexachlorocyclopentadiene exceeded the control limit; however, the compound was not detected in the site sample. The RPDs for benzidine and benzoic acid exceeded the control limit; therefore, the nondetected results for these compounds were qualified as estimated, "UJ." The remaining recoveries and RPDs were within laboratory-established QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on LCS/LCSD results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- 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.

Project: SSFL NPDES SDG: ITB0890/ITB0894

#### F. EPA METHOD 525.2—Semivolatile Organic Compounds (SVOCs)

Reviewed By: P. Meeks

Date Reviewed: March 25, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the  $MEC^{\times}$  Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 525.2, 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 24 hours of collection and analyzed within 30 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 were ≥0.05 and %RSDs ≤35%. The second source verification and continuing calibration RRFs were ≥0.05 and recoveries were within the method QC limits of 70-130%.
- Blanks: The method blank had no applicable target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratoryestablished QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on the LCS/D results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the method control limits established by the continuing calibration standards of -50%/+100% for internal standard areas and ±30 seconds for retention times.
- Compound Identification: Compound identification was verified. The laboratory analyzed for chlorpyrifos and diazinon by Method 525.2. 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. Reported nondetects are valid to the reporting limit.

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this analysis.
- System Performance: Review of the raw data indicated no problems with system performance.

### G. EPA METHOD 624—Volatile Organic Compounds (VOCs)

Reviewed By: P. Meeks

Date Reviewed: March 25, 2010

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0), EPA Methods 624 and 8260B, and the National Functional Guidelines for Organic Data Review (10/99).

- Holding Times: Analytical holding times were met. The unpreserved aliquots of the water samples were analyzed within seven days of collection and the preserved water samples were analyzed within 14 days of collection.
- GC/MS Tuning: The BFB tunes met the respective method abundance criteria specified by EPA Method 624. Samples were analyzed within 12 hours of the BFB injection time.
- Calibration: The acrolein RRF was <0.05; therefore, nondetected acrolein in the samples was rejected, "R." The remaining initial calibration average RRFs and continuing calibration RRFs were ≥0.05. The initial calibration %RSDs were ≤35% or r² ≥0.995. The continuing calibration %D exceeded the control limit for 2-chloroethyl vinyl ether; therefore, nondetected results for 2-chloroethyl vinyl ether in both samples were qualified as estimated, "UJ." Remaining continuing calibration %Ds were ≤20%.
- Blanks: The method blanks had no target compound detects above the MDL.
- Blank Spikes and Laboratory Control Samples: LCS recoveries were within QC limits.
- Surrogate Recovery: Recoveries were within laboratory-established QC limits.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a 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: Sample Trip Blank was the trip blank associated with the site sample in this SDG. There were no detects above the MDL in the trip blank.
- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- o Field Duplicates: There were no field duplicate samples identified in this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards:
   -50%/+100% for internal standard areas and ±30 seconds for retention times.
- Compound Identification: Compound identification was verified. The laboratory analyzed for volatile target compounds by EPA Method 624. 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 calibrations and the laboratory MDLs. 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: March 26, 2010

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 218.6, 300.0, 314.0, 1664A, SM2540C, SM2540D, SM4500-F-C, SM4500CN-E, 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 r² values were ≥0.995. Nitrite was recovered at 11% in one CCV bracketing the sample analyses; however, nitrite was not detected in the site sample and no qualification was required for the nitrate/nitrite

result. All remaining initial and continuing calibration recoveries were within 90-110%. Balance calibration logs were considered acceptable.

- Blanks: Hexavalent chromium was detected in the ICB at 0.40 μg/L; therefore, hexavalent chromium detected in the sample was qualified as nondetected, "U," at the reporting limit. Method blanks and CCBs had no other applicable detects.
- Blank Spikes and Laboratory Control Samples: A nitrate/nitrite recovery was not listed on the summary form. The reviewer checked the raw data and determined that the nitrate/nitrite recovery was acceptable. The remaining recoveries were within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG for the 200.0 analytes. Nitrate/nitrite recoveries were not listed on the summary form. The reviewer checked the raw data and determined that the nitrate/nitrite recoveries were acceptable. The remaining recoveries and RPDs were within laboratory-established QC limits.
- 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 ITB0890/ITB0894

Analysis Method ASTM 5174-91 Matrix Type: WATER Sample Name Outfall 003 Validation Level: IV ITB0894-01 Sample Date: 2/7/2010 10:28:00 AM Lab Sample Name: Analyte CAS No Result RL **MDL** Result Lab Validation Validation Value Units Qualifier **Qualifier Notes** Total Uranium 7440-61-1 1.09 0.69 0.21 Н pCi/L EPA 1664A Analysis Method Sample Name Outfall 003 Matrix Type: Water Validation Level: IV Sample Date: 2/6/2010 11:50:00 AM ITB0890-01 Lab Sample Name: Result Analyte CAS No RL**MDL** Result Lab Validation Validation Value Units Qualifier Qualifier Notes Hexane Extractable Material (Oil ND 4.8 1.3 mg/l EPA 200.7 Analysis Method Water Validation Level: IV Outfall 003 Matrix Type: Sample Name **Sample Date:** 2/7/2010 10:28:00 AM Lab Sample Name: ITB0894-01 Result Analyte CAS No RL **MDL** Result Lab Validation Validation Value Units Qualifier Qualifier **Notes** 630 Aluminum 7429-90-5 50 40 ug/l Arsenic 7440-38-2 10 7.0 U ND ug/l Beryllium 7440-41-7 2.0 0.90 U ND ug/l U Boron 7440-42-8 ND 0.092 0.020 В mg/l Calcium 7440-70-2 25 0.10 0.050 mg/l 7440-47-3 5.0 2.0 U Chromium ND ug/l 7439-89-6 0.41 0.040 0.015 Iron mg/l Magnesium 7439-95-4 6.0 0.020 0.012 mg/lNickel 7440-02-0 ND 10 2.0 UJ R ug/l Selenium U 7782-49-2 ND 10 8.0 ug/l U Silver 7440-22-4 ND 10 6.0 ug/l 10 Vanadium 7440-62-2 3.2 3.0 ug/l Ja J **DNQ** 

Tuesday, April 06, 2010 Page 1 of 14

6.0

ug/l

20

20

7440-66-6

Zinc

### Analysis Method EPA 200.7-Diss

Sample Name	Outfall 003		Matri	x Type:	Water	7	alidation Le	evel: IV	
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM	1			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes	
Aluminum	7429-90-5	ND	50	40	ug/l		U		
Arsenic	7440-38-2	ND	10	7.0	ug/l		U		
Beryllium	7440-41-7	ND	2.0	0.90	ug/l		U		
Boron	7440-42-8	ND	0.10	0.020	mg/l	В	U	В	
Calcium	7440-70-2	23	0.10	0.050	mg/l				
Chromium	7440-47-3	ND	5.0	2.0	ug/l		U		
Iron	7439-89-6	ND	0.089	0.015	mg/l	В	U	В	
Magnesium	7439-95-4	5.5	0.020	0.012	mg/l				
Nickel	7440-02-0	ND	10	2.0	ug/l		U		
Selenium	7782-49-2	ND	10	8.0	ug/l		U		
Silver	7440-22-4	ND	10	6.0	ug/l		U		
Vanadium	7440-62-2	ND	10	3.0	ug/l		U		
Zinc	7440-66-6	19	20	6.0	ug/l	J	J	DNQ	

### Analysis Method EPA 200.8

Sample Name Outfall 003 Matrix Type: Water Validation Level: IV

Lab Sample Name: ITB0894-01 Sample Date: 2/7/2010 10:28:00 AM

Analyte	CAS No	Result Value		MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	ND	2.0	0.30	ug/l		UJ	В
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		UJ	R, B
Copper	7440-50-8	2.6	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	0.86	1.0	0.20	ug/l	Ja	J	DNQ
Thallium	7440-28-0	ND	1.0	0.20	ug/l	С	U	

### Analysis Method EPA 200.8-Diss

Sample Name Outfall 003 Matrix Type: Water Validation Level: IV

**Lab Sample Name:** ITB0894-01 **Sample Date:** 2/7/2010 10:28:00 AM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Antimony	7440-36-0	0.39	2.0	0.30	ug/l	Ja	J	DNQ
Cadmium	7440-43-9	ND	1.0	0.10	ug/l		U	
Copper	7440-50-8	2.1	2.0	0.50	ug/l		J	*III
Lead	7439-92-1	ND	1.0	0.20	ug/l		U	
Thallium	7440-28-0	ND	1.0	0.20	ug/l		U	

Tuesday, April 06, 2010 Page 2 of 14

# Analysis Method EPA 218.6

Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITB0890-01	Sam	ple Date:	2/6/2010	11:50:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chromium VI	18540-29-9	ND	0.0010	0.00025	mg/l	Ja	U	В
Analysis Metho	od EPA 2	245.1						
Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.00020	0.00010	mg/l		U	
Analysis Metho	od EPA 2	245.1-L	<i>Diss</i>					
Sample Name	Outfall 003		Matri	x Type:	Water	•	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	7439-97-6	ND	0.00020	0.00010	mg/l		U	
Analysis Metho	od EPA 3	800.0						
Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chloride	16887-00-6	5.6	0.50	0.25	mg/l			
Nitrate/Nitrite-N	NA	0.82	0.26	0.15	mg/l			
Sulfate	14808-79-8	13	0.50	0.20	mg/l			
Analysis Metho	od EPA 3	314.0						
Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
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		U	

Tuesday, April 06, 2010 Page 3 of 14

### Analysis Method EPA 525.2

Toxaphene

Analysis Meine	oa EFA .	023.2						
Sample Name	Outfall 003		Matri	іх Туре:	Water	Validation Level: IV		
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM	1		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	2921-88-2	ND	1.0		ug/l		U	
Diazinon	333-41-5	ND	0.25		ug/l		U	
Analysis Metho	od EPA 6	608						
Sample Name	Outfall 003		Matri	іх Туре:	Water	V	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sample Da		2/7/2010 10:28:00 AM		1		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
4,4'-DDD	72-54-8	ND	0.0047	0.0019	ug/l		U	
4,4'-DDE	72-55-9	ND	0.0047	0.0028	ug/l		U	
4,4'-DDT	50-29-3	ND	0.0094	0.0038	ug/l		U	
Aldrin	309-00-2	ND	0.0047	0.0014	ug/l		U	
alpha-BHC	319-84-6	ND	0.0047	0.0024	ug/l		U	
Aroclor 1016	12674-11-2	ND	0.47	0.24	ug/l		U	
Aroclor 1221	11104-28-2	ND	0.47	0.24	ug/l		U	
Aroclor 1232	11141-16-5	ND	0.47	0.24	ug/l		U	
Aroclor 1242	53469-21-9	ND	0.47	0.24	ug/l		U	
Aroclor 1248	12672-29-6	ND	0.47	0.24	ug/l		U	
Aroclor 1254	11097-69-1	ND	0.47	0.24	ug/l		U	
Aroclor 1260	11096-82-5	ND	0.47	0.24	ug/l		U	
beta-BHC	319-85-7	ND	0.0094	0.0038	ug/l		U	
Chlordane	57-74-9	ND	0.094	0.038	ug/l		U	
delta-BHC	319-86-8	ND	0.0047	0.0033	ug/l		U	
Dieldrin	60-57-1	ND	0.0047	0.0019	ug/l		U	
Endosulfan I	959-98-8	ND	0.0047	0.0019	ug/l		U	
Endosulfan II	33213-65-9	ND	0.0047	0.0028	ug/l		UJ	С
Endosulfan sulfate	1031-07-8	ND	0.0094	0.0028	ug/l		U	
Endrin	72-20-8	ND	0.0047	0.0019	ug/l	С	UJ	С
Endrin aldehyde	7421-93-4	ND	0.0094	0.0019	ug/l		U	
Endrin ketone	53494-70-5	ND	0.0094	0.0028	ug/l		UJ	С
gamma-BHC (Lindane)	58-89-9	ND	0.019	0.0028	ug/l		U	
Heptachlor	76-44-8	ND	0.0094	0.0028	ug/l	С	UJ	С
Heptachlor epoxide	1024-57-3	ND	0.0047	0.0024	ug/l		U	
Methoxychlor	72-43-5	ND	0.0047	0.0033	ug/l		U	

Tuesday, April 06, 2010 Page 4 of 14

0.24

ug/l

UJ

0.47

8001-35-2

ND

Sample Name	Outfall 003		Matrix Type: Water				<b>Validation Level:</b> IV		
Lab Sample Name:	ITB0890-01	Sam	ple Date:	2/6/2010	11:50:00 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		
,1,2,2-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-Dichloroethane	75-34-3	ND	0.50	0.40	ug/l		U		
,1-Dichloroethene	75-35-4	ND	0.50	0.42	ug/l		U		
,2-Dichlorobenzene	95-50-1	ND	0.50	0.32	ug/l		U		
,2-Dichloroethane	107-06-2	ND	0.50	0.28	ug/l		U		
,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		UJ	С	
Acrolein	107-02-8	ND	5.0	4.0	ug/l		R	R	
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		
eis-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		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		
Γetrachloroethene	127-18-4	ND	0.50	0.32	ug/l		U		
Γoluene	108-88-3	ND	0.50	0.36	ug/l		U		
rans-1,2-Dichloroethene	156-60-5	ND	0.50	0.30	ug/l		U		
rans-1,3-Dichloropropene	10061-02-6	ND	0.50	0.32	ug/l		U		
Γrichloroethene	79-01-6	ND	0.50	0.26	ug/l		U		
Γrichlorofluoromethane	75-69-4	ND	0.50	0.34	ug/l		U		
Trichlorotrifluoroethane (Fred	on 76-13-1	ND	5.0	0.50	ug/l		U		
Vinyl chloride	75-01-4	ND	0.50	0.40	ug/l		U		
Francisco Annil 00, 0040								5 - 1	

Tuesday, April 06, 2010 Page 5 of 14

# Analysis Method EPA 624

Xylenes, Total 1330-20-7 ND 1.5 0.90 ug/l **U** 

Tuesday, April 06, 2010 Page 6 of 14

Sample Name	Trip Blank		Matrix Type: Water				<b>Validation Level:</b> IV		
Lab Sample Name:	ITB0890-02	Sam	ple Date:	2/6/2010	11:50:00 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		
,1,2,2-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-Dichloroethane	75-34-3	ND	0.50	0.40	ug/l		U		
,1-Dichloroethene	75-35-4	ND	0.50	0.42	ug/l		U		
,2-Dichlorobenzene	95-50-1	ND	0.50	0.32	ug/l		U		
,2-Dichloroethane	107-06-2	ND	0.50	0.28	ug/l		U		
,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		UJ	С	
Acrolein	107-02-8	ND	5.0	4.0	ug/l		R	R	
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		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		
Γetrachloroethene	127-18-4	ND	0.50	0.32	ug/l		U		
Γoluene	108-88-3	ND	0.50	0.36	ug/l		U		
rans-1,2-Dichloroethene	156-60-5	ND	0.50	0.30	ug/l		U		
rans-1,3-Dichloropropene	10061-02-6	ND	0.50	0.32	ug/l		U		
Γrichloroethene	79-01-6	ND	0.50	0.26	ug/l		U		
Γrichlorofluoromethane	75-69-4	ND	0.50	0.34	ug/l		U		
Trichlorotrifluoroethane (Fred	on 76-13-1	ND	5.0	0.50	ug/l		U		
Vinyl chloride	75-01-4	ND	0.50	0.40	ug/l		U		
Francisco America CO COAC									

Tuesday, April 06, 2010 Page 7 of 14

# Analysis Method EPA 624

Xylenes, Total 1330-20-7 ND 1.5 0.90 ug/l **U** 

Tuesday, April 06, 2010 Page 8 of 14

Sample Name	Outfall 003		Matri	x Type:	Water	Validation Level: IV		
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM	I		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,4-Trichlorobenzene	120-82-1	ND	9.6	2.4	ug/l		U	
1,2-Dichlorobenzene	95-50-1	ND	9.6	2.9	ug/l		U	
1,2- Diphenylhydrazine/Azobenz	103-33-3	ND	19	2.4	ug/l		U	
1,3-Dichlorobenzene	541-73-1	ND	9.6	2.9	ug/l		U	
1,4-Dichlorobenzene	106-46-7	ND	9.6	2.4	ug/l		U	
2,4,5-Trichlorophenol	95-95-4	ND	19	2.9	ug/l		U	
2,4,6-Trichlorophenol	88-06-2	ND	19	4.3	ug/l		U	
2,4-Dichlorophenol	120-83-2	ND	9.6	3.4	ug/l		U	
2,4-Dimethylphenol	105-67-9	ND	19	3.4	ug/l		U	
2,4-Dinitrophenol	51-28-5	ND	19	7.7	ug/l		UJ	С
2,4-Dinitrotoluene	121-14-2	ND	9.6	3.4	ug/l		U	
2,6-Dinitrotoluene	606-20-2	ND	9.6	1.9	ug/l		U	
2-Chloronaphthalene	91-58-7	ND	9.6	2.9	ug/l		U	
2-Chlorophenol	95-57-8	ND	9.6	2.9	ug/l		U	
2-Methylnaphthalene	91-57-6	ND	9.6	1.9	ug/l		U	
2-Methylphenol	95-48-7	ND	9.6	2.9	ug/l		U	
2-Nitroaniline	88-74-4	ND	19	1.9	ug/l		U	
2-Nitrophenol	88-75-5	ND	9.6	3.4	ug/l		U	
3,3'-Dichlorobenzidine	91-94-1	ND	19	7.2	ug/l		U	
3-Nitroaniline	99-09-2	ND	19	2.9	ug/l		U	
4,6-Dinitro-2-methylphenol	534-52-1	ND	19	3.8	ug/l		U	
4-Bromophenyl phenyl ether	101-55-3	ND	9.6	2.9	ug/l		U	
4-Chloro-3-methylphenol	59-50-7	ND	19	2.4	ug/l		U	
4-Chloroaniline	106-47-8	ND	9.6	1.9	ug/l		U	
4-Chlorophenyl phenyl ether	7005-72-3	ND	9.6	2.4	ug/l		U	
4-Methylphenol	106-44-5	ND	9.6	2.9	ug/l		U	
4-Nitroaniline	100-01-6	ND	19	3.8	ug/l		U	
4-Nitrophenol	100-02-7	ND	19	5.3	ug/l		U	
Acenaphthene	83-32-9	ND	9.6	2.9	ug/l		U	
Acenaphthylene	208-96-8	ND	9.6	2.9	ug/l		U	
Aniline	62-53-3	ND	9.6	3.4	ug/l		U	
Anthracene	120-12-7	ND	9.6	2.4	ug/l		U	
Benzidine	92-87-5	ND	19	9.6	ug/l		UJ	C, *III
Benzo(a)anthracene	56-55-3	ND	9.6	2.4	ug/l		U	
Benzo(a)pyrene	50-32-8	ND	9.6	2.9	ug/l		U	

Tuesday, April 06, 2010 Page 9 of 14

# Analysis Method EPA 625

Benzo(b)fluoranthene	205-99-2	ND	9.6	1.9	ug/l		U	
Benzo(g,h,i)perylene	191-24-2	ND	9.6	3.8	ug/l		U	
Benzo(k)fluoranthene	207-08-9	ND	9.6	2.4	ug/l		U	
Benzoic acid	65-85-0	ND	19	9.6	ug/l		UJ	C, *III
Benzyl alcohol	100-51-6	ND	19	3.4	ug/l	С	UJ	С
Bis(2-chloroethoxy)methane	111-91-1	ND	9.6	2.9	ug/l		U	
Bis(2-chloroethyl)ether	111-44-4	ND	9.6	2.9	ug/l		U	
Bis(2-chloroisopropyl)ether	108-60-1	ND	9.6	2.4	ug/l		U	
Bis(2-ethylhexyl)phthalate	117-81-7	ND	48	3.8	ug/l		U	
Butyl benzyl phthalate	85-68-7	ND	19	3.8	ug/l		U	
Chrysene	218-01-9	ND	9.6	2.4	ug/l		U	
Dibenz(a,h)anthracene	53-70-3	ND	19	2.9	ug/l		U	
Dibenzofuran	132-64-9	ND	9.6	3.8	ug/l		U	
Diethyl phthalate	84-66-2	ND	9.6	3.4	ug/l		U	
Dimethyl phthalate	131-11-3	ND	9.6	2.4	ug/l		U	
Di-n-butyl phthalate	84-74-2	ND	19	2.9	ug/l		U	
Di-n-octyl phthalate	117-84-0	ND	19	3.4	ug/l		U	
Fluoranthene	206-44-0	ND	9.6	2.9	ug/l		U	
Fluorene	86-73-7	ND	9.6	2.9	ug/l		U	
Hexachlorobenzene	118-74-1	ND	9.6	2.9	ug/l		U	
Hexachlorobutadiene	87-68-3	ND	9.6	3.8	ug/l		U	
Hexachlorocyclopentadiene	77-47-4	ND	19	4.8	ug/l	C, L	UJ	C
Hexachloroethane	67-72-1	ND	9.6	3.4	ug/l		U	
Indeno(1,2,3-cd)pyrene	193-39-5	ND	19	3.4	ug/l		U	
Isophorone	78-59-1	ND	9.6	2.9	ug/l		U	
Naphthalene	91-20-3	ND	9.6	2.9	ug/l		U	
Nitrobenzene	98-95-3	ND	19	2.9	ug/l		U	
N-Nitrosodimethylamine	62-75-9	ND	19	2.4	ug/l		U	
N-Nitroso-di-n-propylamine	621-64-7	ND	9.6	3.4	ug/l		U	
N-Nitrosodiphenylamine	86-30-6	ND	9.6	1.9	ug/l		UJ	C
Pentachlorophenol	87-86-5	ND	19	3.4	ug/l		UJ	С
Phenanthrene	85-01-8	ND	9.6	3.4	ug/l		U	
Phenol	108-95-2	ND	9.6	1.9	ug/l		U	
Pyrene	129-00-0	ND	9.6	3.8	ug/l		U	

Tuesday, April 06, 2010 Page 10 of 14

# Analysis Method EPA 900.0 MOD

Sample Name	Outfall 003		Matri	x Type:	WATER	7	alidation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	3.7	3	1.4	pCi/L		J	С
Gross Beta	12587-47-2	4.03	4	0.99	pCi/L			
Analysis Metho	od EPA 9	001.1 N	10D					
Sample Name	Outfall 003		Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-1.5	20	17	pCi/L	U	U	
Potassium 40	13966-00-2	-100	0	200	pCi/L	U	U	
Analysis Metho	od EPA 9	903.0 M	10D					
Sample Name	Outfall 003		Matri	x Type:	WATER	7	alidation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.16	1	0.27	pCi/L	U	UJ	С
Analysis Metho	od EPA 9	004 MC	DD					
Sample Name	Outfall 003		Matri	x Type:	WATER	7	alidation Le	vel: IV
<b>Lab Sample Name:</b>	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.08	1	0.37	pCi/L	U	R	Н
Analysis Metho	od EPA 9	905 MC	DD					
Sample Name	Outfall 003		Matri	х Туре:	WATER	7	alidation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.41	3	0.87	pCi/L	U	UJ	*III

Tuesday, April 06, 2010 Page 11 of 14

# Analysis Method EPA 906.0 MOD

Sample Name	Outfall 003		Matri	x Type: \	WATER	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010 10	0:28:00 AM	1		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	ND	500	94	pCi/L	Jb	U	В
Analysis Metho	od EPA-S	5 16131	3					
Sample Name	Outfall 003		Matri	x Type:	WATER	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010 10	0:28:00 AM	1		
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	В
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	1.7e-006	0.0000005	ug/L	J, Q, Ba	U	В
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.00005	0.0000009	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	6.6e-007	0.0000005	ug/L	J, Q	UJ	*III
1,2,3,4,7,8-HxCDF	70648-26-9	ND	9.8e-007	0.0000003	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDD	57653-85-7	ND	4.5e-007	0.0000004	ug/L	J, Q	UJ	*III
1,2,3,6,7,8-HxCDF	57117-44-9	9.9e-007	0.00005	0.0000003	ug/L	J	J	DNQ
1,2,3,7,8,9-HxCDD	19408-74-3	ND	3.7e-007	0.0000003	ug/L	J, Q	UJ	*III
1,2,3,7,8,9-HxCDF	72918-21-9	ND	5.1e-007	0.0000004	ug/L	J, Q	UJ	*III
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000005	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.00005	0.0000004	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	4.1e-007	0.00005	0.0000002	ug/L	J	J	DNQ
2,3,4,7,8-PeCDF	57117-31-4	ND	0.00005	0.0000004	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.0000099	0.0000005	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.0000099	0.0000023	ug/L		R	D
2,3,7,8-TCDF	51207-31-9	ND	9.9e-007	0.0000003	ug/L	J, Q	UJ	*III
OCDD	3268-87-9	ND	0.000099	0.0000009	ug/L	J, Ba	U	В
OCDF	39001-02-0	ND	0.000099	0.0000008	ug/L	J, Ba	U	В
Total HpCDD	37871-00-4	ND	0.00005	0.0000006	ug/L	J, Ba	U	В
Total HpCDF	38998-75-3	ND	1.7e-006	0.0000005	ug/L	J, Q, Ba	U	В
Total HxCDD	34465-46-8	ND	1.5e-006	0.0000003	ug/L	J, Q	UJ	*III
Total HxCDF	55684-94-1	2.9e-006	2.9e-006	0.0000002	ug/L	J, Q	J	DNQ, *III
Total PeCDD	36088-22-9	ND	0.00005	0.0000005	ug/L		U	
Total PeCDF	30402-15-4	ND	0.00005	0.0000001	ug/L		U	
Total TCDD	41903-57-5	ND	0.0000099	0.0000005	ug/L		U	
Total TCDF	55722-27-5	1.7e-006	1.7e-006	0.0000003	ug/L	J, Q	J	DNQ, *III

Tuesday, April 06, 2010 Page 12 of 14

# Analysis Method SM 2540D

Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	28	10	1.0	mg/l			
Analysis Metho	od SM 43	500-F-0	C					
Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Fluoride	16984-48-8	0.27	0.10	0.020	mg/l	В		
Analysis Metho	od SM23	40B						
Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
<b>Lab Sample Name:</b>	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3		87	0.33	0.17	mg/l			
Analysis Metho	od SM23	40B-D	iss					
Sample Name	Outfall 003		Matri	x Type:	Water	7	Validation Le	vel: IV
<b>Lab Sample Name:</b>	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Hardness as CaCO3		79	0.33	0.17	mg/l			
Analysis Metho	od SM25	40C						
Sample Name	Outfall 003		Matri	x Type:	Water	V	Validation Le	vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Dissolved Solids	NA	190	10	1.0	mg/l			

Tuesday, April 06, 2010 Page 13 of 14

# Analysis Method SM4500CN-E

Sample Name	Outfall 003		Matrix Type: Water Validation Level: IV					vel: IV
Lab Sample Name:	ITB0894-01	Sam	ple Date:	2/7/2010	10:28:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Cyanide	57-12-5	ND	0.0050	0.0022	mg/l		U	

Tuesday, April 06, 2010 Page 14 of 14



## **APPENDIX G**

# **Section 19**

Outfall 003 - February 6 & 7, 2010 Test America Analytical Laboratory Report







## LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003

Arcadia, CA 91007

Attention: Bronwyn Kelly Sampled: 02/06/10-02/07/10

Received: 02/06/10 Revised: 04/02/10 09:02

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

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

This entire report was reviewed and approved for release.

#### SAMPLE CROSS REFERENCE

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

ADDITIONAL

INFORMATION: Final revised report to include corrected units, .pdf data file for Radchem and added PP metals omitted from

original issue.

LABORATORY ID	CLIENT ID	MATRIX
ITB0890-01	Outfall 003	Water
ITB0890-02	Trip Blank	Water
ITB0894-01	Outfall 003	Water

Reviewed By:

TestAmerica Irvine

Kathleen A. Robb For Heather Clark Project Manager



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

## **PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0890-01 (Outfall 003 - Wat	er)				Sample	ed: 02/06/1	10		
Reporting Units: ug/l	<i>(1)</i>				Sample	cu. 02/00/1	IU		
Benzene	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/09/10	
Bromodichloromethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
Bromoform	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
Bromomethane	EPA 624	10B0840	0.42	1.0	ND	1	02/08/10	02/09/10	
Carbon tetrachloride	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/09/10	
Chlorobenzene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/09/10	
Chloroethane	EPA 624	10B0840	0.40	1.0	ND	1	02/08/10	02/09/10	
Chloroform	EPA 624	10B0840	0.33	0.50	ND	1	02/08/10	02/09/10	
Chloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
Dibromochloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
1,2-Dichlorobenzene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
1,3-Dichlorobenzene	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/09/10	
1,4-Dichlorobenzene	EPA 624	10B0840	0.37	0.50	ND	1	02/08/10	02/09/10	
1,1-Dichloroethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
1,2-Dichloroethane	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/09/10	
1,1-Dichloroethene	EPA 624	10B0840	0.42	0.50	ND	1	02/08/10	02/09/10	
cis-1,2-Dichloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
trans-1,2-Dichloroethene	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
1,2-Dichloropropane	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/09/10	
cis-1,3-Dichloropropene	EPA 624	10B0840	0.22	0.50	ND	1	02/08/10	02/09/10	
trans-1,3-Dichloropropene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
Ethylbenzene	EPA 624	10B0840	0.25	0.50	ND	1	02/08/10	02/09/10	
Methylene chloride	EPA 624	10B0840	0.95	1.0	ND	1	02/08/10	02/09/10	
1,1,2,2-Tetrachloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
Tetrachloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
Toluene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/09/10	
1,1,1-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
1,1,2-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
Trichloroethene	EPA 624	10B0840	0.26	0.50	ND	1	02/08/10	02/09/10	
Trichlorofluoromethane	EPA 624	10B0840	0.34	0.50	ND	1	02/08/10	02/09/10	
Trichlorotrifluoroethane (Freon 113)	EPA 624	10B0840	0.50	5.0	ND	1	02/08/10	02/09/10	
Vinyl chloride	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
Xylenes, Total	EPA 624	10B0840	0.90	1.5	ND	1	02/08/10	02/09/10	
Surrogate: 4-Bromofluorobenzene (80-120%)	)				92 %				
Surrogate: Dibromofluoromethane (80-120%)	<i>6)</i>				108 %				
Surrogate: Toluene-d8 (80-120%)					107 %				

## TestAmerica Irvine

Kathleen A. Robb For Heather Clark Project Manager



MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

## **PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution	Date Extracted	Date Analyzed	Data Qualifiers
•		Daten	Limit	Limit	Result	ractor	Extracted	Anaiyzeu	Quamicis
Sample ID: ITB0890-02 (Trip Blank - Water	er)				Sample	ed: 02/06/1	10		
Reporting Units: ug/l									
Benzene	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/09/10	
Bromodichloromethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
Bromoform	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
Bromomethane	EPA 624	10B0840	0.42	1.0	ND	1	02/08/10	02/09/10	
Carbon tetrachloride	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/09/10	
Chlorobenzene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/09/10	
Chloroethane	EPA 624	10B0840	0.40	1.0	ND	1	02/08/10	02/09/10	
Chloroform	EPA 624	10B0840	0.33	0.50	ND	1	02/08/10	02/09/10	
Chloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
Dibromochloromethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
1,2-Dichlorobenzene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
1,3-Dichlorobenzene	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/09/10	
1,4-Dichlorobenzene	EPA 624	10B0840	0.37	0.50	ND	1	02/08/10	02/09/10	
1,1-Dichloroethane	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
1,2-Dichloroethane	EPA 624	10B0840	0.28	0.50	ND	1	02/08/10	02/09/10	
1,1-Dichloroethene	EPA 624	10B0840	0.42	0.50	ND	1	02/08/10	02/09/10	
cis-1,2-Dichloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
trans-1,2-Dichloroethene	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
1,2-Dichloropropane	EPA 624	10B0840	0.35	0.50	ND	1	02/08/10	02/09/10	
cis-1,3-Dichloropropene	EPA 624	10B0840	0.22	0.50	ND	1	02/08/10	02/09/10	
trans-1,3-Dichloropropene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
Ethylbenzene	EPA 624	10B0840	0.25	0.50	ND	1	02/08/10	02/09/10	
Methylene chloride	EPA 624	10B0840	0.95	1.0	ND	1	02/08/10	02/09/10	
1,1,2,2-Tetrachloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
Tetrachloroethene	EPA 624	10B0840	0.32	0.50	ND	1	02/08/10	02/09/10	
Toluene	EPA 624	10B0840	0.36	0.50	ND	1	02/08/10	02/09/10	
1,1,1-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
1,1,2-Trichloroethane	EPA 624	10B0840	0.30	0.50	ND	1	02/08/10	02/09/10	
Trichloroethene	EPA 624	10B0840	0.26	0.50	ND	1	02/08/10	02/09/10	
Trichlorofluoromethane	EPA 624	10B0840	0.34	0.50	ND	1	02/08/10	02/09/10	
Trichlorotrifluoroethane (Freon 113)	EPA 624	10B0840	0.50	5.0	ND	1	02/08/10	02/09/10	
Vinyl chloride	EPA 624	10B0840	0.40	0.50	ND	1	02/08/10	02/09/10	
Xylenes, Total	EPA 624	10B0840	0.90	1.5	ND	1	02/08/10	02/09/10	
Surrogate: 4-Bromofluorobenzene (80-120%					91 %				
Surrogate: Dibromofluoromethane (80-120%					107 %				
Surrogate: Toluene-d8 (80-120%)	,				108 %				

# TestAmerica Irvine

Kathleen A. Robb For Heather Clark Project Manager

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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: ITB0890-01 (Outfall 003 - Wate	er)			Sampled: 02/06/10						
Reporting Units: ug/l										
Acrolein	EPA 624	10B0840	4.0	5.0	ND	1	02/08/10	02/09/10		
Acrylonitrile	EPA 624	10B0840	1.2	2.0	ND	1	02/08/10	02/09/10		
2-Chloroethyl vinyl ether	EPA 624	10B0840	1.8	5.0	ND	1	02/08/10	02/09/10		
Surrogate: 4-Bromofluorobenzene (80-120%)	)				92 %					
Surrogate: Dibromofluoromethane (80-120%	)				108 %					
Surrogate: Toluene-d8 (80-120%)					107 %					
Sample ID: ITB0890-02 (Trip Blank - Wate	er)				Sample	ed: 02/06/1	10			
Reporting Units: ug/l										
Acrolein	EPA 624	10B0840	4.0	5.0	ND	1	02/08/10	02/09/10		
Acrylonitrile	EPA 624	10B0840	1.2	2.0	ND	1	02/08/10	02/09/10		
2-Chloroethyl vinyl ether	EPA 624	10B0840	1.8	5.0	ND	1	02/08/10	02/09/10		
Surrogate: 4-Bromofluorobenzene (80-120%)	)				91 %					
Surrogate: Dibromofluoromethane (80-120%)	)				107 %					
Surrogate: Toluene-d8 (80-120%)					108 %					



MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

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

Analyta	Method	Dotah	MDL Limit	Reporting Limit	-	Dilution	Date Extracted	Date	Data Qualifiers
Analyte	Method	Batch	Limit	Limit	Result	ractor	Extracted	Analyzed	Quanners
Sample ID: ITB0894-01 (Outfall 003 - V	Vater)				Sample	ed: 02/07/1	10		
Reporting Units: ug/l									
Acenaphthene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Acenaphthylene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Aniline	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
Anthracene	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
Benzidine	EPA 625	10B1328	9.6	19	ND	0.962	02/11/10	02/14/10	
Benzo(a)anthracene	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
Benzo(a)pyrene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Benzo(b)fluoranthene	EPA 625	10B1328	1.9	9.6	ND	0.962	02/11/10	02/14/10	
Benzo(g,h,i)perylene	EPA 625	10B1328	3.8	9.6	ND	0.962	02/11/10	02/14/10	
Benzo(k)fluoranthene	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
Benzoic acid	EPA 625	10B1328	9.6	19	ND	0.962	02/11/10	02/14/10	
Benzyl alcohol	EPA 625	10B1328	3.4	19	ND	0.962	02/11/10	02/14/10	C
4-Bromophenyl phenyl ether	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Butyl benzyl phthalate	EPA 625	10B1328	3.8	19	ND	0.962	02/11/10	02/14/10	
4-Chloro-3-methylphenol	EPA 625	10B1328	2.4	19	ND	0.962	02/11/10	02/14/10	
4-Chloroaniline	EPA 625	10B1328	1.9	9.6	ND	0.962	02/11/10	02/14/10	
Bis(2-chloroethoxy)methane	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Bis(2-chloroethyl)ether	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Bis(2-chloroisopropyl)ether	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
Bis(2-ethylhexyl)phthalate	EPA 625	10B1328	3.8	48	ND	0.962	02/11/10	02/14/10	
2-Chloronaphthalene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
2-Chlorophenol	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
4-Chlorophenyl phenyl ether	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
Chrysene	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
Dibenz(a,h)anthracene	EPA 625	10B1328	2.9	19	ND	0.962	02/11/10	02/14/10	
Dibenzofuran	EPA 625	10B1328	3.8	9.6	ND	0.962	02/11/10	02/14/10	
Di-n-butyl phthalate	EPA 625	10B1328	2.9	19	ND	0.962	02/11/10	02/14/10	
1,2-Dichlorobenzene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
1,3-Dichlorobenzene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
1,4-Dichlorobenzene	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
3,3'-Dichlorobenzidine	EPA 625	10B1328	7.2	19	ND	0.962	02/11/10	02/14/10	
2,4-Dichlorophenol	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
Diethyl phthalate	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
2,4-Dimethylphenol	EPA 625	10B1328	3.4	19	ND	0.962	02/11/10	02/14/10	
Dimethyl phthalate	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
4,6-Dinitro-2-methylphenol	EPA 625	10B1328	3.8	19	ND	0.962	02/11/10	02/14/10	
2,4-Dinitrophenol	EPA 625	10B1328	7.7	19	ND	0.962	02/11/10	02/14/10	
2,4-Dinitrophenor	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
2,4-Dinitrotoluene	EPA 625	10B1328	1.9	9.6 9.6	ND ND	0.962	02/11/10	02/14/10	
Di-n-octyl phthalate	EPA 625	10B1328	3.4	19	ND ND	0.962	02/11/10	02/14/10	
1,2-Diphenylhydrazine/Azobenzene			2.4	19	ND ND	0.962	02/11/10	02/14/10	
1,2-Diphenymydrazine/Azobenzene	EPA 625	10B1328	∠.4	19	ND	0.902	02/11/10	02/14/10	

#### **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager



MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

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

Analysta	Method	Datah	MDL Limit	Reporting Limit	Sample Result	Dilution	Date Extracted	Date Analyzed	Data Qualifiers
Analyte	Method	Batch	Limit	LIIIII	Result	ractor	Extracted	Anaiyzeu	Qualifiers
Sample ID: ITB0894-01 (Outfall 003 - Water	er) - cont.				Sample	ed: 02/07/1	10		
Reporting Units: ug/l									
Fluoranthene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Fluorene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Hexachlorobenzene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Hexachlorobutadiene	EPA 625	10B1328	3.8	9.6	ND	0.962	02/11/10	02/14/10	
Hexachlorocyclopentadiene	EPA 625	10B1328	4.8	19	ND	0.962	02/11/10	02/14/10	C, L
Hexachloroethane	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
Indeno(1,2,3-cd)pyrene	EPA 625	10B1328	3.4	19	ND	0.962	02/11/10	02/14/10	
Isophorone	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
2-Methylnaphthalene	EPA 625	10B1328	1.9	9.6	ND	0.962	02/11/10	02/14/10	
2-Methylphenol	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
4-Methylphenol	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
Naphthalene	EPA 625	10B1328	2.9	9.6	ND	0.962	02/11/10	02/14/10	
2-Nitroaniline	EPA 625	10B1328	1.9	19	ND	0.962	02/11/10	02/14/10	
3-Nitroaniline	EPA 625	10B1328	2.9	19	ND	0.962	02/11/10	02/14/10	
4-Nitroaniline	EPA 625	10B1328	3.8	19	ND	0.962	02/11/10	02/14/10	
Nitrobenzene	EPA 625	10B1328	2.9	19	ND	0.962	02/11/10	02/14/10	
2-Nitrophenol	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
4-Nitrophenol	EPA 625	10B1328	5.3	19	ND	0.962	02/11/10	02/14/10	
N-Nitroso-di-n-propylamine	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
N-Nitrosodimethylamine	EPA 625	10B1328	2.4	19	ND	0.962	02/11/10	02/14/10	
N-Nitrosodiphenylamine	EPA 625	10B1328	1.9	9.6	ND	0.962	02/11/10	02/14/10	
Pentachlorophenol	EPA 625	10B1328	3.4	19	ND	0.962	02/11/10	02/14/10	
Phenanthrene	EPA 625	10B1328	3.4	9.6	ND	0.962	02/11/10	02/14/10	
Phenol	EPA 625	10B1328	1.9	9.6	ND	0.962	02/11/10	02/14/10	
Pyrene	EPA 625	10B1328	3.8	9.6	ND	0.962	02/11/10	02/14/10	
1,2,4-Trichlorobenzene	EPA 625	10B1328	2.4	9.6	ND	0.962	02/11/10	02/14/10	
2,4,5-Trichlorophenol	EPA 625	10B1328	2.9	19	ND	0.962	02/11/10	02/14/10	
2,4,6-Trichlorophenol	EPA 625	10B1328	4.3	19	ND	0.962	02/11/10	02/14/10	
Surrogate: 2,4,6-Tribromophenol (40-120%)					83 %				
Surrogate: 2-Fluorobiphenyl (50-120%)					74 %				
Surrogate: 2-Fluorophenol (30-120%)					57%				
Surrogate: Nitrobenzene-d5 (45-120%)					71 %				
Surrogate: Phenol-d6 (35-120%)					67 %				
Surrogate: Terphenyl-d14 (50-125%)					89 %				

