APPENDIX G

FIRST QUARTER 2010 ANALYTICAL LABORATORY REPORTS,
CHAIN-OF-CUSTODY, AND VALIDATION REPORTS

THIS PAGE LEFT INTENTIONALLY BLANK

APPENDIX G

TABLE OF CONTENTS

Section No.

APPENDIX G

TABLE OF CONTENTS

Section No.

APPENDIX G

TABLE OF CONTENTS

Section No.

THIS PAGE LEFT INTENTIONALLY BLANK

APPENDIX G

Section 1

Outfall 001 - January 18, 2010

MEC^X Data Validation Report

THIS PAGE LEFT INTENTIONALLY BLANK

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ITA1329

Prepared by

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

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ITA1329
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 001 (Comp)	ITA1329-02	G0A210544-001, F0A200494-001	WATER	1/18/2010 15:00	ASTM 5174-91, 180.1, 200.7, EPA 200.7 (Diss), 200.8, 200.8 (Diss), 245.1, 245.1 (Diss), 1613B, 900.0 MOD, 901.1 MOD, 903.0 MOD, 904 MOD, 905 MOD, 906.0 MOD
Outfall 001 (Grab)	ITA1329-01	N/A	Water	1/18/2010 15:00	EPA 120.1, SM2540D

II. Sample Management

No anomalies were observed regarding sample management. The samples wer 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 arrival at TestAmerica-West Sacramento. No seals were present on the coolers upon arrival at TestAmerica-St. Louis. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

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

Qualification Code Reference Table

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

Qualification Code Reference Table Cont.

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

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: L. Calvin
Date Reviewed: March 10, 2010

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

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

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

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was analyzed with the initial calibration sequence and at the beginning of each analytical sequence. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

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

- Calibration: Calibration criteria were met.

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

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

- Blanks: The method blank had detects between the EDL and the RL for 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. Sample results for all HxCDD isomers and total HxCDD, all of the HxCDF isomers except 1,2,3,4,7,8-HxCDF,

1,2,3,4,6,7,8-HpCDF, and OCDF were qualified as nondetected, "U," at the RL. Method blank detects for 1,2,3,4,6,7,8-HpCDD, total HpCDD, and OCDD were insufficient to qualify sample results. The results for total HxCDF and total HpCDF were qualified as estimated, "J," as only a portion of the total result was considered method 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. A confirmation analysis for 2,3,7,8-TCDF was performed by the laboratory; however, the result was reported by the laboratory as an EMPC, and subsequently qualified as an estimated nondetect (see Compound Quantification and Reported Detection Limits section.) The reported confirmation analysis was rejected, "R," as duplicate data in favor of the original result.

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating a representative number of sample results. Several detects for individual isomers were reported as EMPCs; however, those qualified as nondetects for method blank contamination were not further qualified as EMPCs. As ratio criteria were not met, the results for 2,3,7,8-TCDF (and total TCDF at the same concentration) were qualified as estimated nondetects, "UJ," at the reported concentration level. Any other total results reported as EMPCs or including EMPCs were qualified as estimated, "J." Any detects reported between the estimated detection limit (EDL) and the reporting limit (RL) were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Nondetects are valid to the EDL.

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

Reviewed By: P. Meeks
Date Reviewed: March 10, 2010

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

- Holding Times: Analytical holding times, six months for ICP and ICP-MS metals and 28 days for mercury, were met.

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

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP and ICP-MS metals and 85-115% for mercury. CRDL/CRI recoveries were within the control limits of 70-130%.

- Blanks: Method blanks and CCBs had no detects.

- Interference Check Samples: Recoveries were within the method- (6010B) or laboratory-(6020) established control limits. There were no target compounds present in the ICP ICSA solution at concentrations indicative of matrix interference. All compounds were detected in the ICP-MS ICSA solution; however, the reviewer was not able to determine if the detects were due to low-level contamination in the standard.

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

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

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the dissolved aliquot for the ICP 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: All sample internal standard intensities were within 60-125% of the internal standard intensities measured in the initial calibration. Copper and zinc were not bracketed by an internal standard of lower mass; therefore, the copper and zinc results were qualified as estimated, “J,” for detects and, “UJ,” for nondetects.

