Appendix E
Data Validation Reports

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 21, 2006

LDC Report Date: April 5, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 2 & 3

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IPK2470

Sample Identification

IWC002_WG112106_0001
IWC002_WG112106_0001RE1
IWC002_WG112106_0001RE2
IWC001_WG112106_0001**
IWC001_WG112106_0001RE1**
IWC001_WG112106_0001RE2**
MWC024_WG112106_001
MWC024_WG112106_001RE1
MWC024_WG112106_001RE2
IWC002_WG112106_0001MS
IWC002_WG112106_0001MSD

**Indicates sample underwent Tier 3 review

Introduction

This data review covers 11 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Samples indicated by a double asterisk on the front cover underwent a Tier Level 3 review. A Tier 2 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
11/22/06 (20:10)	Tetrahydrofuran	48	MWC024_WG112106_001 6K22027-BLK1	J (all detects) UJ (all non-detects)	A

All of the continuing calibration RRF values were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
11/22/06 (09:39)	2-Butanone	0.048 (≥0.05)	IWC002_WG112106_0001 IWC001_WG112106_0001** IWC002_WG112106_0001MS IWC002_WG112106_0001MSD 6K22017-BLK1	J (all detects) UJ (all non-detects)	A

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
6K22017-BLK1	11/22/06	Tetrahydrofuran	4.83 ug/L	IWC002_WG112106_0001 IWC001_WG112106_0001**
6K22027-BLK1	11/22/06	Tetrahydrofuran	5.50 ug/L	MWC024_WG112106_001

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Volatiles - Data Qualification Summary - SDG IPK2470

SDG	Sample	Compound	Flag	A or P	Reason
IPK2470	MWC024_WG112106_001	Tetrahydrofuran	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
IPK2470	IWC002_WG112106_0001 IWC001_WG112106_0001**	2-Butanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)

Boeing Realty Corp. C-6, EM2727
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPK2470

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IPK2470

Sampled: 11/21/06
Received: 11/21/06

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-05 (IWC002_WG112106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6K22017	4.5	10	ND	1	11/22/06	11/22/06	
Benzene	EPA 8260B	6K22017	0.28	1.0	**0.30**	1	11/22/06	11/22/06	J
Bromobenzene	EPA 8260B	6K22017	0.27	1.0	ND	1	11/22/06	11/22/06	
Bromochloromethane	EPA 8260B	6K22017	0.32	1.0	ND	1	11/22/06	11/22/06	
Bromodichloromethane	EPA 8260B	6K22017	0.30	1.0	ND	1	11/22/06	11/22/06	
Bromoform	EPA 8260B	6K22017	0.40	1.0	ND	1	11/22/06	11/22/06	
Bromomethane	EPA 8260B	6K22017	0.42	1.0	ND	1	11/22/06	11/22/06	
2-Butanone (MEK)	EPA 8260B	6K22017	3.8	5.0	ND UJ	1	11/22/06	11/22/06	
n-Butylbenzene	EPA 8260B	6K22017	0.37	1.0	ND	1	11/22/06	11/22/06	
sec-Butylbenzene	EPA 8260B	6K22017	0.25	1.0	ND	1	11/22/06	11/22/06	
tert-Butylbenzene	EPA 8260B	6K22017	0.22	1.0	ND	1	11/22/06	11/22/06	
Carbon Disulfide	EPA 8260B	6K22017	0.48	1.0	ND	1	11/22/06	11/22/06	
Carbon tetrachloride	EPA 8260B	6K22017	0.28	0.50	ND	1	11/22/06	11/22/06	
Chlorobenzene	EPA 8260B	6K22017	0.36	1.0	ND	1	11/22/06	11/22/06	
Chloroethane	EPA 8260B	6K22017	0.40	2.0	ND	1	11/22/06	11/22/06	
Chloroform	EPA 8260B	6K22017	0.33	1.0	**21**	1	11/22/06	11/22/06	
Chloromethane	EPA 8260B	6K22017	0.40	2.0	ND	1	11/22/06	11/22/06	
2-Chlorotoluene	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
4-Chlorotoluene	EPA 8260B	6K22017	0.29	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6K22017	0.97	2.0	ND	1	11/22/06	11/22/06	
Dibromochloromethane	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6K22017	0.40	1.0	ND	1	11/22/06	11/22/06	
1,4-Dichlorobenzene	EPA 8260B	6K22017	0.37	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichlorobenzene	EPA 8260B	6K22017	0.32	1.0	ND	1	11/22/06	11/22/06	
1,3-Dichlorobenzene	EPA 8260B	6K22017	0.35	1.0	ND	1	11/22/06	11/22/06	
Dichlorodifluoromethane	EPA 8260B	6K22017	0.79	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloroethane	EPA 8260B	6K22017	0.28	0.50	**3.9**	1	11/22/06	11/22/06	
1,1-Dichloroethane	EPA 8260B	6K22017	0.27	1.0	**5.9**	1	11/22/06	11/22/06	
1,1-Dichloroethene	EPA 8260B	6K22017	0.42	1.0	**110**	1	11/22/06	11/22/06	
cis-1,2-Dichloroethene	EPA 8260B	6K22017	0.32	1.0	**9.2**	1	11/22/06	11/22/06	
trans-1,2-Dichloroethene	EPA 8260B	6K22017	0.27	1.0	**4.1**	1	11/22/06	11/22/06	
1,2-Dichloropropane	EPA 8260B	6K22017	0.35	1.0	ND	1	11/22/06	11/22/06	
2,2-Dichloropropane	EPA 8260B	6K22017	0.34	1.0	ND	1	11/22/06	11/22/06	
cis-1,3-Dichloropropene	EPA 8260B	6K22017	0.22	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloropropene	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
trans-1,3-Dichloropropene	EPA 8260B	6K22017	0.32	0.50	ND	1	11/22/06	11/22/06	
Ethylbenzene	EPA 8260B	6K22017	0.25	1.0	ND	1	11/22/06	11/22/06	
Hexachlorobutadiene	EPA 8260B	6K22017	0.38	1.0	ND	1	11/22/06	11/22/06	
2-Hexanone	EPA 8260B	6K22017	2.6	6.0	ND	1	11/22/06	11/22/06	
Iodomethane	EPA 8260B	6K22017	1.0	2.0	ND	1	11/22/06	11/22/06	
Isopropylbenzene	EPA 8260B	6K22017	0.25	1.0	ND	1	11/22/06	11/22/06	