#### **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

Arcadia, CA 91007

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

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITB0894-01 (Outfall 003	3 - Water)	Sampled: 02/07/10							
Reporting Units: ug/l									
Chlorpyrifos	EPA 525.2	10B0852	N/A	1.0	ND	1	02/08/10	02/12/10	
Diazinon	EPA 525.2	10B0852	N/A	0.25	ND	1	02/08/10	02/12/10	
Surrogate: 1,3-Dimethyl-2-nitrobenze	ene (70-130%)				92 %				
Surrogate: 1,3-Dimethyl-2-nitrobenze	ene (70-130%)				92 %				
Surrogate: Triphenylphosphate (70-1	30%)				104 %				
Surrogate: Triphenylphosphate (70-1	30%)				104 %				
Surrogate: Perylene-d12 (70-130%)					94 %				
Surrogate: Perylene-d12 (70-130%)					94 %				



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Report Nu Attention: Bronwyn Kelly

## **ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003 - Water	er)				Sample	ed: 02/07/1	10		
Reporting Units: ug/l					_				
4,4'-DDD	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	
4,4'-DDE	EPA 608	10B1291	0.0028	0.0047	ND	0.943	02/11/10	02/13/10	
4,4'-DDT	EPA 608	10B1291	0.0038	0.0094	ND	0.943	02/11/10	02/13/10	
Aldrin	EPA 608	10B1291	0.0014	0.0047	ND	0.943	02/11/10	02/13/10	
alpha-BHC	EPA 608	10B1291	0.0024	0.0047	ND	0.943	02/11/10	02/13/10	
beta-BHC	EPA 608	10B1291	0.0038	0.0094	ND	0.943	02/11/10	02/13/10	
delta-BHC	EPA 608	10B1291	0.0033	0.0047	ND	0.943	02/11/10	02/13/10	
Dieldrin	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	
Endosulfan I	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	
Endosulfan II	EPA 608	10B1291	0.0028	0.0047	ND	0.943	02/11/10	02/13/10	
Endosulfan sulfate	EPA 608	10B1291	0.0028	0.0094	ND	0.943	02/11/10	02/13/10	
Endrin	EPA 608	10B1291	0.0019	0.0047	ND	0.943	02/11/10	02/13/10	C
Endrin aldehyde	EPA 608	10B1291	0.0019	0.0094	ND	0.943	02/11/10	02/13/10	
Endrin ketone	EPA 608	10B1291	0.0028	0.0094	ND	0.943	02/11/10	02/13/10	
gamma-BHC (Lindane)	EPA 608	10B1291	0.0028	0.019	ND	0.943	02/11/10	02/13/10	
Heptachlor	EPA 608	10B1291	0.0028	0.0094	ND	0.943	02/11/10	02/13/10	C
Heptachlor epoxide	EPA 608	10B1291	0.0024	0.0047	ND	0.943	02/11/10	02/13/10	
Methoxychlor	EPA 608	10B1291	0.0033	0.0047	ND	0.943	02/11/10	02/13/10	
Chlordane	EPA 608	10B1291	0.038	0.094	ND	0.943	02/11/10	02/13/10	
Toxaphene	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/13/10	
Surrogate: Decachlorobiphenyl (45-120%)					60 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					40 %				



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

Arcadia, CA 91007

## **TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003 - Wat	er) - cont.				Sample	ed: 02/07/1	10		
Reporting Units: ug/l									
Aroclor 1016	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1221	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1232	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1242	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1248	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1254	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Aroclor 1260	EPA 608	10B1291	0.24	0.47	ND	0.943	02/11/10	02/12/10	
Surrogate: Decachlorobiphenyl (45-120%)					65 %				



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

#### HEXANE EXTRACTABLE MATERIAL

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITB0890-01 (Outfall 003 - Water)					Sample	d: 02/06/1	0		
Reporting Units: mg/l									
Hexane Extractable Material (Oil &	EPA 1664A	10B1991	1.3	4.8	ND	1	02/17/10	02/17/10	
Grease)									



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

Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

MWH-Pasadena/Boeing

## **METALS**

		1	VIII I / N.	LIS					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003	- Water)				Sample	ed: 02/07/1	10		
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	87	1	02/16/10	02/17/10	
Aluminum	EPA 200.7	10B1911	0.040	0.050	0.63	1	02/16/10	02/17/10	
Boron	EPA 200.7	10B1911	0.020	0.050	0.092	1	02/16/10	02/17/10	В
Calcium	EPA 200.7	10B1911	0.050	0.10	25	1	02/16/10	02/17/10	
Iron	EPA 200.7	10B1911	0.015	0.040	0.41	1	02/16/10	02/17/10	
Magnesium	EPA 200.7	10B1911	0.012	0.020	6.0	1	02/16/10	02/17/10	
Sample ID: ITB0894-01 (Outfall 003	- Water)				Sample	ed: 02/07/1	10		
Reporting Units: ug/l									
Mercury	EPA 245.1	10B1942	0.10	0.20	ND	1	02/16/10	02/16/10	
Arsenic	EPA 200.7	10B1911	7.0	10	ND	1	02/16/10	02/17/10	
Antimony	EPA 200.8	10B1598	0.30	2.0	ND	1	02/12/10	02/15/10	
Beryllium	EPA 200.7	10B1911	0.90	2.0	ND	1	02/16/10	02/17/10	
Chromium	EPA 200.7	10B1911	2.0	5.0	ND	1	02/16/10	02/17/10	
Nickel	EPA 200.7	10B1911	2.0	10	ND	1	02/16/10	02/17/10	
Selenium	EPA 200.7	10B1911	8.0	10	ND	1	02/16/10	02/17/10	
Silver	EPA 200.7	10B1911	6.0	10	ND	1	02/16/10	02/17/10	
Cadmium	EPA 200.8	10B1598	0.10	1.0	ND	1	02/12/10	02/15/10	
Vanadium	EPA 200.7	10B1911	3.0	10	3.2	1	02/16/10	02/17/10	Ja
Zinc	EPA 200.7	10B1911	6.0	20	20	1	02/16/10	02/17/10	
Copper	EPA 200.8	10B1598	0.50	2.0	2.6	1	02/12/10	02/15/10	
Lead	EPA 200.8	10B1598	0.20	1.0	0.86	1	02/12/10	02/15/10	Ja
Thallium	EPA 200.8	10B1598	0.20	1.0	ND	1	02/12/10	02/15/10	C

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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

#### **DISSOLVED METALS**

		DISSOI							
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003	3 - Water)				Sample	ed: 02/07/1	10		
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B-Diss	[CALC]	N/A	0.33	79	1	02/15/10	02/16/10	
Aluminum	EPA 200.7-Diss	10B1846	0.040	0.050	ND	1	02/15/10	02/16/10	
Boron	EPA 200.7-Diss	10B1846	0.020	0.050	0.10	1	02/15/10	02/16/10	В
Calcium	EPA 200.7-Diss	10B1846	0.050	0.10	23	1	02/15/10	02/16/10	
Iron	EPA 200.7-Diss	10B1846	0.015	0.040	0.089	1	02/15/10	02/16/10	В
Magnesium	EPA 200.7-Diss	10B1846	0.012	0.020	5.5	1	02/15/10	02/16/10	
Sample ID: ITB0894-01 (Outfall 003	3 - Water)				Sample	ed: 02/07/1	10		
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10B1953	0.10	0.20	ND	1	02/16/10	02/16/10	
Arsenic	EPA 200.7-Diss	10B1846	7.0	10	ND	1	02/15/10	02/16/10	
Antimony	EPA 200.8-Diss	10B1845	0.30	2.0	0.39	1	02/15/10	02/17/10	Ja
Beryllium	EPA 200.7-Diss	10B1846	0.90	2.0	ND	1	02/15/10	02/16/10	
Chromium	EPA 200.7-Diss	10B1846	2.0	5.0	ND	1	02/15/10	02/16/10	
Nickel	EPA 200.7-Diss	10B1846	2.0	10	ND	1	02/15/10	02/16/10	
Selenium	EPA 200.7-Diss	10B1846	8.0	10	ND	1	02/15/10	02/16/10	
Silver	EPA 200.7-Diss	10B1846	6.0	10	ND	1	02/15/10	02/16/10	
Cadmium	EPA 200.8-Diss	10B1845	0.10	1.0	ND	1	02/15/10	02/17/10	
Vanadium	EPA 200.7-Diss	10B1846	3.0	10	ND	1	02/15/10	02/16/10	
Zinc	EPA 200.7-Diss	10B1846	6.0	20	19	1	02/15/10	02/16/10	Ja
Copper	EPA 200.8-Diss	10B2106	0.50	2.0	2.1	1	02/17/10	02/17/10	
Lead	EPA 200.8-Diss	10B1845	0.20	1.0	ND	1	02/15/10	02/17/10	
Thallium	EPA 200.8-Diss	10B1845	0.20	1.0	ND	1	02/15/10	02/17/10	



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

## **DISSOLVED INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0890-01 (Outfall 003				Sample	d: 02/06/1	10			
Reporting Units: ug/l									
Chromium VI	EPA 218.6	10B0756	0.25	1.0	0.66	1	02/06/10	02/06/10	Ja



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

## **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003	- Water)				Sample	ed: 02/07/1	10		
Reporting Units: mg/l					_				
Chloride	EPA 300.0	10B0856	0.25	0.50	5.6	1	02/08/10	02/08/10	
Fluoride	SM 4500-F-C	10B0814	0.020	0.10	0.27	1	02/08/10	02/08/10	В
Nitrate/Nitrite-N	EPA 300.0	10B0856	0.15	0.26	0.82	1	02/08/10	02/08/10	
Sulfate	EPA 300.0	10B0856	0.20	0.50	13	1	02/08/10	02/08/10	
<b>Total Dissolved Solids</b>	SM2540C	10B1487	1.0	10	190	1	02/12/10	02/12/10	
<b>Total Suspended Solids</b>	SM 2540D	10B1648	1.0	10	28	1	02/12/10	02/12/10	
Sample ID: ITB0894-01 (Outfall 003	- Water)				Sample	ed: 02/07/1	10		
Reporting Units: ug/l									
Perchlorate	EPA 314.0	10B1658	0.90	4.0	ND	1	02/13/10	02/13/10	
Total Cyanide	SM4500CN-E	10B1250	2.2	5.0	ND	1	02/10/10	02/10/10	



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

#### **ASTM 5174-91**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003 - Water)					Sample	d: 02/07/1	10		
Reporting Units: pCi/L Total Uranium	ASTM 5174-91	53280	0.21	0.69	1.09	1	02/23/10	02/26/10	



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

## **EPA 900.0 MOD**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003 - Water)					Sample	ed: 02/07/1	10		
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	43108	1.4	3	3.7	1	02/10/10	02/18/10	
Gross Beta	EPA 900.0 MOD	43108	0.99	4	4.03	1	02/10/10	02/18/10	



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

## **EPA 901.1 MOD**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003 - Water)					Sample	d: 02/07/1	10		
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	42136	17	20	-1.5	1	02/11/10	02/19/10	U
Potassium 40	EPA 901.1 MOD	42136	200	NA	-100	1	02/11/10	02/19/10	U



618 Michillinda Avenue, Suite 200

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

Project ID: Annual Outfall 003 MWH-Pasadena/Boeing

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

## **EPA 903.0 MOD**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003			Sample	d: 02/07/1	10				
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	41160	0.27	1	0.16	1	02/10/10	02/26/10	U



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

## **EPA 904 MOD**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01RE1 (Outfall 003 - Water)					Sample	d: 02/07/1	10		
Reporting Units: pCi/L									
Radium 228	EPA 904 MOD	60257	0.37	1	0.08	1	03/01/10	03/05/10	U



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

## **EPA 905 MOD**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers			
Sample ID: ITB0894-01 (Outfall 003	- Water)		Sampled: 02/07/10									
Reporting Units: pCi/L												
Strontium 90	EPA 905 MOD	41162	0.87	3	0.41	1	02/10/10	02/19/10	U			



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

## **EPA 906.0 MOD**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01 (Outfall 003 -	Water)				Sample	d: 02/07/1	10		
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	49035	94	500	173	1	02/18/10	02/18/10	Jb



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Project ID: Annual Outfall 003

Annual Outfall 003

Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

## **EPA-5 1613B**

Analyte	Method	Batch	MDL Repor Limit Lim		Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
		Duten	Ziiii Ziii				1 mary 2cu	<b>C</b>
Sample ID: ITB0894-01 (Outfall 003	- water)			Sampl	ed: 02/07/	10		
Reporting Units: ug/L 1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	48124	0.00000061 0.000	005 <b>5e-006</b>	0.99	02/17/10	02/19/10	J, Ba
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B		0.00000001 0.000			02/17/10	02/19/10	J, Ба J, Q, Ba
2,3,7,8-TCDF	EPA-5 1613B		0.00000032 0.000			02/17/10	02/19/10	J, Q, Ба J, Q
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B		0.000000380.0000		0.99	02/17/10	02/19/10	J, Q
-	EPA-5 1613B		0.00000053 0.000			02/17/10	02/19/10	1.0
1,2,3,4,7,8-HxCDD	EPA-5 1613B		0.00000031 0.000			02/17/10	02/19/10	J, Q J, Q
1,2,3,4,7,8-HxCDF	EPA-5 1613B		0.00000033 0.000			02/17/10	02/19/10	J, Q J, Q
1,2,3,6,7,8-HxCDD	EPA-5 1613B	48124				02/17/10	02/19/10	J, Q J
1,2,3,6,7,8-HxCDF	EPA-5 1613B		0.0000003 0.000			02/17/10	02/19/10	
1,2,3,7,8,9-HxCDD		48124						J, Q
1,2,3,7,8,9-HxCDF	EPA-5 1613B		0.0000004 0.000			02/17/10 02/17/10	02/19/10	J, Q
1,2,3,7,8-PeCDD	EPA-5 1613B				0.99	02/17/10	02/19/10	
1,2,3,7,8-PeCDF	EPA-5 1613B		0.00000043 0.000		0.99		02/19/10	T
2,3,4,6,7,8-HxCDF	EPA-5 1613B		0.00000029 0.000			02/17/10	02/19/10	J
2,3,4,7,8-PeCDF	EPA-5 1613B		0.00000049 0.000		0.99	02/17/10	02/19/10	
2,3,7,8-TCDD	EPA-5 1613B		0.000000530.0000		0.99	02/17/10	02/19/10	I D.
OCDD	EPA-5 1613B		0.00000093 0.000			02/17/10	02/19/10	J, Ba
OCDF	EPA-5 1613B		0.00000084 0.000			02/17/10	02/19/10	J, Ba
Total HpCDD	EPA-5 1613B		0.00000061 0.000			02/17/10	02/19/10	J, Ba
Total HpCDF	EPA-5 1613B		0.00000052 0.000			02/17/10	02/19/10	J, Q, Ba
Total HxCDD	EPA-5 1613B		0.00000039 0.000			02/17/10	02/19/10	J, Q
Total HxCDF	EPA-5 1613B		0.00000029 0.000			02/17/10	02/19/10	J, Q
Total PeCDD	EPA-5 1613B		0.00000052 0.000		0.99	02/17/10	02/19/10	
Total PeCDF	EPA-5 1613B		0.00000011 0.000		0.99	02/17/10	02/19/10	
Total TCDD	EPA-5 1613B		0.000000530.0000		0.99	02/17/10	02/19/10	1.0
Total TCDF	EPA-5 1613B	48124	0.000000380.0000		0.99	02/17/10	02/19/10	J, Q
Surrogate: 13C-2,3,7,8-TCDF (24-169				68 %				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-1				93 %				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	'			94 %				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF				86 %				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF				81 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (3				88 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (2				86 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (2				89 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (2	*			89 %				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (2				84 %				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-				87 %				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-				82 %				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (2				96 %				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-				81 %				
Surrogate: 13C-2,3,7,8-TCDD (25-16-	470)			76 %				
Surrogate: 13C-OCDD (17-157%)				94 %				
Tost A morios Irvino								

## **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

## EPA-5 1613B

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB0894-01RE1 (Outfall 003	- Water) - cont.				Sample	d: 02/07/1	10		
Reporting Units: ug/L									
2,3,7,8-TCDF	EPA-5 1613B	48124	0.000002	3 0.0000099	ND	0.99	02/17/10	02/19/10	
Surrogate: 13C-2,3,7,8-TCDF (24-169%)					88 %				
Surrogate: 37Cl4-2.3.7.8-TCDD (35-197%)	5)				97%				



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

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

MWH-Pasadena/Boeing

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 003 (ITB0890-01) - Water	•				
EPA 218.6	1	02/06/2010 11:50	02/06/2010 12:00	02/06/2010 18:15	02/06/2010 19:29
EPA 624	3	02/06/2010 11:50	02/06/2010 12:00	02/08/2010 00:00	02/09/2010 02:20
Sample ID: Trip Blank (ITB0890-02) - Water	•				
EPA 624	3	02/06/2010 11:50	02/06/2010 12:00	02/08/2010 00:00	02/09/2010 02:49
Sample ID: Outfall 003 (ITB0894-01) - Water	•				
EPA 300.0	2	02/07/2010 10:28	02/07/2010 15:40	02/08/2010 14:00	02/08/2010 14:13
EPA 525.2	1	02/07/2010 10:28	02/07/2010 15:40	02/08/2010 09:00	02/12/2010 03:51
Filtration	1	02/07/2010 10:28	02/07/2010 15:40	02/07/2010 19:33	02/07/2010 19:35



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

## METHOD BLANK/QC DATA

## **PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/	10										
Blank Analyzed: 02/08/2010 (10B0840	-RLK1)										
Bromodichloromethane	ND	0.50	0.30	ug/l							
Bromoform	ND	0.50	0.40	ug/l							
Bromomethane	ND	1.0	0.42	ug/l							
Chlorobenzene	ND	0.50	0.36	ug/l							
Chloroethane	ND	1.0	0.40	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							
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							
Methylene chloride	ND	1.0	0.95	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l							
Surrogate: 4-Bromofluorobenzene	23.4			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
LCS Analyzed: 02/08/2010 (10B0840-I	BS1)										
Bromodichloromethane	24.0	0.50	0.30	ug/l	25.0		96	70-135			
Bromoform	20.1	0.50	0.40	ug/l	25.0		81	55-130			
Bromomethane	28.6	1.0	0.42	ug/l	25.0		115	65-140			
Chlorobenzene	24.7	0.50	0.36	ug/l	25.0		99	75-120			
Chloroethane	26.6	1.0	0.40	ug/l	25.0		107	60-140			
Chloromethane	28.4	0.50	0.40	ug/l	25.0		114	50-140			
Dibromochloromethane	22.3	0.50	0.40	ug/l	25.0		89	70-140			
1,2-Dichlorobenzene	24.5	0.50	0.32	ug/l	25.0		98	75-120			
1,3-Dichlorobenzene	25.1	0.50	0.35	ug/l	25.0		100	75-120			
1,4-Dichlorobenzene	24.6	0.50	0.37	ug/l	25.0		99	75-120			
cis-1,2-Dichloroethene	26.5	0.50	0.32	ug/l	25.0		106	70-125			
trans-1,2-Dichloroethene	25.9	0.50	0.30	ug/l	25.0		104	70-125			
1,2-Dichloropropane	21.7	0.50	0.35	ug/l	25.0		87	70-125			
cis-1,3-Dichloropropene	25.8	0.50	0.22	ug/l	25.0		103	75-125			
TT 4A . T .											

#### **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

## METHOD BLANK/QC DATA

## **PURGEABLES BY GC/MS (EPA 624)**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0840 Extracted: 02/08/10	)										
	_										
LCS Analyzed: 02/08/2010 (10B0840-BS	1)										
trans-1,3-Dichloropropene	19.9	0.50	0.32	ug/l	25.0		80	70-125			
Methylene chloride	24.0	1.0	0.95	ug/l	25.0		96	55-130			
1,1,2,2-Tetrachloroethane	25.5	0.50	0.30	ug/l	25.0		102	55-130			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		105	80-120			
Matrix Spike Analyzed: 02/08/2010 (10B	80840-MS1)				Sou	rce: ITB(	0892-01				
Bromodichloromethane	27.4	0.50	0.30	ug/l	25.0	ND	109	70-135			
Bromoform	22.2	0.50	0.40	ug/l	25.0	ND	89	55-135			
Bromomethane	30.0	1.0	0.42	ug/l	25.0	ND	120	55-145			
Chlorobenzene	26.9	0.50	0.36	ug/l	25.0	ND	108	75-125			
Chloroethane	28.3	1.0	0.40	ug/l	25.0	ND	113	55-140			
Chloromethane	29.6	0.50	0.40	ug/l	25.0	ND	118	45-145			
Dibromochloromethane	25.1	0.50	0.40	ug/l	25.0	ND	100	65-140			
1,2-Dichlorobenzene	26.3	0.50	0.32	ug/l	25.0	ND	105	75-125			
1,3-Dichlorobenzene	27.5	0.50	0.35	ug/l	25.0	ND	110	75-125			
1,4-Dichlorobenzene	27.0	0.50	0.37	ug/l	25.0	ND	108	75-125			
cis-1,2-Dichloroethene	29.2	0.50	0.32	ug/l	25.0	ND	117	65-130			
trans-1,2-Dichloroethene	27.6	0.50	0.30	ug/l	25.0	ND	111	65-130			
1,2-Dichloropropane	24.3	0.50	0.35	ug/l	25.0	ND	97	65-130			
cis-1,3-Dichloropropene	29.5	0.50	0.22	ug/l	25.0	ND	118	70-130			
trans-1,3-Dichloropropene	22.6	0.50	0.32	ug/l	25.0	ND	90	65-135			
Methylene chloride	26.0	1.0	0.95	ug/l	25.0	ND	104	50-135			
1,1,2,2-Tetrachloroethane	26.1	0.50	0.30	ug/l	25.0	ND	104	55-135			
Surrogate: 4-Bromofluorobenzene	26.5			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.7			ug/l	25.0		107	80-120			

#### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

## METHOD BLANK/QC DATA

## **PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0840 Extracted: 02/08/1	<u>0</u>										
Matrix Spike Dup Analyzed: 02/08/2010			Sou	rce: ITB(	0892-01						
Bromodichloromethane	25.6	0.50	0.30	ug/l	25.0	ND	102	70-135	7	20	
Bromoform	21.2	0.50	0.40	ug/l	25.0	ND	85	55-135	5	25	
Bromomethane	29.2	1.0	0.42	ug/l	25.0	ND	117	55-145	3	25	
Chlorobenzene	26.0	0.50	0.36	ug/l	25.0	ND	104	75-125	3	20	
Chloroethane	26.8	1.0	0.40	ug/l	25.0	ND	107	55-140	5	25	
Chloromethane	28.7	0.50	0.40	ug/l	25.0	ND	115	45-145	3	25	
Dibromochloromethane	23.7	0.50	0.40	ug/l	25.0	ND	95	65-140	6	25	
1,2-Dichlorobenzene	25.2	0.50	0.32	ug/l	25.0	ND	101	75-125	4	20	
1,3-Dichlorobenzene	26.2	0.50	0.35	ug/l	25.0	ND	105	75-125	5	20	
1,4-Dichlorobenzene	25.9	0.50	0.37	ug/l	25.0	ND	103	75-125	4	20	
cis-1,2-Dichloroethene	27.3	0.50	0.32	ug/l	25.0	ND	109	65-130	7	20	
trans-1,2-Dichloroethene	26.2	0.50	0.30	ug/l	25.0	ND	105	65-130	6	20	
1,2-Dichloropropane	23.2	0.50	0.35	ug/l	25.0	ND	93	65-130	5	20	
cis-1,3-Dichloropropene	28.0	0.50	0.22	ug/l	25.0	ND	112	70-130	5	20	
trans-1,3-Dichloropropene	20.9	0.50	0.32	ug/l	25.0	ND	84	65-135	8	25	
Methylene chloride	25.0	1.0	0.95	ug/l	25.0	ND	100	50-135	4	20	
1,1,2,2-Tetrachloroethane	24.5	0.50	0.30	ug/l	25.0	ND	98	55-135	6	30	
Surrogate: 4-Bromofluorobenzene	25.8			ug/l	25.0		103	80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

## METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0840 Extracted: 02/08/10	<u>.</u>										
Blank Analyzed: 02/08/2010 (10B0840-B	,										
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	23.4			ug/l	25.0		94	80-120			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
LCS Analyzed: 02/08/2010 (10B0840-BS	1)										
2-Chloroethyl vinyl ether	13.8	5.0	1.8	ug/l	25.0		55	25-170			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		105	80-120			
Matrix Spike Analyzed: 02/08/2010 (10B	0840-MS1)				Sou	rce: ITB	0892-01				
2-Chloroethyl vinyl ether	13.8	5.0	1.8	ug/l	25.0	ND	55	25-170			
Surrogate: 4-Bromofluorobenzene	26.5			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.7			ug/l	25.0		107	80-120			
Matrix Spike Dup Analyzed: 02/08/2010	(10B0840-M	ISD1)			Sou	rce: ITB	0892-01				
2-Chloroethyl vinyl ether	12.8	5.0	1.8	ug/l	25.0	ND	51	25-170	7	25	
Surrogate: 4-Bromofluorobenzene	25.8			ug/l	25.0		103	80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			

#### **TestAmerica Irvine**

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

Project ID: Annual Outfall 003 MWH-Pasadena/Boeing

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

# 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: 10B1328 Extracted: 02/11/10	<u>)                                    </u>										
Blank Analyzed: 02/13/2010 (10B1328-B	I K1)										
Acenaphthene	ND	10	3.0	ug/l							
Acenaphthylene	ND	10	3.0	ug/l							
Aniline	ND	10	3.5	ug/l							
Anthracene	ND	10	2.5	ug/l							
Benzidine	ND	20	10	ug/l							
Benzo(a)anthracene	ND	10	2.5	ug/l							
Benzo(a)pyrene	ND	10	3.0	ug/l							
Benzo(b)fluoranthene	ND	10	2.0	ug/l							
Benzo(g,h,i)perylene	ND	10	4.0	ug/l							
Benzo(k)fluoranthene	ND	10	2.5	ug/l							
Benzoic acid	ND	20	10	ug/l							
Benzyl alcohol	ND	20	3.5	ug/l							
4-Bromophenyl phenyl ether	ND	10	3.0	ug/l							
Butyl benzyl phthalate	ND	20	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	2.5	ug/l							
4-Chloroaniline	ND	10	2.0	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.0	ug/l							
Bis(2-chloroethyl)ether	ND	10	3.0	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	2.5	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	4.0	ug/l							
2-Chloronaphthalene	ND	10	3.0	ug/l							
2-Chlorophenol	ND	10	3.0	ug/l							
4-Chlorophenyl phenyl ether	ND	10	2.5	ug/l							
Chrysene	ND	10	2.5	ug/l							
Dibenz(a,h)anthracene	ND	20	3.0	ug/l							
Dibenzofuran	ND	10	4.0	ug/l							
Di-n-butyl phthalate	ND	20	3.0	ug/l							
1,2-Dichlorobenzene	ND	10	3.0	ug/l							
1,3-Dichlorobenzene	ND	10	3.0	ug/l							
1,4-Dichlorobenzene	ND	10	2.5	ug/l							
3,3'-Dichlorobenzidine	ND	20	7.5	ug/l							
2,4-Dichlorophenol	ND	10	3.5	ug/l							
Diethyl phthalate	ND	10	3.5	ug/l							
2,4-Dimethylphenol	ND	20	3.5	ug/l							
Dimethyl phthalate	ND	10	2.5	ug/l							

### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				<b>C</b>
Batch: 10B1328 Extracted: 02/11/10	<u>)                                    </u>										
Blank Analyzed: 02/13/2010 (10B1328-E	BLK1)										
4,6-Dinitro-2-methylphenol	ND	20	4.0	ug/l							
2,4-Dinitrophenol	ND	20	8.0	ug/l							
2,4-Dinitrotoluene	ND	10	3.5	ug/l							
2,6-Dinitrotoluene	ND	10	2.0	ug/l							
Di-n-octyl phthalate	ND	20	3.5	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	2.5	ug/l							
Fluoranthene	ND	10	3.0	ug/l							
Fluorene	ND	10	3.0	ug/l							
Hexachlorobenzene	ND	10	3.0	ug/l							
Hexachlorobutadiene	ND	10	4.0	ug/l							
Hexachlorocyclopentadiene	ND	20	5.0	ug/l							
Hexachloroethane	ND	10	3.5	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	3.5	ug/l							
Isophorone	ND	10	3.0	ug/l							
2-Methylnaphthalene	ND	10	2.0	ug/l							
2-Methylphenol	ND	10	3.0	ug/l							
4-Methylphenol	ND	10	3.0	ug/l							
Naphthalene	ND	10	3.0	ug/l							
2-Nitroaniline	ND	20	2.0	ug/l							
3-Nitroaniline	ND	20	3.0	ug/l							
4-Nitroaniline	ND	20	4.0	ug/l							
Nitrobenzene	ND	20	3.0	ug/l							
2-Nitrophenol	ND	10	3.5	ug/l							
4-Nitrophenol	ND	20	5.5	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.5	ug/l							
N-Nitrosodimethylamine	ND	20	2.5	ug/l							
N-Nitrosodiphenylamine	ND	10	2.0	ug/l							
Pentachlorophenol	ND	20	3.5	ug/l							
Phenanthrene	ND	10	3.5	ug/l							
Phenol	ND	10	2.0	ug/l							
Pyrene	ND	10	4.0	ug/l							
1,2,4-Trichlorobenzene	ND	10	2.5	ug/l							
2,4,5-Trichlorophenol	ND	20	3.0	ug/l							
2,4,6-Trichlorophenol	ND	20	4.5	ug/l							
Surrogate: 2,4,6-Tribromophenol	149			ug/l	200		74	40-120			

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Limit	MIDL	Units	Level	Result	70KEC	Lillits	KID	Lillit	Quanners
<b>Batch: 10B1328 Extracted: 02/11/1</b>	<u>0</u>										
DI I A I I 02/12/2010 (10D1220 )	DI 171\										
Blank Analyzed: 02/13/2010 (10B1328-1	· · · · · · · · · · · · · · · · · · ·			a	100		7.4	50 120			
Surrogate: 2-Fluorobiphenyl	74.1			ug/l	100		74	50-120			
Surrogate: 2-Fluorophenol	119			ug/l	200		60 70	30-120			
Surrogate: Nitrobenzene-d5	69.8			ug/l	100		70	45-120			
Surrogate: Phenol-d6	127			ug/l	200		64	35-120			
Surrogate: Terphenyl-d14	79.8			ug/l	100		80	50-125			
LCS Analyzed: 02/13/2010 (10B1328-B	S1)										MNR1
Acenaphthene	78.5	10	3.0	ug/l	100		78	60-120			
Acenaphthylene	79.4	10	3.0	ug/l	100		79	60-120			
Aniline	77.9	10	3.5	ug/l	100		78	35-120			
Anthracene	79.0	10	2.5	ug/l	100		79	65-120			
Benzidine	117	20	10	ug/l	100		117	30-160			
Benzo(a)anthracene	79.0	10	2.5	ug/l	100		79	65-120			
Benzo(a)pyrene	84.2	10	3.0	ug/l	100		84	55-130			
Benzo(b)fluoranthene	86.5	10	2.0	ug/l	100		87	55-125			
Benzo(g,h,i)perylene	87.8	10	4.0	ug/l	100		88	45-135			
Benzo(k)fluoranthene	83.7	10	2.5	ug/l	100		84	50-125			
Benzoic acid	55.7	20	10	ug/l	100		56	25-120			
Benzyl alcohol	98.3	20	3.5	ug/l	100		98	50-120			
4-Bromophenyl phenyl ether	80.0	10	3.0	ug/l	100		80	60-120			
Butyl benzyl phthalate	88.8	20	4.0	ug/l	100		89	55-130			
4-Chloro-3-methylphenol	75.5	20	2.5	ug/l	100		75	60-120			
4-Chloroaniline	79.5	10	2.0	ug/l	100		80	55-120			
Bis(2-chloroethoxy)methane	80.3	10	3.0	ug/l	100		80	55-120			
Bis(2-chloroethyl)ether	75.3	10	3.0	ug/l	100		75	50-120			
Bis(2-chloroisopropyl)ether	83.4	10	2.5	ug/l	100		83	45-120			
Bis(2-ethylhexyl)phthalate	88.8	50	4.0	ug/l	100		89	65-130			
2-Chloronaphthalene	77.6	10	3.0	ug/l	100		78	60-120			
2-Chlorophenol	69.4	10	3.0	ug/l	100		69	45-120			
4-Chlorophenyl phenyl ether	75.7	10	2.5	ug/l	100		76	65-120			
Chrysene	82.7	10	2.5	ug/l	100		83	65-120			
Dibenz(a,h)anthracene	88.1	20	3.0	ug/l	100		88	50-135			
Dibenzofuran	78.4	10	4.0	ug/l	100		78	65-120			
Di-n-butyl phthalate	81.0	20	3.0	ug/l	100		81	60-125			
1,2-Dichlorobenzene	63.5	10	3.0	ug/l	100		63	40-120			
1,3-Dichlorobenzene	62.3	10	3.0	ug/l	100		62	35-120			

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 10B1328 Extracted: 02/11/10	0										
Dutchi 10D1020 Extruction 02/11/11	<u>,                                     </u>										
LCS Analyzed: 02/13/2010 (10B1328-BS	51)										MNR1
1,4-Dichlorobenzene	62.5	10	2.5	ug/l	100		63	35-120			
3,3'-Dichlorobenzidine	76.1	20	7.5	ug/l	100		76	45-135			
2,4-Dichlorophenol	76.2	10	3.5	ug/l	100		76	55-120			
Diethyl phthalate	76.5	10	3.5	ug/l	100		76	55-120			
2,4-Dimethylphenol	66.8	20	3.5	ug/l	100		67	40-120			
Dimethyl phthalate	77.7	10	2.5	ug/l	100		78	30-120			
4,6-Dinitro-2-methylphenol	93.8	20	4.0	ug/l	100		94	45-120			
2,4-Dinitrophenol	89.0	20	8.0	ug/l	100		89	40-120			
2,4-Dinitrotoluene	80.4	10	3.5	ug/l	100		80	65-120			
2,6-Dinitrotoluene	79.3	10	2.0	ug/l	100		79	65-120			
Di-n-octyl phthalate	90.4	20	3.5	ug/l	100		90	65-135			
1,2-Diphenylhydrazine/Azobenzene	87.4	20	2.5	ug/l	100		87	60-120			
Fluoranthene	78.7	10	3.0	ug/l	100		79	60-120			
Fluorene	75.9	10	3.0	ug/l	100		76	65-120			
Hexachlorobenzene	76.7	10	3.0	ug/l	100		77	60-120			
Hexachlorobutadiene	64.6	10	4.0	ug/l	100		65	40-120			
Hexachlorocyclopentadiene	127	20	5.0	ug/l	100		127	25-120			L
Hexachloroethane	58.7	10	3.5	ug/l	100		59	35-120			
Indeno(1,2,3-cd)pyrene	84.1	20	3.5	ug/l	100		84	45-135			
Isophorone	83.0	10	3.0	ug/l	100		83	50-120			
2-Methylnaphthalene	73.4	10	2.0	ug/l	100		73	55-120			
2-Methylphenol	69.6	10	3.0	ug/l	100		70	50-120			
4-Methylphenol	72.2	10	3.0	ug/l	100		72	50-120			
Naphthalene	75.9	10	3.0	ug/l	100		76	55-120			
2-Nitroaniline	83.3	20	2.0	ug/l	100		83	65-120			
3-Nitroaniline	83.1	20	3.0	ug/l	100		83	60-120			
4-Nitroaniline	81.9	20	4.0	ug/l	100		82	55-125			
Nitrobenzene	78.8	20	3.0	ug/l	100		79	55-120			
2-Nitrophenol	77.0	10	3.5	ug/l	100		77	50-120			
4-Nitrophenol	68.4	20	5.5	ug/l	100		68	45-120			
N-Nitroso-di-n-propylamine	77.6	10	3.5	ug/l	100		78	45-120			
N-Nitrosodimethylamine	78.9	20	2.5	ug/l	100		79	45-120			
N-Nitrosodiphenylamine	86.7	10	2.0	ug/l	100		87	60-120			
Pentachlorophenol	77.5	20	3.5	ug/l	100		78	50-120			
Phenanthrene	79.5	10	3.5	ug/l	100		79	65-120			

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1328 Extracted: 02/11/10	)										
	_										
LCS Analyzed: 02/13/2010 (10B1328-BS	51)										MNR1
Phenol	70.9	10	2.0	ug/l	100		71	40-120			
Pyrene	81.0	10	4.0	ug/l	100		81	55-125			
1,2,4-Trichlorobenzene	69.8	10	2.5	ug/l	100		70	45-120			
2,4,5-Trichlorophenol	78.0	20	3.0	ug/l	100		78	55-120			
2,4,6-Trichlorophenol	80.1	20	4.5	ug/l	100		80	55-120			
Surrogate: 2,4,6-Tribromophenol	165			ug/l	200		83	40-120			
Surrogate: 2-Fluorobiphenyl	80.0			ug/l	100		80	50-120			
Surrogate: 2-Fluorophenol	127			ug/l	200		63	30-120			
Surrogate: Nitrobenzene-d5	78.3			ug/l	100		78	45-120			
Surrogate: Phenol-d6	140			ug/l	200		70	35-120			
Surrogate: Terphenyl-d14	81.1			ug/l	100		81	50-125			
LCS Dup Analyzed: 02/13/2010 (10B132	28-BSD1)										
Acenaphthene	86.0	10	3.0	ug/l	100		86	60-120	9	20	
Acenaphthylene	87.9	10	3.0	ug/l	100		88	60-120	10	20	
Aniline	75.7	10	3.5	ug/l	100		76	35-120	3	30	
Anthracene	85.4	10	2.5	ug/l	100		85	65-120	8	20	
Benzidine	81.0	20	10	ug/l	100		81	30-160	36	35	R-7
Benzo(a)anthracene	84.7	10	2.5	ug/l	100		85	65-120	7	20	
Benzo(a)pyrene	89.9	10	3.0	ug/l	100		90	55-130	7	25	
Benzo(b)fluoranthene	91.0	10	2.0	ug/l	100		91	55-125	5	25	
Benzo(g,h,i)perylene	95.1	10	4.0	ug/l	100		95	45-135	8	25	
Benzo(k)fluoranthene	90.4	10	2.5	ug/l	100		90	50-125	8	20	
Benzoic acid	81.8	20	10	ug/l	100		82	25-120	38	30	R-7
Benzyl alcohol	113	20	3.5	ug/l	100		113	50-120	14	20	
4-Bromophenyl phenyl ether	86.4	10	3.0	ug/l	100		86	60-120	8	25	
Butyl benzyl phthalate	91.8	20	4.0	ug/l	100		92	55-130	3	20	
4-Chloro-3-methylphenol	85.3	20	2.5	ug/l	100		85	60-120	12	25	
4-Chloroaniline	87.9	10	2.0	ug/l	100		88	55-120	10	25	
Bis(2-chloroethoxy)methane	91.1	10	3.0	ug/l	100		91	55-120	13	20	
Bis(2-chloroethyl)ether	86.4	10	3.0	ug/l	100		86	50-120	14	20	
Bis(2-chloroisopropyl)ether	97.5	10	2.5	ug/l	100		97	45-120	16	20	
Bis(2-ethylhexyl)phthalate	96.0	50	4.0	ug/l	100		96	65-130	8	20	
2-Chloronaphthalene	87.2	10	3.0	ug/l	100		87	60-120	12	20	
2-Chlorophenol	76.8	10	3.0	ug/l	100		77	45-120	10	25	
4-Chlorophenyl phenyl ether	83.4	10	2.5	ug/l	100		83	65-120	10	20	