- 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.

  Due to matrix interference, the laboratory raised the reporting limits for total cadmium and selenium. In order to report one or more analytes within the linear range of the instruments, the total ICP-MS analytes were reported from a 5× dilution and the total ICP analytes were reported from a 2× dilution.

- 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 10, 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 tritium sample was analyzed within 180 days of collection. The aliquot for total uranium was prepared one day beyond 3× the five-day holding time for unpreserved samples; therefore, total uranium detected in the sample was qualified as estimated, "J." Aliquots for gross alpha and gross beta were prepared beyond the five-day analytical holding time for unpreserved samples; therefore, the detected results for these analytes were qualified as estimated, "J." Aliquots for the remaining analytes 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, gross alpha detected in the sample was qualified as an estimated detect, "J." The remaining detector efficiencies were greater than 20%.

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

- Blanks: Tritium was detected in the method blank but was not detected in the site sample. There were no analytes detected in the method blanks or the KPA CCBs.

- Blank Spikes and Laboratory Control Samples: The recoveries and RPDs (strontium-90, radium-226, radium-228) 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.

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

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

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

D. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 10, 2010

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 120.1, 180.1, SM2540D,* and the *National Functional Guidelines for Inorganic Data Review* (7/02).

- Holding Times: Analytical holding times were met.

- Calibration: Calibration criteria were met. The conductivity and turbidity calibration check sample recoveries were within 90-110%.

- Blanks: Method blanks and CCBs had no detects.

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

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: Not applicable to these analyses.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. When the sample results were qualified and the reviewer was able to clearly determine bias, detected results were qualified as either "J+" or "J-"; otherwise, bias was not indicated in the qualification. Any detects between the method detection limit and the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

  Turbidity was analyzed at a 100× dilution in order to report the result within the linear range of the calibration.

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

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

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

Validated Sample Result Forms: ITA1329

Analysis Method ASTM 5174-91

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Uranium	7440-61-1	0.455	0.693	0.21	pCi/L	Jb	J	H, DNQ

Analysis Method EPA 120.1

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Specific Conductance	NA	55	1.0	1.0	umhos/c			

Analysis Method EPA 180.1

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Turbidity	Turb	650	100	4.0	NTU			

Analysis Method EPA 200.7

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron	7439-89-6	23	0.080	0.030	mg/l			
Manganese	7439-96-5	400	40	14	ug/l			
Zinc	7440-66-6	76	40	12	ug/l		J	*III

Analysis Method EPA 200.7-Diss

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Iron, dissolved	7439-89-6	1.1	0.040	0.015	mg/l			
Manganese, dissolved	7439-96-5	16	20	7.0	ug/l	J	J	DNQ
Zinc, dissolved	7440-66-6	ND	20	6.0	ug/l		UJ	*III

Analysis Method EPA 200.8

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium	7440-43-9	ND	5.0	0.50	ug/l	RL1	U	
Copper	7440-50-8	12	10	2.5	ug/l		J	*III
Lead	7439-92-1	13	5.0	1.0	ug/l			
Selenium	7782-49-2	ND	10	2.5	ug/l	RL1	U	

Analysis Method EPA 200.8-Diss

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cadmium, dissolved	7440-43-9	ND	1.0	0.10	ug/l		U	
Copper, dissolved	7440-50-8	2.5	2.0	0.50	ug/l		J	*III
Lead, dissolved	7439-92-1	0.51	1.0	0.20	ug/l	J	J	DNQ
Selenium, dissolved	7782-49-2	ND	2.0	0.50	ug/l		U	

Analysis Method EPA 245.1

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

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

Analysis Method EPA 245.1-Diss

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

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	C	U	

Analysis Method EPA 900.0 MOD

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Gross Alpha	12587-46-1	7.3	3	1.2	pCi/L		J	H, C
Gross Beta	12587-47-2	9	4	1.6	pCi/L		J	H

Analysis Method EPA 901.1 MOD

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cesium 137	10045-97-3	-2.2	20	16	pCi/L	U	U	
Potassium 40	13966-00-2	-90	0	260	pCi/L	U	U	