TestAmerica - Irvine, CA
Michele Chamberlin
Project Manager

K04D407

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

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-05 (IWC002_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6K22017	0.32	1.0	ND	1	11/22/06	11/22/06	
Methylene chloride	EPA 8260B	6K22017	0.95	1.0	ND	1	11/22/06	11/22/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6K22017	3.5	5.0	ND	1	11/22/06	11/22/06	
n-Propylbenzene	EPA 8260B	6K22017	0.27	1.0	ND	1	11/22/06	11/22/06	
Styrene	EPA 8260B	6K22017	0.16	1.0	ND	1	11/22/06	11/22/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6K22017	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6K22017	0.24	1.0	ND	1	11/22/06	11/22/06	
Tetrachloroethene	EPA 8260B	6K22017	0.32	1.0	**0.98**	1	11/22/06	11/22/06	J
Tetrahydrofuran (THF)	EPA 8260B	6K22017	3.5	10	ND	1	11/22/06	11/22/06	
Toluene	EPA 8260B	6K22017	0.36	1.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichlorobenzene	EPA 8260B	6K22017	0.30	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trichlorobenzene	EPA 8260B	6K22017	0.48	1.0	ND	1	11/22/06	11/22/06	
1,1,2-Trichloroethane	EPA 8260B	6K22017	0.30	1.0	**2.4**	1	11/22/06	11/22/06	
1,1,1-Trichloroethane	EPA 8260B	6K22017	0.30	1.0	ND	1	11/22/06	11/22/06	
Trichlorofluoromethane	EPA 8260B	6K22017	0.34	2.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichloropropane	EPA 8260B	6K22017	0.40	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trimethylbenzene	EPA 8260B	6K22017	0.23	1.0	ND	1	11/22/06	11/22/06	
1,3,5-Trimethylbenzene	EPA 8260B	6K22017	0.26	1.0	ND	1	11/22/06	11/22/06	
Vinyl chloride	EPA 8260B	6K22017	0.30	0.50	ND	1	11/22/06	11/22/06	
Xylenes, Total	EPA 8260B	6K22017	0.90	1.0	ND	1	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Surrogate: Dibromofluoromethane (80-120%)					*108 %*				
Surrogate: Toluene-d8 (80-120%)					*100 %*				

TestAmerica - Irvine, CA
Michele Chamberlin
Project Manager

MC 12/4/07

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

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-05RE1 (IWC002_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	6K22031	5.2	20	**3000**	20	11/22/06	11/23/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*82 %*				
Surrogate: Dibromofluoromethane (80-120%)					*99 %*				
Surrogate: Toluene-d8 (80-120%)					*100 %*				

TestAmerica - Irvine, CA
Michele Chamberlin
Project Manager

M 04/04/07

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

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-05RE2 (IWC002_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Vinyl acetate	EPA 8260B	6K27030	1.7	6.0	ND	1	11/27/06	11/27/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*91 %*				
Surrogate: Dibromofluoromethane (80-120%)					*89 %*				
Surrogate: Toluene-d8 (80-120%)					*95 %*				

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Michele Chamberlin
Project Manager

Kotofo1

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IPK2470

Sampled: 11/21/06
Received: 11/21/06

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-07 (IWC001_WG112106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6K22017	4.5	10	ND	1	11/22/06	11/22/06	
Benzene	EPA 8260B	6K22017	0.28	1.0	**0.43**	1	11/22/06	11/22/06	J
Bromobenzene	EPA 8260B	6K22017	0.27	1.0	ND	1	11/22/06	11/22/06	
Bromochloromethane	EPA 8260B	6K22017	0.32	1.0	ND	1	11/22/06	11/22/06	
Bromodichloromethane	EPA 8260B	6K22017	0.30	1.0	ND	1	11/22/06	11/22/06	
Bromoform	EPA 8260B	6K22017	0.40	1.0	ND	1	11/22/06	11/22/06	
Bromomethane	EPA 8260B	6K22017	0.42	1.0	ND	1	11/22/06	11/22/06	
2-Butanone (MEK)	EPA 8260B	6K22017	3.8	5.0	ND UJ	1	11/22/06	11/22/06	
n-Butylbenzene	EPA 8260B	6K22017	0.37	1.0	ND	1	11/22/06	11/22/06	
sec-Butylbenzene	EPA 8260B	6K22017	0.25	1.0	ND	1	11/22/06	11/22/06	
tert-Butylbenzene	EPA 8260B	6K22017	0.22	1.0	ND	1	11/22/06	11/22/06	
Carbon Disulfide	EPA 8260B	6K22017	0.48	1.0	ND	1	11/22/06	11/22/06	
Carbon tetrachloride	EPA 8260B	6K22017	0.28	0.50	**0.97**	1	11/22/06	11/22/06	
Chlorobenzene	EPA 8260B	6K22017	0.36	1.0	ND	1	11/22/06	11/22/06	
Chloroethane	EPA 8260B	6K22017	0.40	2.0	ND	1	11/22/06	11/22/06	
Chloromethane	EPA 8260B	6K22017	0.40	2.0	ND	1	11/22/06	11/22/06	
2-Chlorotoluene	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
4-Chlorotoluene	EPA 8260B	6K22017	0.29	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6K22017	0.97	2.0	ND	1	11/22/06	11/22/06	
Dibromochloromethane	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6K22017	0.40	1.0	ND	1	11/22/06	11/22/06	
1,4-Dichlorobenzene	EPA 8260B	6K22017	0.37	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichlorobenzene	EPA 8260B	6K22017	0.32	1.0	ND	1	11/22/06	11/22/06	
1,3-Dichlorobenzene	EPA 8260B	6K22017	0.35	1.0	ND	1	11/22/06	11/22/06	
Dichlorodifluoromethane	EPA 8260B	6K22017	0.79	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloroethane	EPA 8260B	6K22017	0.28	0.50	**1.2**	1	11/22/06	11/22/06	
1,1-Dichloroethane	EPA 8260B	6K22017	0.27	1.0	**1.1**	1	11/22/06	11/22/06	
1,1-Dichloroethene	EPA 8260B	6K22017	0.42	1.0	**53**	1	11/22/06	11/22/06	
cis-1,2-Dichloroethene	EPA 8260B	6K22017	0.32	1.0	**1.6**	1	11/22/06	11/22/06	
trans-1,2-Dichloroethene	EPA 8260B	6K22017	0.27	1.0	**0.33**	1	11/22/06	11/22/06	J
1,2-Dichloropropane	EPA 8260B	6K22017	0.35	1.0	ND	1	11/22/06	11/22/06	
2,2-Dichloropropane	EPA 8260B	6K22017	0.34	1.0	ND	1	11/22/06	11/22/06	
cis-1,3-Dichloropropene	EPA 8260B	6K22017	0.22	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloropropene	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	
trans-1,3-Dichloropropene	EPA 8260B	6K22017	0.32	0.50	ND	1	11/22/06	11/22/06	
Ethylbenzene	EPA 8260B	6K22017	0.25	1.0	ND	1	11/22/06	11/22/06	
Hexachlorobutadiene	EPA 8260B	6K22017	0.38	1.0	ND	1	11/22/06	11/22/06	
2-Hexanone	EPA 8260B	6K22017	2.6	6.0	ND	1	11/22/06	11/22/06	
Iodomethane	EPA 8260B	6K22017	1.0	2.0	ND	1	11/22/06	11/22/06	
Isopropylbenzene	EPA 8260B	6K22017	0.25	1.0	ND	1	11/22/06	11/22/06	
p-Isopropyltoluene	EPA 8260B	6K22017	0.28	1.0	ND	1	11/22/06	11/22/06	