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10 Received: 02/06/10

# METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1328 Extracted: 02/11/1	10										
LCS Dup Analyzed: 02/13/2010 (10B13	328-BSD1)										
Chrysene	87.8	10	2.5	ug/l	100		88	65-120	6	20	
Dibenz(a,h)anthracene	93.8	20	3.0	ug/l	100		94	50-135	6	25	
Dibenzofuran	87.1	10	4.0	ug/l	100		87	65-120	11	20	
Di-n-butyl phthalate	86.8	20	3.0	ug/l	100		87	60-125	7	20	
1,2-Dichlorobenzene	73.1	10	3.0	ug/l	100		73	40-120	14	25	
1,3-Dichlorobenzene	71.0	10	3.0	ug/l	100		71	35-120	13	25	
1,4-Dichlorobenzene	71.6	10	2.5	ug/l	100		72	35-120	14	25	
3,3'-Dichlorobenzidine	81.3	20	7.5	ug/l	100		81	45-135	7	25	
2,4-Dichlorophenol	83.7	10	3.5	ug/l	100		84	55-120	9	20	
Diethyl phthalate	84.2	10	3.5	ug/l	100		84	55-120	10	30	
2,4-Dimethylphenol	74.1	20	3.5	ug/l	100		74	40-120	10	25	
Dimethyl phthalate	85.4	10	2.5	ug/l	100		85	30-120	9	30	
4,6-Dinitro-2-methylphenol	100	20	4.0	ug/l	100		100	45-120	6	25	
2,4-Dinitrophenol	95.9	20	8.0	ug/l	100		96	40-120	8	25	
2,4-Dinitrotoluene	88.3	10	3.5	ug/l	100		88	65-120	9	20	
2,6-Dinitrotoluene	87.5	10	2.0	ug/l	100		87	65-120	10	20	
Di-n-octyl phthalate	96.5	20	3.5	ug/l	100		96	65-135	7	20	
1,2-Diphenylhydrazine/Azobenzene	97.0	20	2.5	ug/l	100		97	60-120	10	25	
Fluoranthene	84.6	10	3.0	ug/l	100		85	60-120	7	20	
Fluorene	84.3	10	3.0	ug/l	100		84	65-120	11	20	
Hexachlorobenzene	83.1	10	3.0	ug/l	100		83	60-120	8	20	
Hexachlorobutadiene	73.4	10	4.0	ug/l	100		73	40-120	13	25	
Hexachlorocyclopentadiene	137	20	5.0	ug/l	100		137	25-120	7	30	L
Hexachloroethane	67.7	10	3.5	ug/l	100		68	35-120	14	25	
Indeno(1,2,3-cd)pyrene	91.5	20	3.5	ug/l	100		92	45-135	8	25	
Isophorone	94.0	10	3.0	ug/l	100		94	50-120	12	20	
2-Methylnaphthalene	84.8	10	2.0	ug/l	100		85	55-120	14	20	
2-Methylphenol	79.8	10	3.0	ug/l	100		80	50-120	14	20	
4-Methylphenol	82.6	10	3.0	ug/l	100		83	50-120	13	20	
Naphthalene	85.6	10	3.0	ug/l	100		86	55-120	12	20	
2-Nitroaniline	93.7	20	2.0	ug/l	100		94	65-120	12	20	
3-Nitroaniline	91.9	20	3.0	ug/l	100		92	60-120	10	25	
4-Nitroaniline	92.1	20	4.0	ug/l	100		92	55-125	12	20	
Nitrobenzene	89.3	20	3.0	ug/l	100		89	55-120	12	25	
2-Nitrophenol	86.7	10	3.5	ug/l	100		87	50-120	12	25	

### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1328 Extracted: 02/11/10	<u>)                                    </u>										
LCS Dup Analyzed: 02/13/2010 (10B132	28-BSD1)										
4-Nitrophenol	74.0	20	5.5	ug/l	100		74	45-120	8	30	
N-Nitroso-di-n-propylamine	90.2	10	3.5	ug/l	100		90	45-120	15	20	
N-Nitrosodimethylamine	82.9	20	2.5	ug/l	100		83	45-120	5	20	
N-Nitrosodiphenylamine	94.9	10	2.0	ug/l	100		95	60-120	9	20	
Pentachlorophenol	84.5	20	3.5	ug/l	100		84	50-120	9	25	
Phenanthrene	85.6	10	3.5	ug/l	100		86	65-120	7	20	
Phenol	77.9	10	2.0	ug/l	100		78	40-120	9	25	
Pyrene	85.5	10	4.0	ug/l	100		86	55-125	5	25	
1,2,4-Trichlorobenzene	79.3	10	2.5	ug/l	100		79	45-120	13	20	
2,4,5-Trichlorophenol	85.4	20	3.0	ug/l	100		85	55-120	9	30	
2,4,6-Trichlorophenol	87.4	20	4.5	ug/l	100		87	55-120	9	30	
Surrogate: 2,4,6-Tribromophenol	178			ug/l	200		89	40-120			
Surrogate: 2-Fluorobiphenyl	87.7			ug/l	100		88	50-120			
Surrogate: 2-Fluorophenol	128			ug/l	200		64	30-120			
Surrogate: Nitrobenzene-d5	88.7			ug/l	100		89	45-120			
Surrogate: Phenol-d6	152			ug/l	200		76	35-120			
Surrogate: Terphenyl-d14	87.2			ug/l	100		87	50-125			

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

%REC

RPD

Data

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Spike

Source

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

## METHOD BLANK/QC DATA

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

Reporting

		Reporting			Spike	Source		%KEC		KPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0852 Extracted: 02/08/10	<u>)                                    </u>										
Blank Analyzed: 02/11/2010 (10B0852-E	BLK1)										
Acenaphthylene	ND	5.0	N/A	ug/l							
Alachlor	ND	1.0	N/A	ug/l							
Aldrin	ND	0.075	N/A	ug/l							
Ametryn	ND	1.0	N/A	ug/l							
Atrazine	ND	0.50	N/A	ug/l							
Benz(a)anthracene	ND	10	N/A	ug/l							
Benzo(a)pyrene	ND	0.10	N/A	ug/l							
Benzo(b)fluoranthene	ND	10	N/A	ug/l							
Benzo(g,h,i)perylene	ND	10	N/A	ug/l							
Benzo(k)fluoranthene	ND	10	N/A	ug/l							
Butachlor	ND	0.38	N/A	ug/l							
Butylate	ND	1.0	N/A	ug/l							
Butyl benzyl phthalate	ND	10	N/A	ug/l							
Di-n-butyl phthalate	ND	5.0	N/A	ug/l							
2-Chlorobiphenyl	ND	0.50	N/A	ug/l							
Chloroneb	ND	0.50	N/A	ug/l							
Chloropropham	ND	5.0	N/A	ug/l							
Chlorpyrifos	ND	1.0	N/A	ug/l							
Chrysene	ND	5.0	N/A	ug/l							
Cycloate	ND	0.30	N/A	ug/l							
Diazinon	ND	0.25	N/A	ug/l							
Dibenz(a,h)anthracene	ND	5.0	N/A	ug/l							
2,3-Dichlorobiphenyl	ND	0.50	N/A	ug/l							
Di(2-ethylhexyl)adipate	ND	5.0	N/A	ug/l							
Di(2-ethylhexyl)phthalate	ND	3.0	N/A	ug/l							
Diethyl phthalate	ND	5.0	N/A	ug/l							
Dimethyl phthalate	ND	5.0	N/A	ug/l							
Diphenamid	ND	100	N/A	ug/l							
Fluorene	ND	5.0	N/A	ug/l							
2,2',3,3',4,4',6-Heptachlorobiphenyl	ND	1.0	N/A	ug/l							
Hexachlorobenzene	ND	0.50	N/A	ug/l							
2,2',4,4',5,6'-Hexachlorobiphenyl	ND	1.0	N/A	ug/l							
Hexachlorocyclopentadiene	ND	1.0	N/A	ug/l							
Indeno(1,2,3-cd)pyrene	ND	10	N/A	ug/l							
gamma-BHC (Lindane)	ND	0.20	N/A	ug/l							

### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0852 Extracted: 02/08/10											
Daten. 10D0032 Extracted. 02/00/19	<u>,                                     </u>										
Blank Analyzed: 02/11/2010 (10B0852-E	BLK1)										
Methoxychlor	ND	10	N/A	ug/l							
Metolachlor	ND	0.50	N/A	ug/l							
Metribuzin	ND	1.0	N/A	ug/l							
Molinate	ND	2.0	N/A	ug/l							
Napropamide	ND	1.0	N/A	ug/l							
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ND	1.0	N/A	ug/l							
Pebulate	ND	0.50	N/A	ug/l							
2,2',3',4,6-Pentachlorobiphenyl	ND	1.0	N/A	ug/l							
Permethrins (mixed isomers, total)	ND	2.0	N/A	ug/l							
Phenanthrene	ND	5.0	N/A	ug/l							
Prometryn	ND	2.0	N/A	ug/l							
Propachlor	ND	0.50	N/A	ug/l							
Propazine	ND	0.50	N/A	ug/l							
Pyrene	ND	5.0	N/A	ug/l							
Simazine	ND	1.0	N/A	ug/l							
Simetryn	ND	1.0	N/A	ug/l							
Terbutryn (e)	ND	1.0	N/A	ug/l							
2,2',4,4'-Tetrachlorobiphenyl	ND	0.50	N/A	ug/l							
Thiobencarb	ND	1.0	N/A	ug/l							
Triadimefon	ND	0.50	N/A	ug/l							
2,4,5-Trichlorobiphenyl	ND	0.50	N/A	ug/l							
Trifluralin	ND	0.50	N/A	ug/l							
Vernolate	ND	0.50	N/A	ug/l							
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.59			ug/l	5.00		92	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.59			ug/l	5.00		92	70-130			
Surrogate: Triphenylphosphate	5.28			ug/l	5.00		106	70-130			
Surrogate: Triphenylphosphate	5.28			ug/l	5.00		106	70-130			
Surrogate: Perylene-d12	4.82			ug/l	5.00		96	70-130			
Surrogate: Perylene-d12	4.82			ug/l	5.00		96	70-130			



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Lillit	MDL	Units	Levei	Result	70KEC	Limits	KID	Lillit	Quanners
<b>Batch:</b> 10B0852 Extracted: 02/08/10	<u>)                                    </u>										
L CC	147										
LCS Analyzed: 02/11/2010 (10B0852-BS	•	- 0									_
Acenaphthylene	4.34	5.0	N/A	ug/l	5.00		87	70-130			Ja
Alachlor	5.41	1.0	N/A	ug/l	5.00		108	70-130			
Aldrin	4.35	0.075	N/A	ug/l	5.00		87	70-130			
Ametryn	5.06	1.0	N/A	ug/l	5.00		101	70-130			
Atrazine	5.12	0.50	N/A	ug/l	5.00		102	70-130			
Benz(a)anthracene	4.76	10	N/A	ug/l	5.00		95	70-130			Ja
Benzo(a)pyrene	5.76	0.10	N/A	ug/l	5.00		115	70-130			
Benzo(b)fluoranthene	5.41	10	N/A	ug/l	5.00		108	70-130			Ja
Benzo(g,h,i)perylene	5.35	10	N/A	ug/l	5.00		107	70-130			Ja
Benzo(k)fluoranthene	5.00	10	N/A	ug/l	5.00		100	70-130			Ja
Butachlor	5.52	0.38	N/A	ug/l	5.00		110	70-130			
Butylate	4.81	1.0	N/A	ug/l	5.00		96	70-130			
Butyl benzyl phthalate	10.8	10	N/A	ug/l	10.0		108	70-130			
Di-n-butyl phthalate	9.80	5.0	N/A	ug/l	10.0		98	70-130			
2-Chlorobiphenyl	4.55	0.50	N/A	ug/l	5.00		91	70-130			
Chloroneb	5.30	0.50	N/A	ug/l	5.00		106	70-130			
Chloropropham	5.83	5.0	N/A	ug/l	5.00		117	70-130			
Chlorpyrifos	4.88	1.0	N/A	ug/l	5.00		98	70-130			
Chrysene	5.19	5.0	N/A	ug/l	5.00		104	70-130			
Cycloate	5.64	0.30	N/A	ug/l	5.00		113	70-130			
Diazinon	5.23	0.25	N/A	ug/l	5.00		105	70-130			
Dibenz(a,h)anthracene	5.42	5.0	N/A	ug/l	5.00		108	70-130			
2,3-Dichlorobiphenyl	5.31	0.50	N/A	ug/l	5.00		106	70-130			
Di(2-ethylhexyl)adipate	10.7	5.0	N/A	ug/l	10.0		107	70-130			
Di(2-ethylhexyl)phthalate	10.6	3.0	N/A	ug/l	10.0		106	70-130			
Diethyl phthalate	10.9	5.0	N/A	ug/l	10.0		109	70-130			
Dimethyl phthalate	9.95	5.0	N/A	ug/l	10.0		100	70-130			
Diphenamid	5.22	100	N/A	ug/l	5.00		104	70-130			Ja
Fluorene	5.31	5.0	N/A	ug/l	5.00		106	70-130			
2,2',3,3',4,4',6-Heptachlorobiphenyl	4.95	1.0	N/A	ug/l	5.00		99	70-130			
Hexachlorobenzene	5.47	0.50	N/A	ug/l	5.00		109	70-130			
2,2',4,4',5,6'-Hexachlorobiphenyl	5.19	1.0	N/A	ug/l	5.00		104	70-130			
Hexachlorocyclopentadiene	10.4	1.0	N/A	ug/l	10.0		104	70-130			
Indeno(1,2,3-cd)pyrene	4.70	10	N/A	ug/l	5.00		94	70-130			Ja
gamma-BHC (Lindane)	5.16	0.20	N/A	ug/l	5.00		103	70-130			- <del></del>
<i>3</i> (				0							

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte         Result         Limit         MDL         Units         Level         Result         %REC         Limits         RPD         Limit         Qualifiers           Batch: 10B0852 Extracted: 02/08/10         LCS Analyzed: 02/11/2010 (10B0852-BS1)           Methoxychlor         4.69         10         N/A         ug/l         5.00         94         70-130         Ja           Metolachlor         5.43         0.50         N/A         ug/l         5.00         109         70-130          Ja
LCS Analyzed: 02/11/2010 (10B0852-BS1)       Methoxychlor     4.69     10     N/A     ug/l     5.00     94     70-130     Ja       Metolachlor     5.43     0.50     N/A     ug/l     5.00     109     70-130
Methoxychlor         4.69         10         N/A         ug/l         5.00         94         70-130         Ja           Metolachlor         5.43         0.50         N/A         ug/l         5.00         109         70-130
Methoxychlor         4.69         10         N/A         ug/l         5.00         94         70-130         Ja           Metolachlor         5.43         0.50         N/A         ug/l         5.00         109         70-130
Metolachlor 5.43 0.50 N/A ug/l 5.00 109 70-130
č
Metribuzin 5.11 1.0 N/A ug/l 5.00 102 70-130
Molinate 5.69 2.0 N/A ug/l 5.00 114 70-130
Napropamide 5.59 1.0 N/A ug/l 5.00 112 70-130
2,2',3,3',4,5',6,6'-Octachlorobiphenyl 5.22 1.0 N/A ug/l 5.00 104 70-130
Pebulate 4.81 0.50 N/A ug/l 5.00 96 70-130
2,2',3',4,6-Pentachlorobiphenyl 5.27 1.0 N/A ug/l 5.00 105 70-130
Permethrins (mixed isomers, total) 12.1 2.0 N/A ug/l 9.90 122 70-130
Phenanthrene 4.82 5.0 N/A ug/l 5.00 96 70-130 Ja
Prometryn 5.15 2.0 N/A ug/l 5.00 103 70-130
Propachlor 6.08 0.50 N/A ug/l 5.00 122 70-130
Propazine 5.39 0.50 N/A ug/l 5.00 108 70-130
Pyrene 5.52 5.0 N/A ug/l 5.00 110 70-130
Simazine 4.91 1.0 N/A ug/l 5.00 98 70-130
Simetryn 4.65 1.0 N/A ug/l 5.00 93 70-130
Terbutryn (e) 5.30 1.0 N/A ug/l 5.00 106 70-130
2,2',4,4'-Tetrachlorobiphenyl 5.14 0.50 N/A ug/l 5.00 103 70-130
Thiobencarb 5.33 1.0 N/A ug/l 5.00 107 70-130
Triadimefon 5.30 0.50 N/A ug/l 5.00 106 70-130
2,4,5-Trichlorobiphenyl 5.07 0.50 N/A ug/l 5.00 101 70-130
Trifluralin 6.12 0.50 N/A ug/l 5.00 122 70-130
Vernolate 4.81 0.50 N/A ug/l 5.00 96 70-130
Surrogate: 1,3-Dimethyl-2-nitrobenzene 3.99 ug/l 5.00 80 70-130
Surrogate: 1,3-Dimethyl-2-nitrobenzene 3.99 ug/l 5.00 80 70-130
Surrogate: Triphenylphosphate 5.04 ug/l 5.00 101 70-130
Surrogate: Triphenylphosphate 5.04 ug/l 5.00 101 70-130
Surrogate: Perylene-d12 5.39 ug/l 5.00 108 70-130
Surrogate: Perylene-d12 5.39 ug/l 5.00 108 70-130

### **TestAmerica Irvine**

%REC



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Spike

Source

Report Number: ITB0890

Reporting

Sampled: 02/06/10-02/07/10

RPD

Data

Received: 02/06/10

# METHOD BLANK/QC DATA

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

		Keporting			Spike	Source		OKEC		KI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0852 Extracted: 02/08	<u>3/10</u>										
Matrix Spike Analyzed: 02/11/2010 (	10B0852-MS1)				Sou	rce: ITB(	)598-01				
Acenaphthylene	4.38	5.0	N/A	ug/l	5.00	0.00	88	70-130			Ja
Alachlor	5.35	1.0	N/A	ug/l	5.00	0.00	107	70-130			
Aldrin	4.02	0.075	N/A	ug/l	5.00	0.00	80	70-130			
Ametryn	5.32	1.0	N/A	ug/l	5.00	0.00	106	70-130			
Atrazine	4.74	0.50	N/A	ug/l	5.00	0.00	95	70-130			
Benz(a)anthracene	4.51	10	N/A	ug/l	5.00	0.00	90	70-130			Ja
Benzo(a)pyrene	4.99	0.10	N/A	ug/l	5.00	0.00	100	70-130			
Benzo(b)fluoranthene	5.12	10	N/A	ug/l	5.00	0.00	102	70-130			Ja
Benzo(g,h,i)perylene	4.87	10	N/A	ug/l	5.00	0.00	97	70-130			Ja
Benzo(k)fluoranthene	4.33	10	N/A	ug/l	5.00	0.00	87	70-130			Ja
Butachlor	5.43	0.38	N/A	ug/l	5.00	0.00	109	70-130			
Butylate	4.75	1.0	N/A	ug/l	5.00	0.00	95	70-130			
Butyl benzyl phthalate	10.9	10	N/A	ug/l	10.0	0.00	109	70-130			
Di-n-butyl phthalate	9.87	5.0	N/A	ug/l	10.0	0.00	99	70-130			
2-Chlorobiphenyl	4.59	0.50	N/A	ug/l	5.00	0.00	92	70-130			
Chloroneb	5.32	0.50	N/A	ug/l	5.00	0.00	106	70-130			
Chloropropham	5.61	5.0	N/A	ug/l	5.00	0.00	112	70-130			
Chlorpyrifos	5.11	1.0	N/A	ug/l	5.00	0.00	102	70-130			
Chrysene	5.01	5.0	N/A	ug/l	5.00	0.00	100	70-130			
Cycloate	5.22	0.30	N/A	ug/l	5.00	0.00	104	70-130			
Diazinon	3.14	0.25	N/A	ug/l	5.00	0.00	63	70-130			M2
Dibenz(a,h)anthracene	4.89	5.0	N/A	ug/l	5.00	0.00	98	70-130			Ja
2,3-Dichlorobiphenyl	4.83	0.50	N/A	ug/l	5.00	0.00	97	70-130			
Di(2-ethylhexyl)adipate	10.4	5.0	N/A	ug/l	10.0	0.00	104	70-130			
Di(2-ethylhexyl)phthalate	10.5	3.0	N/A	ug/l	10.0	0.720	98	70-130			
Diethyl phthalate	10.2	5.0	N/A	ug/l	10.0	0.00	102	70-130			
Dimethyl phthalate	9.55	5.0	N/A	ug/l	10.0	0.00	96	70-130			
Diphenamid	5.39	100	N/A	ug/l	5.00	0.00	108	70-130			Ja
Fluorene	5.09	5.0	N/A	ug/l	5.00	0.00	102	70-130			
2,2',3,3',4,4',6-Heptachlorobiphenyl	4.74	1.0	N/A	ug/l	5.00	0.00	95	70-130			
Hexachlorobenzene	4.73	0.50	N/A	ug/l	5.00	0.00	95	70-130			
2,2',4,4',5,6'-Hexachlorobiphenyl	4.88	1.0	N/A	ug/l	5.00	0.00	98	70-130			
Hexachlorocyclopentadiene	11.1	1.0	N/A	ug/l	10.0	0.00	111	70-130			
Indeno(1,2,3-cd)pyrene	4.65	10	N/A	ug/l	5.00	0.00	93	70-130			Ja
gamma-BHC (Lindane)	5.03	0.20	N/A	ug/l	5.00	0.00	101	70-130			

### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B0852 Extracted: 02/08/1	<u>0</u>										
Matrix Spike Analyzed: 02/11/2010 (10)	B0852-MS1)				Sou	rce: ITB(	0598-01				
Methoxychlor	4.97	10	N/A	ug/l	5.00	0.00	99	70-130			Ja
Metolachlor	5.45	0.50	N/A	ug/l	5.00	0.00	109	70-130			
Metribuzin	3.64	1.0	N/A	ug/l	5.00	0.00	73	70-130			
Molinate	5.09	2.0	N/A	ug/l	5.00	0.00	102	70-130			
Napropamide	5.77	1.0	N/A	ug/l	5.00	0.00	115	70-130			
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	4.73	1.0	N/A	ug/l	5.00	0.00	95	70-130			
Pebulate	4.60	0.50	N/A	ug/l	5.00	0.00	92	70-130			
2,2',3',4,6-Pentachlorobiphenyl	4.80	1.0	N/A	ug/l	5.00	0.00	96	70-130			
Permethrins (mixed isomers, total)	11.2	2.0	N/A	ug/l	9.90	0.00	113	70-130			
Phenanthrene	4.86	5.0	N/A	ug/l	5.00	0.00	97	70-130			Ja
Prometryn	5.04	2.0	N/A	ug/l	5.00	0.00	101	70-130			
Propachlor	5.60	0.50	N/A	ug/l	5.00	0.00	112	70-130			
Propazine	5.15	0.50	N/A	ug/l	5.00	0.00	103	70-130			
Pyrene	5.19	5.0	N/A	ug/l	5.00	0.00	104	70-130			
Simazine	4.91	1.0	N/A	ug/l	5.00	0.00	98	70-130			
Simetryn	5.30	1.0	N/A	ug/l	5.00	0.00	106	70-130			
Terbutryn (e)	5.41	1.0	N/A	ug/l	5.00	0.00	108	70-130			
2,2',4,4'-Tetrachlorobiphenyl	4.72	0.50	N/A	ug/l	5.00	0.00	94	70-130			
Thiobencarb	5.43	1.0	N/A	ug/l	5.00	0.00	109	70-130			
Triadimefon	5.69	0.50	N/A	ug/l	5.00	0.00	114	70-130			
2,4,5-Trichlorobiphenyl	4.87	0.50	N/A	ug/l	5.00	0.00	97	70-130			
Trifluralin	5.32	0.50	N/A	ug/l	5.00	0.00	106	70-130			
Vernolate	4.79	0.50	N/A	ug/l	5.00	0.00	96	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.50			ug/l	5.00		90	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.50			ug/l	5.00		90	70-130			
Surrogate: Triphenylphosphate	5.08			ug/l	5.00		102	70-130			
Surrogate: Triphenylphosphate	5.08			ug/l	5.00		102	70-130			
Surrogate: Perylene-d12	4.67			ug/l	5.00		93	70-130			
Surrogate: Perylene-d12	4.67			ug/l	5.00		93	70-130			

### **TestAmerica Irvine**

%REC



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890

Source

Spike

Received: 02/06/10

RPD

Data

# METHOD BLANK/QC DATA

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

Reporting

		Keporting			Spike	Source		OKEC		KI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0852 Extracted: 02/08	<u>3/10</u>										
Matrix Spike Analyzed: 02/11/2010 (	10B0852-MS2)				Sou	rce: ITB(	)590-01				
Acenaphthylene	4.33	5.0	N/A	ug/l	5.00	0.00	87	70-130			Ja
Alachlor	5.19	1.0	N/A	ug/l	5.00	0.00	104	70-130			
Aldrin	3.65	0.075	N/A	ug/l	5.00	0.00	73	70-130			
Ametryn	4.70	1.0	N/A	ug/l	5.00	0.00	94	70-130			
Atrazine	4.84	0.50	N/A	ug/l	5.00	0.00	97	70-130			
Benz(a)anthracene	4.86	10	N/A	ug/l	5.00	0.00	97	70-130			Ja
Benzo(a)pyrene	5.38	0.10	N/A	ug/l	5.00	0.00	108	70-130			
Benzo(b)fluoranthene	5.38	10	N/A	ug/l	5.00	0.00	108	70-130			Ja
Benzo(g,h,i)perylene	5.33	10	N/A	ug/l	5.00	0.00	107	70-130			Ja
Benzo(k)fluoranthene	4.89	10	N/A	ug/l	5.00	0.00	98	70-130			Ja
Butachlor	5.36	0.38	N/A	ug/l	5.00	0.00	107	70-130			
Butylate	4.70	1.0	N/A	ug/l	5.00	0.00	94	70-130			
Butyl benzyl phthalate	11.6	10	N/A	ug/l	10.0	0.00	116	70-130			
Di-n-butyl phthalate	9.38	5.0	N/A	ug/l	10.0	0.00	94	70-130			
2-Chlorobiphenyl	4.45	0.50	N/A	ug/l	5.00	0.00	89	70-130			
Chloroneb	4.66	0.50	N/A	ug/l	5.00	0.00	93	70-130			
Chloropropham	5.24	5.0	N/A	ug/l	5.00	0.00	105	70-130			
Chlorpyrifos	4.73	1.0	N/A	ug/l	5.00	0.00	95	70-130			
Chrysene	5.29	5.0	N/A	ug/l	5.00	0.00	106	70-130			
Cycloate	5.11	0.30	N/A	ug/l	5.00	0.00	102	70-130			
Diazinon	2.29	0.25	N/A	ug/l	5.00	0.00	46	70-130			M2
Dibenz(a,h)anthracene	5.44	5.0	N/A	ug/l	5.00	0.00	109	70-130			
2,3-Dichlorobiphenyl	4.63	0.50	N/A	ug/l	5.00	0.00	93	70-130			
Di(2-ethylhexyl)adipate	10.9	5.0	N/A	ug/l	10.0	0.00	109	70-130			
Di(2-ethylhexyl)phthalate	10.4	3.0	N/A	ug/l	10.0	0.00	104	70-130			
Diethyl phthalate	10.1	5.0	N/A	ug/l	10.0	0.00	101	70-130			
Dimethyl phthalate	9.26	5.0	N/A	ug/l	10.0	0.00	93	70-130			
Diphenamid	5.17	100	N/A	ug/l	5.00	0.00	103	70-130			Ja
Fluorene	4.96	5.0	N/A	ug/l	5.00	0.00	99	70-130			Ja
2,2',3,3',4,4',6-Heptachlorobiphenyl	5.17	1.0	N/A	ug/l	5.00	0.00	103	70-130			
Hexachlorobenzene	4.63	0.50	N/A	ug/l	5.00	0.00	93	70-130			
2,2',4,4',5,6'-Hexachlorobiphenyl	4.70	1.0	N/A	ug/l	5.00	0.00	94	70-130			
Hexachlorocyclopentadiene	10.9	1.0	N/A	ug/l	10.0	0.00	109	70-130			
Indeno(1,2,3-cd)pyrene	4.80	10	N/A	ug/l	5.00	0.00	96	70-130			Ja
gamma-BHC (Lindane)	4.87	0.20	N/A	ug/l	5.00	0.00	97	70-130			

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Oualifiers
Batch: 10B0852 Extracted: 02/08/10		2	.,122	0 11105	20,01	1100411	, 41120	23111105			Quantities of
	<b>_</b>										
Matrix Spike Analyzed: 02/11/2010 (10B	30852-MS2)				Sou	rce: ITB(	0590-01				
Methoxychlor	4.92	10	N/A	ug/l	5.00	0.00	98	70-130			Ja
Metolachlor	5.27	0.50	N/A	ug/l	5.00	0.00	105	70-130			
Metribuzin	3.77	1.0	N/A	ug/l	5.00	0.00	75	70-130			
Molinate	5.10	2.0	N/A	ug/l	5.00	0.00	102	70-130			
Napropamide	5.55	1.0	N/A	ug/l	5.00	0.00	111	70-130			
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	5.02	1.0	N/A	ug/l	5.00	0.00	100	70-130			
Pebulate	4.60	0.50	N/A	ug/l	5.00	0.00	92	70-130			
2,2',3',4,6-Pentachlorobiphenyl	4.85	1.0	N/A	ug/l	5.00	0.00	97	70-130			
Permethrins (mixed isomers, total)	12.0	2.0	N/A	ug/l	9.90	0.00	121	70-130			
Phenanthrene	4.68	5.0	N/A	ug/l	5.00	0.00	94	70-130			Ja
Prometryn	4.69	2.0	N/A	ug/l	5.00	0.00	94	70-130			
Propachlor	5.41	0.50	N/A	ug/l	5.00	0.00	108	70-130			
Propazine	5.16	0.50	N/A	ug/l	5.00	0.00	103	70-130			
Pyrene	5.09	5.0	N/A	ug/l	5.00	0.00	102	70-130			
Simazine	4.59	1.0	N/A	ug/l	5.00	0.00	92	70-130			
Simetryn	4.56	1.0	N/A	ug/l	5.00	0.00	91	70-130			
Terbutryn (e)	4.84	1.0	N/A	ug/l	5.00	0.00	97	70-130			
2,2',4,4'-Tetrachlorobiphenyl	4.77	0.50	N/A	ug/l	5.00	0.00	95	70-130			
Thiobencarb	5.17	1.0	N/A	ug/l	5.00	0.00	103	70-130			
Triadimefon	5.26	0.50	N/A	ug/l	5.00	0.00	105	70-130			
2,4,5-Trichlorobiphenyl	4.86	0.50	N/A	ug/l	5.00	0.00	97	70-130			
Trifluralin	4.94	0.50	N/A	ug/l	5.00	0.00	99	70-130			
Vernolate	4.63	0.50	N/A	ug/l	5.00	0.00	93	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.72			ug/l	5.00		94	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.72			ug/l	5.00		94	70-130			
Surrogate: Triphenylphosphate	5.34			ug/l	5.00		107	70-130			
Surrogate: Triphenylphosphate	5.34			ug/l	5.00		107	70-130			
Surrogate: Perylene-d12	4.86			ug/l	5.00		97	70-130			
Surrogate: Perylene-d12	4.86			ug/l	5.00		97	70-130			

### **TestAmerica Irvine**

%REC



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Reporting

Sampled: 02/06/10-02/07/10

RPD

Data

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Spike

Source

		Keporting			Spike	Source		OKEC		KI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0852 Extracted: 02/08	3/10_										
Matrix Spike Dup Analyzed: 02/11/20	010 (10B0852-M	ISD1)			Sou	rce: ITB(	598-01				
Acenaphthylene	4.31	5.0	N/A	ug/l	5.00	0.00	86	70-130	2	30	Ja
Alachlor	5.14	1.0	N/A	ug/l	5.00	0.00	103	70-130	4	30	
Aldrin	3.95	0.075	N/A	ug/l	5.00	0.00	79	70-130	2	30	
Ametryn	5.32	1.0	N/A	ug/l	5.00	0.00	106	70-130	0	30	
Atrazine	4.84	0.50	N/A	ug/l	5.00	0.00	97	70-130	2	30	
Benz(a)anthracene	4.61	10	N/A	ug/l	5.00	0.00	92	70-130	2	30	Ja
Benzo(a)pyrene	5.41	0.10	N/A	ug/l	5.00	0.00	108	70-130	8	30	
Benzo(b)fluoranthene	5.34	10	N/A	ug/l	5.00	0.00	107	70-130	4	30	Ja
Benzo(g,h,i)perylene	5.57	10	N/A	ug/l	5.00	0.00	111	70-130	13	30	Ja
Benzo(k)fluoranthene	4.49	10	N/A	ug/l	5.00	0.00	90	70-130	4	30	Ja
Butachlor	5.46	0.38	N/A	ug/l	5.00	0.00	109	70-130	0.6	30	
Butylate	5.02	1.0	N/A	ug/l	5.00	0.00	100	70-130	6	30	
Butyl benzyl phthalate	11.2	10	N/A	ug/l	10.0	0.00	112	70-130	3	30	
Di-n-butyl phthalate	9.76	5.0	N/A	ug/l	10.0	0.00	98	70-130	1	30	
2-Chlorobiphenyl	4.51	0.50	N/A	ug/l	5.00	0.00	90	70-130	2	30	
Chloroneb	5.21	0.50	N/A	ug/l	5.00	0.00	104	70-130	2	30	
Chloropropham	5.78	5.0	N/A	ug/l	5.00	0.00	116	70-130	3	30	
Chlorpyrifos	4.80	1.0	N/A	ug/l	5.00	0.00	96	70-130	6	30	
Chrysene	5.01	5.0	N/A	ug/l	5.00	0.00	100	70-130	0	30	
Cycloate	5.22	0.30	N/A	ug/l	5.00	0.00	104	70-130	0	30	
Diazinon	2.88	0.25	N/A	ug/l	5.00	0.00	58	70-130	9	30	M2
Dibenz(a,h)anthracene	5.54	5.0	N/A	ug/l	5.00	0.00	111	70-130	12	30	
2,3-Dichlorobiphenyl	4.83	0.50	N/A	ug/l	5.00	0.00	97	70-130	0	30	
Di(2-ethylhexyl)adipate	10.5	5.0	N/A	ug/l	10.0	0.00	105	70-130	0.7	30	
Di(2-ethylhexyl)phthalate	11.0	3.0	N/A	ug/l	10.0	0.720	102	70-130	4	30	
Diethyl phthalate	10.3	5.0	N/A	ug/l	10.0	0.00	103	70-130	1	30	
Dimethyl phthalate	9.63	5.0	N/A	ug/l	10.0	0.00	96	70-130	0.8	30	
Diphenamid	5.24	100	N/A	ug/l	5.00	0.00	105	70-130	3	30	Ja
Fluorene	5.11	5.0	N/A	ug/l	5.00	0.00	102	70-130	0.4	30	
2,2',3,3',4,4',6-Heptachlorobiphenyl	4.77	1.0	N/A	ug/l	5.00	0.00	95	70-130	0.6	30	
Hexachlorobenzene	4.81	0.50	N/A	ug/l	5.00	0.00	96	70-130	2	30	
2,2',4,4',5,6'-Hexachlorobiphenyl	4.68	1.0	N/A	ug/l	5.00	0.00	94	70-130	4	30	
Hexachlorocyclopentadiene	11.2	1.0	N/A	ug/l	10.0	0.00	112	70-130	1	30	
Indeno(1,2,3-cd)pyrene	5.48	10	N/A	ug/l	5.00	0.00	110	70-130	16	30	Ja
gamma-BHC (Lindane)	5.09	0.20	N/A	ug/l	5.00	0.00	102	70-130	1	30	

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Lillit	MIDL	Units	Level	Result	70KEC	Lillits	KrD	Lillit	Quanners
<b>Batch: 10B0852 Extracted: 02/08/10</b>	<u>)                                    </u>										
Matrix Spike Dup Analyzed: 02/11/2010	(10B0852-N	MSD1)			Sou	rce: ITB(	0598-01				
Methoxychlor	4.51	10	N/A	ug/l	5.00	0.00	90	70-130	10	30	Ja
Metolachlor	5.30	0.50	N/A	ug/l	5.00	0.00	106	70-130	3	30	
Metribuzin	3.68	1.0	N/A	ug/l	5.00	0.00	74	70-130	1	30	
Molinate	5.12	2.0	N/A	ug/l	5.00	0.00	102	70-130	0.6	30	
Napropamide	5.41	1.0	N/A	ug/l	5.00	0.00	108	70-130	6	30	
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	4.77	1.0	N/A	ug/l	5.00	0.00	95	70-130	0.8	30	
Pebulate	4.66	0.50	N/A	ug/l	5.00	0.00	93	70-130	1	30	
2,2',3',4,6-Pentachlorobiphenyl	4.81	1.0	N/A	ug/l	5.00	0.00	96	70-130	0.2	30	
Permethrins (mixed isomers, total)	11.5	2.0	N/A	ug/l	9.90	0.00	117	70-130	3	30	
Phenanthrene	4.86	5.0	N/A	ug/l	5.00	0.00	97	70-130	0	30	Ja
Prometryn	5.16	2.0	N/A	ug/l	5.00	0.00	103	70-130	2	30	
Propachlor	5.48	0.50	N/A	ug/l	5.00	0.00	110	70-130	2	30	
Propazine	4.91	0.50	N/A	ug/l	5.00	0.00	98	70-130	5	30	
Pyrene	5.08	5.0	N/A	ug/l	5.00	0.00	102	70-130	2	30	
Simazine	4.35	1.0	N/A	ug/l	5.00	0.00	87	70-130	12	30	
Simetryn	5.47	1.0	N/A	ug/l	5.00	0.00	109	70-130	3	30	
Terbutryn (e)	5.45	1.0	N/A	ug/l	5.00	0.00	109	70-130	0.7	30	
2,2',4,4'-Tetrachlorobiphenyl	4.70	0.50	N/A	ug/l	5.00	0.00	94	70-130	0.4	30	
Thiobencarb	5.39	1.0	N/A	ug/l	5.00	0.00	108	70-130	0.7	30	
Triadimefon	5.55	0.50	N/A	ug/l	5.00	0.00	111	70-130	2	30	
2,4,5-Trichlorobiphenyl	4.90	0.50	N/A	ug/l	5.00	0.00	98	70-130	0.6	30	
Trifluralin	5.38	0.50	N/A	ug/l	5.00	0.00	108	70-130	1	30	
Vernolate	4.65	0.50	N/A	ug/l	5.00	0.00	93	70-130	3	30	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.73			ug/l	5.00		95	70-130			
Surrogate: 1,3-Dimethyl-2-nitrobenzene	4.73			ug/l	5.00		95	70-130			
Surrogate: Triphenylphosphate	5.00			ug/l	5.00		100	70-130			
Surrogate: Triphenylphosphate	5.00			ug/l	5.00		100	70-130			
Surrogate: Perylene-d12	5.14			ug/l	5.00		103	70-130			
Surrogate: Perylene-d12	5.14			ug/l	5.00		103	70-130			

### **TestAmerica Irvine**

%REC



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Reporting

Sampled: 02/06/10-02/07/10

RPD

Data

Received: 02/06/10

# METHOD BLANK/QC DATA

# **ORGANOCHLORINE PESTICIDES (EPA 608)**

Spike

Source

		Keporting			Spike	Source		OKEC		KI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1291 Extracted: 02/11/	10										
Blank Analyzed: 02/12/2010 (10B1291	-BLK1)										
4,4'-DDD	ND	0.0050	0.0020	ug/l							
4,4'-DDE	ND	0.0050	0.0030	ug/l							
4,4'-DDT	ND	0.010	0.0040	ug/l							
Aldrin	ND	0.0050	0.0015	ug/l							
alpha-BHC	ND	0.0050	0.0025	ug/l							
beta-BHC	ND	0.010	0.0040	ug/l							
delta-BHC	ND	0.0050	0.0035	ug/l							
Dieldrin	ND	0.0050	0.0020	ug/l							
Endosulfan I	ND	0.0050	0.0020	ug/l							
Endosulfan II	ND	0.0050	0.0030	ug/l							
Endosulfan sulfate	ND	0.010	0.0030	ug/l							
Endrin	ND	0.0050	0.0020	ug/l							
Endrin aldehyde	ND	0.010	0.0020	ug/l							
Endrin ketone	ND	0.010	0.0030	ug/l							
gamma-BHC (Lindane)	ND	0.020	0.0030	ug/l							
Heptachlor	ND	0.010	0.0030	ug/l							
Heptachlor epoxide	ND	0.0050	0.0025	ug/l							
Methoxychlor	ND	0.0050	0.0035	ug/l							
Chlordane	ND	0.10	0.040	ug/l							
Toxaphene	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.387			ug/l	0.500		77	45-120			
Surrogate: Tetrachloro-m-xylene	0.240			ug/l	0.500		48	35-115			
LCS Analyzed: 02/12/2010 (10B1291-I											
4,4'-DDD	0.464	0.0050	0.0020	ug/l	0.500		93	55-120			
4,4'-DDE	0.418	0.0050	0.0030	ug/l	0.500		84	50-120			
4,4'-DDT	0.450	0.010	0.0040	ug/l	0.500		90	55-120			
Aldrin	0.374	0.0050	0.0015	ug/l	0.500		75	40-115			
alpha-BHC	0.369	0.0050	0.0025	ug/l	0.500		74	45-115			
beta-BHC	0.361	0.010	0.0040	ug/l	0.500		72	55-115			
delta-BHC	0.404	0.0050	0.0035	ug/l	0.500		81	55-115			
Dieldrin	0.434	0.0050	0.0020	ug/l	0.500		87	55-115			
Endosulfan I	0.423	0.0050	0.0020	ug/l	0.500		85	55-115			
Endosulfan II	0.464	0.0050	0.0030	ug/l	0.500		93	55-120			
Endosulfan sulfate	0.431	0.010	0.0030	ug/l	0.500		86	60-120			
Endrin	0.477	0.0050	0.0020	ug/l	0.500		95	55-115			
Test America Irvine											