Analysis Method EPA 903.0 MOD

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium (226)	13982-63-3	0.1	1	0.25	pCi/L	U	U	

Analysis Method EPA 904 MOD

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Radium 228	15262-20-1	0.4	1	0.67	pCi/L	U	U	

Analysis Method EPA 905 MOD

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Strontium 90	10098-97-2	0.29	3	0.5	pCi/L	U	U	

Analysis Method EPA 906.0 MOD

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Tritium	10028-17-8	64	500	140	pCi/L	U	U	

Analysis Method EPA-5 1613B

Sample Name Outfall 001 (Grab) **Matrix Type:** WATER **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,2,3,4,6,7,8-HpCDD	35822-46-9	0.00012	0.000048	0.000012	ug/L	B		
1,2,3,4,6,7,8-HpCDF	67562-39-4	ND	0.000048	0.000005	ug/L	J, B	U	B
1,2,3,4,7,8,9-HpCDF	55673-89-7	ND	0.000048	0.000009	ug/L		U	
1,2,3,4,7,8-HxCDD	39227-28-6	ND	6.8e-006	0.000007	ug/L	J, Q, B	U	B
1,2,3,4,7,8-HxCDF	70648-26-9	6.8e-006	0.000048	0.000004	ug/L	J	J	DNQ
1,2,3,6,7,8-HxCDD	57653-85-7	ND	6.6e-006	0.000006	ug/L	J, Q, B	U	B
1,2,3,6,7,8-HxCDF	57117-44-9	ND	3.8e-006	0.000004	ug/L	J, Q, B	U	B
1,2,3,7,8,9-HxCDD	19408-74-3	ND	8.1e-006	0.000005	ug/L	J, Q, B	U	B
1,2,3,7,8,9-HxCDF	72918-21-9	ND	0.000048	0.000004	ug/L	J, B	U	B
1,2,3,7,8-PeCDD	40321-76-4	ND	0.000048	0.000009	ug/L		U	
1,2,3,7,8-PeCDF	57117-41-6	ND	0.000048	0.000005	ug/L		U	
2,3,4,6,7,8-HxCDF	60851-34-5	ND	0.000048	0.000004	ug/L	J, B	U	B
2,3,4,7,8-PeCDF	57117-31-4	ND	0.000048	0.000006	ug/L		U	
2,3,7,8-TCDD	1746-01-6	ND	0.0000095	0.000003	ug/L		U	
2,3,7,8-TCDF	51207-31-9	ND	0.0000095	0.000002	ug/L		R	D
2,3,7,8-TCDF	51207-31-9	ND	2.6e-006	0.000002	ug/L	J, Q	UJ	*III
OCDD	3268-87-9	0.0013	0.000095	0.000022	ug/L	B		
OCDF	39001-02-0	ND	0.000095	0.000013	ug/L	J, B	U	B
Total HpCDD	37871-00-4	0.00024	0.000048	0.000012	ug/L	B		
Total HpCDF	38998-75-3	6.7e-005	0.000048	0.000005	ug/L	J, B	J	B
Total HxCDD	34465-46-8	ND	2.1e-005	0.000005	ug/L	J, Q, B	U	B
Total HxCDF	55684-94-1	2.1e-005	2.1e-005	0.000004	ug/L	J, Q, B	J	B, *III, DNQ
Total PeCDD	36088-22-9	ND	0.000048	0.000009	ug/L		U	
Total PeCDF	30402-15-4	ND	0.000048	0.000004	ug/L		U	
Total TCDD	41903-57-5	ND	0.0000095	0.000003	ug/L		U	
Total TCDF	55722-27-5	ND	2.6e-006	0.000002	ug/L	J, Q	UJ	*III

Analysis Method SM 2540D

Sample Name Outfall 001 (Grab) **Matrix Type:** Water **Validation Level:** IV

Lab Sample Name: ITA1329-01 **Sample Date:** 1/18/2010 3:00:00 PM

Analyte	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Total Suspended Solids	TSS	450	20	2.0	mg/l			