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Michele Chamberlin
Project Manager

K040407

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IPK2470

Sampled: 11/21/06
Received: 11/21/06

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-07 (IWC001_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6K22017	0.32	1.0	ND	1	11/22/06	11/22/06	
Methylene chloride	EPA 8260B	6K22017	0.95	1.0	ND	1	11/22/06	11/22/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6K22017	3.5	5.0	ND	1	11/22/06	11/22/06	
n-Propylbenzene	EPA 8260B	6K22017	0.27	1.0	ND	1	11/22/06	11/22/06	
Styrene	EPA 8260B	6K22017	0.16	1.0	ND	1	11/22/06	11/22/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6K22017	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6K22017	0.24	1.0	ND	1	11/22/06	11/22/06	
Tetrachloroethene	EPA 8260B	6K22017	0.32	1.0	**2.6**	1	11/22/06	11/22/06	
Tetrahydrofuran (THF)	EPA 8260B	6K22017	3.5	10	ND	1	11/22/06	11/22/06	
Toluene	EPA 8260B	6K22017	0.36	1.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichlorobenzene	EPA 8260B	6K22017	0.30	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trichlorobenzene	EPA 8260B	6K22017	0.48	1.0	ND	1	11/22/06	11/22/06	
1,1,2-Trichloroethane	EPA 8260B	6K22017	0.30	1.0	**0.59**	1	11/22/06	11/22/06	J
1,1,1-Trichloroethane	EPA 8260B	6K22017	0.30	1.0	**0.33**	1	11/22/06	11/22/06	J
Trichlorofluoromethane	EPA 8260B	6K22017	0.34	2.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichloropropane	EPA 8260B	6K22017	0.40	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trimethylbenzene	EPA 8260B	6K22017	0.23	1.0	ND	1	11/22/06	11/22/06	
1,3,5-Trimethylbenzene	EPA 8260B	6K22017	0.26	1.0	ND	1	11/22/06	11/22/06	
Vinyl chloride	EPA 8260B	6K22017	0.30	0.50	ND	1	11/22/06	11/22/06	
Xylenes, Total	EPA 8260B	6K22017	0.90	1.0	ND	1	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Surrogate: Dibromofluoromethane (80-120%)					*110 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				

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MC 4/24/07

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-07RE1 (IWC001_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Chloroform	EPA 8260B	6K22031	6.6	20	**730**	20	11/22/06	11/23/06	
Trichloroethene	EPA 8260B	6K22031	5.2	20	**2600**	20	11/22/06	11/23/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*82 %*				
Surrogate: Dibromofluoromethane (80-120%)					*98 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-07RE2 (IWC001_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Vinyl acetate	EPA 8260B	6K27030	1.7	6.0	ND	1	11/27/06	11/27/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*92 %*				
Surrogate: Dibromofluoromethane (80-120%)					*89 %*				
Surrogate: Toluene-d8 (80-120%)					*97 %*				

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Rev 04/04/07

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IPK2470

Sampled: 11/21/06
Received: 11/21/06

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-09 (MWC024_WG112106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6K22027	4.5	10	ND	1	11/22/06	11/22/06	
Benzene	EPA 8260B	6K22027	0.28	1.0	**0.66**	1	11/22/06	11/22/06	J
Bromobenzene	EPA 8260B	6K22027	0.27	1.0	ND	1	11/22/06	11/22/06	
Bromochloromethane	EPA 8260B	6K22027	0.32	1.0	ND	1	11/22/06	11/22/06	
Bromodichloromethane	EPA 8260B	6K22027	0.30	1.0	ND	1	11/22/06	11/22/06	
Bromoform	EPA 8260B	6K22027	0.40	1.0	ND	1	11/22/06	11/22/06	
Bromomethane	EPA 8260B	6K22027	0.42	1.0	ND	1	11/22/06	11/22/06	
2-Butanone (MEK)	EPA 8260B	6K22027	3.8	5.0	ND	1	11/22/06	11/22/06	
n-Butylbenzene	EPA 8260B	6K22027	0.37	1.0	ND	1	11/22/06	11/22/06	
sec-Butylbenzene	EPA 8260B	6K22027	0.25	1.0	ND	1	11/22/06	11/22/06	
tert-Butylbenzene	EPA 8260B	6K22027	0.22	1.0	ND	1	11/22/06	11/22/06	
Carbon Disulfide	EPA 8260B	6K22027	0.48	1.0	ND	1	11/22/06	11/22/06	
Carbon tetrachloride	EPA 8260B	6K22027	0.28	0.50	**0.94**	1	11/22/06	11/22/06	
Chlorobenzene	EPA 8260B	6K22027	0.36	1.0	**0.53**	1	11/22/06	11/22/06	J
Chloroethane	EPA 8260B	6K22027	0.40	2.0	ND	1	11/22/06	11/22/06	
Chloromethane	EPA 8260B	6K22027	0.40	2.0	ND	1	11/22/06	11/22/06	
2-Chlorotoluene	EPA 8260B	6K22027	0.28	1.0	ND	1	11/22/06	11/22/06	
4-Chlorotoluene	EPA 8260B	6K22027	0.29	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6K22027	0.97	2.0	ND	1	11/22/06	11/22/06	
Dibromochloromethane	EPA 8260B	6K22027	0.28	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6K22027	0.40	1.0	ND	1	11/22/06	11/22/06	
1,4-Dichlorobenzene	EPA 8260B	6K22027	0.37	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichlorobenzene	EPA 8260B	6K22027	0.32	1.0	ND	1	11/22/06	11/22/06	
1,3-Dichlorobenzene	EPA 8260B	6K22027	0.35	1.0	ND	1	11/22/06	11/22/06	
Dichlorodifluoromethane	EPA 8260B	6K22027	0.79	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloroethane	EPA 8260B	6K22027	0.28	0.50	**0.65**	1	11/22/06	11/22/06	
1,1-Dichloroethane	EPA 8260B	6K22027	0.27	1.0	**1.1**	1	11/22/06	11/22/06	
1,1-Dichloroethene	EPA 8260B	6K22027	0.42	1.0	**33**	1	11/22/06	11/22/06	
cis-1,2-Dichloroethene	EPA 8260B	6K22027	0.32	1.0	**1.9**	1	11/22/06	11/22/06	
trans-1,2-Dichloroethene	EPA 8260B	6K22027	0.27	1.0	**0.57**	1	11/22/06	11/22/06	J
1,2-Dichloropropane	EPA 8260B	6K22027	0.35	1.0	ND	1	11/22/06	11/22/06	
2,2-Dichloropropane	EPA 8260B	6K22027	0.34	1.0	ND	1	11/22/06	11/22/06	
cis-1,3-Dichloropropene	EPA 8260B	6K22027	0.22	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloropropene	EPA 8260B	6K22027	0.28	1.0	ND	1	11/22/06	11/22/06	
trans-1,3-Dichloropropene	EPA 8260B	6K22027	0.32	0.50	ND	1	11/22/06	11/22/06	
Ethylbenzene	EPA 8260B	6K22027	0.25	1.0	ND	1	11/22/06	11/22/06	
Hexachlorobutadiene	EPA 8260B	6K22027	0.38	1.0	ND	1	11/22/06	11/22/06	
2-Hexanone	EPA 8260B	6K22027	2.6	6.0	ND	1	11/22/06	11/22/06	
Iodomethane	EPA 8260B	6K22027	1.0	2.0	ND	1	11/22/06	11/22/06	
Isopropylbenzene	EPA 8260B	6K22027	0.25	1.0	ND	1	11/22/06	11/22/06	
p-Isopropyltoluene	EPA 8260B	6K22027	0.28	1.0	ND	1	11/22/06	11/22/06	