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

# **ORGANOCHLORINE PESTICIDES (EPA 608)**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1291 Extracted: 02/11/10	_										
	_										
LCS Analyzed: 02/12/2010 (10B1291-BS	1)										
Endrin aldehyde	0.393	0.010	0.0020	ug/l	0.500		79	50-120			
Endrin ketone	0.454	0.010	0.0030	ug/l	0.500		91	55-120			
gamma-BHC (Lindane)	0.381	0.020	0.0030	ug/l	0.500		76	45-115			
Heptachlor	0.415	0.010	0.0030	ug/l	0.500		83	45-115			
Heptachlor epoxide	0.407	0.0050	0.0025	ug/l	0.500		81	55-115			
Methoxychlor	0.485	0.0050	0.0035	ug/l	0.500		97	60-120			
Surrogate: Decachlorobiphenyl	0.394			ug/l	0.500		79	45-120			
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			
Matrix Spike Analyzed: 02/12/2010 (10B	1291-MS1)				Sou	rce: ITB(	0602-01				
4,4'-DDD	0.362	0.019	0.0075	ug/l	0.472	ND	77	50-125			
4,4'-DDE	0.530	0.019	0.011	ug/l	0.472	ND	112	45-125			
4,4'-DDT	0.402	0.038	0.015	ug/l	0.472	ND	85	50-125			
Aldrin	0.386	0.019	0.0057	ug/l	0.472	ND	82	35-120			
alpha-BHC	0.372	0.019	0.0094	ug/l	0.472	ND	79	40-120			
beta-BHC	0.186	0.038	0.015	ug/l	0.472	ND	39	50-120			M2
delta-BHC	0.314	0.019	0.013	ug/l	0.472	ND	67	50-120			
Dieldrin	0.390	0.019	0.0075	ug/l	0.472	ND	83	50-120			
Endosulfan I	0.475	0.019	0.0075	ug/l	0.472	ND	101	50-120			
Endosulfan II	0.390	0.019	0.011	ug/l	0.472	ND	83	50-125			
Endosulfan sulfate	0.333	0.038	0.011	ug/l	0.472	ND	71	55-125			
Endrin	0.413	0.019	0.0075	ug/l	0.472	ND	88	50-120			
Endrin aldehyde	0.190	0.038	0.0075	ug/l	0.472	ND	40	45-125			M2
Endrin ketone	0.342	0.038	0.011	ug/l	0.472	ND	72	50-125			
gamma-BHC (Lindane)	0.371	0.075	0.011	ug/l	0.472	ND	79	40-120			
Heptachlor	0.452	0.038	0.011	ug/l	0.472	ND	96	40-120			
Heptachlor epoxide	0.450	0.019	0.0094	ug/l	0.472	ND	95	50-120			
Methoxychlor	0.447	0.019	0.013	ug/l	0.472	ND	95	55-125			
Surrogate: Decachlorobiphenyl	0.418			ug/l	0.472		89	45-120			
Surrogate: Tetrachloro-m-xylene	0.220			ug/l	0.472		47	35-115			

### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

# **ORGANOCHLORINE PESTICIDES (EPA 608)**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1291 Extracted: 02/11/10	<u>)                                    </u>										
Matrix Spike Dup Analyzed: 02/12/2010	(10B1291-M	(SD1)			Sou	rce: ITB(	0602-01				
4,4'-DDD	0.364	0.019	0.0075	ug/l	0.472	ND	77	50-125	0.5	30	
4,4'-DDE	0.527	0.019	0.011	ug/l	0.472	ND	112	45-125	0.7	30	
4,4'-DDT	0.396	0.038	0.015	ug/l	0.472	ND	84	50-125	1	30	
Aldrin	0.384	0.019	0.0057	ug/l	0.472	ND	81	35-120	0.6	30	
alpha-BHC	0.367	0.019	0.0094	ug/l	0.472	ND	78	40-120	1	30	
beta-BHC	0.196	0.038	0.015	ug/l	0.472	ND	42	50-120	5	30	M2
delta-BHC	0.313	0.019	0.013	ug/l	0.472	ND	66	50-120	0.2	30	
Dieldrin	0.387	0.019	0.0075	ug/l	0.472	ND	82	50-120	0.7	30	
Endosulfan I	0.471	0.019	0.0075	ug/l	0.472	ND	100	50-120	1	30	
Endosulfan II	0.393	0.019	0.011	ug/l	0.472	ND	83	50-125	0.7	30	
Endosulfan sulfate	0.346	0.038	0.011	ug/l	0.472	ND	73	55-125	4	30	
Endrin	0.409	0.019	0.0075	ug/l	0.472	ND	87	50-120	1	30	
Endrin aldehyde	0.197	0.038	0.0075	ug/l	0.472	ND	42	45-125	4	30	M2
Endrin ketone	0.338	0.038	0.011	ug/l	0.472	ND	72	50-125	1	30	
gamma-BHC (Lindane)	0.368	0.075	0.011	ug/l	0.472	ND	78	40-120	0.6	30	
Heptachlor	0.441	0.038	0.011	ug/l	0.472	ND	93	40-120	3	30	
Heptachlor epoxide	0.447	0.019	0.0094	ug/l	0.472	ND	95	50-120	0.7	30	
Methoxychlor	0.442	0.019	0.013	ug/l	0.472	ND	94	55-125	1	30	
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.472		86	45-120			
Surrogate: Tetrachloro-m-xylene	0.264			ug/l	0.472		56	35-115			

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

# **TOTAL PCBS (EPA 608)**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1291 Extracted: 02/11/10	<u>L</u>										
	_										
Blank Analyzed: 02/11/2010 (10B1291-B	LK1)										
Aroclor 1016	ND	0.50	0.25	ug/l							
Aroclor 1221	ND	0.50	0.25	ug/l							
Aroclor 1232	ND	0.50	0.25	ug/l							
Aroclor 1242	ND	0.50	0.25	ug/l							
Aroclor 1248	ND	0.50	0.25	ug/l							
Aroclor 1254	ND	0.50	0.25	ug/l							
Aroclor 1260	ND	0.50	0.25	ug/l							
Surrogate: Decachlorobiphenyl	0.422			ug/l	0.500		84	45-120			
LCS Analyzed: 02/11/2010 (10B1291-BS	2)										
Aroclor 1016	2.94	0.50	0.25	ug/l	4.00		74	50-115			
Aroclor 1260	3.60	0.50	0.25	ug/l	4.00		90	60-120			
Surrogate: Decachlorobiphenyl	0.432			ug/l	0.500		86	45-120			
Matrix Spike Analyzed: 02/11/2010 (10B	1291-MS2)				Sou	rce: ITB	0602-01				
Aroclor 1016	4.30	0.47	0.24	ug/l	3.77	ND	114	45-120			
Aroclor 1260	3.32	0.47	0.24	ug/l	3.77	ND	88	55-125			
Surrogate: Decachlorobiphenyl	0.388			ug/l	0.472		82	45-120			
Matrix Spike Dup Analyzed: 02/11/2010	(10B1291-M	SD2)			Sou	rce: ITB	0602-01				
Aroclor 1016	4.36	0.47	0.24	ug/l	3.77	ND	116	45-120	1	30	
Aroclor 1260	3.32	0.47	0.24	ug/l	3.77	ND	88	55-125	0.2	25	
Surrogate: Decachlorobiphenyl	0.383			ug/l	0.472		81	45-120			



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

## HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1991 Extracted: 02/17/1</b>	<u>0</u>										
Blank Analyzed: 02/17/2010 (10B1991-1	BLK1)										
Hexane Extractable Material (Oil & Grease)	ND	5.0	1.4	mg/l							
LCS Analyzed: 02/17/2010 (10B1991-B	<b>S</b> 1)										
Hexane Extractable Material (Oil & Grease)	20.5	5.0	1.4	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 02/17/2010 (10B19)	91-BSD1)										
Hexane Extractable Material (Oil & Grease)	20.2	5.0	1.4	mg/l	20.0		101	78-114	1	11	

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1598 Extracted: 02/12/10	<u>_</u>										
District Associated 4, 02/15/2010 (10D1500 D	I IZ1)										
Blank Analyzed: 02/15/2010 (10B1598-B	ND	2.0	0.30	Л							
Antimony Cadmium	ND ND			ug/l							
	ND ND	1.0 2.0	0.10 0.50	ug/l							
Copper Lead	ND ND	1.0	0.30	ug/l							
Thallium	ND ND			ug/l							
1 nailium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/15/2010 (10B1598-BS	1)										
Antimony	82.5	2.0	0.30	ug/l	80.0		103	85-115			
Cadmium	82.4	1.0	0.10	ug/l	80.0		103	85-115			
Copper	81.0	2.0	0.50	ug/l	80.0		101	85-115			
Lead	84.3	1.0	0.20	ug/l	80.0		105	85-115			
Thallium	81.6	1.0	0.20	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 02/15/2010 (10B	1598-MS1)				Sou	rce: ITB(	)888-01				
Antimony	83.1	2.0	0.30	ug/l	80.0	ND	104	70-130			
Cadmium	79.9	1.0	0.10	ug/l	80.0	ND	100	70-130			
Copper	80.3	2.0	0.50	ug/l	80.0	1.68	98	70-130			
Lead	77.4	1.0	0.20	ug/l	80.0	0.398	96	70-130			
Thallium	79.3	1.0	0.20	ug/l	80.0	ND	99	70-130			
Matrix Spike Analyzed: 02/15/2010 (10B	1598-MS2)				Sou	rce: ITB(	900-02				
Antimony	82.9	2.0	0.30	ug/l	80.0	ND	104	70-130			
Cadmium	81.1	1.0	0.10	ug/l	80.0	ND	101	70-130			
Copper	84.1	2.0	0.50	ug/l	80.0	1.41	103	70-130			
Lead	78.7	1.0	0.20	ug/l	80.0	0.252	98	70-130			
Thallium	82.9	1.0	0.20	ug/l	80.0	ND	104	70-130			
Matrix Spike Dup Analyzed: 02/15/2010	(10B1598-M	ISD1)			Sou	rce: ITB(	0888-01				
Antimony	84.1	2.0	0.30	ug/l	80.0	ND	105	70-130	1	20	
Cadmium	80.8	1.0	0.10	ug/l	80.0	ND	101	70-130	1	20	
Copper	82.7	2.0	0.50	ug/l	80.0	1.68	101	70-130	3	20	
Lead	79.1	1.0	0.20	ug/l	80.0	0.398	98	70-130	2	20	
Thallium	80.5	1.0	0.20	ug/l	80.0	ND	101	70-130	1	20	

### **TestAmerica Irvine**



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **METALS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1911 Extracted: 02/16	/10										
Blank Analyzed: 02/16/2010 (10B1911	I-BLK1)										
Aluminum	ND	0.050	0.040	mg/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	0.0243	0.050	0.020	mg/l							Ja
Calcium	ND	0.10	0.050	mg/l							
Chromium	ND	5.0	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
Magnesium	ND	0.020	0.012	mg/l							
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Silver	ND	10	6.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 02/16/2010 (10B1911-	BS1)										
Aluminum	0.502	0.050	0.040	mg/l	0.500		100	85-115			
Arsenic	472	10	7.0	ug/l	500		94	85-115			
Beryllium	483	2.0	0.90	ug/l	500		97	85-115			
Boron	0.498	0.050	0.020	mg/l	0.500		100	85-115			
Calcium	2.44	0.10	0.050	mg/l	2.50		97	85-115			
Chromium	456	5.0	2.0	ug/l	500		91	85-115			
Iron	0.481	0.040	0.015	mg/l	0.500		96	85-115			
Magnesium	2.36	0.020	0.012	mg/l	2.50		94	85-115			
Nickel	464	10	2.0	ug/l	500		93	85-115			
Selenium	452	10	8.0	ug/l	500		90	85-115			
Silver	242	10	6.0	ug/l	250		97	85-115			
Vanadium	467	10	3.0	ug/l	500		93	85-115			
Zinc	460	20	6.0	ug/l	500		92	85-115			
				-							



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

## **METALS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1911 Extracted: 02/16/10	)										
Matrix Spike Analyzed: 02/16/2010 (10E	B1911-MS1)				Sou	rce: ITB	1030-02				
Aluminum	1.49	0.050	0.040	mg/l	0.500	0.882	122	70-130			
Arsenic	516	10	7.0	ug/l	500	13.4	101	70-130			
Beryllium	486	2.0	0.90	ug/l	500	ND	97	70-130			
Boron	2.08	0.050	0.020	mg/l	0.500	1.56	105	70-130			
Calcium	29.1	0.10	0.050	mg/l	2.50	26.3	112	70-130			MHA
Chromium	461	5.0	2.0	ug/l	500	ND	92	70-130			
Iron	1.73	0.040	0.015	mg/l	0.500	1.11	125	70-130			
Magnesium	24.0	0.020	0.012	mg/l	2.50	21.2	112	70-130			MHA
Nickel	468	10	2.0	ug/l	500	7.99	92	70-130			
Selenium	461	10	8.0	ug/l	500	ND	92	70-130			
Silver	244	10	6.0	ug/l	250	7.93	94	70-130			
Vanadium	524	10	3.0	ug/l	500	44.0	96	70-130			
Zinc	482	20	6.0	ug/l	500	15.1	93	70-130			
Matrix Spike Dup Analyzed: 02/16/2010	(10B1911-M	SD1)			Sou	rce: ITB	1030-02				
Aluminum	1.50	0.050	0.040	mg/l	0.500	0.882	123	70-130	0.4	20	
Arsenic	507	10	7.0	ug/l	500	13.4	99	70-130	2	20	
Beryllium	486	2.0	0.90	ug/l	500	ND	97	70-130	0.1	20	
Boron	2.05	0.050	0.020	mg/l	0.500	1.56	99	70-130	1	20	
Calcium	28.8	0.10	0.050	mg/l	2.50	26.3	101	70-130	1	20	MHA
Chromium	451	5.0	2.0	ug/l	500	ND	90	70-130	2	20	
Iron	1.67	0.040	0.015	mg/l	0.500	1.11	113	70-130	4	20	
Magnesium	23.6	0.020	0.012	mg/l	2.50	21.2	96	70-130	2	20	MHA
Nickel	465	10	2.0	ug/l	500	7.99	91	70-130	0.7	20	
Selenium	446	10	8.0	ug/l	500	ND	89	70-130	3	20	
Silver	246	10	6.0	ug/l	250	7.93	95	70-130	0.8	20	
Vanadium	517	10	3.0	ug/l	500	44.0	95	70-130	1	20	
Zinc	473	20	6.0	ug/l	500	15.1	92	70-130	2	20	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **METALS**

Analyte	I Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B1942 Extracted: 02/16/10</b>	-										
Blank Analyzed: 02/16/2010 (10B1942-Bl	LK1)										
Mercury	ND	0.20	0.10	ug/l							
LCS Analyzed: 02/16/2010 (10B1942-BS)	1)										
Mercury	7.96	0.20	0.10	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B	1942-MS1)				Sou	rce: ITB(	974-01				
Mercury	7.91	0.20	0.10	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 02/16/2010 (10B1942-MSD1)					Sou	rce: ITB(	974-01				
Mercury	7.91	0.20	0.10	ug/l	8.00	ND	99	70-130	0.03	20	



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **DISSOLVED METALS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1845 Extracted: 02/15/10	_										
Blank Analyzed: 02/16/2010 (10B1845-Bl	,										
Antimony	ND	2.0	0.30	ug/l							
Cadmium	ND	1.0	0.10	ug/l							
Lead	ND	1.0	0.20	ug/l							
Thallium	ND	1.0	0.20	ug/l							
LCS Analyzed: 02/16/2010 (10B1845-BS1	1)										
Antimony	81.7	2.0	0.30	ug/l	80.0		102	85-115			
Cadmium	81.8	1.0	0.10	ug/l	80.0		102	85-115			
Lead	84.1	1.0	0.20	ug/l	80.0		105	85-115			
Thallium	87.0	1.0	0.20	ug/l	80.0		109	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B	1845-MS1)				Sou	rce: ITB1	082-03				
Antimony	82.8	20	3.0	ug/l	80.0	ND	103	70-130			
Cadmium	81.7	10	1.0	ug/l	80.0	1.14	101	70-130			
Lead	74.3	10	2.0	ug/l	80.0	ND	93	70-130			
Thallium	78.4	10	2.0	ug/l	80.0	ND	98	70-130			
Matrix Spike Analyzed: 02/16/2010 (10B	1845-MS2)				Sou	rce: ITB(	888-01				
Antimony	86.1	2.0	0.30	ug/l	80.0	ND	108	70-130			
Cadmium	83.4	1.0	0.10	ug/l	80.0	ND	104	70-130			
Lead	78.5	1.0	0.20	ug/l	80.0	ND	98	70-130			
Thallium	85.5	1.0	0.20	ug/l	80.0	ND	107	70-130			
Matrix Spike Dup Analyzed: 02/16/2010	(10B1845-M	SD1)			Sou	rce: ITB1	082-03				
Antimony	85.7	20	3.0	ug/l	80.0	ND	107	70-130	4	20	
Cadmium	84.8	10	1.0	ug/l	80.0	1.14	105	70-130	4	20	
Lead	76.5	10	2.0	ug/l	80.0	ND	96	70-130	3	20	
Thallium	80.8	10	2.0	ug/l	80.0	ND	101	70-130	3	20	



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **DISSOLVED METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Ziiiii	ME	Cints	Level	resure	, une	Limits	I L	Ziiiii	Quantiers
<b>Batch: 10B1846 Extracted: 02/15/10</b>	<u>)                                    </u>										
Blank Analyzed: 02/16/2010 (10B1846-B	BLK1)										
Aluminum	ND	0.050	0.040	mg/l							
Arsenic	ND	10	7.0	ug/l							
Beryllium	ND	2.0	0.90	ug/l							
Boron	0.0453	0.050	0.020	mg/l							Ja
Calcium	0.0573	0.10	0.050	mg/l							Ja
Iron	0.0219	0.040	0.015	mg/l							Ja
Magnesium	0.0150	0.020	0.012	mg/l							Ja
Nickel	ND	10	2.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	6.0	ug/l							
LCS Analyzed: 02/16/2010 (10B1846-BS	51)										
Aluminum	0.510	0.050	0.040	mg/l	0.500		102	85-115			
Arsenic	521	10	7.0	ug/l	500		104	85-115			
Beryllium	486	2.0	0.90	ug/l	500		97	85-115			
Boron	0.521	0.050	0.020	mg/l	0.500		104	85-115			
Calcium	2.42	0.10	0.050	mg/l	2.50		97	85-115			
Iron	0.499	0.040	0.015	mg/l	0.500		100	85-115			
Magnesium	2.42	0.020	0.012	mg/l	2.50		97	85-115			
Nickel	480	10	2.0	ug/l	500		96	85-115			
Vanadium	489	10	3.0	ug/l	500		98	85-115			
Zinc	499	20	6.0	ug/l	500		100	85-115			
Matrix Spike Analyzed: 02/16/2010 (10E	31846-MS1)				Sou	rce: ITB(	0895-01				
Aluminum	0.519	0.050	0.040	mg/l	0.500	ND	104	70-130			
Arsenic	543	10	7.0	ug/l	500	ND	109	70-130			
Beryllium	503	2.0	0.90	ug/l	500	ND	101	70-130			
Boron	0.617	0.050	0.020	mg/l	0.500	0.110	102	70-130			
Calcium	28.3	0.10	0.050	mg/l	2.50	24.7	144	70-130			MHA
Iron	0.567	0.040	0.015	mg/l	0.500	ND	113	70-130			
Magnesium	7.76	0.020	0.012	mg/l	2.50	4.98	111	70-130			
Nickel	488	10	2.0	ug/l	500	ND	98	70-130			
Vanadium	500	10	3.0	ug/l	500	ND	100	70-130			
Zinc	523	20	6.0	ug/l	500	12.7	102	70-130			

### **TestAmerica Irvine**

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **DISSOLVED METALS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B1846 Extracted: 02/15/10	<u>.</u>										
Matrix Spike Analyzed: 02/16/2010 (10B	1846-MS2)				Sou	rce: ITB	0887-04				
Aluminum	1.66	0.050	0.040	mg/l	0.500	0.761	179	70-130			M1
Arsenic	510	10	7.0	ug/l	500	ND	102	70-130			
Beryllium	481	2.0	0.90	ug/l	500	ND	96	70-130			
Boron	0.549	0.050	0.020	mg/l	0.500	0.0701	96	70-130			
Calcium	13.1	0.10	0.050	mg/l	2.50	11.0	84	70-130			MHA
Iron	1.16	0.040	0.015	mg/l	0.500	0.642	104	70-130			
Magnesium	5.35	0.020	0.012	mg/l	2.50	3.23	85	70-130			
Nickel	465	10	2.0	ug/l	500	ND	93	70-130			
Vanadium	486	10	3.0	ug/l	500	ND	97	70-130			
Zinc	497	20	6.0	ug/l	500	10.3	97	70-130			
Matrix Spike Dup Analyzed: 02/16/2010	(10B1846-M	SD1)			Sou	rce: ITB	0895-01				
Aluminum	0.497	0.050	0.040	mg/l	0.500	ND	99	70-130	4	20	
Arsenic	534	10	7.0	ug/l	500	ND	107	70-130	2	20	
Beryllium	480	2.0	0.90	ug/l	500	ND	96	70-130	5	20	
Boron	0.599	0.050	0.020	mg/l	0.500	0.110	98	70-130	3	20	
Calcium	27.1	0.10	0.050	mg/l	2.50	24.7	96	70-130	4	20	MHA
Iron	0.509	0.040	0.015	mg/l	0.500	ND	102	70-130	11	20	
Magnesium	7.37	0.020	0.012	mg/l	2.50	4.98	96	70-130	5	20	
Nickel	472	10	2.0	ug/l	500	ND	94	70-130	3	20	
Vanadium	480	10	3.0	ug/l	500	ND	96	70-130	4	20	
Zinc	510	20	6.0	ug/l	500	12.7	99	70-130	3	20	
Batch: 10B1953 Extracted: 02/16/10	<u>-</u>										
Blank Analyzed: 02/16/2010 (10B1953-B	LK1)										
Mercury	ND	0.20	0.10	ug/l							

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **DISSOLVED METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10B1953 Extracted: 02/16/10	_										
LCS Analyzed: 02/16/2010 (10B1953-BS	1)										
Mercury	8.15	0.20	0.10	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 02/16/2010 (10B	1953-MS1)				Sou	rce: ITB0	907-01				
Mercury	7.43	0.20	0.10	ug/l	8.00	ND	93	70-130			
Matrix Spike Dup Analyzed: 02/16/2010	(10B1953-M	SD1)			Sou	rce: ITB0	907-01				
Mercury	7.66	0.20	0.10	ug/l	8.00	ND	96	70-130	3	20	
Batch: 10B2106 Extracted: 02/17/10	-										
Blank Analyzed: 02/17/2010 (10B2106-B	LK1)										
Copper	ND	2.0	0.50	ug/l							
LCS Analyzed: 02/17/2010 (10B2106-BS	1)										
Copper	77.6	2.0	0.50	ug/l	80.0		97	85-115			
Matrix Spike Analyzed: 02/17/2010 (10B	2106-MS1)			Source: ITB1775-07							
Copper	76.0	2.0	0.50	ug/l	80.0	2.19	92	70-130			
Matrix Spike Dup Analyzed: 02/17/2010	(10B2106-M	SD1)			Sou	rce: ITB1	775-07				
Copper	77.2	2.0	0.50	ug/l	80.0	2.19	94	70-130	2	20	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

## **DISSOLVED INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 10B0756 Extracted: 02/06/10</b>	-										
Blank Analyzed: 02/06/2010 (10B0756-Bl	LK1)										
Chromium VI	ND	1.0	0.25	ug/l							
LCS Analyzed: 02/06/2010 (10B0756-BS)	1)										
Chromium VI	4.95	1.0	0.25	ug/l	5.00		99	90-110			
Matrix Spike Analyzed: 02/06/2010 (10B	0756-MS1)				Sou	rce: ITB	0889-01				
Chromium VI	4.80	1.0	0.25	ug/l	5.00	ND	96	90-110			
Matrix Spike Dup Analyzed: 02/06/2010 (10B0756-MSD1)					Sou	rce: ITB(	0889-01				
Chromium VI	4.91	1.0	0.25	ug/l	5.00	ND	98	90-110	2	10	

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

## **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10B0814 Extracted: 02/08/10	_										
DI I I I I DOMONIO (10 DOM I D	F 774)										
Blank Analyzed: 02/08/2010 (10B0814-B)	,										
Fluoride	0.0335	0.10	0.020	mg/l							Ja
LCS Analyzed: 02/08/2010 (10B0814-BS)	1)										
Fluoride	1.04	0.10	0.020	mg/l	1.00		104	90-110			
Matrix Spike Analyzed: 02/08/2010 (10B	0814-MS1)				Sou	rce: ITB(	0610-01				
Fluoride	1.48	0.10	0.020	mg/l	1.00	0.481	100	80-120			
Matrix Spike Dup Analyzed: 02/08/2010	(10B0814-MS	SD1)			Sou	rce: ITB(	0610-01				
Fluoride	1.50	0.10	0.020	mg/l	1.00	0.481	101	80-120	1	20	
Batch: 10B0856 Extracted: 02/08/10	_										
Blank Analyzed: 02/08/2010 (10B0856-B	LK1)										
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 02/08/2010 (10B0856-BS)	1)										
Chloride	4.73	0.50	0.25	mg/l	5.00		95	90-110			M-3
Sulfate	9.84	0.50	0.20	mg/l	10.0		98	90-110			M-3
Matrix Spike Analyzed: 02/08/2010 (10B	0856-MS1)				Sou	rce: ITB(	0894-01				
Chloride	11.2	0.50	0.25	mg/l	5.00	5.65	112	80-120			
Sulfate	23.8	0.50	0.20	mg/l	10.0	12.8	110	80-120			
Matrix Spike Dup Analyzed: 02/08/2010	(10B0856-MS	SD1)			Sou	rce: ITB(	0894-01				
Chloride	11.2	0.50	0.25	mg/l	5.00	5.65	111	80-120	0.5	20	
Sulfate	23.6	0.50	0.20	mg/l	10.0	12.8	108	80-120	0.6	20	

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

## **INORGANICS**

Amaluta	Dogul4	Reporting Limit	MDL	Units	Spike Level	Source	0/ DEC	%REC	RPD	RPD Limit	Data
Analyte	Result	Limit	MIDL	Units	Level	Result	%REC	Limits	KPD	Limit	Qualifiers
Batch: 10B1250 Extracted: 02/10/10	_										
Blank Analyzed: 02/10/2010 (10B1250-B	LK1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/10/2010 (10B1250-BS	1)										
Total Cyanide	190	5.0	2.2	ug/l	200		95	90-110			
•						TED.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Matrix Spike Analyzed: 02/10/2010 (10B	*	7.0	2.2	/1		rce: ITB(		70.115			
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115			
Matrix Spike Dup Analyzed: 02/10/2010	(10B1250-M	ISD1)			Sou	rce: ITB(	0359-02				
Total Cyanide	182	5.0	2.2	ug/l	200	ND	91	70-115	3	15	
Batch: 10B1487 Extracted: 02/12/10	_										
Blank Analyzed: 02/12/2010 (10B1487-B)	,										
Total Dissolved Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/12/2010 (10B1487-BS	1)										
Total Dissolved Solids	1010	10	1.0	mg/l	1000		101	90-110			
Duplicate Analyzed: 02/12/2010 (10B148	7-DUP1)				Sou	rce: ITB1	1082-01				
Total Dissolved Solids	2140	10	1.0	mg/l		2150			0.7	10	
Batch: 10B1648 Extracted: 02/12/10	_										
Blank Analyzed: 02/12/2010 (10B1648-B	LK1)										
Total Suspended Solids	ND	10	1.0	mg/l							

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

## **INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 10B1648 Extracted: 02/12/10				2			,,,,,,				<b>C</b>
L CC A	- 1)										
LCS Analyzed: 02/12/2010 (10B1648-BS	,										
Total Suspended Solids	1000	10	1.0	mg/l	1000		100	85-115			
Duplicate Analyzed: 02/12/2010 (10B164	8-DUP1)				Sou	rce: ITB1	069-01				
Total Suspended Solids	35.0	10	1.0	mg/l		36.0			3	10	
Batch: 10B1658 Extracted: 02/13/10	_										
Blank Analyzed: 02/13/2010 (10B1658-B	LK1)										
Perchlorate	ND	4.0	0.90	ug/l							
LCS Analyzed: 02/13/2010 (10B1658-BS	1)										
Perchlorate	24.4	4.0	0.90	ug/l	25.0		98	85-115			
Matrix Spike Analyzed: 02/13/2010 (10B	1658-MS1)			Source: ITB1511-01							
Perchlorate	24.6	4.0	0.90	ug/l	25.0	1.91	91	80-120			
Matrix Spike Dup Analyzed: 02/13/2010	(10B1658-M	(SD1)			Sou	rce: ITB1	511-01				
Perchlorate	24.7	4.0	0.90	ug/l	25.0	1.91	91	80-120	0.2	20	

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **ASTM 5174-91**

Analyte  Batch: 53280 Extracted: 02/23/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup Analyzed: 02/26/2010 Total Uranium	<b>(F0B09047000</b>	<b>21D)</b> 1.4	0.4	pCi/L	<b>Sou</b> 27.7	rce: F0B0 0.566	<b>09047000</b> 106	<b>1</b> 62-150	1	20	
Matrix Spike Analyzed: 02/26/2010 (F0B Total Uranium	<b>090470001S</b> )	1.4	0.4	pCi/L	<b>Sou</b> 27.7	rce: F0B0	<b>09047000</b> 105	<b>1</b> 62-150			
Blank Analyzed: 02/26/2010 (F0B220000 Total Uranium		0.693	0.21	pCi/L	Sou		103	-			U
LCS Analyzed: 02/26/2010 (F0B2200002) Total Uranium	80C) 30.2	0.7	0.2	pCi/L	<b>Sou</b> 27.7	rce:	109	90-120			

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

# METHOD BLANK/QC DATA

### **EPA 900.0 MOD**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 43108 Extracted: 02/10/10	Result	Zimit	MDL	Omes	Level	Result	70KLC	Limes	KI D	Limit	Quantiers
Matrix Spike Analyzed: 02/18/2010 (F0B	090470001S)				Sou	rce: F0B0	9047000	1			
Gross Alpha	47.2	3	1	pCi/L	49.4	2	91	35-150			
Gross Beta	79	4	1.5	pCi/L	68	3.9	110	54-150			
<b>Duplicate Analyzed: 02/18/2010 (F0B090</b>	470001X)				Sou	rce: F0B(	9047000	1			
Gross Alpha	0.84	3	0.94	pCi/L		2		-			U
Gross Beta	3.2	4	1.5	pCi/L		3.9		-			Jb
Blank Analyzed: 02/19/2010 (F0B120000	108B)				Sou	rce:					
Gross Alpha	-0.28	2	0.87	pCi/L				-			U
Gross Beta	-0.23	4	1.1	pCi/L				-			U
LCS Analyzed: 02/19/2010 (F0B1200001	08C)				Sou	rce:					
Gross Alpha	34.8	3	1.2	pCi/L	49.4		70	62-134			
Gross Beta	71.6	4	1	pCi/L	68		105	58-133			

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA 901.1 MOD**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 42136 Extracted: 02/11/10</b>											
Duplicate Analyzed: 02/19/2010 (F0B090	0470001X)				Sou	rce: F0B0	9047000	1			
Cesium 137	1.2	20	14	pCi/L		-2.9		-			U
Potassium 40	-50	NA	200	pCi/L		-100		-			U
Blank Analyzed: 02/19/2010 (F0B110000	0136B)				Sou	rce:					
Cesium 137	1.8	20	14	pCi/L				-			U
Potassium 40	-80	NA	210	pCi/L				-			U
LCS Analyzed: 02/19/2010 (F0B1100001	36C)				Sou	rce:					
Americium 241	140000	NA	500	pCi/L	141000		99	87-110			
Cobalt 60	88000	NA	200	pCi/L	87900		100	89-110			
Cesium 137	52900	20	200	pCi/L	53100		100	90-110			



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA 903.0 MOD**

Analyte  Batch: 41160 Extracted: 02/10/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Duplicate Analyzed: 02/26/2010 (F0B09</b> ) Radium (226)	0467001X) 0.07	1	0.29	pCi/L	Sou	rce: F0B( 0.089	)9046700	1 -			U
Blank Analyzed: 02/26/2010 (F0B100000 Radium (226)	0.092	1	0.14	pCi/L	Sou	rce:		-			U
LCS Analyzed: 02/26/2010 (F0B1000000) Radium (226)	<b>60C)</b> 10.4	1	0.2	pCi/L	<b>Sou</b> 11.3	rce:	93	68-136			



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA 904 MOD**

Analyte  Batch: 60257 Extracted: 03/01/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 03/05/2010 (F0C010000) Radium 228	<b>257B)</b> 0.08	1	0.39	pCi/L	Sour	rce:		-			U
LCS Analyzed: 03/05/2010 (F0C0100002 Radium 228	<b>57C)</b> 6.23	1	0.39	pCi/L	<b>Sou</b> : 6.4	rce:	97	60-142			
LCS Dup Analyzed: 03/05/2010 (F0C010) Radium 228	<b>000257L)</b> 6.35	1	0.4	pCi/L	<b>Sou</b> : 6.4	rce:	99	60-142	2	40	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA 905 MOD**

Analyte <u>Batch: 41162 Extracted: 02/10/10</u>	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Duplicate Analyzed: 02/19/2010 (F0B09) Strontium 90	<b>0475001X)</b> -0.15	3	0.42	pCi/L	Sou	rce: F0B0	)9047500	1 -			U
Blank Analyzed: 02/19/2010 (F0B100000 Strontium 90	<b>0162B)</b> -0.15	3	0.38	pCi/L	Sou	rce:		-			U
LCS Analyzed: 02/19/2010 (F0B1000001 Strontium 90	<b>62C)</b> 6.82	3	0.34	pCi/L	<b>Sou</b> 6.8	rce:	100	80-130			

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA 906.0 MOD**

Analyte  Batch: 49035 Extracted: 02/18/10	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Duplicate Analyzed: 02/18/2010 (F0B090</b>	470001X)				Sou	rce: F0B0	9047000	1			
Tritium	80	500	92	pCi/L		114		-			U
Matrix Spike Analyzed: 02/18/2010 (F0E	8090473001S)				Sou	rce: F0B0	9047300	1			
Tritium	4650	500	90	pCi/L	4530	122	100	62-147			
Blank Analyzed: 02/18/2010 (F0B180000	035B)				Sou	rce:					
Tritium	165	500	95	pCi/L				-			Jb
LCS Analyzed: 02/18/2010 (F0B1800000	35C)				Sour	rce:					
Tritium	4440	500	90	pCi/L	4530		98	85-112			

%REC



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Spike

Source

Report Number: ITB0890

Reporting

Sampled: 02/06/10-02/07/10

RPD

Data

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA-5 1613B**

		Keporung	<b>5</b>		Spike	Source		OKEC		KI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 48124 Extracted: 02/17/1	10										
Blank Analyzed: 02/18/2010 (G0B17	70000124B)				Sou	rce:					
1,2,3,4,6,7,8-HpCDD	2.3e-006	0.00005	0.0000011	ug/L				-			J, Q
1,2,3,4,6,7,8-HpCDF	6e-007	0.00005	0.0000004	ug/L				-			J, Q
2,3,7,8-TCDF	ND	0.00001	0.00000047	ug/L				-			
1,2,3,4,7,8,9-HpCDF	ND	0.00005	0.00000069	ug/L				-			
1,2,3,4,7,8-HxCDD	ND	0.00005	0.0000006	ug/L				-			
1,2,3,4,7,8-HxCDF	ND	0.00005	0.00000036	ug/L				-			
1,2,3,6,7,8-HxCDD	ND	0.00005	0.0000005	ug/L				-			
1,2,3,6,7,8-HxCDF	ND	0.00005	0.00000031	ug/L				-			
1,2,3,7,8,9-HxCDD	ND	0.00005	0.00000046	ug/L				-			
1,2,3,7,8,9-HxCDF	ND	0.00005	0.0000004	ug/L				-			
1,2,3,7,8-PeCDD	ND	0.00005	0.00000057	ug/L				-			
1,2,3,7,8-PeCDF	ND	0.00005	0.00000044	ug/L				-			
2,3,4,6,7,8-HxCDF	ND	0.00005	0.00000031	ug/L				-			
2,3,4,7,8-PeCDF	ND	0.00005	0.00000052	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	0.00000046	ug/L				-			
OCDD	2.3e-005	0.0001	0.00000084	ug/L				-			J
OCDF	7.2e-007	0.0001	0.0000008	ug/L				-			J, Q
Total HpCDD	1.3e-005	0.00005	0.0000011	ug/L				-			J, Q
Total HpCDF	1.1e-006	0.00005	0.0000004	ug/L				-			J, Q
Total HxCDD	ND	0.00005	0.00000046	ug/L				-			
Total HxCDF	ND	0.00005	0.00000031	ug/L				-			
Total PeCDD	ND	0.00005	0.00000057	ug/L				-			
Total PeCDF	ND	0.00005	0.00000016	ug/L				-			
Total TCDD	ND	0.00001	0.00000046	ug/L				-			
Total TCDF	ND	0.00001	0.00000047	ug/L				-			
Surrogate: 13C-2,3,7,8-TCDF	0.0013			ug/L	0.002		63	24-169			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00072			ug/L	0.0008		90	35-197			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018			ug/L	0.002		92	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0017			ug/L	0.002		86	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.002		79	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0017			ug/L	0.002		87	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0016			ug/L	0.002		82	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0017			ug/L	0.002		86	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0017			ug/L	0.002		86	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0016			ug/L	0.002		81	29-147			

### **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager

%REC

Sampled: 02/06/10-02/07/10

RPD

Data



THE LEADER IN ENVIRONMENTAL TESTING

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Annual Outfall 003

Annual Outfall 003

Spike

Report Number: ITB0890 Received: 02/06/10

Source

### METHOD BLANK/QC DATA

### **EPA-5 1613B**

Reporting

		Keporting	5		Spike	Source		/okec		KI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 48124 Extracted: 02/17/1	10										
Blank Analyzed: 02/18/2010 (G0B1	70000124B)				Sou	rce:					
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0016			ug/L	0.002		80	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0015			ug/L	0.002		75	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0018			ug/L	0.002		90	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0015			ug/L	0.002		74	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0014			ug/L	0.002		71	25-164			
Surrogate: 13C-OCDD	0.0039			ug/L	0.004		98	17-157			
LCS Analyzed: 02/19/2010 (G0B170	0000124C)				Sou	rce:					
1,2,3,4,6,7,8-HpCDD	0.00111	0.00005	0.0000021	ug/L	0.001		111	70-140			Ва
1,2,3,4,6,7,8-HpCDF	0.00113	0.00005	0.0000023	ug/L	0.001		113	82-122			Ba
2,3,7,8-TCDF	0.000222	0.00001	0.00000048	ug/L	0.0002		111	75-158			
1,2,3,4,7,8,9-HpCDF	0.00125	0.00005	0.000004	ug/L	0.001		125	78-138			
1,2,3,4,7,8-HxCDD	0.00128	0.00005	0.0000013	ug/L	0.001		128	70-164			
1,2,3,4,7,8-HxCDF	0.00119	0.00005	0.0000019	ug/L	0.001		119	72-134			
1,2,3,6,7,8-HxCDD	0.00109	0.00005	0.0000011	ug/L	0.001		109	76-134			
1,2,3,6,7,8-HxCDF	0.00114	0.00005	0.0000017	ug/L	0.001		114	84-130			
1,2,3,7,8,9-HxCDD	0.00102	0.00005	0.00000097	ug/L	0.001		102	64-162			
1,2,3,7,8,9-HxCDF	0.00118	0.00005	0.0000022	ug/L	0.001		118	78-130			
1,2,3,7,8-PeCDD	0.00112	0.00005	0.0000013	ug/L	0.001		112	70-142			
1,2,3,7,8-PeCDF	0.00114	0.00005	0.0000014	ug/L	0.001		114	80-134			
2,3,4,6,7,8-HxCDF	0.00116	0.00005	0.0000016	ug/L	0.001		116	70-156			
2,3,4,7,8-PeCDF	0.00115	0.00005	0.0000016	ug/L	0.001		115	68-160			
2,3,7,8-TCDD	0.000231	0.00001	0.00000063	ug/L	0.0002		115	67-158			
OCDD	0.00222	0.0001	0.0000034	ug/L	0.002		111	78-144			Ba
OCDF	0.0021	0.0001	0.0000025	ug/L	0.002		105	63-170			Ва
Surrogate: 13C-2,3,7,8-TCDF	0.00139			ug/L	0.002		70	22-152			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.000723			ug/L	0.0008		90	31-191			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00186			ug/L	0.002		93	26-166			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00176			ug/L	0.002		88	21-158			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0016			ug/L	0.002		80	20-186			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00179			ug/L	0.002		89	21-193			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00175			ug/L	0.002		87	19-202			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00189			ug/L	0.002		94	25-163			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00177			ug/L	0.002		89	21-159			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00171			ug/L	0.002		85	17-205			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00174			ug/L	0.002		87	21-227			

### **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Annual Outfall 003

Annual Outfall 003

Report Number: ITB0890

Sampled: 02/06/10-02/07/10

Received: 02/06/10

### METHOD BLANK/QC DATA

### **EPA-5 1613B**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 48124 Extracted: 02/17/10											
LCS Analyzed: 02/19/2010 (G0B170000	124C)				Sou	rce:					
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00161			ug/L	0.002		81	21-192			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00192			ug/L	0.002		96	22-176			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00158			ug/L	0.002		79	13-328			
Surrogate: 13C-2,3,7,8-TCDD	0.00151			ug/L	0.002		76	20-175			
Surrogate: 13C-OCDD	0.00383			ug/L	0.004		96	13-199			



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Arcadia, CA 91007

### DATA QUALIFIERS AND DEFINITIONS

- Method blank contamination. The associated method blank contains the target analyte at a reportable level. Ba
- $\mathbf{C}$ 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 Result is greater than sample detection limit but less than stated reporting limit.
- L Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- **M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS). M2
- M-3Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- MNR1 There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- Q Estimated maximum possible concentration (EMPC).
- R-7 LFB/LFBD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- U Result is less than the sample detection limit.
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- **RPD** Relative Percent Difference

