

APPENDIX G

Section 50

Arroyo Simi Receiving Water, February 27, 2009

MEC^X Data Validation Report



DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISB3184

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: ISB3184
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
Arroyo Simi-FP	ISB3184-01	CSB1075-001	Water	02/27/09 0915	200.7, 525.2, SM2340B

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at TestAmerica-Irvine within the temperature limit of $4 \pm 2^{\circ}\text{C}$. TestAmerica-Ontario did not note the sample temperature upon receipt; however, due to the nonvolatile nature of the analytes, no qualifications were required. According to the case narrative for this SDG, the samples were received intact at all laboratories. The original COC was appropriately signed and dated by field and TestAmerica-Irvine personnel. No laboratory personnel signed the transfer COC. As the sample was couriered to TestAmerica-Irvine and TestAmerica Ontario, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	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 200.7—Metals

Reviewed By: P. Meeks

Date Reviewed: April 2, 2009

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

- Holding Times: The analytical holding times, 180 days for ICP metals, was met.
- Tuning: Not applicable to this analysis.
- Calibration: Calibration criteria were met. Initial and continuing calibration recoveries were within 90-110% for the ICP metals. The CRI check standards were recovered within the control limits of 70-130%.
- Blanks: There were no applicable detects in the method blanks or CCBs.
- Interference Check Samples: Recoveries were within the method-established control limits.
- Blank Spikes and Laboratory Control Samples: The recoveries were within the laboratory-established QC limits.
- Laboratory Duplicates: No laboratory duplicate analysis was performed on the sample in this SDG.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG. As the native sample concentration exceeded the spike amount by more than a factor of four, the MS/MSD results were not assessed.
- Serial Dilution: No serial dilution analyses were performed on the sample in this SDG.
- Internal Standards Performance: Not applicable to this analysis.
- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summaries were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicates: There were no field duplicate samples identified for this SDG.

B. EPA METHOD 525.2—Semivolatile Organic Compounds (SVOCs)

Reviewed By: P. Meeks

Date Reviewed: April 2, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 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 diazinon initial calibration average RRF was ≥ 0.05 and $\%RSD \leq 30\%$. The continuing calibration RRF for diazinon was ≥ 0.05 and recovery was within the method QC limits of 70-130%. The reviewer could not duplicate the chlorpyrifos initial calibration; however, the calculated average RRF was ≥ 0.05 and the calculated $\%RSD \leq 30\%$. Additionally the calculated chlorpyrifos continuing calibration RRF was ≥ 0.05 and the calculated recovery was 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 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 was evaluated based on the LCS result.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.
- Field Duplicates: There were no field duplicate samples identified for this SDG.
- Internal Standards Performance: The internal standard area counts and retention times were within the method control limits established by the continuing calibration standards of $\pm 30\%$.
- 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.

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

Project ID: Quartely Arroyo Simi-Frontier Park

Report Number: ISB3184

Sampled: 02/27/09
Received: 02/27/09

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB3184-01 (Arroyo Simi-FP - Water) - cont.									
Reporting Units: mg/l									
Hardness as CaCO3	SM2340B	[CALC]	N/A	0.33	810	1	03/07/09	03/09/09	
Calcium	EPA 200.7	9C07060	0.050	0.10	210	1	03/07/09	03/09/09	MHA
Magnesium	EPA 200.7	9C07060	0.012	0.020	71	1	03/07/09	03/09/09	MHA

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

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

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Report Number: ISB3184

Sampled: 02/27/09
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ORGANIC COMPOUNDS BY GC/MS (EPA 525.2)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB3184-01 (Arroyo Simi-FP - Water) - cont.									
Reporting Units: ug/l									
Chlorpyrifos	EPA 525.2	C9B2801	0.10	1.0	ND	0.98	02/28/09	02/28/09	
Diazinon	EPA 525.2	C9B2801	0.24	0.25	ND	0.98	02/28/09	02/28/09	
Surrogate: 1,3-Dimethyl-2-nitrobenzene (70-130%)					99 %				
Surrogate: Triphenylphosphate (70-130%)					82 %				
Surrogate: Perylene-d12 (70-130%)					110 %				

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