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Project Manager

11/30/07

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-09 (MWC024_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6K22027	0.32	1.0	ND	1	11/22/06	11/22/06	
Methylene chloride	EPA 8260B	6K22027	0.95	1.0	ND	1	11/22/06	11/22/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6K22027	3.5	5.0	ND	1	11/22/06	11/22/06	
n-Propylbenzene	EPA 8260B	6K22027	0.27	1.0	ND	1	11/22/06	11/22/06	
Styrene	EPA 8260B	6K22027	0.16	1.0	ND	1	11/22/06	11/22/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6K22027	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6K22027	0.24	1.0	ND	1	11/22/06	11/22/06	
Tetrachloroethene	EPA 8260B	6K22027	0.32	1.0	**1.2**	1	11/22/06	11/22/06	
Tetrahydrofuran (THF)	EPA 8260B	6K22027	3.5	10	ND UJ	1	11/22/06	11/22/06	
Toluene	EPA 8260B	6K22027	0.36	1.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichlorobenzene	EPA 8260B	6K22027	0.30	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trichlorobenzene	EPA 8260B	6K22027	0.48	1.0	ND	1	11/22/06	11/22/06	
1,1,2-Trichloroethane	EPA 8260B	6K22027	0.30	1.0	**0.44**	1	11/22/06	11/22/06	J
1,1,1-Trichloroethane	EPA 8260B	6K22027	0.30	1.0	ND	1	11/22/06	11/22/06	
Trichlorofluoromethane	EPA 8260B	6K22027	0.34	2.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichloropropane	EPA 8260B	6K22027	0.40	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trimethylbenzene	EPA 8260B	6K22027	0.23	1.0	ND	1	11/22/06	11/22/06	
1,3,5-Trimethylbenzene	EPA 8260B	6K22027	0.26	1.0	ND	1	11/22/06	11/22/06	
Vinyl chloride	EPA 8260B	6K22027	0.30	0.50	ND	1	11/22/06	11/22/06	
Xylenes, Total	EPA 8260B	6K22027	0.90	1.0	ND	1	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*101 %*				
Surrogate: Dibromofluoromethane (80-120%)					*110 %*				
Surrogate: Toluene-d8 (80-120%)					*100 %*				

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Project Manager

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-09RE1 (MWC024_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Chloroform	EPA 8260B	6K25014	6.6	20	**460**	20	11/25/06	11/25/06	
Trichloroethene	EPA 8260B	6K25014	5.2	20	**2800**	20	11/25/06	11/25/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*106 %*				
Surrogate: Dibromofluoromethane (80-120%)					*114 %*				
Surrogate: Toluene-d8 (80-120%)					*109 %*				

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Michele Chamberlin
Project Manager

M 04/04/07

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-09RE2 (MWC024_WG112106_0001 - Water) - cont.									
Reporting Units: ug/l									
Vinyl acetate	EPA 8260B	6K24024	1.7	6.0	ND	1	11/24/06	11/24/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*92 %*				
Surrogate: Dibromofluoromethane (80-120%)					*95 %*				
Surrogate: Toluene-d8 (80-120%)					*97 %*				

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Project Manager

Rev 040401

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LDC #: 16470A1
SDG #: IPK2470
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 2/3

Date: 3/3/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/21/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD, r^2 20-99U
IV.	Continuing calibration	SW	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	Not reviewed for Tier II validation.
XII.	Compound quantitation/CRQLs	A	Not reviewed for Tier II validation.
XIII.	Tentatively identified compounds (TICs)	N	Not reviewed for Tier II validation. not reported
XIV.	System performance	A	Not reviewed for Tier II validation.
XV.	Overall assessment of data	A	
XVI.	Field duplicates N	~~SW~~	~~D = 1, 4 2, 5 3, 6~~ *
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; * ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Tier III validation

5	1 1	IWC002_WG112106_0001	11 1	IWC002_WG112106_0001MSD	21 1	6K22017 x	31	
	2 2	5 IWC002_WG112106_0001RE1	12		22 2	6K22031 x	32	
	3 3	HH IWC002_WG112106_0001RE2	13		23 3	6K27030 x	33	
7	4 1	IWC001_WG112106_0001**	14		24 4	6K22027 x	34	
	5 2	S.K. IWC001_WG112106_0001RE1**	15		25 5	6K25014 x	35	
	6 3	HH IWC001_WG112106_0001RE2**	16		26 6	6K24024 x	36	
9	7 4	MWC024_WG112106_001	17		27		37	
	8 5	S.K. MWC024_WG112106_001RE1	18		28		38	
	9 6	HH MWC024_WG112106_001RE2	19		29		39	
	10 1	IWC002_WG112106_0001MS	20		30		40	

LDC #: 16470-A1
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: PZ
2nd Reviewer: [illegible]

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) > 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?			✓	
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?	✓			
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

.DC #: 16470A1
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer: B
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV System performance				
System performance was found to be acceptable.	✓			
XV Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl chorlde**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Methyl ethyl ketone	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethene	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC. 1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