### ADDITIONAL COMMENTS

### For 1,2-Diphenylhydrazine:

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

### **TestAmerica Irvine**



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

MWH-Pasadena/Boeing Project ID: Annual Outfall 003

618 Michillinda Avenue, Suite 200 Annual Outfall 003 Sampled: 02/06/10-02/07/10

Arcadia, CA 91007 Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

### **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	X
EPA 200.7	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 218.6	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	X	X
EPA 525.2	Water		
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
Filtration	Water	N/A	N/A
SM 2540D	Water	X	X
SM 4500-F-C	Water	X	X
SM2340B-Diss	Water		
SM2340B	Water	X	X
SM2540C	Water	X	
SM4500CN-E	Water	X	X

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

### **Subcontracted Laboratories**

Aquatic Testing Laboratories-SUB California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnic

Samples: ITB0894-01

Analysis Performed: Bioassay-Acute 96hr

Samples: ITB0890-01

### **TestAmerica Irvine**

Kathleen A. Robb For Heather Clark Project Manager



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

Project ID: Annual Outfall 003

Annual Outfall 003 Sampled: 02/06/10-02/07/10

Report Number: ITB0890 Received: 02/06/10

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

### TestAmerica St. Louis

MWH-Pasadena/Boeing

Arcadia, CA 91007

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

Samples: ITB0894-01

Method Performed: EPA 900.0 MOD

Samples: ITB0894-01

Method Performed: EPA 901.1 MOD

Samples: ITB0894-01

Method Performed: EPA 903.0 MOD

Samples: ITB0894-01

Method Performed: EPA 904 MOD

Samples: ITB0894-01RE1

Method Performed: EPA 905 MOD

Samples: ITB0894-01

Method Performed: EPA 906.0 MOD

Samples: ITB0894-01

### **TestAmerica West Sacramento**

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B Samples: ITB0894-01, ITB0894-01RE1

### **TestAmerica Irvine**

Continue work of the work o							<b>5</b>		5		) }				N	27170890	90	2	1 2 2 3 3 4
Stormward of Stormward at RAMF    W VOAs 3	Citent Name/Address	 		₽ro∯	act:									ANALYSIS	REGUIR	9			
Service   Contect. Juseph Doek	MVVH-Arcadia 618 Michillinda Ave, Arcadia, CA 91007	Suite 200		Ann GRA	ing-SSFL ual Outfa ual Outfa (B	NPDES II 003 RMHF												Field (Log	ld readings: g in and include in
Surgician Continuer   Contin	Test America Contar	ot: Joseph D	oak						· · · · · ·	. <u> </u>			<u>.</u>					Ten :	np .F = 52.3
Marcia   Faz Number   Faz Num	roject Manager. Bi	onwyn Kelly		Pho	ne Numbe	<u> </u>										_		<u>Ē</u> i	
Warring   Consideration   Section	Sampler: $ec{\mathcal{E}} \mathcal{W} / \mathcal{U}$	J		626 (626	) 568-569 Number: ) 568-651;	- ю					Toxicity							<u> </u>	ne of readings = (1 5 0
W   11, Amber   2   266/16 - 1/5 C   HC    20, 29, 20/4   X   X   X   X   X   X   X   X   X			* 8	1	ampling ate/Time	Preservetive	Bottle #				etuc.A		;		•				Comments
W   VOAs   3		1L Amber			10-1150		1A, 1B¢	×											
W   VOAs   3	_	VOAs	9	_			2A, 2B, 2CV		×										
W   VOAs   3   HC  44,48,40   X		VOAs	C			None	3A, 3B, 3C											-	
W         VOAs         3         None         6 p         X         X         Composite         Control         Contr		VOA®	9			HCI	4A, 4B, 40		×										
W   1 Gat Popy   1		VOAs	3			None	5A, 5B, 5CV												MS
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work order.  DaterTime.  DaterTime.  DaterTime.  DaterTime.  DaterTime.  DaterTime.  DaterTime.  Received By  DaterTime.  Server integrity. (Check)  DaterTime.  DaterTime.  Received By  DaterTime.  Received By  DaterTime.  DaterTime.  Received By  DaterTime.  DaterTime.  Received By  DaterTime.  DaterTime.  Name Requirements (Check)  No Level IV.  All boot IV.  All boot IV.  No Level IV.  All boot IV.		500 mL Pot				None				×							_		10/0
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work order.  DeterTime.  M. 2-6-10 UCS. 24 Hour. 10 D.  DeterTime.  As Hour. 55 by. Nomice Nomice.  DeterTime.  As Hour. 55 by. Nomice Nomice.  DeterTime.  As Hour. 55 by. Nomice Nomice.  Seewfed By DeterTime.  DeterTime.  As Hour. 10 D.  As Hour. 10 D		1 Gal Poly	{	_	<del>}</del>	None					×				'			0	215316
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work order.    Contact   C	_/		_	_						_\									
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work orr    Received By   Date/Time   Sample integrity (Check)			+	A				<i>(</i> ************************************	$\forall$		7							_	5.0D
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work or Carefuline.  These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work or Carefuline.  Received By  Date/Time.  As Hour 12 to be added to this work or 24 Hour 25 to be added to this work or 25 Hour 32 Hour 3					/			\#\	#	1									
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work ore  DeterTime:  DeterTime:  As Hour:  DeterTime:  As Hour:  As Hour:  Beselved By  DeterTime:  Beselved By  DeterTime:  DeterMine:  De				_			7	M	$\mathbb{Y}$	$\perp \!\!\!\! \mid$									
These Samples are the Grab Portion of Outfall 003 for this storm event. Composite samples will follow and are to be added to this work orr    Main										7				7					
These samples are the Grab Portion of Outrail 103 for this storm event. Composite samples will follow and are to be added to this work on the control of the								H;	H.	$\bigsqcup_{i}$	Ħ,						H	 	
Media Total Checks The Context Checks	elingulahed By	11890 dall		are co	de Grab P	o to nome	Received By		E	764 2	Compo te/films	site sam	W Sel	II TOIFOW and	are to b	added to	this wor	rk order,	
Check Server integrity. (Check)  Check Server integrity. (Check)  DaterTime.  DaterTime.  Received By  Onice: X  Conice:	XNU	1		j			W	40	N	5 '1	2-6-10	143	ر. <u>* * *</u>	Hour		2 Hour.	, 1	ACI OT NOTION	Ny:
Reserved By   Caterfines   Requirements: (Check)   Caterfines   Check   Chec	(eimquished By	h		уТіте. , 66		1700	Received By	\N	<u>M</u>		))))	7	()	unphe Integrity: (Ch.			$\mathcal{N}$	2	<u>بر</u>
	telingulehed By		Date	vTime:			Reserved By	}			(Taryline)	•	<u>ō ²</u>	fin Requirements: (		II Level IV.		NPOE	ES Lavel IV.



### LABORATORY REPORT

Date:

February 15, 2010

Client:

TestAmerica, Irvine

17461 Derian Ave., Suite 100

Irvine, CA 92614 Attn: Joseph Doak



"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

Laboratory No.:

A-10020802-001

Sample I.D.:

ITB0894-01 (Outfall 003)

**Sample Control:** 

The sample was received by ATL within the recommended hold time, chilled and with the chain of custody record attached. Testing conducted on only one sample per

client instruction (rain runoff sample).

Date Sampled:

02/07/10

Date Received:

02/08/10

Temp. Received:

1.3°C

Chlorine (TRC):

 $0.0 \, \text{mg/l}$ 

Date Tested:

02/08/10 to 02/15/10

Sample Analysis:

The following analyses were performed on your sample:

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

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

Result Summary:

Ceriodaphnia Survival:

NOEC 100%

TUc 1.0

Ceriodaphnia Reproduction:

100%

1.0

**Quality Control:** 

Reviewed and approved by:

Joseph A. LeMay

Laboratory Director

### CERIODAPHNIA CHRONIC BIOASSAY EPA METHOD 1002.0



Lab No.: A-10020802-001

Client/ID: Test America - ITB0894-01 (Outfall 003)

Date Tested: 02/08/10 to 02/15/10

### **TEST SUMMARY**

Test type: Daily static-renewal.

Species: Ceriodaphnia dubia.

Age: < 24 hrs; all released within 8 hrs.

Test vessel size: 30 ml.

Number of test organisms per vessel: 1.

Temperature: 25 +/- 1°C.

Dilution water: Mod. hard reconstituted (MHRW).

QA/QC Batch No.: RT-100207.

Endpoints: Survival and Reproduction.

Source: In-laboratory culture. Food: .1 ml YTC, algae per day. Test solution volume: 15 ml.

Number of replicates: 10.

Photoperiod: 16/8 hrs. light/dark cycle.

Test duration: 7 days.

Statistics: ToxCalc computer program.

### **RESULTS SUMMARY**

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	26.9
100% Sample	100%	26.0

### **CHRONIC TOXICITY**

Survival NOEC	100%
Survival TUc	1.0
Reproduction NOEC	100%
Reproduction TUc	1.0

### QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (26.9 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction; if >47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 13.6%)
Statistically significantly different concentrations relative difference > 13%	Pass (no concentration significantly different)
Concentration response relationship acceptable	Pass (no significant response at concentration tested)

			Cerioda	phnia Sui	vival and	l Reprodi	ection Tes	t-7 Day	Survival	
Start Date:	2/8/2010 1	5:00	Test ID:	10020802	C		Sample ID	):	ITB0894-0	01
End Date:	2/15/2010	14:30	Lab ID:	CAATL-AC	uatic Tes	ting Labs	Sample Ty	/pe:	EFF2-Indu	ıstrial
Sample Date:	2/7/2010 1	0:28	Protocol:	FWCH EP	A		Test Spec	ies:	CD-Cerioo	laphnia dubia
Comments:										
Comments:	1	2	3	4	5	6	7	8	9	10
	1.0000	1.0000	3 1.0000	1.0000	<b>5</b>	6 1.0000	7	<b>8</b> 1.0000	9	<b>10</b>

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

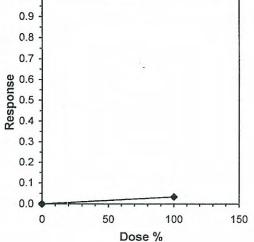
	s Test (1-tail,	0.05)	NOEC	LOEC	ChV	TU					
Fisher's Ex			100	>100		1		***			
Treatments	vs D-Control				10						
				Line	ar Interpo	lation (2	00 Resamples)				
Point	%	SD	95%	6 CL	Skew						
IC05	>100										
IC10	>100										
IC15	>100						1.0				
IC20	>100						4				
IC25	>100						0.9				
IC40	>100						0.8 -				
IC50	>100						0.7				
			78*							1	
							<b>%</b> 0.6 -				
							Response 0.6 - 0.5 - 0.4				
							8				
							₩ 0.4 j				
							0.3 -				
							0.2			ŀ	
							-				
							0.1 -				
							0.0				
							0	50	100	150	
							Ü			100	
								טספ	se %		

			Cerioda	phnia Su	rvival and	Reprodu	ction Tes	t-Reprod	luction	
Start Date:	2/8/2010 1	5:00	Test ID:	10020802	С		Sample ID	:	ITB0894-0	)1
End Date:	2/15/2010	14:30	Lab ID:	CAATL-AC	uatic Test	ting Labs	Sample Ty	/pe:	EFF2-Indu	ıstrial
Sample Date:	2/7/2010 1	0:28	Protocol:	FWCH EP	A		Test Spec	ies:	CD-Cerioo	laphnia dubia
Comments:										
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Contro	28.000	28.000	21.000	27.000	23.000	32.000	29.000	33.000	28.000	20.000
100	27.000	28,000	26,000	23.000	26,000	22.000	39.000	23.000	25.000	21.000

				Transforn	n: Untran	sformed			1-Tailed		Isot	onic
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	26.900	1.0000	26.900	20.000	33.000	16.104	10				26.900	1.0000
100	26.000	0.9665	26.000	21.000	39.000	19.612	10	0.425	1.734	3.669	26.000	0.9665

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.92321		0.905		1.04305	2.15056
F-Test indicates equal variances (p = 0.64)	1.38544		6.54109			
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	3.66895	0.13639	4.05	22.3833	0.67561	1, 18
Treatments vs D-Control						

Linear Interpolation (200 Resamples) Skew Point IC05 IC10 IC15 IC20 % >100 >100 95% CL SD >100 1.0 >100 0.9 IC25 >100 IC40 IC50 >100 0.8 >100 0.7



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



Lab No.: A-10020802-001

Client ID: TestAmerica - ITB0894-01 Outfall 003 Start Date: 02/08/2010

		DA	Y 1	DA	Y 2		DAY 3	D,	AY4		DAY 5		D/	AY 6	D	AY 7
		0 hr	24hr	0 hr	24hr	0 hr		0 hr	24hr	0 hr	1	24hr	0 hr	24hr	0 hr	24hr
Analyst Ir	nitials:	1	m	Rn	Rm	Rr	· Cr	In	hu	R	1/	2	Ru	2	2	In
Time of Re	eadings:	1500	1500		1430	1430	0 1400	1400	1500	15a	) 16	000	1100	150	140	1430
	DO	8-1	8,2	8.4	8.3	8.2	2 8.0	8.3	7.7	8.1	12	9	8.1	80	8-1	29
Control	pН	8.2	8.0	7.9	7.7	2.7	7.6	2.7	7.8	7.7	1	2	7.7	7.8	25	24
	Temp	24.)	24.1	24.2	24.8	24.	3 24.3	25.7	24.7	25.	42	4.9	25.9	25.4	24.9	242
	DO	103	8.4	8.8	7.9	10:	7 7.8	10.2	7.4	10.	3 7	1.6	99	2-7	10.1	7.7
100%	pН	76	8.0	8.0	7.7	7.5	7.8	2.5	7.9	7.5	- 7	2-8	7-4	7-8	73	7.9
	Temp	25.0	24.2	24.7	24.6	24.	8 24.5	24.8	24.9	24.	8 25	5.0	25.0	2/2	X-2	24.2
	Ad	ditional P	arametei	rs				Co	ntrol					100% Sam	ıple	
	Cor	ductivity	(umohms	)				3 40	7				2	18		
	Alk	alinity (m	g/I CaCO	5)				67	>				2	36		
	Ha	rdness (m	g/I CaCO	i)				90	1				C	12		
	Am	monia (m	g/1 NH3-N	1)				co	1-1				20	0-1		
						S	Source of N	eonates								
Repl	licate:		A	В	С		D	Е	F	4	G		Н	1		J
Вгос	od ID:	6	1	613	50		50	4B	14F	- 3	6		4H	57		é J
Sample		Day				Numbe	er of Young	Produced				Tot	al Live	No. Live	e A	nalyst
Sample		Day	A	В	C	D	E F	G	н	I	J		oung	Adults		nitials
		1	Ü	0	0	0	00	0	0	0	0		0	10	1	2
		2	10		0	0	00	00	0	0	0		2	10	1	2_
		3	4		2	4	3 0		0	0	3	1	9	10		2
Control		4	7	/	0	0	5 9		0	4	0	3	4	10		2n
	-	5	- 0	16	15	81	15 4	1 / 0	6	0	1	-	14	10		6
	-	7		(3)	()	1/1		7/12	1 >	0	0	2	7	10		1
		Total	2	5/26	21 3	27 6	16/1			28	10	8	2	10		7
		1									20	-	00/	10		0
		2	1	10	0	0	00	0	0	0	0	-	5	10		2
	- 11		11 /	)   //	0	0			0	0	0	-	$\leftarrow$	10		5
			10	2	2	)	1 7	1 0	1 0	r 3	1		/\ II	. 11		
		3	02		1	2	0 2	0	3	2	0	4	2	10	1	
100%		3	2 7	9	260	6	-	5	3	2	037	4	7	10	#	2
100%		3			1	2 6 15	-	500		-		4	8	10	1	
100%		3 4 5	2 7 0		1	26150	-	5 0 0 5 19 15	3	2		4 4 5 8	8	10	#	

Circled fourth brood not used in statistical analysis.

<sup>7&</sup>lt;sup>th</sup> day only used if <60% of the surviving control females have produced their third brood.



# CHAIN OF CUSTODY

### SUBCONTRACT ORDER TestAmerica Irvine

### ITB0894

### SENDING LABORATORY:

TestAmerica Irvine

17461 Derian Avenue. Suite 100

Irvine, CA 92614

Phone: (949) 261-1022 Fax: (949) 260-3297

Project Manager: Joseph Doak

### RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB 4350 Transport Street, Unit 107

Ventura, CA 93003 Phone :(805) 650-0546 Fax: (805) 650-0756

Project Location: CA - CALIFORNIA

Receipt Temperature: 3°C

Ice: (Y) / N

Standard TAT is req	uested unless specific due d	late is requested. => Due Date:	Initials:
Analysis	Units	Expires	Comments
Sample ID: ITB0894-0	1 (Outfall 003 - Water)	Sampled: 02/07/10 10:28	
Bioassay-Acute 96hr	% Survival	02/08/10 22:28	FH-minnow, EPA/821-R02-012, Sub-to_ Aquatic testing
Containers Supplied:			Cerre Ch.
1 gal Poly (O)			

Released By Date/Time
Released By Date/Time

Received By MATC

Date/Time

Date/Time

Page 1 of



# Ceriodaphnia dubia Chronic Toxicity Test Reference Toxicant Data

### CERIODAPHNIA CHRONIC BIOASSAY

### EPA METHOD 1002.0 REFERENCE TOXICANT - NaCl



QA/QC Batch No.: RT-100207

Date Tested: 02/07/10 to 02/14/10

### TEST SUMMARY

Test type: Daily static-renewal. Species: *Ceriodaphnia dubia*.

Age: <24 hrs; all released within 8 hrs.

Test vessel size: 30 ml.

Number of test organisms per vessel: 1.

Temperature: 25 +/- 1°C.

Dilution water: Mod. hard reconstituted (MHRW).

Reference Toxicant: Sodium chloride (NaCl).

Endpoints: Survival and Reproduction.

Source: In-laboratory culture. Food: .1 ml YTC, algae per day. Test solution volume: 20 ml. Number of replicates: 10.

Photoperiod: 16/8 hrs. light/dark cycle.

Test duration: 7 days.

Statistics: ToxCalc computer program.

### RESULTS SUMMARY

Sample Concentration	Percent Survi	ival	Mean Num Young Per	
Control	100%		28.5	
0.25 g/l	100%		30.9	
0.5 g/l	100%		25.5	
1.0 g/l	100%		15.4	*
2.0 g/l	100%		2.9	*
4.0 g/l	0%	*	0	**

<sup>\*</sup> Statistically significantly less than control at P=0.05 level \*\* Reproduction data from concentrations greater than survival NŒC are excluded from statistical analysis.

### CHRONIC TOXICITY

Survival LC50	2.8 g/l
Reproduction IC25	0.66 g/l

### QA/QC TEST ACCEPTABILITY

Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥15 young per surviving control female	Pass (28.5 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 14.7%)
Stat. sig. diff. conc. relative difference > 13%	Pass (Stat. sig. diff. conc. Relative difference = 46.0%)
Concentration response relationship acceptable	Pass (Response curve normal)

			Cerioda	phnia Sur	vival and	Reprodu	ction les	t-/ Day		
Start Date:	2/7/2010 1	5:00	Test ID:	RT100207	c		Sample ID	:	REF-Ref T	oxicant
End Date:	2/14/2010	14:00	Lab ID:	CAATL-AC	uatic Test	ting Labs	Sample Ty	rpe:	NACL-Soc	lium chloride
Sample Date:	2/7/2010		Protocol:	FWCH EP	A		Test Spec	CD-Cerioo	laphnia dubia	
Comments:										
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

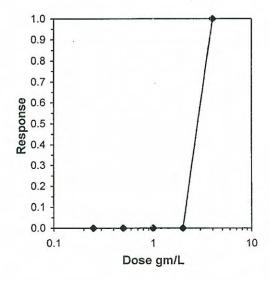
- two				Not			Fisher's	1-Tailed	Number	Total
Conc-gm/L	Mean	N-Mean	Resp	Resp	Total	N	Exact P	Critical	Resp	Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2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

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

**Graphical Method** 

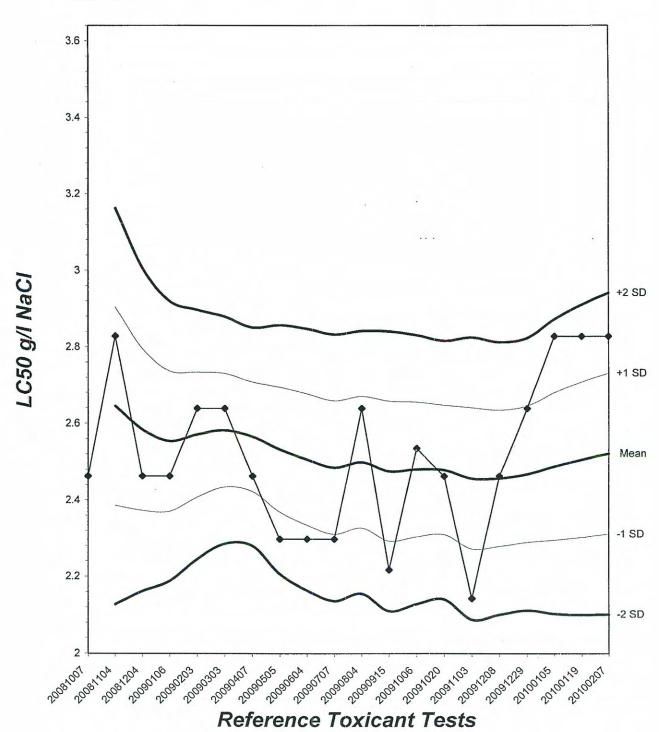
Trim Level 0.0% EC50 2.8284

2.8284



## Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 8.34



Start Date:	2/7/2010 1	E-00		aphnia Su RT100207			Sample ID		REF-Ref T	ovicant
		10177								West To a discount
End Date:	2/14/2010	14:00	Lab ID:	CAATL-Ac	luatic Test	ting Labs	Sample Ty	/pe:		lium chloride
Sample Date:	2/7/2010		Protocol:	<b>FWCH EP</b>	Α		Test Spec	ies:	CD-Cerioo	laphnia dubia
Comments:										
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	30.000	29.000	30.000	32.000	29.000	30.000	30.000	25.000	26.000	24.000
0.25	48.000	29.000	31.000	31.000	27.000	27.000	28.000	36.000	25.000	27.000
0.5	27.000	26.000	26.000	28.000	25.000	25.000	30.000	25.000	18.000	25.000
1	24.000	13.000	15.000	19.000	24.000	13.000	11.000	13.000	11.000	11.000
2	3.000	3.000	2.000	3.000	2.000	3.000	4.000	4.000	2.000	3.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

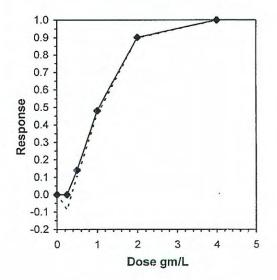
		Transform: Untransformed					Rank	1-Tailed	Isotonic		
Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical	Mean	N-Mean	
28.500	1.0000	28.500	24.000	32.000	9.097	10			29.700	1.0000	
30.900	1.0842	30.900	25.000	48.000	21.867	10	110.50	76.00	29.700	1.0000	
25.500	0.8947	25.500	18.000	30.000	12.158	10	79.00	76.00	25.500	0.8586	
15.400	0.5404	15.400	11.000	24.000	33.280	10	56.00	76.00	15.400	0.5185	
2.900	0.1018	2.900	2.000	4.000	25.444	10	55.00	76.00	2.900	0.0976	
0.000	0.0000	0.000	0.000	0.000	0.000	10			0.000	0.0000	
	28.500 30.900 25.500 15.400 2.900	28.500 1.0000 30.900 1.0842 25.500 0.8947 15.400 0.5404 2.900 0.1018	28.500     1.0000     28.500       30.900     1.0842     30.900       25.500     0.8947     25.500       15.400     0.5404     15.400       2.900     0.1018     2.900	Mean         N-Mean         Mean         Min           28.500         1.0000         28.500         24.000           30.900         1.0842         30.900         25.000           25.500         0.8947         25.500         18.000           15.400         0.5404         15.400         11.000           2.900         0.1018         2.900         2.000	Mean         N-Mean         Mean         Min         Max           28.500         1.0000         28.500         24.000         32.000           30.900         1.0842         30.900         25.000         48.000           25.500         0.8947         25.500         18.000         30.000           15.400         0.5404         15.400         11.000         24.000           2.900         0.1018         2.900         2.000         4.000	Mean         N-Mean         Mean         Min         Max         CV%           28.500         1.0000         28.500         24.000         32.000         9.097           30.900         1.0842         30.900         25.000         48.000         21.867           25.500         0.8947         25.500         18.000         30.000         12.158           15.400         0.5404         15.400         11.000         24.000         33.280           2.900         0.1018         2.900         2.000         4.000         25.444	Mean         N-Mean         Mean         Min         Max         CV%         N           28.500         1.0000         28.500         24.000         32.000         9.097         10           30.900         1.0842         30.900         25.000         48.000         21.867         10           25.500         0.8947         25.500         18.000         30.000         12.158         10           15.400         0.5404         15.400         11.000         24.000         33.280         10           2.900         0.1018         2.900         2.000         4.000         25.444         10	Mean         N-Mean         Mean         Min         Max         CV%         N         Sum           28.500         1.0000         28.500         24.000         32.000         9.097         10           30.900         1.0842         30.900         25.000         48.000         21.867         10         110.50           25.500         0.8947         25.500         18.000         30.000         12.158         10         79.00           15.400         0.5404         15.400         11.000         24.000         33.280         10         56.00           2.900         0.1018         2.900         2.000         4.000         25.444         10         55.00	Mean         N-Mean         Mean         Min         Max         CV%         N         Sum         Critical           28.500         1.0000         28.500         24.000         32.000         9.097         10           30.900         1.0842         30.900         25.000         48.000         21.867         10         110.50         76.00           25.500         0.8947         25.500         18.000         30.000         12.158         10         79.00         76.00           15.400         0.5404         15.400         11.000         24.000         33.280         10         56.00         76.00           2.900         0.1018         2.900         2.000         4.000         25.444         10         55.00         76.00	Mean         N-Mean         Mean         Min         Max         CV%         N         Sum         Critical         Mean           28.500         1.0000         28.500         24.000         32.000         9.097         10         29.700           30.900         1.0842         30.900         25.000         48.000         21.867         10         110.50         76.00         29.700           25.500         0.8947         25.500         18.000         30.000         12.158         10         79.00         76.00         25.500           15.400         0.5404         15.400         11.000         24.000         33.280         10         56.00         76.00         15.400           2.900         0.1018         2.900         2.000         4.000         25.444         10         55.00         76.00         2.900	

Auxiliary Tests		<del></del>			Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates nor	-normal dis	tribution	$(p \le 0.05)$		0.87968	0.947	1.72192	5.90298
Bartlett's Test indicates unequal	variances (	0 = 1.75E	-06)		32.1843	13.2767		
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU				
Steel's Many-One Rank Test	0.5	1	0.70711					

Treatments vs D-Control

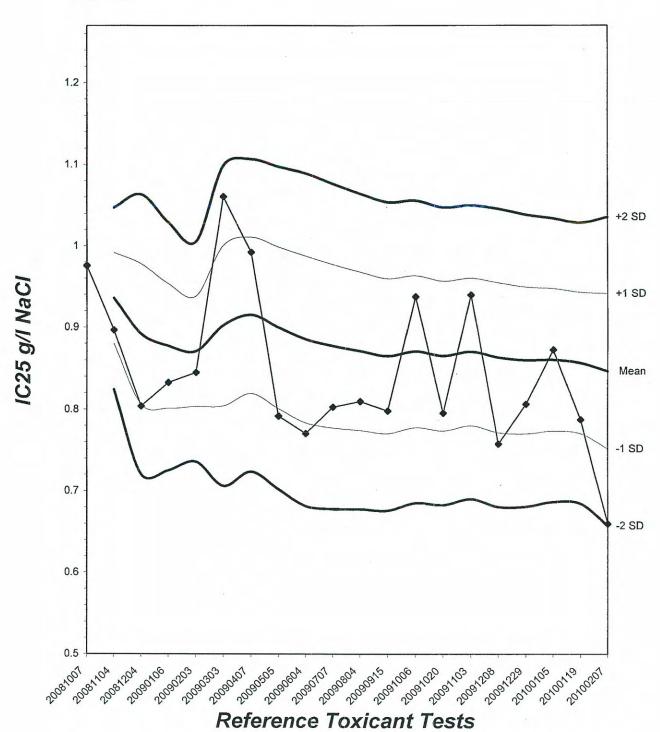
Linear Interpolation	(200 Resamples)
	()

Point	gm/L	SD	95%	CL	Skew
IC05	0.3384	0.0442	0.2691	0.4525	0.4001
IC10	0.4268	0.0548	0.3537	0.5444	0.4118
IC15	0.5126	0.0553	0.4160	0.6069	0.0105
IC20	0.5861	0.0571	0.4714	0.6748	-0.2745
IC25	0.6597	0.0572	0.5402	0.7608	-0.3338
IC40	0.8802	0.0645	0.7629	1.0101	0.4008
IC50	1.0440	0.0882	0.8903	1.2112	0.2244



# Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 11.2



### CERIODAPHNIA DUBIA CHRONIC BIOASSAY

# Reference Toxicant - NaCl Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-100207

Start Date: 02/07/2010

C	D			Nu	mbei	of Y	oung	Produ	uced			Total	No.	Analyst
Sample	Day	A	В	C	D	E	F	G	н	I	J	Live Young	Live Adults	Initials
	1	0	0	0	0	0	0	0	0	0	0	0	10	2
	2	0	0	0	0	0	0	0	0	0	0	J	10	Ru
	3	5	0	4	4	3	4	4	4	3	4	35	10	R
Control	4	0	5	0	0	0	9	10	7	9	9	49	10	R
Control	5	8	8	12	11	10	0	16	14	14	11	104	10	Ly
	6	0	0	0	0	0	17	(13)	(3)	0	(Z)	17	10	h
	7	17	16	14	17	16(	15)	0	U	0	0	80	W.	11/2
	Total	30	29	30	32	29	30	30	25	26	24	285	10	
	1	0	0	0	0	0	0	0	0	0	0	C	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	Ry
	3	0	4	4	4	5	3	4	0	4	3	21	10	2
0.25 ~/1	4	0	0	0	0	9	8	11	10	9	0	47	10	Lu
0.25 g/l	5	11	8	8	10	13	0	13	11	12	8	qu	10	Ly
	6	18	17	19	12	13	116	13	0	(13)	16	103	10	h
	7	19	0	(2)	(16)	0	(17)	0	15	0	(15)	34	10	10
	Total	88	29	31	31	27	27	28	36	25	27	309	10	
	1	0	0	0	0	0	0	0	C	0	C	0	10	en
	2	0	0	0	0	0	0	0	0	0	0	0	10	Ru
	3	2	0	3	0	3	3	0	0	4	3	18	10	2
0.5 //	4	0	4	4	2	5	0	6	4	6	5	36	10	2m
0.5 g/l	5	7	5	0	0	0	7	8	6	8	0	41	10	Rom
	6	18	17	19	12	17	0	16	0	0	0	99	10	9
	7	0	0	0	14	(16)	15	0	15	(14)	17	601	10	
	Total	27	26	26	Fo	25	25	30	35	18	25	255	10	10

Circled fourth brood not used in statistical analysis.

<sup>7&</sup>lt;sup>th</sup> day only used if <60% of the surviving control females have produced their third brood.

### CERIODAPHNIA DUBIA CHRONIC BIOASSAY

### Reference Toxicant - NaCl Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-100207

Start Date:02/07/2010

Samela	Dow		,	Nu	ımbe	r of Y	oung ]	Produ	ced			Total Live	No. Live	Analyst
Sample	Day	A	В	C	D	E	F	G	н	I	J	Young	Adults	Initials
	1	0	0	0	0	0	0	0	0	0	C	0	10	1
	2	0	0	0	0	0	0	0	0	0	0	0	10	En
	3	3	0	2	3	3	0	0	2	2	0	15	10	In
1.0 ~/1	4	0	N	5	2	7	0	0	3	M	0	19	10	La
1.0 g/l	5	5	4	0	0	0	6	4	0	0	0	19	10	In
-	6	0	0	0	14	17	0	0	0	0	4	35	10	h
	7	16	7	8	0	0	7	7	8	.6	7	66	10	R
	Total	24	13	15	19	24	13	11	13	10	11	154	10	
	1	a	0	0	0	0	0	0	0	0	C	0	10	0
	2	0	0	0	C	0	0	0	0	0	0	D	10	1
	3	0	0	0	0	0	0	0	0	C	0	()	10	2
2.0 . //	4	0	0	0	0	0	C	0	0	0	0	U	10	2
2.0 g/l	5	0	0	0	0	0	C	0	0	U	0	C	10	2
	6	0	0	2	0	0	0	0	3	0	0	5	10	2
	7	3	3	0	3	Z	3	4	1	2	3	24	10	1
	Total	2,	3	2	3	2	- 3	4	4	2_	3	29	10	
	1	Ø	及	X	22	X	X	X	X	X	/	0	0	1
	2	,	1		-	-	-	-	_	-		- CONTRACTOR OF THE PARTY OF TH		
	3		_	-	-			-	-		-	-	-	
4.0 0	4	-		-	-	-	-	-						
4.0 g/l	5	_	-	-	_		_			_			-	_
	6	_		-	-	-	-	~		_				
	7.			_	-		_	·	- Marie Carlo		-	-	_	
	Total	0	0	0	0	0	0	0	C	0	0	0	0	1

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

### C\RIODAPHNIA DUBIA CHRONIC BIOASSAY

### Reference Toxicant - NaCl Water Chemistries Raw Data Sheet



QA/QC No.: RT-100207

Start Date: 02/07/2010

		DA	Y 1	DA	Y 2	DA	Y 3	DA	Y 4	DA	Y 5	DA	Y 6	DA	Y 7
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Analyst I	nitials:	N	0	V	Rn	En	ho	Ru	for	2-	Rm	Rm	Ru	h	2
Time of R	eadings:	1500	1430	1430	1500	1500	1400	1400	1400	1400	1500	1500	1600	1600	MW
	DO	8.3	83	8.1	8.4	8,2	8.3	8.3	8.2	8.4	8.2	8.1	7.9	8.0	80
Control	рН	7-7	8.0	8.2	8.0	8.0	2.8	8.0	7.8	7.7	7.7	7.7	7.8	7.5	7-6
	Temp	243	24.2	24-7	25.0	25.7	25.1	24.4	24.0	25.7	24.8	25.4	25.2	25:9:	24.5
	DO	8.4	8.4	8.2	8.4	8.2	8.3	8.3	8.2	8.4	8.2	8.1	8-0	8.0	7.9
0.25 g/l	pН	8.0	7.8	8.0	80	8.0	2.8	8.0	2.8	7.7	7.7	7.7	7.8	7.5	7.5
	Temp	24.4	24.2	24.6	25.1	25-8	25.2	24.5	24.2	25.7	249	25.4	2573	25.9	250
	DO	8.2	8.3	8.2	8.3	8.2	8.3	8.3	8.1	8.4	8.2	8.1	800	8.0	8.1
0.5 g/l	pН	7-9	7-8	7-8	8:0	8.1	7-8	7.8	7.8	2.7	7.7	2.7	2.8	7.6	75
	Temp	24.4	24.6	24.4	25.2	25.8	25.4	24.5	24.2	25.7	25.0	2575	25.4	25.8	247
	DO	8-3	8.4	8.4	8.3	8.3	8.2	8.3	8.1	8.3	8.3	8.2	2.9	8.0	80
1.0 g/l	рН	7.9	7.8	7.8	80	8.1	7-8	7.8	28	2.7	7.7	7.7	2.8	7.6	7.6
	Temp	24.9	24,6	24-5	25.2	25.9	25.4	24.6	24.1	25.8	25.0	25.6	25.4	25.8	24.6
	DO	8.2	80	8.4	8.5	8.3	8.2	8.3	8.1	8:3	8.3	8,2	8.1	8.0	8-3
2.0 g/l	рН	7.9	7.8	7.7	8.0	8.1	7.8	7.8	7.8	7.7	7.7	7.8	2.8	7.7	76
	Temp	24-6	24.8	245	25.2	26.0	25.3	24.8	24.1	25.9	25.1	25.8	25.3	25.12	247
	DO	8.3	8.0	-			_	_		1	_	_		1	)
4.0 g/l	pН	8.1	7.7	_			_	_			_		-		1
	Temp	24.5	25-1	_		aut-	_								
	Dis	ssolved	Oxyge	n (DO)	reading	s are in	mg/l (	O <sub>2</sub> ; Temp	erature	(Temp)	readin	gs are in	ı°C.		

Additional Doubleton		Control		High Concentration			
Additional Parameters	Day 1	Day 3	Day 5	Day 1	Day 3	Day 5	
Conductivity (µS)	349	335	341	6240	3390	3510	
Alkalinity (mg/l CaCO <sub>3</sub> )	67	68	67	67	68	68	
Hardness (mg/l CaCO <sub>3</sub> )	90	93	92	90	92	92	

	Source of Neonates											
Replicate:	A	В	С	D	Е	F	G	Н	1	1		
Brood ID:	3A	33	26	2D	IE	TIL	36	124	3+	13		

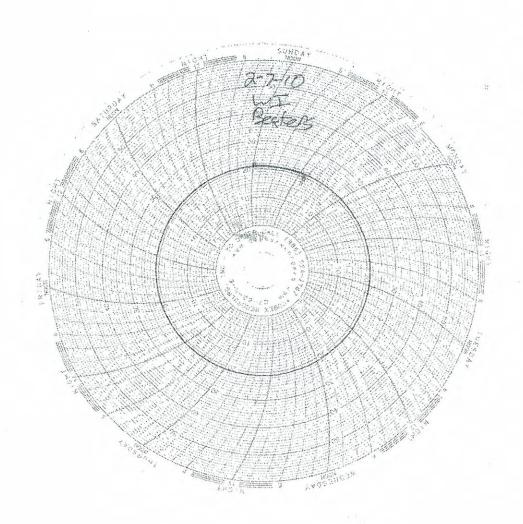


# Test Temperature Chart

Test No: RT-100207

Date Tested: 02/07/10 to 02/14/10

Acceptable Range: 25+/- 1°C



### LABORATORY REPORT

Date:

February 11, 2010

Client:

Test America - Irvine

17461 Derian Ave., Suite 100

Irvine, CA 92614 Attn: Joseph Doak



"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

Laboratory No .:

A-10020705-001

Sample ID.:

ITB0890-01

**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:

02/06/10

Date Received:

02/07/10

Temp. Received:

5.4°C

Chlorine (TRC): Date Tested:

0.0 mg/l 02/07/10 to 02/11/10

Sample Analysis:

The following analyses were performed on your sample:

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

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

**Result Summary:** 

Sample ID.

Results

ITB0890-01

100% Survival (TUa = 0.0)

**Quality Control:** 

Reviewed and approved by:

Laboratory Directo

### FATHEAD MINNOW PERCENT SURVIVAL TEST EPA Method 2000.0



Lab No.: A-10020705-001

Client/ID: TestAmerica ITB0890-01 Outfall 003

Start Date: 02/07/2010

### **TEST SUMMARY**

Species: Pimephales promelas.

Age: 12 (1-14) days. Regulations: NPDES.

Test solution volume: 250 ml. Feeding: prior to renewal at 48 hrs.

Number of replicates: 2.

Dilution water: Moderately hard reconstituted water.

Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture. Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012. Endpoints: Percent Survival at 96 hrs.

Test chamber: 600 ml beakers. Temperature: 20 +/- 1°C.

Number of fish per chamber: 10. QA/QC Batch No.: RT-100202.

### **TEST DATA**

		°C	DO	рН	# D	Dead	Analyst & Time
			DO	þπ	Α	В	of Readings
INITIAL	Control	70.1	8.5	7.7	0	0	ne
MATTIAL	100%	20.0	9.1	7.5	0	0	11400
24 Hr	Control	19.4	8.1	8.0	0	0	2
24 111	100%	19.2	8.6	8.1	0	0	1200
48 Hr	Control	19.3	8.1	7.5	0	()	La
48 111	100%	19.0	8.3	8.2	()	()	1300
Renewal	Control	19.8	9.0	8.0	()	0	2m
Kenewai	100%	20.6	9.3	7.7	0	1)	1300
72 Hr	Control	19.4	7.1	25	0	0	R
72 H	100%	19.0	7.5	7.8	0	0	1500
96 Hr	Control	19.1	8.2	7.7	0	0	R
90 Hr	100%	19.1	7.4	7.7	0	0	2- 140

### Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.5; Conductivity: 290 umho; Temp: 5.4°C; DO: 9.1 mg/l; Alkalinity: 123 mg/l; Hardness: 109 mg/l; NH<sub>3</sub>-N: 40.1 mg/l.

Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No

Control: Alkalinity: 7/ mg/l; Hardness: 108 mg/l; Conductivity: 325 umho.

Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No.

Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

Dissolved Oxygen (DO) readings in mg/l O<sub>2</sub>.

### RESULTS

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

### SUBCONTRACT ORDER TestAmerica Irvine

### ITB0890

### SENDING LABORATORY:

TestAmerica Irvine

17461 Derian Avenue. Suite 100

Irvine, CA 92614

Phone: (949) 261-1022

Fax: (949) 260-3297

Project Manager: Joseph Doak

RECEIVING LABORATORY:

Aquatic Testing Laboratories-SUB 4350 Transport Street, Unit 107

Ventura, CA 93003

Phone: (805) 650-0546

Fax: (805) 650-0756

Project Location: CA - CALIFORNIA

Receipt Temperature: 5-4 °C

Ice: Y N

Standard IAI is reques	sted unless specific due d	ate is requested. => Due Date:	Initials:				
Analysis	Units	Expires	Comments				
Sample ID: ITB0890-01 (	Outfall 003 - Water)	Sampled: 02/06/10 11:50					
	01.0 1.1	02/07/40 22-50	Ell minness EDA/004 D00 040 Cub to				
Bioassay-Acute 96hr	% Survival	02/07/10 23:50	FH minnow, EPA/821-R02-012, Sub to Aquatic testing				
Bioassay-Acute 96hr Containers Supplied:	% Survival	02/0//10 23:50					

Released By Date/Time

Released By Date/Time

Received By A Received By

Date/Time

Date/Time

Page 1 of 1



# REFERENCE TOXICANT DATA

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



QA/QC Batch No.: RT-100202

**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**

		INITIAL				24 Hr					48 Hr			
Date/Time:	2-2-	-10	1200	2-3	2-3-10			OU	2-4-10			1201)		
Analyst:		R	~			La	_	. En						
	°C	DO	all	90	°C DO pH			# Dead .		DO		# D	ead	
		DO	рН	C	ЪО	pri	А	B.	°C	DO	рН	A	В	
Control	19.6	8.4	7.6	19.4	7.9	7-4	0	0	19.2	7.1	7.9	0	0	
1.0 mg/l	19.6	8.5	7.6	19.2	8.0	2.4	0	0	19.2	7.3	7.7	U	0	
2.0 mg/l	19.6	8.5	7.7	19.1	8.0	7.4	0	0	19.1	2.2	7.6	0	0	
4.0 mg/l	19.6	8.5	2.2	19.1	7-6	24	0	0	19.1	7.2	7.6	0	0	
8.0 mg/l	19.6	8.6	7.7	19.0	6.8	7.3	W	10				_		

	F	RENEWA	\L		72 Hr					96 Hr				
Date/Time:	2-4.	-10	1200	2-5	-10	1200			2-10-10			1130		
Analyst:		En	-		Ru									
	°C	DO	pН	°C	DO	pН	# Dead		°C	D0	рH	# Dead		
			pri		DO	pri	Α	В	C	DO	pri	А	В	
Control	19.5	8.8	7.8	19.5	7.4	7.4	0	0	20.6	6.3	7.4	0	0	
1.0 mg/l	19.5	8.8	7.8	19.4	7.4	7.4	0	0	20.6	6.6	7.4	0	0	
2.0 mg/l	19.5	8.9	7.8	19.2	2.4	24	0	0	20.6	6.5	7.4	0	0	
4.0 mg/l	19.5	8.9	7.8	19.2	7.3	7.4	0	0	20.5	6.4	2.4	0	0	
8.0 mg/l		_	-	-	-			_			_	_		

Comments: Control: Alkalinity: <u>69</u> mg/l; Hardness: <u>94</u> mg/l; Conductivity: <u>330</u> umho. SDS: Alkalinity: <u>68</u> mg/l; Hardness: <u>94</u> mg/l; Conductivity: <u>333</u> umho.

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

Yes (response curve normal)

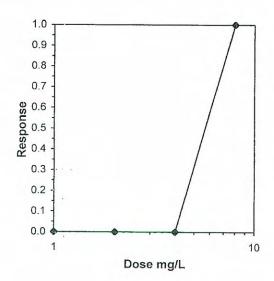
No (dose interrupted indicated or non-normal)

Acute Fish Test-96 Hr Survival											
Start Date:	2/2/2010	12:00	Test ID:	RT100202f	Sample ID:	REF-Ref Toxicant					
End Date:	2/6/2010	11:30	Lab ID:	CAATL-Aquatic Testing Labs	Sample Type:	SDS-Sodium dodecyl sulfate					
Sample Date:	2/2/2010			ACUTE-EPA-821-R-02-012		PP-Pimephales promelas					
Comments:					1						
Conc-mg/L	1	2			THE RESERVE AND A SECOND SECON						
D-Control	1.0000	1.0000									
1	1.0000	1.0000									
2	1.0000	1.0000									
4	1.0000	1.0000									
8	0.0000	0.0000									

			Tra	ansform:	Arcsin Sc	uare Root	i i		Number	Total
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N	•	Resp	Number
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2		0	20
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2		0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2		0	20
4	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2		0	20
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2		20	20

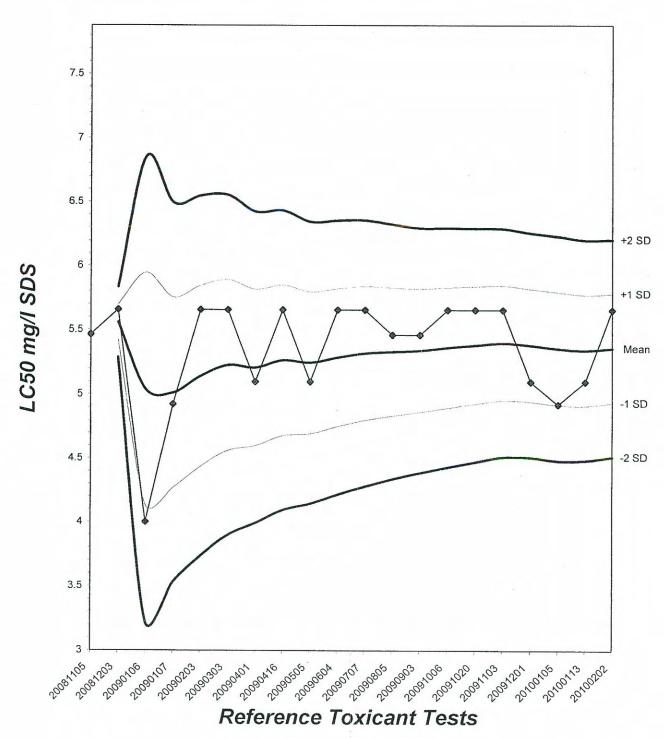
uxiliary Tests			Statistic	Critical	Skew	Kurt
Normality of the	e data set cannot be confirmed					
	ance cannot be confirmed					
		Graphical Me	ethod			
Trim Level	EC50	and and a second second				
0.0%	5.6569					

5.6569



# Fathead Minnow Acute Laboratory Control Chart

CV% = 7.91



## **TEST ORGANISM LOG**



## FATHEAD MINNOW - LARVAL (Pimephales promelas)

QA/QC BATCH NO.: PT-100202
SOURCE: In-Lab Culture
DATE HATCHED: 1-20-10
APPROXIMATE QUANTITY:
APPROXIMATE QUANTITY:
# MORTALITIES 48 HOURS PRIOR TO TO USE IN TESTING:
DATE USED IN LAB: $1/5/10$
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 @ $20^{\circ}$ 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.: $\underline{(9-b)^{\circ}C}$ pH: $\underline{7-b}$ Ammonia: $\underline{(0-1)^{\circ}mg/l}$ NH <sub>3</sub> -N
DO: 8 4 mg/l Alkalinity: 69 mg/l Hardness: 94 mg/l
READINGS RECORDED BY: DATE: z-3-/0

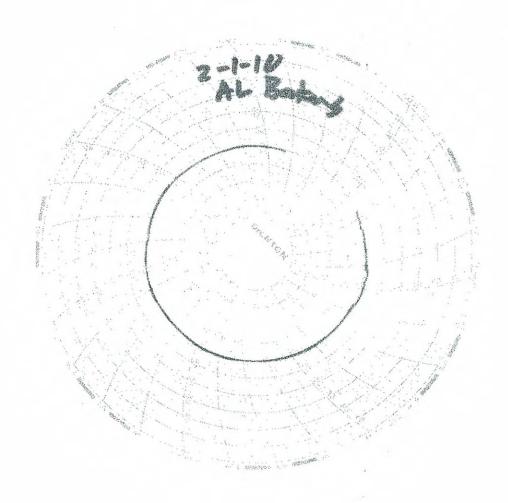


# Test Temperature Chart

Test No: RT-100202

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

Acceptable Range: 20+/- 1°C





TestAmerica Laboratories, Inc.

### ANALYTICAL REPORT

REVISED

PROJECT NO. ITB0894

MWH-Pasadena Boeing

Lot #: F0B090484

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Project Manager

March 17, 2010

#### Case Narrative LOT NUMBER: F0B090484 Revised 03-17-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on February 9, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

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

#### Observations/Nonconformances

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

#### Strontium 90 Method: 905 MOD

The Strontium carrier recovery is outside the lower control limit (40%). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

#### **Affected Sample:**

F0B090484 (1): ITB0894-01

F0B090484 2 of 13

WN

#### TestAmerica Irvine

## ITB0894 <

## F0B090484

#### SENDING LABORATORY:

TestAmerica Irvine

17461 Derian Avenue. Suite 100

Irvine, CA 92614

Phone: (949) 261-1022 Fax: (949) 260-3297

Project Manager: Joseph Doak Client: MWH-Pasadena/Boeing

#### **RECEIVING LABORATORY:**

TestAmerica St. Louis 13715 Rider Trail North Earth City, MO 63045 Phone :(314) 298-8566

Fax: (314) 298-8757

Project Location: CA - CALIFORNIA

Receipt Temperature:\_\_

Ice: Y / N

Analysis	Units	Due	Expires	Interlab Price S	urch	Comments
Sample ID: ITB0894-01 (6	Outfall 003 - Wa	ater)	Sampled	d: 02/07/10_10:28	3	
Gamma Spec-O	mg/kg	02/17/10	02/07/11 10:28	\$200.00	50%	Out St Louis, k-40 and cs-137 only, DO NOT FILTER!
Gross Alpha-O	pCi/L	02/17/10	08/06/10 10:28	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Gross Beta-O	pCi/L	02/17/10	08/06/10 10:28	\$90.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Level 4 + EDD-OUT	N/A	02/17/10	03/07/10 10:28	3 \$0.00	0%	Excel EDD email to pm,Include Std logs for Lvl IV
Radium, Combined-O	pCi/L	02/17/10	02/07/11 10:28	\$200.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Strontium 90-O	pCi/L	02/17/10	02/07/11 10:28	3 \$140.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Tritium-O	pCi/L	02/17/10	02/07/11 10:28	\$80.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Uranium, Combined-O	pCi/L	02/17/10	02/07/11 10:28	\$100.00	50%	Out St Louis, Boeing permit, DO NOT FILTER!
Containers Supplied:						
2.5 gal Poly (K)	500 mL Am	ber (L)				

Magutta July 2/8/10 17:00
Released By Date/Time

Received By / \_ n.m.

2/8/10 17:00

	<u> </u>	<u>-</u>	· All and	10, 452	489
THE LEADER IN ENVIRON	MENTAL TESTING	. ~	t	(73) 484	491
CONDITION	UPON RECEIPT FORM		L	115.465	uau
Client:	11/4/1/00	_	ž,	175,466	495
Quote No:	77435,85044		100		
COC/RFA No:			122		
Initiated By:	\$V	Da	ite: 2-9.	<i>1</i> 0 T	ime: //00
문제하다 하다 (1985년) 대한민국 (1985년)	Ship	_ ping Inf	<u>formation</u>		
Shipper: (F	edEx UPS DHL Courier Clie	ent Ot	her:	Multi	ple Packages: (Y) N
Shipping # (s):*				Sample Tempe	rature (s):**
1. 4289 2	133 2309 MB 6.			1. amb	ien 6.
					7.
3.	8.			3	8.
4.	9			4.	9.
	10.			5.	10.
	s correspond to Numbered Sample Temp lines	**Sam			ote contents below. Temperature
Condition (Circle "Y"	for yes, "N" for no and "N/A" for not applicable):	varian	ce does NOT affect	the following: Metais-L	iquid or Rad tests- Liquid or Solids
1. Y N	Are there custody seals present on the cooler?	8.	Y(N)	Are there custody	seals present on bottles?
2. Y N/A	Do custody seals on cooler appear to be tampered with?	9.	Y N NA	Do custody seals tampered with?	on bottles appear to be
3. (3) N	Were contents of cooler frisked after opening, but before unpacking?	10.	Y N WAS	Was sample recei	ved with proper pH1? (If not,
4. (Y) N 5vq.N	Sample received with Chain of	11.(	Уи	,	in proper containers?
5. <b>(N)</b> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	Y N N/A	Headspace in VO (If Yes, note sample I	A or TOX liquid samples?  D's below)
6. Y N	Was sample received broken?	13. (	N/W N/W	Was Internal COO	C/Workshare received?
7. (Y N	Is sample volume sufficient for analysis?			<u> </u>	original TestAmerica lab?
	ANL, Sandia) sites, pH of ALL containers received  LTB 0887  LTB 0		erified, EXCEPT V	OA, TOX and soils.	
140105.	1 95	136			
	28 SN 2.9.16	97		Quinied	hains were
	94	98	, , , , , ,	wine c	Qual de
	199	, 99	Z Z	Pari - Con a	link the
	92 02			eens pro	Jest .
		800		-00GAA A	11011 : 1215
		590		DUBUU La	bel time is 1315;
		012	<i>C</i> :	-o-c reade	7254
Corrective Action:	J 96				
☐ Client Contact N		I	nformed by:		
<ul><li>☐ Sample(s) proce</li><li>☐ Sample(s) on ho</li></ul>		i If tele	ased, notify:		
Project Management		/ 11 1616	Date:	2-15-10	· · · · · · · · · · · · · · · · · · ·
THIS FORM MUST BE	COMPLETED AT THE TIME THE ITEMS ARE B	EING CH	ECKED IN. IF AN	Y ITEM IS COMPLET	ED BY SOMEONE OTHER THAN

## **METHODS SUMMARY**

#### F0B090484

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

ASTM Annual Book Of ASTM Standards.

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY

PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

### **SAMPLE SUMMARY**

#### F0B090484

WO # SAMPLE	# CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LVF59 001	ITB0894-01	02/07/10	10:28

#### NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

#### TestAmerica Irvine

Client Sample ID: ITB0894-01

#### Radiochemistry

Lab Sample ID: F0B090484-001

LVF59

Work Order: Matrix:

WATER

Date Collected:

02/07/10 1028

Date Received:

02/09/10 1100

Total

Parameter	Result	Qual	Uncert. (2 g+/-)	RL	mdc	Prep Date	Analysis Date
Gamma Cs-137 & H	its by EPA 901	.1 MOD	p	Ci/L	Batch #	0042136	Yld %
Cesium 137	-1.5	U	9.5	20.0	17	02/11/10	02/19/10
Potassium 40	-100	Ū	5300		200	02/11/10	02/19/10
Gross Alpha/Beta	EPA 900		p	Ci/L	Batch #	0043108	Yld %
Gross Alpha	3.7		1.4	3.0	1.4	02/10/10	02/18/10
Gross Beta	4.03		0.95	4.00	0.99	02/10/10	02/18/10
SR-90 BY GFPC E	PA-905 MOD		p	Ci/L	Batch #	0041162	Yld % 30
Strontium 90	C.41	Ŭ	0.53	3.00	0.87	02/10/10	02/19/10
TRITIUM (Distill	) by EPA 906.0	) MOD	p	Ci/L	Batch #	0049035	Yld %
Tritium	173	J	86	500	94	02/18/10	02/18/10
Total Uranium by	KPA ASTM 5174	I-91	p	Ci/L	Batch #	0053280	Yld %
Total Uranium	1.09		0.11	0.69	0.21	02/23/10	02/26/10
Radium 226 by E	PA 903.0 MOD		p	Ci/L	Batch #	0041160	Yld % 80
Radium (226)	0.16	U	0.17	1.00	0.27	02/10/10	02/26/10
Radium 228 by GF	PC EPA 904 MOI	)	p	Ci/L	Batch #	0060257	Yld % 79
Radium 228	0.08	U	0.21	1.00	0.37	03/01/10	03/05/10

Data are incomplete without the case narrative.

#### METHOD BLANK REPORT

#### Radiochemistry

Client Lot ID: F0B090484

Matrix:

WATER

Parameter	Result	Qual	Total Uncert. (2 g+/-)	RL	MDC		Prep Date	Lab Sample ID Analysis Date
Radium 228 by	FPC EPA 904 MC	)D	pCi/L	Batch #	0060257	Yld %	88 F	0C010000-257B
Radium 228	0.08	U	0.23	1.00	0.39		03/01/10	03/05/10
Radium 226 by	EPA 903.0 MOD		pCi/L	Batch #	0041160	Yld %	95 F	0B100000-160B
Radium (226)	0.092	U	0.095	1.00	0.14		02/10/10	02/26/10
SR-90 BY GFPC	EPA-905 MOD		pCi/L	Batch #	0041162	Yld %	80 F	0B100000-162B
Strontium 90	-0.15	Ū	0.20	3.00	0.38		02/10/10	02/19/10
Gamma Cs-137 &	Hits by EPA 90	1.1 MOD	pCi/L	Batch #	0042136	Yld %	F	0B110000-136B
Cesium 137	1.8	U	7.7	20.0	14		02/11/10	02/19/10
Potassium 40	-80	U	620		210		02/11/10	02/19/10
Gross Alpha/Bet	a EPA 900		pCi/L	Batch #	0043108	Yld %	F	0B120000-108B
Gross Alpha	-0.28	Ŭ	0.35	2.00	0.87		02/10/10	02/19/10
Gross Beta	-0.23	U	0.62	4.00	1.1	_	02/10/10	02/19/10
TRITIUM (Distil	ll) by EPA 906.	0 MOD	pCi/L	Batch #	0049035	Yld %	F	0B180000-035B
Tritium	165	J	85	500	95		02/18/10	02/18/10
Total Uranium h	y KPA ASTM 517	4-91	pCi/L	Batch #	0053280	Yld %	F	0B220000-280B
Total Uranium	0.0460	U	0.0057	0.693	0.21		02/23/10	02/26/10

#### NOTE (S)

Data are incomplete without the case narrative.

## Laboratory Control Sample Report

## Radiochemistry

Client Lot ID: F0B090484

Matrix:

WATER

			Total			Lab Sample ID			
Parameter	Spike Amount	Result	Uncert. (2 σ+/-)	MDC	% Yld	% Rec	QC Control Limits		
Radium 226 by E	PA 903.0 MOD		pCi/L	903.0 MOD		F0B	100000-160C		
Radium (226)	11.3	10.4	1.1	0.2	97	93	(68 - 136)		
	Batch #:	0041160		Analysis Date	: 02/26	/10			
SR-90 BY GFPC E	PA-905 MOD		pCi/L	905 MOD		F0B	L00000-162C		
Strontium 90	6.80	6.82	0.77	0.34	83	100	(80 - 130)		
	Batch #:	0041162		Analysis Date	: 02/19	/10			
Gamma Cs-137 & H	its by EPA 901.1	MOD	pCi/L	901.1 MOD		F0B110000-136C			
Americium 241	141000	140000	11000	500		99	(87 - 110)		
Cesium 137	53100	52900	3000	200		100	(90 - 110)		
Cobalt 60	87900	00088	5000	200		100	(89 - 110)		
	Batch #:	0042136		Analysis Date	: 02/19	/10			
Gross Alpha/Beta	EPA 900		pCi/L	900.0 MOD		FOB:	L20000-108C		
Gross Beta	68.0	71.6	6.0	1		105	(58 - 133)		
	Batch #:	0043108		Analysis Date	02/19	/10			
Gross Alpha/Beta	EPA 900		pCi/L	900.0 MOD		F0B1	L20000-108C		
Gross Alpha	49.4	34.8	4.3	1.2		70	(62 - 134)		
	Batch #:	0043108		Analysis Date:	02/19	/10			
TRITIUM (Distill)	) by EPA 906.0 M	OD	pCi/L	906.0 MOD		FOB1	L80000-035C		
Tritium	4530	4440	460	90		98	(85 - 112)		
	Batch #:	0049035		Analysis Date:	02/18,	/10			
Total Uranium by	KPA ASTM 5174-9	1	pCi/L	5174-91		F0B2	220000-280C		
Total Uranium	27.7	30.2	3.6	0.2		109	(90 - 120)		
	Batch #:	0053280		Analysis Date:	02/26,	/10			
Total Uranium by	KPA ASTM 5174-9	1	pCi/L	5174-91		F0B2	20000-280C		
Total Uranium	5.54	5.97	0.61	0.21		108	(90 - 120)		
	Batch #:	0053280		Analysis Date:	02/26,	/10			

## Laboratory Control Sample/LCS Duplicate Report

### Radiochemistry

Client Lot ID: F0B090484

Matrix: WATER

					Total			Lab	Sample ID
Parameter		Spike Amount	Result		Uncert. (2 σ+/-)	% Yld %	% Rec	QC Control Limits	Precision
Radium 228 by	GFPC	EPA 904 MOD	<del></del>	pCi/L	904 M	OD		F0C0	10000-257C
Radium 228	Spk 2	6.40 6.40	6.23 6.35		0.74 0.77	87 84	97 99	(60 - 142) (60 - 142)	2 %RPD
		Batch #:	0060257			Analwei	s Date:	03/05/10	

#### MATRIX SPIKE REPORT

#### Radiochemistry

Client Lot Id: F0B090473

Matrix:

WATER

Date Sampled:

02/05/10

Date Received: 02/09/10

			<b>-</b>		<b></b>	QC Sample	e ID
Parameter	Spike Amount	Spike Result	Total Uncert. (2g +/-)	Spike Sample Yld. Resul	OHCELL.	%yld %rec	QC Control Limits
TRITIUM (Distill) by EP	A 906.0 MC	D	pCi/L	906.0 M	סס	F0B090473	3-001
Tritium	4530	4650	470	122	77	100	(62 - 147)
	Batch #:	0049035	An	alysis Date:	02/18/10		
Gross Alpha/Beta EPA 90	0		pCi/L	900.0 M	OD .	F0B090470	0-001
Gross Alpha	49.4	47.2	5.2	2.00	0.88	91	(35 - 150)
	Batch #:	0043108	An	alysis Date:	02/18/10		
Gross Alpha/Beta EPA 90	0		pCi/L	900.0 M	DD	F0B090470	0-001
Gross Beta	68.0	79.0	6.6	3.9	1.2	110	(54 - 150)
	Batch #:	0043108	An	alysis Date:	02/18/10		

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

Data are incomplete without the case narrative.

### MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

#### Radiochemistry

Client Lot ID: F0B090470

Matrix:

WATER

Date Sampled:

02/07/10 1143

Date Received: 02/09/10 1100

				Total				Total	QC Samp	le ID
Parameter		Spike Amount	SPIKE Result		Spike Yld	Spike SAMPLE Yld Result		Uncert. (2σ +/-) % Υ	d %Rec	QC Control Limits
Total Uranium	by KPA	ASTM 5		pCi/L	5	174-91			F0B0904	70-001
Total Uranium		27.7	29.7	3.1		0.566	J	0.068	105	(62 - 150)
	Spk2	27.7	30.0	3.1		0.566	J	0.068 Precision:	106 1	(62 - 150) %RPD
		Batc	h #: 0053280	Ana	alysis d	ate:	02/2	6/10		

#### DUPLICATE EVALUATION REPORT

### Radiochemistry

Client Lot ID: F0B090484

Matrix:

WATER

Date Sampled: 02/05/10

Date Received: 02/09/10

			Total				Total	•	QC Sample ID	
Parameter	SAMPLE Result		Uncert. (2 5 +/-)	% Yld	DUPLICA Result	ATE	Uncert. (2 σ+/-)	% Yld	Precision	
Radium 226 by E			pCi/L	903	.0 MOD		F	B090467-00	)1	
Radium (226)	0.089	U	0.098	92	0.07	U	0.16	92	31	%RPD
	Bato	ch #:	0041160	(Sample)	0041	.160 (D	uplicate)			·
Gamma Cs-137 & Hits by EPA 901.1			MOD	pCi/L	901	.1 MOD	ļ	F	B090470-00	)1
Cesium 137	-2.9	U	9.0		1.2	U	7.8		479	%RPD
Potassium 40	-100	U	43000		-50	U	230		93	%RPD
	Bato	ch #:	0042136	(Sample)	0042	2136 (D	uplicate)			
Gross Alpha/Beta	EPA 900			pCi/L	900	.0 MOD	1	F	B090470-00	)1
Gross Alpha	2.00	J	0.88		0.84	ŭ	0.66		82	%RPD
Gross Beta	3.9	J	1.2		3.2	J	1.1		20	%RPD
-	Bato	ch #:	0043108	(Sample)	0043	3108 (D	uplicate)			
TRITIUM (Distill	) by EPA 906	.0 мо	Œ	pCi/L	906	.0 MOD	!	FC	B090470-00	)1
Tritium	114	J	75		80	U	66		35	%RPD
	Bato	ch #:	0049035	(Sample)	0049	035 (D	uplicate)			
SR-90 BY GFPC E	PA-905 MOD		*	pCi/L	905	MOD		F	B090475-00	)1
Strontium 90	-0.05	U	0.23	72	-0.15	U	0.23	69	97	%RPD
	Bato	ch #:	0041162	(Sample)	0041	.162 (D	uplicate)			

NOTE (S)

Data are incomplete without the case narrative.



## **APPENDIX G**

## **Section 20**

Outfall 003 – BMP Effectiveness February 7, 2010 Test America Analytical Laboratory Report





#### LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project: BMP Effectiveness

Monitoring Program

Sampled: 02/07/10 Received: 02/10/10

Issued: 02/19/10 17:25

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

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

This entire report was reviewed and approved for release.

#### **CASE NARRATIVE**

SAMPLE RECEIPT: Samples were received intact, at 3°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: No analyses were subcontracted to an outside laboratory.

LABORATORY ID CLIENT ID MATRIX

ITB1348-01 003 EFF-1 Water

Reviewed By:

**TestAmerica Irvine** 

Debby Wilson For Joseph Doak Project Manager

Debby Wilson



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

MWH-Pasadena/Boeing Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200 Monitoring Program Sampled: 02/07/10 Arcadia, CA 91007 Report Number: ITB1348 Received: 02/10/10

Arcadia, CA 91007 Report Number: ITB1348
Attention: Bronwyn Kelly

#### **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITB1348-01 (003 EFF-1 - Wa Reporting Units: g/cc Density	ter)  Displacement	10B2266	N/A	NA	1.0	1	02/18/10	02/18/10	
Sample ID: ITB1348-01 (003 EFF-1 - Wa Reporting Units: mg/l Sediment	ter) ASTM D3977	10B2268	10	10	25	1	02/07/10	02/07/10	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: BMP Effectiveness

Monitoring Program

Report Number: ITB1348

Sampled: 02/07/10

Received: 02/10/10

#### METHOD BLANK/QC DATA

#### **INORGANICS**

		Reporting			Spike	Source	%R	REC	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result %	REC Lin	nits RPD	Limit	Qualifiers
Batch: 10B2266 Extracted: 02/1	8/10									
<b>Duplicate Analyzed: 02/18/2010 (10)</b>	B2266-DUP1)				Sou	rce: ITB1559	9-01			
Density	1.00	NA	N/A	g/cc		1.00		0.06	20	



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

Project ID: BMP Effectiveness

Monitoring Program Sampled: 02/07/10

Report Number: ITB1348 Received: 02/10/10

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

Arcadia, CA 91007

### DATA QUALIFIERS AND DEFINITIONS

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

**RPD** Relative Percent Difference



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: BMP Effectiveness

Monitoring Program

Report Number: ITB1348

Sampled: 02/07/10

Received: 02/10/10

### **Certification Summary**

#### **TestAmerica Irvine**

Displacement

Method	Matrix	Nelac	California
ASTM D3977	Water		

Water

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

Test Ame				Project: Boe	OF CUS	<u> </u>						Ā	NALY	SIS F	REQUIF	
MWH-Pasa 618 Michillinda Pasadena, CA Test America (	adena Ave, Sui 91007	te 200		Effectivene Program	ss Monitorin	ıg	nt 3, ASTM-									
Project Mana Sampler: S D	•	onwyn Kelly		Phone Numl (626) 568-66 Fax Number (626) 568-65	891 :		Suspended Sediment Concentration (SSC, ASTM- D3977-1997)									Comments
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle *	Sust Con D39									
003 EFF-1	W	Poly-500mL	1	47/10 140	None	1	X									
				·												MS'
												,				2/12/10
					-											07:05
Relinquished By	11/2	172	Date/Tir -lo~l	0 14:55	Redeived By	Du	uf	]	2-	 Time: 10—1		4:	5S	-		Turn around Time: (check) 24 Hours 5 Days
Religioushed By	Tung	/// 2-1	Date/Tir /o-/d	19:40	Received By		1	<del>)</del>		Time:	10/	(0	(	72	40	72 Hours NormalX
Re[inquished By			Date/Tir	ne:	Received By				Date	Time:	,		_			Perchlorate Only 72 Hours  Metals Only 72 Hours
																Sample Integrity: (Check) Intact On Ice:

## APPENDIX G

## **Section 21**

Outfall 006 – January 18 & 19, 2010 MEC<sup>X</sup> Data Validation Report





## DATA VALIDATION REPORT

## **Boeing SSFL NPDES**

SAMPLE DELIVERY GROUP: ITA1481

Prepared by

MEC<sup>X</sup>, 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: ITA1481 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 006 (Comp)	ITA1481-02	F0A220438- 001, G0A210567- 001	WATER	1/19/2010 8:46:00 AM	ASTM 5174-91, 245.1, 245.1-Diss, 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD

#### **II. Sample Management**

No anomalies were observed regarding sample management. The sample receipt temperature was noted by TestAmerica-St Louis as "ambient"; 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. No custody seals were present on the sample coolers sent to TestAmerica-St. Louis. Custody seals were present upon receipt at TestAmerica-West Sacramento. As the samples were delivered to the remaining laboratories by courier, no custody seals were necessary. If necessary, the client ID was added to the sample result summary by the reviewer..

1

## **Data Qualifier Reference Table**

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

## **Qualification Code Reference Table**

Qualifier	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
С	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
В	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
Е	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
Α	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.

Project: SSFL NPDES
DATA VALIDATION REPORT SDG: ITA1481

### **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.
Р	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*11, *111	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

#### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: February 26, 2010

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613, and the National Functional Guidelines Chlorinated Dioxin/Furan Data Review (9/05).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - o GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - o Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.
- Blanks: The method blank had detects between the EDL and the RL for more than half of all compounds, including all of the HxCDD isomers and total HxCDD, 1,2,3,6,7,8-HpCDD and total HpCDD, OCDD, total HxCDF and all of the HxCDF isomers except 1,2,3,4,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF and total HpCDF, and OCDF. Any sample detects for individual target compound isomers present at concentrations less than five times the

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

- Blank Spikes and Laboratory Control Samples: OPR recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of reportable sample detects. The laboratory calculated and reported compound-specific detection limits. The result for 1,2,3,4,7,8-HxCDF was reported as an EMPC. As ratio criteria were not met, the result was qualified as an estimated nondetect, "UJ," at the reported concentration level. Any reported totals that included EMPCs were qualified as estimated, "J." Any detects between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

#### B. EPA METHOD 245.1—Mercury

Reviewed By: P. Meeks

Date Reviewed: March 1, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the  $MEC^{\times}$  Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Method 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 this analysis.
- Calibration: Calibration criteria were met. Mercury initial calibration r<sup>2</sup> values were ≥0.995 and the 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 detects.
- Interference Check Samples: Not applicable to this analysis.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG. Recoveries and the RPD were within the method-established control limits.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: Not applicable to this analysis.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the 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: March 1, 2010

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

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

The gross alpha detector efficiency was less than 20%; therefore, nondetected gross alpha in the sample was qualified as estimated, "UJ." The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

- Blanks: Tritium was detected in the method blank at 250 pci/L but was not detected in the sample in this SDG. There were no other analytes detected in the method blank.
- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratoryestablished 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.
- 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: ITA1481

Analysis Metho	od ASTM	01,.,						
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	WATER	7	Validation Le	vel: IV
Lab Sample Name:	ITA1481-02	Sam	ple Date:	1/19/201	0 8:46:00 AM	Į.		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Гotal Uranium	7440-61-1	0.12	0.693	0.21	pCi/L	U	R	Н
Analysis Metho	od EPA 2	45.1						
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	Water	7	Validation Le	vel: IV
Lab Sample Name:	ITA1481-02	Sam	ple Date:	1/19/201	0 8:46:00 AM	I		
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 Metho	od EPA 2	45.1-D	iss					
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	Water	V	Validation Le	vel: IV
Lab Sample Name:	ITA1481-02	Sam	ple Date:	1/19/201	0 8:46:00 AM	[		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury, dissolved	7439-97-6	ND	0.20	0.10	ug/l	С	U	
Analysis Metho	od EPA 9	00.0  M	10D					
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	WATER	V	Validation Le	vel: IV
Lab Sample Name:	ITA1481-02	Sam	ple Date:	1/19/201	0 8:46:00 AM	I		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	2.5	3	1.2	pCi/L	Jb	J	H, C, DNQ
Gross Beta	12587-47-2	2.97	4	1.1	pCi/L	Jb	J	H, DNQ
Analysis Metho	od EPA 9	01.1 M	10D					
Sample Name	Outfall 006 (Co	omp)	Matri	x Type:	WATER	7	Validation Le	vel: IV
Lab Sample Name:	ITA1481-02	Sam	ple Date:	1/19/201	0 8:46:00 AM	[		
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-2.3	20	18	pCi/L	U	U	
Cesium 157								

Monday, March 22, 2010 Page 1 of 3

# Analysis Method EPA 903.0 MOD

Sample Name	Outfall 006 (C	omp)	Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITA1481-02	Samj	ole Date:	1/19/201	0 8:46:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	-0.13	1	0.38	pCi/L	U	U	
Analysis Metho	od EPA 9	04 MO	D					
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITA1481-02	Samj	ole Date:	1/19/201	0 8:46:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.22	1	1.5	pCi/L	U	U	
Analysis Metho	od EPA 9	05 MO	D					
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITA1481-02	Samj	ole Date:	1/19/201	0 8:46:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.04	3	0.37	pCi/L	U	U	
Analysis Metho	od EPA 9	06.0 M	IOD					
Sample Name	Outfall 006 (C	omp)	Matri	x Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITA1481-02	Samp	ole Date:	1/19/201	0 8:46:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes

Monday, March 22, 2010 Page 2 of 3

# Analysis Method EPA-5 1613B

Sample Name	Outfall 006 (Co	omp)	Matrix	Type:	WATER	Validation Level: IV				
Lab Sample Name:	ITA1481-02	Samp	ole Date:	1/19/2010	8:46:00 AM	I				
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	8.4e-005	0.000047	0.000014	ug/L	В				
1,2,3,4,6,7,8-HpCDF	67562-39-4	7.4e-005	0.000047	0.000008	ug/L	В				
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000047	0.000013	ug/L		U			
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.000047	0.000008	ug/L		U			
1,2,3,4,7,8-HxCDF	70648-26-9	ND	5.5e-006	0.000007	ug/L	J, Q, B	UJ	*III		
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.000047	0.000007	ug/L		U			
1,2,3,6,7,8-HxCDF	57117-44-9	ND	0.000047	0.000006	ug/L		U			
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.000047	0.000006	ug/L		U			
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000047	0.000007	ug/L		U			
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000047	0.000012	ug/L		U			
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000047	0.000006	ug/L		U			
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000047	0.000006	ug/L	J, B	U	В		
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000047	0.000006	ug/L		U			
2,3,7,8-TCDD	1746-01-6	ND	0.0000094	0.000004	ug/L		U			
2,3,7,8-TCDF	51207-31-9	ND	0.0000094	0.000002	ug/L		U			
OCDD	3268-87-9	0.00077	0.000094	0.000021	ug/L	В				
OCDF	39001-02-0	0.00029	0.000094	0.000027	ug/L	В				
Total HpCDD	37871-00-4	0.00014	0.000047	0.000014	ug/L	В				
Total HpCDF	38998-75-3	0.00018	0.000047	0.000008	ug/L	В				
Total HxCDD	34465-46-8	ND	0.000047	0.000006	ug/L		U			
Total HxCDF	55684-94-1	3e-005	3e-005	0.000006	ug/L	J, Q, B	J	B, *III, DNQ		
Total PeCDD	36088-22-9	ND	0.000047	0.000012	ug/L		U			
Total PeCDF	30402-15-4	ND	0.000047	0.000004	ug/L		U			
Total TCDD	41903-57-5	ND	0.0000094	0.000004	ug/L		U			
Total TCDF	55722-27-5	ND	0.0000094	0.000002	ug/L		U			

Monday, March 22, 2010 Page 3 of 3



# **APPENDIX G**

# **Section 22**

Outfall 006 – January 18 & 19, 2010 Test America Analytical Laboratory Report







#### LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 006

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly Sampled: 01/18/10-01/19/10

Received: 01/19/10 Revised: 04/02/10 17:10

#### 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, 15 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

#### **CASE NARRATIVE**

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the 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: No significant observations were made.

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

ADDITIONAL

INFORMATION: Final revised report to provide corrected units and .pdf file for Radchem.