BOE-C6-0054135

LDC #: 16470A1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	11/22/06 9:39AM	CCV	M		0.048	6K22017-BLK1, 1, 4, 10, 11	J/UJ/A
	11/22/06 8:10 PM	CCV	Tetrahydrofuran	48		6K22027-BLK1, 7	↓

CONCAL.1SB

BOE-C6-0054136

LDC #: 16470A1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: B
2nd Reviewer: R

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 11/22/06
Conc. units: ug/L
Associated Samples: 1, 4 (ND)

Compound	Blank ID	Sample Identification								
	6K22017-BLK1									
~~Methylene chloride~~ Tetrahydrofuran	4.83									
~~Acetone~~										
CRQL										

Blank analysis date: 11/22/06
Conc. units: ug/L
Associated Samples: 7 (ND)

Compound	Blank ID	Sample Identification								
	6K22027-BLK1									
~~Methylene chloride~~ K	~~0.560~~									
~~Acetone~~ Tetrahydrofuran	5.50									
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BLANKS2.1SB

LDC #: 16470A1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	GCMS33	11/15/06	Methylene chloride (1st internal standard)	0.455	0.455	0.442	0.442	5.53	5.53
			Trichlorethene (2nd internal standard)	0.410	0.410	0.385	0.385	9.22	9.22
			Ethyl Benzene ~~Toluene~~ (3rd internal standard)	1.429	1.429	1.379	1.379	9.63	9.63
2	~~GCMS56~~	11/15/06	1,2-DCB ~~Methylene chloride~~ (1st internal standard)	1.418	1.418	1.337	1.337	10.92	10.92
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3	GCMS56	11/15/06	TCE ~~Methylene chloride~~ (1st internal standard)	0.386	0.386	0.365	0.365	5.81	5.81
			Chloroform ~~Trichlorethene~~ (2nd internal standard)	0.992	0.992	0.977	0.977	5.86	5.86
			Toluene (3rd internal standard)						
4	GCMS5	11/23/06	Vinyl Acetate ~~Methylene chloride~~ (1st internal standard)	0.798	0.798	0.679	0.679	14.85	14.85
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICLC.1SB

LDC #: 16470A1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 939AM (33)	11/22/07	Methylene chloride (1st internal standard)	0.442	0.400	0.400	9.5	9.5
			Trichlorethene (2nd internal standard)	0.385	0.391	0.391	1.6	1.6
			Ethyl Benzene ~~Toluene~~ (3rd internal standard)	1.379	1.410	1.410	2.2	2.2
2			1,2-DCB ~~Methylene chloride~~ (1st internal standard)	1.337	1.403	1.403	4.9	4.9
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
3	CCV 6:44PM (52)	11/22/07	Chloroform ~~Methylene chloride~~ (1st internal standard)	0.977	1.016	1.016	4.0	4.0
			Trichlorethene (2nd internal standard)	0.365	0.358	0.358	1.9	1.9
			Toluene (3rd internal standard)					
4	CCV 4:41PM (55)	11/27/07	Vinyl Acetate ~~Methylene chloride~~ (1st internal standard)	0.679	0.682	0.682	0.4	0.4
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CONCLC.1SB

BOE-C6-0054139

LDC #: 16470A1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 4

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8	25.0	25.31	101	101	0
Bromofluorobenzene	↓	25.62	102	102	↓
1,2-Dichloroethane-d4					
Dibromofluoromethane		27.40	110	110	

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

LDC #: 16470A1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSDC | * 2/(MSC + MSDC)

MSC = Matrix spike percent recovery; MSDC = Matrix spike duplicate percent recovery

MS/MSD sample: 10 & 11

Compound	Spike Added (ng/L)		Sample Concentration (ng/L)	Spiked Sample Concentration (ng/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	----	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	25.0	25.0	110	130	126	80	80	64	64	3	3
Trichloroethene	NA		NA	NA							
Benzene			0.30	24.4	24.8	96	96	98	98	2	2
Toluene			ND	24.8	24.9	99	99	100	100	0	0
Chlorobenzene			ND	25.7	25.9	103	103	104	104	1	1

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

MSOCLC.1SB

LDC #: 16470A1
SDG #: tp per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboraotry control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS ID: 6K22017-LCS

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	25.0	NA	23.3	NA	93	93				
Trichloroethene			~~24.4~~ 26.5		106	106				
Benzene			24.4		98	98				
Toluene			24.6		98	98				
Chlorobenzene			25.1		100	100	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LCSCLC.1SB

BOE-C6-0054142

LDC #: 16470A1
SDG #: 1PK2470

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

V_o = Volume or weight of sample pruged in milliliters (ml) or grams (g).

Df = Dilution factor.

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #4 . Benzene

Conc. = $\frac{(12062)(25)(\quad)(\quad)}{(\cancel{438798}\ 648418)(1.070)(\quad)(\quad)}$

= 0.43 ug Hg

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 21, 2006

LDC Report Date: March 28, 2007

Matrix: Water

Parameters: Dissolved Manganese

Validation Level: Tier 2 & 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IPK2470

Sample Identification

IWC001_WG112106_0001**
MWC024_WG112106_001

**Indicates sample underwent Tier 3 review

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Samples indicated by a double asterisk on the front cover underwent a Tier 3 review. A Tier 2 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

All sample result verifications were acceptable for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

BOE-C6-0054147

Boeing Realty Corp. C-6, EM2727
Dissolved Manganese - Data Qualification Summary - SDG IPK2470

No Sample Data Qualified in this SDG

Boeing Realty Corp. C-6, EM2727
Dissolved Manganese - Laboratory Blank Data Qualification Summary - SDG IPK2470

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-07 (IWC001_WG112106_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	6K21150	0.0070	0.020	**0.038**	1	11/21/06	11/22/06	
Sample ID: IPK2470-09 (MWC024_WG112106_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	6K21150	0.0070	0.020	**0.015**	1	11/21/06	11/22/06	J

M 04 07

TestAmerica - Irvine, CA
Michele Chamberlin
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

LDC #: 16470A4
SDG #: IPK2470
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 2/3

Date: 3/27/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Dissolved Manganese (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/21/06
II.	Calibration	A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	non client
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	not performed
XI.	Sample Result Verification	A	Not reviewed for Tier II validation.
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Tier III validation

1	IWC001_WG112106_0001**	11		21		31	
2	MWC024_WG112106_001	12		22		32	
3	PB	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

16470A4W.wpd

LDC #: 1647sA4
SDG #: See cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: MM
2nd Reviewer: M

Method: Metals (EPA SW 846 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury and 85-115% for cyanide) QC limits?	✓			
Were all initial calibration correlation coefficients ≥ 0.995? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
IV. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			
VI. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	