 LABORATORY ID
 CLIENT ID
 MATRIX

 ITA1481-01
 Outfall 006 (Grab)
 Water

 ITA1481-02
 Outfall 006 (Comp)
 Water

Reviewed By:

**TestAmerica Irvine** 

Kathleen A. Robb For Joseph Doak Project Manager



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

#### HEXANE EXTRACTABLE MATERIAL

			Reporting	g	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-01 (Outfall 006 (Grab) - Water)					\$	Sampled:	01/18/10		
Reporting Units: mg/l									
Hexane Extractable Material (Oil & Grease)	EPA 1664A	10A2388	4.7	1.3	ND	1	1/26/2010	1/26/2010	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

#### **METALS**

Analyte	Method	Batch	Reporting Limit	g MDL	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Com	o) - Water)					Sampled:	01/19/10		
Reporting Units: ug/l									
Mercury	EPA 245.1	10A1830	0.20	0.10	ND	1	1/20/2010	1/20/2010	
Antimony	EPA 200.8	10A1800	2.0	0.30	ND	1	1/20/2010	1/25/2010	
Cadmium	EPA 200.8	10A1800	1.0	0.10	ND	1	1/20/2010	1/25/2010	
Copper	EPA 200.8	10A1800	2.0	0.50	4.7	1	1/20/2010	1/25/2010	
Lead	EPA 200.8	10A1800	1.0	0.20	2.8	1	1/20/2010	1/25/2010	
Thallium	EPA 200.8	10A1800	1.0	0.20	ND	1	1/20/2010	1/25/2010	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Attention: Bronwyn Kelly Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Received: 01/19/10

Report Number: ITA1481

#### **DISSOLVED METALS**

			Reporting	g	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Comp) - Water)					;	Sampled:	01/19/10		
Reporting Units: ug/l									
Mercury	EPA 245.1-Diss	10A2023	0.20	0.10	ND	1	1/21/2010	1/21/2010	C
Antimony	EPA 200.8-Diss	10A1999	2.0	0.30	ND	1	1/21/2010	1/25/2010	
Cadmium	EPA 200.8-Diss	10A1999	1.0	0.10	ND	1	1/21/2010	1/25/2010	
Copper	EPA 200.8-Diss	10A1999	2.0	0.50	1.7	1	1/21/2010	1/25/2010	Ja
Lead	EPA 200.8-Diss	10A1999	1.0	0.20	ND	1	1/21/2010	1/25/2010	C
Thallium	EPA 200.8-Diss	10A1999	1.0	0.20	ND	1	1/21/2010	1/25/2010	C



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

#### **INORGANICS**

A 14	Mala		Reporting	9		Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Comp)	- Water)				5	Sampled:	01/19/10		
Reporting Units: mg/l									
Chloride	EPA 300.0	10A1808	0.50	0.25	4.6	1	1/20/2010	1/20/2010	
Nitrate/Nitrite-N	EPA 300.0	10A1808	0.26	0.15	3.4	1	1/20/2010	1/20/2010	
Sulfate	EPA 300.0	10A1808	0.50	0.20	5.3	1	1/20/2010	1/20/2010	
<b>Total Dissolved Solids</b>	SM2540C	10A1916	10	1.0	120	1	1/21/2010	1/21/2010	



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

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

**ASTM 5174-91** 

	N. a	Reporting				Dilution		Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Comp) - Water)					S	Sampled:	01/19/10		
Reporting Units: pCi/L									
Total Uranium	ASTM 5174-91	35029	0.693	0.21	0.12	1	2/4/2010	2/8/2010	U



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

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481

Received: 01/19/10

#### **EPA 900.0 MOD**

			Reportin	g	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 00	6 (Comp) - Water)				9	Sampled:	01/19/10		
Reporting Units: pCi/L									
Gross Alpha	EPA 900.0 MOD	25415	3	1.2	2.5	1	1/25/2010	1/29/2010	Jb
Gross Beta	EPA 900.0 MOD	25415	4	1.1	2.97	1	1/25/2010	1/29/2010	Jb



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Attention: Bronwyn Kelly

Arcadia, CA 91007

Project ID: Routine Outfall 006

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

#### **EPA 901.1 MOD**

			Reportin	g	Sample Dilution		Date	Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Comp) - Water)					\$	Sampled:	01/19/10		
Reporting Units: pCi/L									
Cesium 137	EPA 901.1 MOD	23036	20	18	-2.3	1	1/23/2010	1/26/2010	U
Potassium 40	EPA 901.1 MOD	23036	NA	300	-80	1	1/23/2010	1/26/2010	U



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

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

(10 Mighillim de Assesse Costa 200

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

#### **EPA 903.0 MOD**

Project ID: Routine Outfall 006

		Report			Sample	Dilution		Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Comp) - Water)					S	Sampled:	01/19/10		
Reporting Units: pCi/L									
Radium (226)	EPA 903.0 MOD	22145	1	0.38	-0.13	1	1/22/2010	2/8/2010	U



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

#### **EPA 904 MOD**

Analyte	Method	Batch	Reportin Limit	g MDL	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Comp) - Water)					S	sampled:	01/19/10		
Reporting Units: pCi/L Radium 228	EPA 904 MOD	22148	1	1.5	0.22	1	1/22/2010	2/8/2010	U



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

MWH-Pasadena/Boeing

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

Attention: Bronwyn Kelly

#### **EPA 905 MOD**

Project ID: Routine Outfall 006

Analyte	Method	Batch	Reporting Limit	g MDL	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Com			S	Sampled:	01/19/10				
Reporting Units: pCi/L Strontium 90	EPA 905 MOD	22149	3	0.37	0.04	1	1/22/2010	2/1/2010	U



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

#### **EPA 906.0 MOD**

		Reporting			Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	MDL	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (Co	mp) - Water)				\$	Sampled:	01/19/10		
Reporting Units: pCi/L									
Tritium	EPA 906.0 MOD	28080	500	140	11	1	1/28/2010	1/29/2010	U



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Attention: Bronwyn Kelly

Arcadia, CA 91007

Project ID: Routine Outfall 006

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

#### **EPA-5 1613B**

Analyte	Method	Batch	Reporting Limit	-	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1481-02 (Outfall 006 (O	Comp) - Water)				5	Sampled:	01/19/10		
Reporting Units: ug/L	у (такет)				_	, unipieur	01/15/10		
1,2,3,4,6,7,8-HpCDD	EPA-5 1613B	26267	0.0000470	000014	8.4e-005	0.94	1/26/2010	2/2/2010	В
1,2,3,4,6,7,8-HpCDF	EPA-5 1613B	26267	0.0000470				1/26/2010	2/2/2010	В
1,2,3,4,7,8,9-HpCDF	EPA-5 1613B	26267	0.0000470		ND	0.94	1/26/2010	2/2/2010	2
1,2,3,4,7,8-HxCDD	EPA-5 1613B	26267	0.0000470			0.94	1/26/2010	2/2/2010	
1,2,3,4,7,8-HxCDF	EPA-5 1613B	26267	0.0000470				1/26/2010	2/2/2010	J, Q, B
1,2,3,6,7,8-HxCDD	EPA-5 1613B	26267	0.0000470		ND	0.94	1/26/2010	2/2/2010	-, -, -
1,2,3,6,7,8-HxCDF	EPA-5 1613B	26267	0.0000470			0.94	1/26/2010	2/2/2010	
1,2,3,7,8,9-HxCDD	EPA-5 1613B	26267	0.0000470			0.94	1/26/2010	2/2/2010	
1,2,3,7,8,9-HxCDF	EPA-5 1613B	26267	0.0000470		ND	0.94	1/26/2010	2/2/2010	
1,2,3,7,8-PeCDD	EPA-5 1613B	26267	0.0000470		ND	0.94	1/26/2010	2/2/2010	
1,2,3,7,8-PeCDF	EPA-5 1613B	26267	0.0000470		ND	0.94	1/26/2010	2/2/2010	
2,3,4,6,7,8-HxCDF	EPA-5 1613B	26267	0.0000470			0.94	1/26/2010	2/2/2010	J, B
2,3,4,7,8-PeCDF	EPA-5 1613B	26267	0.0000470			0.94	1/26/2010	2/2/2010	,
2,3,7,8-TCDD	EPA-5 1613B	26267	0.000009@			0.94	1/26/2010	2/2/2010	
2,3,7,8-TCDF	EPA-5 1613B	26267	0.000009@			0.94	1/26/2010	2/2/2010	
OCDD	EPA-5 1613B	26267	0.0000940			0.94	1/26/2010	2/2/2010	В
OCDF	EPA-5 1613B	26267	0.0000940				1/26/2010	2/2/2010	В
Total HpCDD	EPA-5 1613B	26267	0.0000470				1/26/2010	2/2/2010	В
Total HpCDF	EPA-5 1613B	26267	0.0000470				1/26/2010	2/2/2010	В
Total HxCDD	EPA-5 1613B	26267	0.0000470	.0000062	ND	0.94	1/26/2010	2/2/2010	
Total HxCDF	EPA-5 1613B	26267	0.0000470	.0000061	3e-005	0.94	1/26/2010	2/2/2010	J, Q, B
Total PeCDD	EPA-5 1613B	26267	0.0000470	0.000012	ND	0.94	1/26/2010	2/2/2010	
Total PeCDF	EPA-5 1613B	26267	0.0000470	0.000004	ND	0.94	1/26/2010	2/2/2010	
Total TCDD	EPA-5 1613B	26267	0.0000094	.0000047	ND	0.94	1/26/2010	2/2/2010	
Total TCDF	EPA-5 1613B	26267	0.0000094	.0000028	ND	0.94	1/26/2010	2/2/2010	
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD (2	3-140%)				47 %				
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF (2	8-143%)				54 %				
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF (2	6-138%)				47 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDD (32-	141%)				43 %				
Surrogate: 13C-1,2,3,4,7,8-HxCDF (26-	152%)				46 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDD (28-	130%)				56 %				
Surrogate: 13C-1,2,3,6,7,8-HxCDF (26-	123%)				51%				
Surrogate: 13C-1,2,3,7,8,9-HxCDF (29-	147%)				49 %				
Surrogate: 13C-1,2,3,7,8-PeCDD (25-18	*				41 %				
Surrogate: 13C-1,2,3,7,8-PeCDF (24-18	*				41 %				
Surrogate: 13C-2,3,4,6,7,8-HxCDF (28-					52 %				
Surrogate: 13C-2,3,4,7,8-PeCDF (21-17	*				44 %				
Surrogate: 13C-2,3,7,8-TCDD (25-164%)					49 %				
Surrogate: 13C-2,3,7,8-TCDF (24-169%)	<i>5)</i>				46 %				
Surrogate: 13C-OCDD (17-157%)					41 %				
Surrogate: 37Cl4-2,3,7,8-TCDD (35-197	7%)			!	94 %				

#### **TestAmerica Irvine**

Kathleen A. Robb For Joseph Doak Project Manager



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

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

#### SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 006 (Comp) (ITA1481-02	Hold Time (in days) ) - Water	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 300.0	2	01/19/2010 08:46	01/19/2010 19:00	01/20/2010 17:15	01/20/2010 18:42
Filtration	1	01/19/2010 08:46	01/19/2010 19:00	01/20/2010 16:50	01/20/2010 16:53



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### HEXANE EXTRACTABLE MATERIAL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2388 Extracted: 01/26/10										
Blank Analyzed: 01/26/2010 (10A2388-B	,									
Hexane Extractable Material (Oil & Grease)	ND	5.0	mg/l							
LCS Analyzed: 01/26/2010 (10A2388-BS	1)									
Hexane Extractable Material (Oil & Grease)	20.3	5.0	mg/l	20.0		102	78-114			
LCS Dup Analyzed: 01/26/2010 (10A238	8-BSD1)									
Hexane Extractable Material (Oil & Grease)	20.7	5.0	mg/l	20.0		104	78-114	2	11	
Matrix Spike Analyzed: 01/26/2010 (10A	2388-MS1)				Source: I'	ГА2111-0	1			
Hexane Extractable Material (Oil & Grease)	23.5	4.8	mg/l	19.1	3.33	106	78-114			

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **METALS**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
•	Result	Limit	Cints	Level	Result	/UKEC	Limits	KI D	Limit	Quanners
<b>Batch: 10A1800 Extracted: 01/20/10</b>										
Blank Analyzed: 01/25/2010 (10A1800-B	LK1)									
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.0	ug/l							
Lead	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 01/25/2010 (10A1800-BS	1)									
Antimony	73.9	2.0	ug/l	80.0		92	85-115			
Cadmium	74.1	1.0	ug/l	80.0		93	85-115			
Copper	73.8	2.0	ug/l	80.0		92	85-115			
Lead	74.3	1.0	ug/l	80.0		93	85-115			
Thallium	73.9	1.0	ug/l	80.0		92	85-115			
Matrix Spike Analyzed: 01/25/2010 (10A	1800-MS1)				Source: I'	ТА1401-0	1			
Antimony	81.2	2.0	ug/l	80.0	2.44	98	70-130			
Cadmium	77.9	1.0	ug/l	80.0	ND	97	70-130			
Copper	86.3	2.0	ug/l	80.0	6.94	99	70-130			
Lead	118	1.0	ug/l	80.0	39.4	98	70-130			
Thallium	78.6	1.0	ug/l	80.0	0.228	98	70-130			
Matrix Spike Analyzed: 01/25/2010 (10A	1800-MS2)				Source: I'	ТА1478-0	1			
Antimony	73.2	4.0	ug/l	80.0	0.938	90	70-130			
Cadmium	80.5	2.0	ug/l	80.0	0.628	100	70-130			
Copper	101	4.0	ug/l	80.0	19.2	102	70-130			
Lead	130	2.0	ug/l	80.0	47.6	103	70-130			
Thallium	81.9	2.0	ug/l	80.0	0.594	102	70-130			
Matrix Spike Dup Analyzed: 01/25/2010	(10A1800-M	SD1)			Source: I'	ТА1401-0	1			
Antimony	81.3	2.0	ug/l	80.0	2.44	99	70-130	0.2	20	
Cadmium	79.0	1.0	ug/l	80.0	ND	99	70-130	1	20	
Copper	87.7	2.0	ug/l	80.0	6.94	101	70-130	2	20	
Lead	120	1.0	ug/l	80.0	39.4	101	70-130	2	20	
Thallium	81.2	1.0	ug/l	80.0	0.228	101	70-130	3	20	

#### **TestAmerica Irvine**

Kathleen A. Robb For Joseph Doak Project Manager



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481

Received: 01/19/10

# METHOD BLANK/QC DATA

#### **METALS**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10A1830 Extracted: 01/20/10										
Blank Analyzed: 01/20/2010 (10A1830-Bl	LK1)									
Mercury	ND	0.20	ug/l							
LCS Analyzed: 01/20/2010 (10A1830-BS)	1)									
Mercury	8.22	0.20	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 01/20/2010 (10A	1830-MS1)				Source: I'	TA1359-0	1			
Mercury	8.18	0.20	ug/l	8.00	ND	102	70-130			
Matrix Spike Dup Analyzed: 01/20/2010	(10A1830-MS	SD1)			Source: I'	TA1359-0	1			
Mercury	8.18	0.20	ug/l	8.00	ND	102	70-130	0.08	20	

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

# METHOD BLANK/QC DATA

#### **DISSOLVED METALS**

	B 1/	Reporting	TT *4	Spike	Source	A/ DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
<b>Batch: 10A1999 Extracted: 01/21/10</b>										
Blank Analyzed: 01/25/2010 (10A1999-B	LK1)									
Antimony	ND	2.0	ug/l							
Cadmium	ND	1.0	ug/l							
Copper	ND	2.0	ug/l							
Lead	ND	1.0	ug/l							
Thallium	ND	1.0	ug/l							
LCS Analyzed: 01/25/2010 (10A1999-BS	1)									
Antimony	80.9	2.0	ug/l	80.0		101	85-115			
Cadmium	79.9	1.0	ug/l	80.0		100	85-115			
Copper	84.4	2.0	ug/l	80.0		106	85-115			
Lead	88.1	1.0	ug/l	80.0		110	85-115			
Thallium	86.6	1.0	ug/l	80.0		108	85-115			
Matrix Spike Analyzed: 01/25/2010 (10A	1999-MS1)				Source: I'	TA1358-0	2			
Antimony	79.8	2.0	ug/l	80.0	ND	100	70-130			
Cadmium	78.2	1.0	ug/l	80.0	0.217	98	70-130			
Copper	86.7	2.0	ug/l	80.0	4.63	103	70-130			
Lead	91.4	1.0	ug/l	80.0	5.21	108	70-130			
Thallium	85.9	1.0	ug/l	80.0	0.290	107	70-130			
Matrix Spike Dup Analyzed: 01/25/2010	(10A1999-M	SD1)			Source: I'	ТА1358-0	2			
Antimony	80.7	2.0	ug/l	80.0	ND	101	70-130	1	20	
Cadmium	79.1	1.0	ug/l	80.0	0.217	99	70-130	1	20	
Copper	85.7	2.0	ug/l	80.0	4.63	101	70-130	1	20	
Lead	91.0	1.0	ug/l	80.0	5.21	107	70-130	0.5	20	
Thallium	86.1	1.0	ug/l	80.0	0.290	107	70-130	0.3	20	

#### **TestAmerica Irvine**



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **DISSOLVED METALS**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 10A2023 Extracted: 01/21/10										
Blank Analyzed: 01/21/2010 (10A2023-B	LK1)									
Mercury	ND	0.20	ug/l							
LCS Analyzed: 01/21/2010 (10A2023-BS)	1)									
Mercury	8.84	0.20	ug/l	8.00		110	85-115			
Matrix Spike Analyzed: 01/21/2010 (10A	2023-MS1)				Source: I'	ТА1481-0	2			
Mercury	8.85	0.20	ug/l	8.00	ND	111	70-130			
Matrix Spike Dup Analyzed: 01/21/2010	(10A2023-MSI	<b>D1</b> )			Source: I'	ТА1481-0	2			
Mercury	8.92	0.20	ug/l	8.00	ND	111	70-130	0.8	20	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481

Received: 01/19/10

# METHOD BLANK/QC DATA

#### **INORGANICS**

Analyta	Result	Reporting Limit	Units	Spike Level	Source	%REC	%REC	DDN	RPD Limit	Data Qualificans
Analyte	Result	Limit	Units	Level	Result	70KEC	Limits	KPD	Limit	Qualifiers
Batch: 10A1808 Extracted: 01/20/10										
Blank Analyzed: 01/20/2010 (10A1808-E	BLK1)									
Chloride	ND	0.50	mg/l							
Nitrate/Nitrite-N	ND	0.26	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 01/20/2010 (10A1808-BS	51)									
Chloride	4.93	0.50	mg/l	5.00		99	90-110			
Sulfate	9.94	0.50	mg/l	10.0		99	90-110			
Matrix Spike Analyzed: 01/20/2010 (10A	1808-MS1)				Source: I	TA1585-0	1			
Chloride	95.2	5.0	mg/l	50.0	45.0	100	80-120			
Sulfate	179	5.0	mg/l	100	78.1	101	80-120			
Matrix Spike Analyzed: 01/20/2010 (10A	1808-MS2)				Source: I	TA1659-0	1			
Chloride	42.2	2.5	mg/l	5.00	38.4	77	80-120			MHA
Sulfate	70.0	2.5	mg/l	10.0	62.1	79	80-120			MHA
Matrix Spike Dup Analyzed: 01/20/2010	(10A1808-M	SD1)			Source: I	TA1585-0	1			
Chloride	96.7	5.0	mg/l	50.0	45.0	103	80-120	2	20	
Sulfate	181	5.0	mg/l	100	78.1	103	80-120	1	20	
Batch: 10A1916 Extracted: 01/21/10										
Blank Analyzed: 01/21/2010 (10A1916-E	BLK1)									
Total Dissolved Solids	ND	10	mg/l							
LCS Analyzed: 01/21/2010 (10A1916-BS	51)									
Total Dissolved Solids	990	10	mg/l	1000		99	90-110			

#### **TestAmerica Irvine**



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481

Received: 01/19/10

# METHOD BLANK/QC DATA

#### **INORGANICS**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10A1916 Extracted: 01/21/10										
<b>Duplicate Analyzed: 01/21/2010 (10A19</b>	16-DUP1)				Source: I	TA1658-0	1			
Total Dissolved Solids	489	10	mg/l		494			1	10	

#### **TestAmerica Irvine**



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **ASTM 5174-91**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 35029 Extracted: 02/04/10										
Matrix Spike Dup Analyzed: 02/08/2010	(F0A20048600	1D)			Source: F	0A200486	001			
Total Uranium	29.2	0.7	pCi/L	27.7	-0.0334	105	62-150	2	20	
Matrix Spike Analyzed: 02/08/2010 (F0A	200486001S)				Source: F	0A200486	5001			
Total Uranium	28.8	0.7	pCi/L	27.7	-0.0334	104	62-150			
Blank Analyzed: 02/08/2010 (F0B040000	029B)				Source:					
Total Uranium	-0.0623	0.693	pCi/L				-			U
LCS Analyzed: 02/08/2010 (F0B0400000	29C)				Source:					
Total Uranium	29.2	0.7	pCi/L	27.7		105	90-120			

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA 900.0 MOD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers			
Batch: 25415 Extracted: 01/25/10													
Matrix Spike Analyzed: 01/29/2010 (F0A200486001S)					Source: F0A200486001								
Gross Alpha	6.9	3	pCi/L	49.4	0.98	12	35-150			а			
Gross Beta	10	4	pCi/L	68.1	0.83	14	54-150			a			
Duplicate Analyzed: 01/29/2010 (F0A200	486001X)				Source: F	0A200486	5001						
Gross Alpha	0.71	3	pCi/L		0.98		-			Jb			
Gross Beta	1.6	4	pCi/L		0.83		-			Jb			
Blank Analyzed: 01/29/2010 (F0A250000	415B)				Source:								
Gross Alpha	-0.03	3	pCi/L				-			U			
Gross Beta	-0.26	4	pCi/L				-			U			
LCS Analyzed: 01/29/2010 (F0A2500004	15C)				Source:								
Gross Alpha	45.4	3	pCi/L	49.4		92	62-134						
Gross Beta	73.4	4	pCi/L	68.1		108	58-133						

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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA 901.1 MOD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers		
Batch: 23036 Extracted: 01/23/10												
Duplicate Analyzed: 01/26/2010 (F0A210532001X)					Source: F0A210532001							
Cesium 137	-1.4	20	pCi/L		-2.3		-			U		
Potassium 40	-60	NA	pCi/L		-30		-			U		
Blank Analyzed: 01/26/2010 (F0A230000	036B)				Source:							
Cesium 137	-0.4	20	pCi/L				-			U		
Potassium 40	-70	NA	pCi/L				-			U		
LCS Analyzed: 01/26/2010 (F0A2300000	36C)				Source:							
Americium 241	132000	NA	pCi/L	141000		93	87-110					
Cobalt 60	79000	NA	pCi/L	87900		90	89-110					
Cesium 137	48200	20	pCi/L	53100		91	90-110					



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA 903.0 MOD**

Analyte Batch: 22145 Extracted: 01/22/10	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 02/08/2010 (F0A220000) Radium (226)	0 <b>145B)</b> 0.111	1	pCi/L		Source:		-			U
LCS Analyzed: 02/08/2010 (F0A2200001 Radium (226)	<b>45C)</b> 10.7	1	pCi/L	11.3	Source:	95	68-136			
LCS Dup Analyzed: 02/08/2010 (F0A220 Radium (226)	<b>000145L)</b> 11.2	1	pCi/L	11.3	Source:	100	68-136	5	40	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA 904 MOD**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
<b>Batch: 22148 Extracted: 01/22/10</b>										
Blank Analyzed: 02/08/2010 (F0A220000	0148B)				Source:					
Radium 228	0.22	1	pCi/L				-			U
LCS Analyzed: 02/08/2010 (F0A2200001	48C)				Source:					
Radium 228	8.22	1	pCi/L	6.45		127	60-142			
LCS Dup Analyzed: 02/08/2010 (F0A220000148L)					Source:					
Radium 228	7.58	1	pCi/L	6.45		118	60-142	8	40	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA 905 MOD**

A 1.4	D k	Reporting	TT *4	Spike	Source	0/ DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 22149 Extracted: 01/22/10										
Blank Analyzed: 02/01/2010 (F0A220000	0149B)				Source:					
Strontium 90	-0.01	3	pCi/L				-			U
LCS Analyzed: 02/01/2010 (F0A2200001	49C)				Source:					
Strontium 90	6.74	3	pCi/L	6.81		99	80-130			
LCS Dup Analyzed: 02/01/2010 (F0A220000149L)					Source:					
Strontium 90	6.99	3	pCi/L	6.81		103	80-130	4	40	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA 906.0 MOD**

Analyte  Batch: 28080 Extracted: 01/28/10	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Duplicate Analyzed: 01/29/2010 (F0A20</b> Tritium	<b>0486001X)</b> -49	500	pCi/L		Source: F	0A200486	001 -			U
Matrix Spike Analyzed: 01/29/2010 (F0/2) Tritium	<b>A200494001S)</b> 4350	500	pCi/L	4540	Source: F	<b>0A200494</b> 94	62-147			
Blank Analyzed: 01/28/2010 (F0A28000) Tritium	<b>0080B)</b> 250	500	pCi/L		Source:		-			Jb
LCS Analyzed: 01/28/2010 (F0A2800000 Tritium	<b>080C)</b> 4680	500	pCi/L	4540	Source:	103	85-112			



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA-5 1613B**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 26267 Extracted: 01/26/10										-
Blank Analyzed: 02/02/2010 (G0A26)	0000267B)				Source:					
1,2,3,4,6,7,8-HpCDD	7.9e-006	0.00005	ug/L		2041000		_			J
1,2,3,4,6,7,8-HpCDF	6.9e-006	0.00005	ug/L				_			J
1,2,3,4,7,8,9-HpCDF	ND	0.00005	ug/L				_			
1,2,3,4,7,8-HxCDD	4.6e-006	0.00005	ug/L				-			J
1,2,3,4,7,8-HxCDF	ND	0.00005	ug/L				-			
1,2,3,6,7,8-HxCDD	6.5e-006	0.00005	ug/L				-			J
1,2,3,6,7,8-HxCDF	5.7e-006	0.00005	ug/L				-			J
1,2,3,7,8,9-HxCDD	2.7e-006	0.00005	ug/L				-			J, Q
1,2,3,7,8,9-HxCDF	2.2e-006	0.00005	ug/L				-			J, Q
1,2,3,7,8-PeCDD	ND	0.00005	ug/L				-			_
1,2,3,7,8-PeCDF	ND	0.00005	ug/L				-			
2,3,4,6,7,8-HxCDF	6e-006	0.00005	ug/L				-			J, Q
2,3,4,7,8-PeCDF	ND	0.00005	ug/L				-			
2,3,7,8-TCDD	ND	0.00001	ug/L				-			
2,3,7,8-TCDF	ND	0.00001	ug/L				-			
OCDD	2e-005	0.0001	ug/L				-			J, Q
OCDF	1.6e-005	0.0001	ug/L				-			J
Total HpCDD	7.9e-006	0.00005	ug/L				-			J
Total HpCDF	6.9e-006	0.00005	ug/L				-			J
Total HxCDD	1.4e-005	0.00005	ug/L				-			J, Q
Total HxCDF	1.4e-005	0.00005	ug/L				-			J, Q
Total PeCDD	ND	0.00005	ug/L				-			
Total PeCDF	ND	0.00005	ug/L				-			
Total TCDD	ND	0.00001	ug/L				-			
Total TCDF	ND	0.00001	ug/L				-			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.0018		ug/L	0.002		91	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.0021		ug/L	0.002		104	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.0019		ug/L	0.002		93	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.0017		ug/L	0.002		83	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.0015		ug/L	0.002		77	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.0018		ug/L	0.002		88	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.0017		ug/L	0.002		85	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.0017		ug/L	0.002		85	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.0013		ug/L	0.002		65	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.0013		ug/L	0.002		66	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.0019		ug/L	0.002		93	28-136			
T										

#### **TestAmerica Irvine**

Kathleen A. Robb For Joseph Doak Project Manager



MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

# METHOD BLANK/QC DATA

#### **EPA-5 1613B**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
•						, , , , , , ,				<b>C</b>
Batch: 26267 Extracted: 01/26/10										
Blank Analyzed: 02/02/2010 (G0A2600	00267B)				Source:					
Surrogate: 13C-2,3,4,7,8-PeCDF	0.0014		ug/L	0.002		69	21-178			
Surrogate: 13C-2,3,7,8-TCDD	0.0012		ug/L	0.002		61	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.0012		ug/L	0.002		60	24-169			
Surrogate: 13C-OCDD	0.0036		ug/L	0.004		89	17-157			
Surrogate: 37Cl4-2,3,7,8-TCDD	0.00077		ug/L	0.0008		96	35-197			
LCS Analyzed: 02/02/2010 (G0A260000	0267C)				Source:					
1,2,3,4,6,7,8-HpCDD	0.00102	0.00005	ug/L	0.001		102	70-140			
1,2,3,4,6,7,8-HpCDF	0.00108	0.00005	ug/L	0.001		108	82-122			
1,2,3,4,7,8,9-HpCDF	0.00111	0.00005	ug/L	0.001		111	78-138			
1,2,3,4,7,8-HxCDD	0.00103	0.00005	ug/L	0.001		103	70-164			
1,2,3,4,7,8-HxCDF	0.00114	0.00005	ug/L	0.001		114	72-134			
1,2,3,6,7,8-HxCDD	0.000964	0.00005	ug/L	0.001		96	76-134			
1,2,3,6,7,8-HxCDF	0.00102	0.00005	ug/L	0.001		102	84-130			
1,2,3,7,8,9-HxCDD	0.000912	0.00005	ug/L	0.001		91	64-162			
1,2,3,7,8,9-HxCDF	0.00102	0.00005	ug/L	0.001		102	78-130			
1,2,3,7,8-PeCDD	0.000999	0.00005	ug/L	0.001		100	70-142			
1,2,3,7,8-PeCDF	0.00104	0.00005	ug/L	0.001		104	80-134			
2,3,4,6,7,8-HxCDF	0.00104	0.00005	ug/L	0.001		104	70-156			
2,3,4,7,8-PeCDF	0.00106	0.00005	ug/L	0.001		106	68-160			
2,3,7,8-TCDD	0.000175	0.00001	ug/L	0.0002		88	67-158			
2,3,7,8-TCDF	0.0002	0.00001	ug/L	0.0002		100	75-158			
OCDD	0.002	0.0001	ug/L	0.002		100	78-144			
OCDF	0.00214	0.0001	ug/L	0.002		107	63-170			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDD	0.00169		ug/L	0.002		84	23-140			
Surrogate: 13C-1,2,3,4,6,7,8-HpCDF	0.00191		ug/L	0.002		96	28-143			
Surrogate: 13C-1,2,3,4,7,8,9-HpCDF	0.00165		ug/L	0.002		83	26-138			
Surrogate: 13C-1,2,3,4,7,8-HxCDD	0.00133		ug/L	0.002		66	32-141			
Surrogate: 13C-1,2,3,4,7,8-HxCDF	0.00139		ug/L	0.002		69	26-152			
Surrogate: 13C-1,2,3,6,7,8-HxCDD	0.00175		ug/L	0.002		88	28-130			
Surrogate: 13C-1,2,3,6,7,8-HxCDF	0.00162		ug/L	0.002		81	26-123			
Surrogate: 13C-1,2,3,7,8,9-HxCDF	0.00161		ug/L	0.002		80	29-147			
Surrogate: 13C-1,2,3,7,8-PeCDD	0.00124		ug/L	0.002		62	25-181			
Surrogate: 13C-1,2,3,7,8-PeCDF	0.00123		ug/L	0.002		62	24-185			
Surrogate: 13C-2,3,4,6,7,8-HxCDF	0.00171		ug/L	0.002		86	28-136			
Surrogate: 13C-2,3,4,7,8-PeCDF	0.00127		ug/L	0.002		63	21-178			

#### **TestAmerica Irvine**

Kathleen A. Robb For Joseph Doak Project Manager



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Sampled: 01/18/10-01/19/10

Report Number: ITA1481 Received: 01/19/10

## METHOD BLANK/QC DATA

#### EPA-5 1613B

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 26267 Extracted: 01/26/10										
LCS Analyzed: 02/02/2010 (G0A26	0000267C)				Source:					
Surrogate: 13C-2,3,7,8-TCDD	0.00116		ug/L	0.002		58	25-164			
Surrogate: 13C-2,3,7,8-TCDF	0.00112		ug/L	0.002		56	24-169			
Surrogate: 13C-OCDD	0.00318		ug/L	0.004		80	17-157			
Surrogate: 37Cl4-2.3.7.8-TCDD	0.000752		$u\varphi/L$	0.0008		94	35-197			

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

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Arcadia, CA 91007

Project ID: Routine Outfall 006

618 Michillinda Avenue, Suite 200

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

## **Compliance Check**

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

						Compliance	
LabNumber	Analysis	Analyte	Units	Result	MRL	Limit	
ITA1481-01	1664-HEM	Hexane Extractable Material (Oil & Greas	mg/l	0	4.7	15	

# **Compliance Check**

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

							Compliance
La	bNumber	Analysis	Analyte	Units	Result	MRL	Limit
ITA	A1481-02	Antimony-200.8	Antimony	ug/l	0.29	2.0	6
ITA	A1481-02	Cadmium-200.8	Cadmium	ug/l	0.095	1.0	4
ITA	A1481-02	Chloride - 300.0	Chloride	mg/l	4.57	0.50	150
ITA	A1481-02	Copper-200.8	Copper	ug/l	4.75	2.0	14
ITA	A1481-02	Lead-200.8	Lead	ug/l	2.84	1.0	5.2
ITA	A1481-02	Mercury - 245.1	Mercury	ug/l	0	0.20	0.2
ITA	A1481-02	Nitrogen, NO3+NO2 -N EPA 300.	0 Nitrate/Nitrite-N	mg/l	3.41	0.26	10
ITA	A1481-02	Sulfate-300.0	Sulfate	mg/l	5.30	0.50	250
ITA	A1481-02	TDS - SM2540C	Total Dissolved Solids	mg/l	119	10	850
ITA	A1481-02	Thallium-200.8	Thallium	ug/l	0.014	1.0	2



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

Sampled: 01/18/10-01/19/10

MWH-Pasadena/Boeing Project ID: Routine Outfall 006

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Report Number: ITA1481 Received: 01/19/10

Attention: Bronwyn Kelly

### **DATA QUALIFIERS AND DEFINITIONS**

a Spiked analyte outside of sta	ted OC limits.
---------------------------------	----------------

- **B** Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- C Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- **J** Estimated result. Result is less than the reporting limit.
- **Ja** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- **Jb** Result is greater than sample detection limit but less than stated reporting limit.
- 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).
- **Q** Estimated maximum possible concentration (EMPC).
- U Result is less than the sample detection limit.
- **ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- **RPD** Relative Percent Difference



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

MWH-Pasadena/Boeing

Arcadia, CA 91007

618 Michillinda Avenue, Suite 200

Attention: Bronwyn Kelly

Project ID: Routine Outfall 006

Report Number: ITA1481

Sampled: 01/18/10-01/19/10

Received: 01/19/10

## **Certification Summary**

#### **TestAmerica Irvine**

Method	Matrix	Nelac	California
EDD + Level 4	Water	N/A	N/A
EPA 1664A	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1-Diss	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
Filtration	Water	N/A	N/A
SM2540C	Water	X	

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

#### **Subcontracted Laboratories**

#### **TestAmerica St. Louis**

13715 Rider Trail North - Earth City, MO 63045

Method Performed: ASTM 5174-91

Samples: ITA1481-02

Method Performed: EPA 900.0 MOD

Samples: ITA1481-02

Method Performed: EPA 901.1 MOD

Samples: ITA1481-02

Method Performed: EPA 903.0 MOD

Samples: ITA1481-02

Method Performed: EPA 904 MOD

Samples: ITA1481-02

Method Performed: EPA 905 MOD

Samples: ITA1481-02

Method Performed: EPA 906.0 MOD

Samples: ITA1481-02

## **TestAmerica Irvine**

Kathleen A. Robb For Joseph Doak Project Manager



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

Sampled: 01/18/10-01/19/10

Project ID: Routine Outfall 006

MWH-Pasadena/Boeing 618 Michillinda Avenue, Suite 200

Arcadia, CA 91007 Report Number: ITA1481 Received: 01/19/10

Attention: Bronwyn Kelly

#### **TestAmerica West Sacramento**

880 Riverside Parkway - West Sacramento, CA 95605

Method Performed: EPA-5 1613B Samples: ITA1481-02

**TestAmerica Irvine** 

Test America version 6/29/09	neric	a Version 6/2	29/09			CH	Z	OF C	CHAIN OF CUSTODY FORM	Y FOR	Z.	4	TTA 148	<u> </u>		Page 1 of 2	0
Client Name/Address:	dress:			Project:							AN	ANALYSIS REQUIRED	QUIRED				
MWH-Arcadia 618 Michillinda Ave, Arcadia, CA 91007	ia Ave, Su 007	Suite 200		Boeing-SSFL NPDES Routine Outfall 006 GRAB Stormwater at FSDF-2	NPDES all 006 FSDF-2											Field readings:	
America C	ontact:	Test America Contact: Joseph Doak	oak													Temp °F = 54° &	
					-		(M3H-									pH= 7.3	
Project Manager: Bronwyn Kelly	ır. Bron	wyn Kelly		Phone Number:	٠. ت		<del>1</del> 99									Time of readings =	
ler: £	WAC	Sampler: E. WALKER		(626) 568-6691 Fax Number: (626) 568-6515	<del>ر</del> - ح		ารเธลระ (1									5141	
Sample Sample Description	Sample Matrix	Container Type	# of Cont.	+	Preservative	Bottle #	Oil & (									Comments	
1	3	1L Amber	~	3	모	1A, 1B	×										<u> </u>
																	<u> </u>
																	<u> </u>
																-	
			$\perp$														
																	1
											i i						$ \sqrt{} $
								+									
-			_					-								32	$\overline{\top}$
+								+							1		1.
	Ĕ	ese Sampl	les ar	These Samples are the Grab Portion of Outfall 006	rtion of Out	fall 006 for	his st	rm ever	fall 006 for this storm event. Composite samples will follow and are to be added to this work order	te sampl	es will fol	ow and are	to be add	led to this	work of	der.	
Relinquished By	11		Date/Time:	me:		Received By	1-4	0	Date/Tiffney	2		Turn-around to	me: (Check)	72 Hour.	,	٠.	<del></del> ,
Delination By	1	7	9	9)-01/8/	3	3	٦		A Control	2/2	16:0	6.8 Hour.	1	5 Day:	1	Normal: X	
R	1	M	10	?	19:8							Sample Integrity: (Check) Intact:		On Ice:		36	
Relinquished By		Š	Date/Time:	ше: :		Received By			Date/Time:	QID	(S/10 (9/d)	Data Requirements: (Check)	nents: (Check	<) All Level IV:	2	NPDES Level IV:	
											3						7

	Comments								Unfiltered and unpreserved	analysis	Only test if first or second rain events of the year	Filter w/in 24hrs of receipt at lab	σ			カスペン120	10 Day:	) \$	NPDES Level IV:
															0000	same work order for <del>COS, Page T</del> efteror Outfall 006 for the same event. Gartes Sample S. HALLANDO	72 Hour:5 Day:	on Ice: X	) All Level IV:
ANALYSIS REQUIRED															rm event.	for the same ever	1 urn-around time: (Check) 24 Hour:7 48 Hour:5	Sample Integrity: (Check) Intact:	Data Requirements: (Check) No Level IV:
ANAL	43 10 00 43 10 00											×			for this sto	outfall 006	7:30 to		20 2
	(0), Gross Beta(900.0), Gross Beta(900.0), Total & 226 (903.0 or 903.1), K-4.0), Uranium (908.0), K-6.0 or 901.1)	909) (S-H) m JuibeЯ bənic 106) 822 mr	Tritiur Comb Radiu						>	<					COC Page 7 of 2 are the composite samples for Outfall 006 for this storm event.	Page 4-of 2-fo	oate/Time: ? [-[4-16   4:36	Date/Time:	Date/Time:
	N-2OI	N+8ON ' <sup>†</sup> O'	cı-, s			-	×	×						7/10	te samples	er for COG			ď
	le Metals: Sb, Cd, Cu, Pb,		T ,gH	×	×	×								<i>†</i>	sodmoo au	e work ord	4		
			Bottle #	2A	28	3A, 3B	4A, 4B	9	6A	6B		8	J				Received By	Redeived By	Received By
	AII 006 FSDF-2	11 5	Preservative	HNO3	HNO <sub>3</sub>	None	None	None	None	None	Моле	None	d		OC Page	be added	1430	757	
Project:	Boeing-SSFL NPDES Routine Outfall 006 COMPOSITE Stormwater at FSDF-2 Stormwater at FSDF-2	(626) 568-6691 Fax Number: (626) 568-6515	Sampling Date/Time	14910 034F							+	$\rightarrow$			3	These must be added to the		10 (P.	ne:
			# of Cant.	-		2	2	1	1	1	H	1	***************************************				Date/Time:	Date/Time:	Date/Time:
,	uite 200 Joseph Do iwyn Kelly	Emily-Alfano Meghann Chell	Container Type	1L Poly	1L Poly	1L Amber	500 mL Poly	500 mL Poly	2.5 Gal Cube	500 ml Amber	1 Gal Poly	1L Poly						M	
ddress:	ia Ave, Si 1007 Contact:	Emily-Alfano Meghann C	Sample Matrix	w	W	W	W	W	Α.	:	W	W	$\int$				Ş	19	
Client Name/Address:	MWH-Arcadia 618 Michillinda Ave, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak Project Manager: Bronwyn Kelly	Sampler:	Sample Description	Outfall 006	Outfall 006 Dup	Outfall 006	Outfall 006	Outfall 006	Supplied to the supplied to th		edittall 006	Outfall 006					Relinquished By	Relinquished By	Relinquished By

				Comments			Low Flow (HOLD						Unfiltered and unpreserved	analysis	Only test if first or accord rain events of the year	Filter w/in 24hrs of receipt at lab	<b>A</b>	(HOCD)			10 Day:	⟨\ \rangle		NPDES Level IV: X
	וא אבעטואבט	-																	event.	same work order for COC Page 1 of 2 for Outfall 006 for the same event.	Turn-around time: (Check) 24 Hour: 72 Hour. 5 Day:	ntegrity: (Check)	On Ice: 🗙	Data Requirements: (Check) No Level IV:
02.10140	AINALTO		Cn, Pb,	als: Sb, Cd,											+	×			for this storm	Outfall 006 fo	Turn-arou	Samp	Intact:	Data (Q'\)
		15 &	toT ,(0. (1.509 1	Gross Beta 609) 9c-90 3c (903.0 9. Uranium 1, 1003.1	(0.80e) S muib (0.40e) o 0.10	ned Ra ined Ra 822 m 5-137 (9	Tritiun Comb Radiu 40, C9	<u> </u>					×	<					COC Page 2 of 2 are the composite samples for Outfall 006 for this storm event.	Page 1 of 2 for	T-(8-10 (	Øate/Time:		Date/Time: 
							SQT					×							samples	or COC				
						e bns) 				×	×				+				posite s	order	U,			
		ʻq.	d, Cu, F	letals: Sb, C	M əlds		Total I IT , gH	×	×				,						ne com	work	A.			
							Bottle #	2A	2B	3A, 3B	4A, 4B	·9	6A	89	7	8			of 2 are t		Received By	Received By		Received By
		IPDES	SDF-2				Preservative	HNO3	HNO3	None	None	None	None	None	None	None			C Page 2	oe added to	16:0)	<del>`</del>	14.8	
10000	Tojeci.	Boeing-SSFL NPDES	COMPOSITE Stormwater at FSDF-2		Phone Number: (626) 568-6691	(526) 568-6515 (626) 568-6515	Sampling Date/Time	\$161-01/81/1						,	1	5161-01/81/1			8	hese mu	le:	Bate/Time:	18-6 14:8	: :
			<u> </u>			<u> </u>	# of Cont.	-	-	2	2	-	-	-	F	-					Date/Time:	Sate/Tin	_	Date/Time:
		000	ulte 200	Joseph Do	ıwyn Kelly	KER	Container Type	1L Poly	1L Poly	1L Amber	500 mL Poly	500 mL Poly	2.5 Gal Cube	500 ml Amber	1 Gal Poly	1L Poly					_ \			9
10000	deress.	<u>.</u>	1 Ave, St 1007	Contact:	er: Bron	ZAC	Sample Matrix	3	3	3	Α.	8	3	>	\$	*					1.	1	1	
A description	Client Name/Address.	MWH-Arcadia	618 Michilinda Ave, Suite 200 Arcadia, CA 91007	Test America Contact: Joseph Doak	Project Manager: Bronwyn Kelly	Sampler: E. WALKER	Sample Description	Outfall 006	Outfall 006 Dup	Outfall 006	Outfall 006	Outfall 006	900	Outrall 000	Outfall 905	Outfall 006					Relinquished By	Relinquisped By	1982	Relihquished By

1 2



TestAmerica Laboratories, Inc.

# ANALYTICAL REPORT

REVISED

PROJECT NO. ITA1481

MWH-Pasadena Boeing

Lot #: F0A220438

Joseph Doak

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

TESTAMERICA LABORATORIES, INC.

Project Manager

March 17, 2010

## Case Narrative LOT NUMBER: F0A220438 Revised 03-17-10

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on January 22, 2010. This sample is associated with your MWH-Pasadena Boeing project.

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

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

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

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

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

#### **Observations/Nonconformances**

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

# Gross Alpha/Beta (EPA 900.0 MOD)

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

#### Affected Samples:

F0A220438 (1): ITA1481-02

	٠.٠٠	WZ X	FOA 21042	( (una)
195 AIR		#(8):	112	3 1 406 / .7 441
THE CEADER IN HAVIRON	MENTAL TESTING	. •	<u> </u>	29, 444
	UPON RECEIPT FORM	•	43	33,445
	BROOK HAVEN	_	43	34
Quote No:		<u> </u>	•	
•	SEE BELDW		1770	
Initiated By:	· · · · · · · · · · · · · · · · · · ·			1-10 Time: 0900
Shinnan Æ			<u>formation</u>	
Shipper: F Shipping # (s):*	edEx UPS DHL Courier Clie	nt O	ther:	Multiple Packages: Y N
1. 9800	53 <i>93 45</i> 79 6.			Sample Temperature (s);**  1. Au Men / 6.
2.98005				
3, <u>8629</u> 2	902 4619 8.			
4. 9800 50	393 4580 9.			4. 2 9.
5	10.	٠.		5. 10.
*Numbered shipping line	s correspond to Numbered Sample Temp lines	**Sar	nple must be receive	d at 4°C ± 2°C- If not, note contents below. Temperature
Condition (Circle "Y"	for yes, "N" for no and "N/A" for not applicable):	ASTIBI	ice does NOT affect	the following: Metals-Liquid or Rad tests-Liquid or Solids
1. (Y) N	Are there custody seals present on the cooler?	8.	YN	Are there custody seals present on bottles?
2. Y N N/A	Do custody seals on cooler appear to be tampered with?	9,	Y N N/A	Do custody seals on bottles appear to be tampered with?
3. (Y) N	Were contents of cooler frisked after opening, but before unpacking?	10,	Y N N/A	Was sample received with proper pH <sup>1</sup> ? (If not, make note below)
4. (Y) N	Sample received with Chain of Custody?	11.	Ϋ́N	Sample received in proper containers?
5. YN N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	Y N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. Y N	Was sample received broken?	13.	Y N N/A	Was Internal COC/Workshare received?
7. YN	Is sample volume sufficient for analysis?	` 14.	Y N N/A	Was pH taken by original TestAmerica lab?
Notes:	ANL, Sandia) sites, pH of ALL containers received m	ust be v	erified, EXCEPT VO	DA, TOX and soils.
128246				
28162				
28255		<del></del> -	. , , , , , , , , , , , , , , , , , , ,	
28892			***************************************	
28257	)			
28243				
28248				
<u> </u>				
Corrective Action:  Client Contact Na	ime;	T1	nformed by:	
☐ Sample(s) process ☐ Sample(s) on hold	/ 1			
Project Management F	Review: Aumak Ph	if reles	used, notify; Date;	1-25-10
THIS FORM MUST BE CO	MDI PTELL AT THE PER CO.	VO CHE	<del></del>	
·				NEXT TO THAT ITEM.

# **METHODS SUMMARY**

#### F0A220438

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

#### References:

ASTM Annual Book Of ASTM Standards.

EPA "EASTERN ENVIRONMENTAL RADIATION FACILITY RADIOCHEMISTRY

PROCEDURES MANUAL" US EPA EPA 520/5-84-006 AUGUST 1984

# **SAMPLE SUMMARY**

#### F0A220438

WO # SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LTLAV 001	ITA1481-02	01/19/10	08:46

#### NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

## TestAmerica Irvine

# Client Sample ID: ITA1481-02

## Radiochemistry

Lab Sample ID: F0A220438-001

Work Order: Matrix:

LTLAV WATER Date Collected:

01/19/10 0846

Date Received:

01/22/10 0930

Total
Incart

Parameter	Result	Qual	Uncert. (2 o+/-)	RL.	mdc	Prep Date	Analysis Date
Gamma Cs-137 & H	its by EPA 901.1	MOD	1	Ci/L	Batch # 0	023036	Yld %
Cesium 137	-2.3	U	9.7	20.0	18	01/23/10	01/26/10
Potassium 40	-80	U	1000		300	01/23/10	01/26/10
Gross Alpha/Beta	EPA 900		I	Ci/L	Batch # 0	025415	Yld %
Gross Alpha	2.5	J	1.1	3.0	1.2	01/25/10	01/29/10
Gross Beta	2.97	J	0.89	4.00	1.1	01/25/10	01/29/10
SR-90 BY GFPC EI	PA-905 MOD		Ţ	Ci/L	Batch # 0	022149	Yld % 71
Strontium 90	0.04	U	0.21	3.00	0.37	01/22/10	02/01/10
TRITIUM (Distill)	by EPA 906.0 MO	D	I	Ci/L	Batch # 0	028080	Yld %
Tritium	11	Ū	78	500	140	01/28/10	01/29/10
Total Uranium by	KPA ASTM 5174-91		, i	Ci/L	Batch # 00	035029	Yld %
Total Uranium	0.120	U	0.013	0.693	0.21	02/04/10	02/08/10
Radium 226 by EI	PA 903.0 MOD		F	ci/L	Batch # 00	022145	Yld % 43
Radium (226)	-0.13	U	0.17	1.00	0.38	01/22/10	02/08/10
Radium 228 by GFF	PC EPA 904 MOD		F	ci/L	Batch # 00	022148	Yld % 43
Radium 228	0.22	U	0.86	1.00	1.5	01/22/10	02/08/10

#### METHOD BLANK REPORT

# Radiochemistry

Client Lot ID:

F0A220438

Matrix:

WATER

Parameter	Result	Qual	Total Uncert. (2 σ+/-)	RL	MDC		Prep Date	Lab Sample ID Analysis Date
Total Uranium l	by KPA ASTM 51	74-91	pCi/L	Batch #	0035029	Yld %	F	0B040000-029B
Total Uranium	-0.0623	U	0.0075	0.693	0.21		02/04/10	02/08/10
Radium 226 by	EPA 903.0 MOD		pCi/L	Batch #	0022145	Yld %	108 F	0A220000-145B
Radium (226)	0.111	Ū	0.094	1.00	0.13		01/22/10	02/08/10
Radium 228 by	GFPC EPA 904 MC	DD D	pCi/L	Batch #	0022148	Yld %	92 F	0A220000-148B
Radium 228	0.22	U	0.35	1.00	0.59		01/22/10	02/08/10
SR-90 BY GFPC	EPA-905 MOD		pCi/L	Batch #	0022149	Yld %	79 F	0A220000-149B
Strontium 90	-0.01	U	0.22	3.00	0.38		01/22/10	02/01/10
Gamma Cs-137 &	Hits by EPA 90	01.1 MOD	pCi/L	Batch #	0023036	Yld %	F	0A230000-036B
Cesium 137	-0.4	U	6.7	20.0	12		01/23/10	01/26/10
Potassium 40	-70	U	240		210		01/23/10	01/26/10
Gross Alpha/Bet	ta EPA 900		pCi/L	Batch #	0025415	Yld %	F	0A250000-415B
Gross Alpha	-0.03	U	0.34	3.00	0.71		01/25/10	01/29/10
Gross Beta	-0.26	U	0.86	4.00	1.5		01/25/10	01/29/10
TRITIUM (Distil	11) by EPA 906.	0 MOD	pCi/L	Batch #	0028080	Yld %	Ŧ	0A280000-080B
Tritium	250	J	120	500	140		01/28/10	01/28/10

#### NOTE (S)

Data are incomplete without the case narrative.

MDC is determined using instrument performance only

# Laboratory Control Sample Report

# Radiochemistry

Client Lot ID: F0A220438
Matrix: WATER

				Total			Lab Sample ID			
Parameter	Spike Amount	Result		Uncert. (2 σ+/-)		MDC	% Yld	% Rec	QC Control Limits	
Gamma Cs-137 & Hits	s by EPA 901.1	MOD	pCi/L		901.1	MOD		F0A2	230000-036C	
Americium 241	141000	132000		10000		500		93	(87 - 110)	
Cesium 137	53100	48200		2800		200		91	(90 - 110)	
Cobalt 60	87900	79000		4400		200		90	(89 - 110)	
	Batch #:	0023036				Analysis Date:	01/26	5/10		
Gross Alpha/Beta El	PA 900	······································	pCi/L		900.0	MOD		F0A2	250000-415C	
Gross Beta	68.1	73.4		6.2		1.6		108	(58 - 133)	
	Batch #:	0025415				Analysis Date:	01/29	/10		
Gross Alpha/Beta El	PA 900		pCi/L		900.0	MOD		F0A2	50000-415C	
Gross Alpha	49.4	45.4		5.0		0.9		92	(62 - 134)	
	Batch #:	0025415				Analysis Date:	01/29	/10		
TRITIUM (Distill) h	OY EPA 906.0 M	OD OC	pCi/L		906.0	MOD		F0A2	80000-080C	
Tritium	4540	468C		480		140		103	(85 - 112)	
	Batch #:	0028080				Analysis Date:	01/28	/10		
Total Uranium by KE	PA ASTM 5174-9:	1	pCi/L		5174-9	91		F0B0	40000-029C	
Total Uranium	27.7	29.2		3.5		0.2		105	(90 - 120)	
	Batch #:	0035029				Analysis Date:	02/08	/10		
Total Uranium by KE	PA ASTM 5174-9:	L	pCi/L		5174-9	91		F0B0	40000-029C	
Total Uranium	5.54	5.67		0.59		0.21		102	(90 - 120)	
	Batch #:	0035029				Analysis Date:	02/08	/10		

# Laboratory Control Sample/LCS Duplicate Report

# Radiochemistry

Client Lot ID: F0A220438 Matrix: WATER

					Total			Lab	Sample	ID
		Onile Assess			Uncert.			QC Control	Prec	ision
Parameter		Spike Amount	Result		(2 σ+/-)	% Yld	% Rec	Limits		
Radium 226 by E	PA	903.0 MOD	····	pCi/L	903	O MOD		F0A2	220000-	-145C
Radium (226)		11.3	10.7		1.1	108	95	(68 - 136)		
Spk	2	11.3	11.2		1.1	110	100	(68 - 136)	5	%RPD
		Batch #:	0022145			Analysis	Date:	02/08/10		
Radium 228 by GF	PC I	EPA 904 MOD	-	pCi/L	904	MOD		F0A2	20000-	-148C
Radium 228		6.45	8.22		0.95	93	127	(60 - 142)		
Spk	2	6.45	7.58		0.88	99	118	(60 - 142)	8	%RPD
		Batch #:	0022148			Analysis	Date:	02/08/10		
SR-90 BY GFPC E	PA-	905 MOD		pCi/L	905	MOD		F0A2	20000-	·149C
Strontium 90		6.81	6.74		0.79	77	99	(80 - 130)		
Spk	2	6.81	6.99		0.81	80	103	(80 - 130)	4	%RPD
		Batch #:	0022149			Analysis	. Date:	02/01/10		

#### MATRIX SPIKE REPORT

## Radiochemistry

Client Lot Id: F0A200486

Matrix:

WATER

Date Sampled: 01/18/10

Date Received: 01/20/10

			Total		m - 4 7	QC Samp	ole ID
Parameter	Spike Amount	Spike Result	Uncert. (2g +/-)	Spike Sampl Yld. Resul	uncert.	%YLD %REC	QC Control Limits
Gross Alpha/Beta EPA 9	00		pCi/L	900.0 M	OD	F0A2004	86-001
Gross Beta	68.1	10.0	1.6	0.83	0.99	14	a (54 - 150)
	Batch #:	0025415	An	alysis Date:	01/29/10		
Gross Alpha/Beta EPA 9	00		pCi/L	900.0 M	OD	F0A2004	86-001
Gross Alpha	49.4	6.9	1.6	0.98	0.70	12	a (35 - 150)
	Batch #:	0025415	An	alysis Date:	01/29/10		
TRITIUM (Distill) by E	PA 906.0 MO	D	pCi/L	906.0 M	OD	F0A2004	94-001
Tritium	4540	4350	460	64	88	94	(62 - 147)
	Batch #:	0028080	An	alysis Date:	01/29/10		

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

Data are incomplete without the case narrative.

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE REPORT

#### Radiochemistry

Client Lot ID: F0A200486

Matrix:

WATER

Date Sampled: 01/18/10 0730

Date Received: 01/20/10 0915

				Total				Total	QC Samp	le ID
Parameter		Spike Amount	SPIKE Result	Uncert. (2 σ+/-)	-	Spike SAMPLE Yld Result		Uncert. (2 <sub>5</sub> +/-) % Y1	d %Rec	QC Control Limits
Total Uranium	by KPA	ASTM 5		pCi/L	517	74-91			F0A2004	86-001
Total Uranium		27.7	28.8	3.4		0.0334	Ū	0.0040	104	(62 - 150)
	Spk2	27.7	29.2	3.5	-1	0.0334	U	0.0040 Precision:	105 2	(62 - 150) %RPD
		Batch	#: 0035029	Ana	alysis date	<b>)</b> ;	02/08	/10		

#### DUPLICATE EVALUATION REPORT

#### Radiochemistry

Client Lot ID: F0A220438

Matrix:

WATER

Date Sampled: 01/18/10

Date Received: 01/20/10

Parameter	SAMPLE Result		Total Uncert. (2 g +/-)	% Yld	DUPLICA Result	TE	Total Uncert. (2 σ+/-)	% Yld	QC Sample ID Precis	lon
Gross Alpha/Beta EPA	900			pCi/L	900.	0 MOD		FC	A200486-0	01
Gross Alpha	0.98	J	0.70		0.71	J	0.85		32	%RPD
Gross Beta	0.83	U	0.99		1.6	J	1.0		62	%RPD
	Bat	ch #:	0025415	(Sample)	0025	415 (Du	plicate)			
TRITIUM (Distill) by	EPA 90	6.0 MC	DD.	pCi/L	906.	O MOD		FC	A200486-0	01
Tritium	99	U	94		-49	U	64		586	%RPD
	Bat	ch #:	0028080	(Sample)	00280	080 (Du	plicate)			
Gamma Cs-137 & Hits	by EPA	901.1	MOD	pCi/L	901.	1 MOD		FC	A210532-0	01
Cesium 137	-2.3	U	9.2		-1.4	ŭ	9.8		47	%RPD
	-30	U	240		-60	U	440		69	%RPD
Potassium 40										

# **APPENDIX G**

# **Section 23**

Outfall 006 – BMP Effectiveness January 18 & 19, 2010 Test America Analytical Laboratory Report





#### LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project: BMP Effectiveness

Monitoring Program

Sampled: 01/18/10-01/19/10

Received: 01/22/10 Issued: 02/02/10 06:16

#### 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 of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

#### **CASE NARRATIVE**

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the 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: No analyses were subcontracted to an outside laboratory.

 LABORATORY ID
 CLIENT ID
 MATRIX

 ITA1967-01
 006 EFF-1
 Water

 ITA1967-02
 006 EFF-2
 Water

Reviewed By:

Delby Wilson TestAmerica Irvine

Debby Wilson For Joseph Doak Project Manager



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

MWH-Pasadena/Boeing Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200 Monitoring Program Sampled: 01/18/10-01/19/10

Arcadia, CA 91007 Report Number: ITA1967 Received: 01/22/10

Attention: Bronwyn Kelly

#### **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ITA1967-01 (006 EFF-1 - Wa Reporting Units: g/cc	ater)				Sample	ed: 01/18/1	10		
Density Density	Displacement	10A2463	N/A	NA	1.0	1	01/26/10	01/26/10	
Sample ID: ITA1967-02 (006 EFF-2 - Wa	ater)				Sample	ed: 01/19/1	10		
Reporting Units: g/cc Density	Displacement	10A2463	N/A	NA	1.0	1	01/26/10	01/26/10	
Sample ID: ITA1967-01 (006 EFF-1 - Wa	ater)				Sample	ed: 01/18/1	10		
Reporting Units: mg/l Sediment	ASTM D3977	10A2469	10	10	120	1	01/26/10	01/26/10	
Sample ID: ITA1967-02 (006 EFF-2 - Wa	ater)				Sample	ed: 01/19/1	10		
Reporting Units: mg/l Sediment	ASTM D3977	10A2469	10	10	95	1	01/26/10	01/26/10	



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

MWH-Pasadena/Boeing

618 Michillinda Avenue, Suite 200

Arcadia, CA 91007

Attention: Bronwyn Kelly

Project ID: BMP Effectiveness

Monitoring Program

Report Number: ITA1967

Received: 01/22/10

Sampled: 01/18/10-01/19/10

## METHOD BLANK/QC DATA

#### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 10A2463 Extracted: 01/26	/10_										
<b>Duplicate Analyzed: 01/26/2010 (10A</b>	2463-DUP1)				Sou	rce: ITA1	969-01				
Density	0.997	NA	N/A	g/cc		0.997			0	20	



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

Project ID: BMP Effectiveness

Monitoring Program Sampled: 01/18/10-01/19/10

Report Number: ITA1967 Received: 01/22/10

Arcadia, CA 91007 Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

# DATA QUALIFIERS AND DEFINITIONS

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

**RPD** Relative Percent Difference



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

MWH-Pasadena/Boeing Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200 Monitoring Program Sampled: 01/18/10-01/19/10

Arcadia, CA 91007 Report Number: ITA1967 Received: 01/22/10

Attention: Bronwyn Kelly

## **Certification Summary**

#### **TestAmerica Irvine**

Displacement

Method	Matrix	Nelac	California
ASTM D3977	Water		

Water

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

#### **TestAmerica Irvine**

# APPENDIX G

# **Section 24**

Outfall 006 – March 8, 2010

MEC<sup>X</sup> Data Validation Report





# DATA VALIDATION REPORT

# **Boeing SSFL NPDES**

SAMPLE DELIVERY GROUP: ITC0989

Prepared by

MEC<sup>x</sup>, LP 12269 East Vassar Drive Aurora, CO 80014 DATA VALIDATION REPORT Project: SSFL NPDES
SDG: ITC0989

#### I. INTRODUCTION

Task Order Title: Boeing SSFL NPDES

Contract Task Order: 1261.100D.00

Sample Delivery Group: ITC0989
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 006 (COMPOSITE)	ITC0989-03	G0C110494- 001, F0C110508- 001	WATER	3/8/2010	ASTM 5174-91, 218.6, 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), SM2540D, 625

### **II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at TestAmerica-St. Louis above the control limit at ambient temperature; however, due to the nonvolatile nature of the analytes, no qualifications were required. The samples in this SDG were received at the laboratory 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 TestAmerica-West Sacramento and TestAmerica-St. Louis. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

1

DATA VALIDATION REPORT Project: SSFL NPDES SDG: ITC0989

# **Data Qualifier Reference Table**

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

DATA VALIDATION REPORT Project: SSFL NPDES SDG: ITC0989

# **Qualification Code Reference Table**

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

3 Revision 1

DATA VALIDATION REPORT Project: SSFL NPDES SDG: ITC0989

# **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.
Р	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*11, *111	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

4 Revision 1

DATA VALIDATION REPORT SSFL NPDES
SDG: ITC0989

### III. Method Analyses

#### A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin

Date Reviewed: April 15, 2010

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

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.
- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.
  - o GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.
  - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.
- Calibration: Calibration criteria were met.
  - o Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.
  - o 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 all target compounds except 2,3,7,8-TCDD and total TCDD, and 1,2,3,7,8-PeCDD and total PeCDD. Most method blank results were reported as EMPCs; however, due to the extent of the method blank contamination, it was the reviewer's professional opinion that the EMPC results also be utilized to qualify sample results. All sample detects for target

5 Revision 1

compound isomers and for total HxCDF were qualified as estimated nondetects, "U," at the levels of contamination. Totals for HpCDD and HpCDF were qualified as estimated, "J," as only a portion of the total was considered blank contamination.

- Blank Spikes and Laboratory Control Samples: OPR recoveries were within the acceptance criteria listed in Table 6 of Method 1613.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
  - Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.
- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613.
- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of LCS results. The EMPCs qualified as nondetected for method blank contamination were not further qualified as EMPCs. Total PeCDD was comprised of a single EMPC peak, and was therefore qualified as an estimated nondetect, "UJ," at the level of the EMPC. Any detects reported below the EDL, or between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

Reviewed By: P. Meeks

Date Reviewed: April 15, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the  $MEC^{\times}$  Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 200.7 and 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<sup>2</sup> values were ≥0.995.
   All initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS 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%. Boron and selenium were detected in the ICSA associated with the dissolved analyses at 21.6 and 6.7 μg/L, respectively; however, the reviewer was not able to determine if the detects were due to matrix interference or low-level contamination of the ICSA solution. Selenium was reported in the ICSA associated with the total analysis at -17.8 μg/L. The sample result was reported at approximately the same level but the negative result in the sample was not due to matrix interference as the concentrations of the interferents were not large enough. There were no other target compounds present in the ICSA solution at concentrations indicative of matrix interference.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for all of the 200.7 analytes. Recoveries and RPDs were within laboratory-established QC limits.
- 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.

Total selenium was reported as a nondetect but the reviewer noted that the raw result was a negative value, the absolute value of which was larger than the reporting limit; therefore, the reviewer raised the reporting limits and method detection limit for total selenium to the level of interference,  $18 \mu g/L$ .

Dissolved antimony and boron were detected at concentrations marginally higher than the total concentrations. Chromium and nickel were not detected in the total fraction but were detected near the reporting limit in the dissolved fraction.

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, 2010

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 aliquots for gross alpha, gross beta, cesium-137, potassium-40, and total uranium were prepared beyond the 5-day holding time for unpreserved samples; therefore, the results for these analytes were qualified as estimated, "UJ," for nondetects and, "J," for detects. The tritium sample was analyzed within 180 days of collection. All 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 and radium-226 detector efficiencies were less than 20%; therefore, the nondetected results for these analytes were qualified as estimated, "UJ." The remaining detector efficiencies were greater than 20%.

The tritium aliquot was spiked for efficiency determination; therefore, no calibration was necessary. All chemical yields were at least 40% and were considered acceptable. The gamma spectroscopy analytes were determined at the maximum photopeak energy. The kinetic phosphorescence analyzer (KPA) was calibrated immediately prior to the sample analysis. All KPA calibration check standard recoveries were within 90-110% and were deemed acceptable.

Blanks: Total uranium and radium-226 were detected in the method blank at 0.269 and 0.059 pCi/L, respectively; therefore, total uranium and radium-226 detected in the sample were qualified as nondetected, "U," at the reporting limits. There were no other analytes detected in the method blanks or the KPA CCBs.

- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs (radium-226, radium-228, strontium-90) were within laboratory-established control limits.
- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for cesium-137 and potassium-40. All results and duplicate results were nondetects.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for the sample in this SDG for total uranium. The recoveries and RPD were within the laboratoryestablished control limits. Method accuracy for the remaining analytes was evaluated based on the LCS results.
- Sample Result Verification: An EPA Level IV review was performed for the sample in this
  data package. The sample results and MDAs reported on the sample result form were
  verified against the raw data and no calculation or transcription errors were noted. Any
  detects between the MDA and the reporting limit were qualified as estimated, "J," and
  coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are
  valid to the MDA.

The reviewer noted that the total uranium preparation log was not signed as having been reviewed.

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

# D. EPA METHOD 525.2/625—Semivolatile Organic Compounds (SVOCs) Diazinon and Chlorpyrifos

Reviewed By: E. Wessling Date Reviewed: April 28, 2010

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the  $MEC^{x}$  Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625,

EPA Method 525.2, and the National Functional Guidelines for Organic Data Review (10/99).

Holding Times: Extraction holding times were met for the 625 method. The sample was
extracted 4 days from sample collection. The sample was analyzed 1 day past the 40 day
analytical holding time. The sample was qualified as estimated, "UJ," for chlorpyrifos and
diazinon. The extraction holding time for diazinon by Method 525.2, listed as "immediate,"
was not met.

- GC/MS Tuning: The DFTPP tunes met the method abundance criteria. The sample was analyzed within 12 hours of the DFTPP injection time.
- Calibration: The sample was analyzed utilizing a 525.2 calibration. Calibration criteria were met. The initial calibration % RSD were ≤35%. The second source ICV had %Ds less than 20%. The CCV RRFs were ≥0.05 and the CCV recoveries were within the method control limits of 70-130%.
- Blanks: A method blank was extracted by the Method 625 procedure along with the sample and analyzed by the 625 and 525.2 calibration methods. The blank did not contain either chlorpyrifos or diazinon.
- Blank Spikes and Laboratory Control Samples: A standard 625 LCD/LCSD pair was extracted and analyzed with the sample during the 625 analysis. Benzidine was recovered below QC limits in the LSC only and had an RPD which exceeded the control limit. All other recoveries and RPDs including surrogates and internal standards were within QC limits. An LCS/LCSD pair containing the 525.2 LCS analytes was subsequently prepared by the 625 method. The recoveries for diazinon and chlorpyrifos LCS/LCSD were 61%/52% and 93%/92%, respectively. The diazinon recoveries were below the laboratory 525.2 method acceptance criteria of 70% but demonstrated the ability to recover the compounds by the 625 preparation method. RPDs were 17% and 1%; within the 30% laboratory acceptance criteria. Although not extracted with the sample, these recoveries along with the acceptable 625 target compound recoveries and RPDs demonstrate acceptable recovery of diazinon and chlorpyrifos by the 625 preparation method.
- Surrogate Recovery: Surrogate recoveries were within laboratory-established QC limits for the 625 analysis of the sample. Surrogate recoveries were not calculated for the 525.2 analysis of the samples.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on LCS/LCSD results.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

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

- o Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards:
   -50%/+100% for internal standard areas and ±30 seconds for retention times for the 625 and 525.2 analysis of the sample.
- Compound Identification: Compound identification was verified. Three methods of evaluation were performed on the sample to determine the absence of diazinon and chlorpyrifos in the site sample. A tentatively identified compound (TIC) search for diazinon and chlorpyrifos was performed on the 625 analysis of the sample. The region of the chromatogram in which diazinon and chlorpyrifos would elude was scanned for the presence of the primary ions of these compounds and the areas with these abundances evaluated for the presence of the target compounds. Additionally, spectra for all unknown peaks eluting within the retention time window of diazinon and chlorpyrifos were compared to the reference spectra. Diazinon and chlorpyrifos were not detected in the 625 extract analyzed by the 625 analytical method. Subsequently, the 625 extract was analyzed by the 525.2 method, using a 525.2 calibration. Diazinon and chlorpyrifos were not detected in the 525.2 analysis of the sample. However, due to the deviations from the published methods, both diazinon and chlorpyrifos were qualified as estimated nondetects, "UJ."
- 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. The reporting limits from the 525.2 analysis were utilized in the reporting of these compounds. However, due to the deviations from the published methods, both diazinon and chlorpyrifos were qualified as estimated nondetects, "UJ."
- Tentatively Identified Compounds: TICs were evaluated as an integral part of this sample analysis. Diazinon and chlorpyrifos were not identified in the sample.

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

#### E. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks Date Reviewed: April 8, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the  $MEC^{\times}$  Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 218.6 and SM2540D, and the National Functional Guidelines for Inorganic Data Review (7/02).

 Holding Times: Analytical holding times, seven days for TSS and 24 hours from collection for hexavalent chromium, were met.

- Calibration: Calibration criteria were met. The hexavalent chromium initial calibration r<sup>2</sup> value was ≥0.995 and all ICV and continuing calibration recoveries were within 90-110%.
- Blanks: Method blanks and CCBs had no detects.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed for 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 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 ITC0989

Analysis Method AS	STM 5174-91
--------------------	-------------

Sample Name Outfall 006 (Composite) Matrix Type: WATER Validation Level: IV

**Lab Sample Name:** ITC0989-03 **Sample Date:** 3/9/2010 11:08:00 AM

Analyte CAS No Result RL**MDL** Result Lab Validation Validation Value Units Qualifier Qualifier **Notes** Total Uranium 7440-61-1 ND 0.677 0.21 pCi/L UJ B, H Jb

Analysis Method EPA 200.7

Sample Name Outfall 006 (Composite) Matrix Type: Water Validation Level: IV

Lab Sample Name: ITC0989-03 Sample Date: 3/9/2010 11:08:00 AM

Result RL **MDL** Analyte CAS No Result Lab Validation Validation Value Units Qualifier Qualifier Notes Aluminum 7429-90-5 0.20 0.050 0.040 mg/l Arsenic 7440-38-2 ND 10 7.0 U ug/l Beryllium 7440-41-7 U ND 2.0 0.90 ug/l Boron 7440-42-8 0.055 0.050 0.020 mg/l Calcium 7440-70-2 51 0.10 0.050 mg/l 7440-47-3 Chromium ND 5.0 2.0 U ug/l Iron 7439-89-6 0.14 0.040 0.015 mg/l 7439-95-4 0.020 0.012 Magnesium mg/l Nickel 7440-02-0 ND 10 2.0 U ug/l Selenium 7782-49-2 U ND 18 18 ug/l Silver 7440-22-4 ND 10 6.0 ug/l u Vanadium 7440-62-2 3.7 10 3.0 ug/l Ja J DNQ Zinc 7440-66-6 7.7 20 6.0 DNQ ug/l Ja

Thursday, April 29, 2010 Page 1 of 5

## Analysis Method EPA 200.7-Diss

Sample Name	Outfall 006 (C	Composite	) Matri	x Type:	Water	V	Validation Le	vel: IV
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	7429-90-5	ND	0.050	0.040	mg/l		U	
Arsenic	7440-38-2	ND	10	7.0	ug/l		U	
Beryllium	7440-41-7	ND	2.0	0.90	ug/l		U	
Boron	7440-42-8	0.057	0.050	0.020	mg/l			
Calcium	7440-70-2	51	0.10	0.050	mg/l	MHA		
Chromium	7440-47-3	4.6	5.0	2.0	ug/l	Ja	J	DNQ
Iron	7439-89-6	0.016	0.040	0.015	mg/l	Ja	J	DNQ
Magnesium	7439-95-4	4.1	0.020	0.012	mg/l			
Nickel	7440-02-0	10	10	2.0	ug/l			
Selenium	7782-49-2	ND	10	8.0	ug/l		U	
Silver	7440-22-4	ND	10	6.0	ug/l		U	
Vanadium	7440-62-2	3.4	10	3.0	ug/l	Ja	J	DNQ
Zinc	7440-66-6	ND	20	6.0	ug/l		U	
Analysis Metho	od EPA 2	218.6						
Sample Name	Outfall 006 (C	Grab)	Matri	х Туре:	Water	Validation Level: IV		
Lab Sample Name:	ITC0989-01	Sam	ple Date:	3/8/2010	11:08:00 AM			
				MDI				
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
	CAS No		<b>RL</b>	0.25				
	18540-29-9	<b>Value</b> 0.83			Units	Qualifier	Qualifier	Notes
Chromium VI	18540-29-9	Value 0.83 245.1	1.0		Units	<b>Qualifier</b> Ja	Qualifier	Notes DNQ
Chromium VI  Analysis Metho	18540-29-9 od EPA 2	0.83 2.45.1 Composite	1.0 ) <b>Matri</b>	0.25 <b>x Type:</b>	Units ug/l	Qualifier Ja	Qualifier J	Notes DNQ
Chromium VI  Analysis Metho  Sample Name  Lab Sample Name:	18540-29-9 od EPA 2 Outfall 006 (C	0.83 2.45.1 Composite	1.0 ) <b>Matri</b>	0.25 <b>x Type:</b>	Units ug/l Water	Qualifier Ja	Qualifier J	Notes DNQ vel: IV
Chromium VI  Analysis Metho  Sample Name  Lab Sample Name:  Analyte	18540-29-9 od EPA 2 Outfall 006 (C	Value 0.83 2.45.1 Composite Sam Result	1.0  Matri ple Date:	0.25 <b>x Type:</b> 3/9/2010	Units  ug/l  Water  11:08:00 AM  Result	Qualifier  Ja  V	Qualifier  J  Validation Le  Validation	Notes  DNQ  vel: IV  Validation
Chromium VI  Analysis Metho  Sample Name  Lab Sample Name:  Analyte	18540-29-9  od EPA 2  Outfall 006 (C  ITC0989-03  CAS No  7439-97-6	Value  0.83  2.45.1  Composite  Sam  Result Value	) Matri ple Date: RL	0.25 <b>x Type:</b> 3/9/2010 <b>MDL</b>	Units  ug/l  Water  11:08:00 AM  Result Units	Qualifier  Ja  V	Qualifier  J  Validation Le  Validation  Qualifier	Notes  DNQ  vel: IV  Validation
Chromium VI  Analysis Metho Sample Name Lab Sample Name: Analyte  Mercury	18540-29-9  od EPA 2  Outfall 006 (C  ITC0989-03  CAS No  7439-97-6	Value  0.83  2.45.1  Composite  Sam  Result  Value  ND  2.45.1-L	1.0  Matri ple Date: RL  0.20  Diss	0.25 <b>x Type:</b> 3/9/2010 <b>MDL</b>	Units  ug/l  Water  11:08:00 AM  Result Units	Qualifier  Ja  V  Lab  Qualifier	Qualifier  J  Validation Le  Validation  Qualifier	Notes  DNQ  vel: IV  Validation Notes
Chromium VI  Analysis Metho Sample Name  Lab Sample Name:  Analyte  Mercury  Analysis Metho	18540-29-9  od EPA 2  Outfall 006 (C  ITC0989-03  CAS No  7439-97-6  od EPA 2	Value  0.83  2.45.1  Composite  Sam  Result Value  ND  2.45.1-L  Composite	1.0  Matri ple Date: RL  0.20  Diss	0.25  x Type: 3/9/2010  MDL  0.10  x Type:	Units  ug/l  Water  11:08:00 AM  Result Units  ug/l	Qualifier  Ja  Lab  Qualifier	J Validation Le Validation Qualifier U	Notes  DNQ  vel: IV  Validation Notes
Sample Name Lab Sample Name: Analyte  Mercury  Analysis Metho Sample Name	18540-29-9 Od EPA 2 Outfall 006 (C ITC0989-03 CAS No 7439-97-6 Od EPA 2 Outfall 006 (C	Value  0.83  2.45.1  Composite  Sam  Result Value  ND  2.45.1-L  Composite	1.0  ) Matri ple Date:  RL  0.20  Diss  ) Matri	0.25  x Type: 3/9/2010  MDL  0.10  x Type:	Water 11:08:00 AM  Result Units  ug/l  Water	Qualifier  Ja  Lab  Qualifier	J Validation Le Validation Qualifier U	Notes  DNQ  vel: IV  Validation Notes  vel: IV

Thursday, April 29, 2010 Page 2 of 5

Analysis	Method	EPA 525.2
$\Delta nu voio$	memou	Lin J2J.2

	Outfall 006 (C	Composite	) Matri	ix Type:	Water	V	alidation Le	vel: IV
Lab Sample Name:	ITC0989-03RE1	Sam	ple Date:	3/8/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	2921-88-2	ND	0.96	0.0096	ug/l		UJ	H,*III
Diazinon	333-41-5	ND	0.24	0.096	ug/l	L2	UJ	H,*III
Analysis Metho	d EPA (	525						
Sample Name	Outfall 006 (C	Composite	) Matri	ix Type:	Water	V	alidation Le	vel: IV
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/8/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Chlorpyrifos	2921-88-2	ND	48		ug/l		R	D
Diazinon	333-41-5	ND	48		ug/l		R	D
Analysis Metho	d EPA 9	900.0 N	10D					
Sample Name	Outfall 006 (C	Composite	) Matri	ix Type:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	0.7	3	2	pCi/L	U	UJ	H, C
Gross Beta	12587-47-2	3.6	4	1.2	pCi/L	Jb	J	H, DNQ
Gross Beta  Analysis Metho		3.6 201.1 M		1.2	pCi/L	Jb	J	H, DNQ
		901.1 M	10D	1.2	pCi/L WATER		J Validation Le	
Analysis Metho	d EPA 9	201.1 M	Matri	іх Туре:		V		
Analysis Metho Sample Name Lab Sample Name:	Outfall 006 (C	201.1 M	Matri	іх Туре:	WATER	V		vel: IV
Analysis Metho Sample Name Lab Sample Name: Analyte	Outfall 006 (C	201.1 M Composite Sam Result	MOD  Matri	ix Type: 3/9/2010	WATER 11:08:00 AM  Result	V Lab	validation Le	vel: IV Validation
Analysis Metho Sample Name Lab Sample Name: Analyte Cesium 137	d EPA 9 Outfall 006 (C ITC0989-03 CAS No	2001.1 M Composite Sam Result Value	MOD  Matri pple Date: RL	ix Type: 3/9/2010 MDL	WATER 11:08:00 AM Result Units	V Lab Qualifier	Validation Le Validation Qualifier	vel: IV  Validation  Notes
Analysis Metho Sample Name Lab Sample Name: Analyte Cesium 137	d EPA 9 Outfall 006 (C ITC0989-03 CAS No 10045-97-3 13966-00-2	Composite Sam Result Value	MOD  Matri  ple Date:  RL  20 0	ix Type: 3/9/2010 MDL	WATER 11:08:00 AM  Result Units  pCi/L	Lab Qualifier	Validation Le Validation Qualifier UJ	vel: IV  Validation Notes  H
Analysis Metho Sample Name Lab Sample Name: Analyte Cesium 137 Potassium 40	d EPA 9 Outfall 006 (C ITC0989-03 CAS No 10045-97-3 13966-00-2	Composite Sam Result Value -2.2 -80	MOD  Matri sple Date:  RL  20 0  MOD	ix Type: 3/9/2010 MDL	WATER 11:08:00 AM  Result Units  pCi/L	Lab Qualifier U	Validation Le Validation Qualifier UJ	vel: IV  Validation Notes  H
Analysis Metho Sample Name Lab Sample Name: Analyte Cesium 137 Potassium 40 Analysis Metho	Outfall 006 (CITC0989-03  CAS No  10045-97-3 13966-00-2  d EPA 9	Composite Sam Result Value -2.2 -80 Composite	MOD  Matri sple Date:  RL  20 0  MOD	ix Type: 3/9/2010 MDL  16 300  ix Type:	WATER 11:08:00 AM  Result Units  pCi/L pCi/L	Lab Qualifier U	Validation Le Validation Qualifier UJ UJ	vel: IV  Validation Notes  H
Sample Name Lab Sample Name: Analyte  Cesium 137 Potassium 40 Analysis Metho Sample Name	d EPA 9 Outfall 006 (C ITC0989-03 CAS No  10045-97-3 13966-00-2 d EPA 9 Outfall 006 (C	Composite Sam Result Value -2.2 -80 Composite	MOD  Matri  pple Date:  RL  20  0  MOD  Matri	ix Type: 3/9/2010 MDL  16 300  ix Type:	WATER 11:08:00 AM  Result Units  pCi/L  pCi/L  WATER	Lab Qualifier U	Validation Le Validation Qualifier UJ UJ	vel: IV  Validation Notes  H

Thursday, April 29, 2010 Page 3 of 5

## Analysis Method EPA 904 MOD

Sample Name	Outfall 006 (C	omposite	) Matr	іх Туре:	WATER	7	alidation Le	vel: IV
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.11	1	0.44	pCi/L	U	U	
Analysis Metho	od EPA 9	905 MC	DD					
Sample Name	Outfall 006 (C	omposite	) Matr	іх Туре:	WATER	V	alidation Le	vel: IV
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	-0.1	3	0.68	pCi/L	U	U	
Analysis Metho	od EPA 9	006.0 M	10D					
Sample Name	Outfall 006 (C	omposite	) Matr	іх Туре:	WATER	7	alidation Le	vel: IV
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010	11:08:00 AM			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	73	500	150	pCi/L	U	U	

Thursday, April 29, 2010 Page 4 of 5

## Analysis Method EPA-5 1613B

Sample Name	Outfall 006 (C	composite	) Matri	ix Type:	WATER	Validation Level: IV			
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010 1	1:08:00 AM	I			
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	0.0000014	ug/L	J, Ba	U	В	
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	1.2e-006	0.0000004	ug/L	J, Q, Ba	U	В	
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	6.2e-007	0.0000007	ug/L	J, Q, Ba	U	В	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	0.00005	0.0000009	ug/L		U		
1,2,3,4,7,8-HxCDF	70648-26-9	ND	4.1e-007	0.0000001	ug/L	J, Q, Ba	U	В	
1,2,3,6,7,8-HxCDD	57653-85-7	ND	0.00005	0.0000008	ug/L		U		
1,2,3,6,7,8-HxCDF	57117-44-9	ND	6.5e-007	0.0000001	ug/L	J, Q, Ba	U	В	
1,2,3,7,8,9-HxCDD	19408-74-3	ND	0.00005	0.0000007	ug/L		U		
1,2,3,7,8,9-HxCDF	72918-21-9	ND	6.4e-007	0.0000002	ug/L	J, Q, Ba	U	В	
1,2,3,7,8-PeCDD	40321-76-4	ND	0.00005	0.0000006	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	4.4e-007	0.0000001	ug/L	J, Q, Ba	U	В	
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	0.0000004	ug/L		U		
2,3,7,8-TCDF	51207-31-9	ND	0.00001	0.0000004	ug/L		U		
OCDD	3268-87-9	ND	1.1e-005	0.0000027	ug/L	J, Q, Ba	U	В	
OCDF	39001-02-0	ND	2.4e-006	0.0000008	ug/L	J, Q, Ba	U	В	
Total HpCDD	37871-00-4	6e-006	0.00005	0.0000014	ug/L	J, Ba	J	B, DNQ, *III	
Total HpCDF	38998-75-3	3.3e-006	3.3e-006	0.0000004	ug/L	J, Q, Ba	J	B, DNQ, *III	
Total HxCDD	34465-46-8	ND	0.00005	0.0000007	ug/L		U		
Total HxCDF	55684-94-1	ND	2.4e-006	0.0000001	ug/L	J, Q, Ba	U	В	
Total PeCDD	36088-22-9	ND	1.1e-006	0.0000006	ug/L	J, Q	UJ	*III	
Total PeCDF	30402-15-4	ND	0.00005	0.0000002	ug/L		U		
Total TCDD	41903-57-5	ND	0.00001	0.0000004	ug/L		U		
Total TCDF	55722-27-5	ND	0.00001	0.0000004	ug/L		U		
Analysis Metho	od SM 25	540D							
Sample Name	Outfall 006 (C	Composite	) Matri	ix Type:	Water	7	Validation Le	vel: IV	
Lab Sample Name:	ITC0989-03	Sam	ple Date:	3/9/2010 1	1:08:00 AM	I			
Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes	
Total Suspended Solids	TSS	13	10	1.0	mg/l				

Thursday, April 29, 2010 Page 5 of 5