LDC #: 16470A4
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: MM
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VII. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the IDL?		✓		
Were all percent differences (%Ds) < 10%?			✓	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
VIII. Internal Standards (EPA SW 846 Method 6020)				
Were all the percent recoveries (%R) within the 30-120% of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XIII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 1647oAf
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MY
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Mn	1.986	2.0	99	MR	Y
	GFAA (Initial calibration)						
	CVAA (Initial calibration)						
CCV	ICP (Continuing calibration)	Mn	101	1.0	101	MR	Y
	GFAA (Continuing calibration)						
	CVAA (Continuing calibration)						
	Cyanide (Initial calibration)						
	Cyanide (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CALCLC.4SW

LDC #: 16490A4
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MM
2nd Reviewer: A

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recaluculated using the following formula:

$\%R = \frac{Found}{True} \times 100$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Mn	0.4762	0.5	95	NR	Y
LCS	Laboratory control sample	↓	0.984	1.00	98	98	↓
TPK24561	Matrix spike	↓	(SSR-SR) 0.913	1.00	91	87	↓
↓	Duplicate	↓	3.87	3.87	0	0	↓
	ICP serial dilution						

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.4SW

LDC #: 16490A4
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MW
2nd reviewer: A

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for 1 were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)(\%S)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor
%S = Decimal percent solids

Recalculation:

From the raw data

Mn = 0.0383 mg/L

Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	Mn	0.038	0.038	Y

RECALC.4S2

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 20, 2006

LDC Report Date: March 28, 2007

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 1

Laboratory: TestAmerica

Sample Delivery Group (SDG): IPK2310

Sample Identification

MWC015_WG112006_0001
MWC015_WG112006_0001DUP

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Bromide, Chloride, Nitrate, Nitrite, and Sulfate, EPA Method 310.1 for Alkalinity, EPA Method 415.1 for Total Organic Carbon, and Standard Method 4500-CO2C for Carbon Dioxide.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

b. Calibration Verification

Calibration verification data were not reviewed for Tier 1.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

BOE-C6-0054158

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Wet Chemistry - Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

Boeing Realty Corp. C-6, EM2727
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number: IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan		

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-05 (MWC015_WG112006_0001 - Water) - cont.									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2 C	6K21062	N/A	2.0	**16**	1	11/21/06	11/21/06	
Alkalinity as CaCO3	EPA 310.1	6K30126	N/A	2.0	**180**	1	11/30/06	11/30/06	
Bromide	EPA 300.0	6K20045	N/A	0.50	ND	1	11/20/06	11/21/06	
Chloride	EPA 300.0	6K20045	N/A	10	**120**	20	11/20/06	11/21/06	
Nitrate-NO3	EPA 300.0	6K20045	N/A	0.50	**7.3**	1	11/20/06	11/21/06	
Nitrite-NO2	EPA 300.0	6K20045	N/A	0.50	ND	1	11/20/06	11/21/06	
Sulfate	EPA 300.0	6K20045	N/A	10	**33**	20	11/20/06	11/21/06	
Total Organic Carbon	EPA 415.1	6K30137	N/A	1.0	ND	1	11/30/06	11/30/06	

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

12/04/07

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

LDC #: 16470B6
SDG #: IPK2310
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 1

Date: 3/27/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Alkalinity (EPA Method 310.1), Bromide, Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), TOC (EPA Method 415.1) Carbon Dioxide (SM 4500 CO2 C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/20/06
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	A	
IVa.	Matrix Spike/(Matrix Spike) Duplicates	A	MS/MSD/Dup. (non client)
IVb.	Laboratory control samples	A	LCS
V.	Sample result verification	N	
VI.	Overall assessment of data	A	
VII.	Field duplicates	N	
VIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: A2

1	MWC015_WG112006_0001	11		21		31	
2	↓ Dup	12		22		32	
3	MB	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16470B6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MY
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter				
1	pH TDS (Cl) F (NO3) (NO2) (SO4) PO4 (ALK) CN- NH3 TKN (TOC) CR6+	(Br)	(CO2)		
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
m2	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+		(CO2)		
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				
	pH TDS Cl F NO3 NO2 SO4 PO4 ALK CN- NH3 TKN TOC CR6+				

Comments:

METHODS.6

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: December 4, 2006

LDC Report Date: April 5, 2007

Matrix: Water

Parameters: Sulfide

Validation Level: Tier 1, 2, & 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IPL0295

Sample Identification

IRZMW001B_WG120406_0001
IRZMW001B_WG120406_0002*
IRZMW002B_WG120406_0001**

*Indicates sample underwent Tier 2 review
**Indicates sample underwent Tier 3 review
All other samples underwent Tier 1 review

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 376.2 for Sulfide.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent a Tier 3 review. A Tier 2 or Tier 1 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 2 or Tier 1 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

Initial calibration data were not reviewed for Tier I.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

Calibration verification data were not reviewed for Tier I.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

All sample result verifications were acceptable for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 or Tier 1 criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples IRZMW001B_WG120406_0001 and IRZMW001B_WG120406_0002* were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/L)		RPD
	IRZMW001B_WG120406_0001	IRZMW001B_WG120406_0002*	
Sulfide	0.024	0.024	0

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Sulfide - Data Qualification Summary - SDG IPL0295

No Sample Data Qualified in this SDG

Boeing Realty Corp. C-6, EM2727
Sulfide - Laboratory Blank Data Qualification Summary - SDG IPL0295

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM 2727
Report Number: IPL0295

Sampled: 12/04/06
Received: 12/04/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPL0295-05 (IRZMW001B_WGR0406_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	**0.024**	1	12/05/06	12/05/06	J
Sample ID: IPL0295-06 (IRZMW001B_WGR0406_0002 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	**0.024**	1	12/05/06	12/05/06	J
Sample ID: IPL0295-07 (IRZMW002B_WGR0406_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	**0.076**	1	12/05/06	12/05/06	J
Sample ID: IPL0295-08 (IRZMW003B_WGR0406_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	**0.022**	1	12/05/06	12/05/06	J
Sample ID: IPL0295-09 (CMW001_WGR0406_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	**0.022**	1	12/05/06	12/05/06	J
Sample ID: IPL0295-10 (IRZCMW002_WGR0406_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	**0.13**	1	12/05/06	12/05/06	
Sample ID: IPL0295-11 (IRZMW003A_WGR0406_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6L05111	0.010	0.10	ND	1	12/05/06	12/05/06	

Not of 07

TestAmerica - Irvine, CA
Michele Chamberlin
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

LDC #: 16470C6
SDG #: IPL0295
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 1/2/3

Date: 3/27/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Total Sulfide (EPA Method 376.2)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 12/4/06
IIa.	Initial calibration	A	Not reviewed for Tier I validation.
IIb.	Calibration verification	A	
III.	Blanks	A	
IVa.	Matrix Spike/(Matrix Spike) Duplicates	A	non client
IVb.	Laboratory control samples	A	LCS
V.	Sample result verification	A	Not reviewed for Tier II validation.
VI.	Overall assessment of data	A	
VII.	Field duplicates	SW	(1,2)
VIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: * Indicates sample underwent Tier II validation, ** Indicates sample underwent Tier III validation

1	IRZMW001B_WGR0406_0001	11		21		31	
2	IRZMW001B_WGR0406_0002*	12		22		32	
3	IRZMW002B_WGR0406_0001**	13		23		33	
4	MB	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16470C6
SDG #: See cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: MY
2nd Reviewer: A

Method: Inorganics (EPA Method 376.2)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 16470c6
SDG #: See cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: MY
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC#: 16474C6
SDG#: IPL0295

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer:
2nd Reviewer:

Inorganics, Method EPA 376.2

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/L)		RPD	
	1	2		
Sulfide	0.024	0.024	0	

V:\FIELD DUPLICATES\FD_inorganic\16470C6.wpd

LDC #: 16470C6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MY
2nd Reviewer: [illegible]

METHOD: Inorganics, Method 376.2

The correlation coefficient (r) for the calibration of S was recalculated. Calibration date: 12/5/06

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of Analysis	Analyte		Conc. (mg/L) (units)	Abs (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	S	Blank	0	0	r=0.99998	r=0.99998	Y
Calibration verification		Standard 1	0.122	0.057			
		Standard 2	0.366	0.182			
		Standard 3	0.61	0.302			
		Standard 4	1.22	0.606			
		Standard 5					
		Standard 6					
		Standard 7					
Calibration verification CCV	S	0.360	0.374		104	NR	Y
Calibration verification							
Calibration verification							

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CALCLC.6

LDC #: 16470C6
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MM
2nd Reviewer: [illegible]

METHOD: Inorganics, Method 376.2

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	S	0.640	0.610	105	104	Y
MW0303 -01	Matrix spike sample	↓	(SSR-SR) 0.583	↓	96	96	↓
↓	Duplicate sample	↓	0.664	0.642	2	2	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.6

LDC #: 16470C6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MM
2nd reviewer: [illegible]

METHOD: Inorganics, Method 376.2

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for _____ reported with a positive detect were recalculated and verified using the following equation:

Concentration =

$$S = \frac{abs + 0.001408}{0.49786}$$

Recalculation:

$$S = \frac{0.037 + 0.001408}{0.49786} = 0.0771 \text{ mg/L}$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	3	S	0.076	0.077	Y

Note: _____

RECALC.6

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 20, 2006

LDC Report Date: April 5, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 1

Laboratory: TestAmerica

Sample Delivery Group (SDG): IPK2310

Sample Identification

MWC015_WG112006_0001
MWC015_WG112006_0001RE1
MWC016_WG112006_0001
MWC016_WG112006_0001RE1
MWC015_WG112006_0001MS
MWC015_WG112006_0001MSD

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

BOE-C6-0054178

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance data were not reviewed for Tier 1.

III. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Tier 1.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
6K22012-BLK	11/22/06	Tetrahydrofuran	4.41 ug/L	All samples in SDG IPK2310

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MWC015_WG112006_0001MS/MSD (MWC015_WG112006_0001)	Bromodichloromethane	-	-	38 (≤20)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Tier 1.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Volatiles - Data Qualification Summary - SDG IPK2310

SDG	Sample	Compound	Flag	A or P	Reason
IPK2310	MWC015_WG112006_0001	Bromodichloromethane	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (RPD)

Boeing Realty Corp. C-6, EM2727
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number:	IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan			

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-05 (MWC015_WG112006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6K22012	4.5	10	ND	1	11/22/06	11/22/06	
Benzene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
Bromobenzene	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
Bromochloromethane	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
Bromodichloromethane	EPA 8260B	6K22012	0.30	1.0	ND UJ	1	11/22/06	11/22/06	R
Bromoform	EPA 8260B	6K22012	0.40	1.0	ND	1	11/22/06	11/22/06	
Bromomethane	EPA 8260B	6K22012	0.42	1.0	ND	1	11/22/06	11/22/06	
2-Butanone (MEK)	EPA 8260B	6K22012	3.8	5.0	ND	1	11/22/06	11/22/06	
n-Butylbenzene	EPA 8260B	6K22012	0.37	1.0	ND	1	11/22/06	11/22/06	
sec-Butylbenzene	EPA 8260B	6K22012	0.25	1.0	ND	1	11/22/06	11/22/06	
tert-Butylbenzene	EPA 8260B	6K22012	0.22	1.0	ND	1	11/22/06	11/22/06	
Carbon Disulfide	EPA 8260B	6K22012	0.48	1.0	ND	1	11/22/06	11/22/06	
Carbon tetrachloride	EPA 8260B	6K22012	0.28	0.50	ND	1	11/22/06	11/22/06	
Chlorobenzene	EPA 8260B	6K22012	0.36	1.0	ND	1	11/22/06	11/22/06	
Chloroethane	EPA 8260B	6K22012	0.40	2.0	ND	1	11/22/06	11/22/06	
Chloroform	EPA 8260B	6K22012	0.33	1.0	**1.8**	1	11/22/06	11/22/06	
Chloromethane	EPA 8260B	6K22012	0.40	2.0	ND	1	11/22/06	11/22/06	
2-Chlorotoluene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
4-Chlorotoluene	EPA 8260B	6K22012	0.29	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6K22012	0.97	2.0	ND	1	11/22/06	11/22/06	
Dibromochloromethane	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6K22012	0.40	1.0	ND	1	11/22/06	11/22/06	
1,4-Dichlorobenzene	EPA 8260B	6K22012	0.37	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichlorobenzene	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
1,3-Dichlorobenzene	EPA 8260B	6K22012	0.35	1.0	ND	1	11/22/06	11/22/06	
Dichlorodifluoromethane	EPA 8260B	6K22012	0.79	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloroethane	EPA 8260B	6K22012	0.28	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloroethane	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1-Dichloroethene	EPA 8260B	6K22012	0.42	1.0	**4.6**	1	11/22/06	11/22/06	
cis-1,2-Dichloroethene	EPA 8260B	6K22012	0.32	1.0	**4.6**	1	11/22/06	11/22/06	
trans-1,2-Dichloroethene	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloropropane	EPA 8260B	6K22012	0.35	1.0	ND	1	11/22/06	11/22/06	
2,2-Dichloropropane	EPA 8260B	6K22012	0.34	1.0	ND	1	11/22/06	11/22/06	
cis-1,3-Dichloropropene	EPA 8260B	6K22012	0.22	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloropropene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
trans-1,3-Dichloropropene	EPA 8260B	6K22012	0.32	0.50	ND	1	11/22/06	11/22/06	
Ethylbenzene	EPA 8260B	6K22012	0.25	1.0	ND	1	11/22/06	11/22/06	
Hexachlorobutadiene	EPA 8260B	6K22012	0.38	1.0	ND	1	11/22/06	11/22/06	
2-Hexanone	EPA 8260B	6K22012	2.6	6.0	ND	1	11/22/06	11/22/06	
Iodomethane	EPA 8260B	6K22012	1.0	2.0	ND	1	11/22/06	11/22/06	C
Isopropylbenzene	EPA 8260B	6K22012	0.25	1.0	ND	1	11/22/06	11/22/06	

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

N04/04/07

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TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number: IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-05 (MWC015_WG112006_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
Methylene chloride	EPA 8260B	6K22012	0.95	1.0	ND	1	11/22/06	11/22/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6K22012	3.5	5.0	ND	1	11/22/06	11/22/06	
n-Propylbenzene	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
Styrene	EPA 8260B	6K22012	0.16	1.0	ND	1	11/22/06	11/22/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6K22012	0.24	1.0	ND	1	11/22/06	11/22/06	
Tetrachloroethene	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
Tetrahydrofuran (THF)	EPA 8260B	6K22012	3.5	10	ND	1	11/22/06	11/22/06	
Toluene	EPA 8260B	6K22012	0.36	1.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichlorobenzene	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trichlorobenzene	EPA 8260B	6K22012	0.48	1.0	ND	1	11/22/06	11/22/06	
1,1,2-Trichloroethane	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
1,1,1-Trichloroethane	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
Trichlorofluoromethane	EPA 8260B	6K22012	0.34	2.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichloropropane	EPA 8260B	6K22012	0.40	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trimethylbenzene	EPA 8260B	6K22012	0.23	1.0	ND	1	11/22/06	11/22/06	
1,3,5-Trimethylbenzene	EPA 8260B	6K22012	0.26	1.0	ND	1	11/22/06	11/22/06	
Vinyl acetate	EPA 8260B	6K22012	1.7	6.0	ND	1	11/22/06	11/22/06	
Vinyl chloride	EPA 8260B	6K22012	0.30	0.50	ND	1	11/22/06	11/22/06	
Xylenes, Total	EPA 8260B	6K22012	0.90	1.0	ND	1	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*93 %*				
Surrogate: Dibromofluoromethane (80-120%)					*96 %*				
Surrogate: Toluene-d8 (80-120%)					*95 %*				

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Nicholas Marz For Michele Chamberlin
Project Manager

K40407

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ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number:	IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan			

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-05RE1 (MWC015_WG112006_0001 - Water) - cont.									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	6K22012	2.6	10	810	10	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*94 %*				
Surrogate: Dibromofluoromethane (80-120%)					*100 %*				
Surrogate: Toluene-d8 (80-120%)					*98 %*				

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Nicholas Marz For Michele Chamberlin
Project Manager

Mar 04 07

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TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number: IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-06 (MWC016_WG112006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6K22012	4.5	10	ND	1	11/22/06	11/22/06	
Benzene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
Bromobenzene	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
Bromochloromethane	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
Bromodichloromethane	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
Bromoform	EPA 8260B	6K22012	0.40	1.0	ND	1	11/22/06	11/22/06	
Bromomethane	EPA 8260B	6K22012	0.42	1.0	ND	1	11/22/06	11/22/06	
2-Butanone (MEK)	EPA 8260B	6K22012	3.8	5.0	ND	1	11/22/06	11/22/06	
n-Butylbenzene	EPA 8260B	6K22012	0.37	1.0	ND	1	11/22/06	11/22/06	
sec-Butylbenzene	EPA 8260B	6K22012	0.25	1.0	ND	1	11/22/06	11/22/06	
tert-Butylbenzene	EPA 8260B	6K22012	0.22	1.0	ND	1	11/22/06	11/22/06	
Carbon Disulfide	EPA 8260B	6K22012	0.48	1.0	ND	1	11/22/06	11/22/06	
Carbon tetrachloride	EPA 8260B	6K22012	0.28	0.50	**1.0**	1	11/22/06	11/22/06	
Chlorobenzene	EPA 8260B	6K22012	0.36	1.0	ND	1	11/22/06	11/22/06	
Chloroethane	EPA 8260B	6K22012	0.40	2.0	ND	1	11/22/06	11/22/06	
Chloroform	EPA 8260B	6K22012	0.33	1.0	**8.8**	1	11/22/06	11/22/06	
Chloromethane	EPA 8260B	6K22012	0.40	2.0	ND	1	11/22/06	11/22/06	
2-Chlorotoluene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
4-Chlorotoluene	EPA 8260B	6K22012	0.29	1.0	ND	1	11/22/06	11/22/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6K22012	0.97	2.0	ND	1	11/22/06	11/22/06	
Dibromochloromethane	EPA 8260B	6K22012	0.28	1.0	**1.6**	1	11/22/06	11/22/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6K22012	0.40	1.0	ND	1	11/22/06	11/22/06	
1,4-Dichlorobenzene	EPA 8260B	6K22012	0.37	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichlorobenzene	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
1,3-Dichlorobenzene	EPA 8260B	6K22012	0.35	1.0	ND	1	11/22/06	11/22/06	
Dichlorodifluoromethane	EPA 8260B	6K22012	0.79	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloroethane	EPA 8260B	6K22012	0.28	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloroethane	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1-Dichloroethene	EPA 8260B	6K22012	0.42	1.0	**7.8**	1	11/22/06	11/22/06	
cis-1,2-Dichloroethene	EPA 8260B	6K22012	0.32	1.0	**1.4**	1	11/22/06	11/22/06	
trans-1,2-Dichloroethene	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
1,2-Dichloropropane	EPA 8260B	6K22012	0.35	1.0	ND	1	11/22/06	11/22/06	
2,2-Dichloropropane	EPA 8260B	6K22012	0.34	1.0	ND	1	11/22/06	11/22/06	
cis-1,3-Dichloropropene	EPA 8260B	6K22012	0.22	0.50	ND	1	11/22/06	11/22/06	
1,1-Dichloropropene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
trans-1,3-Dichloropropene	EPA 8260B	6K22012	0.32	0.50	ND	1	11/22/06	11/22/06	
Ethylbenzene	EPA 8260B	6K22012	0.25	1.0	ND	1	11/22/06	11/22/06	
Hexachlorobutadiene	EPA 8260B	6K22012	0.38	1.0	ND	1	11/22/06	11/22/06	
2-Hexanone	EPA 8260B	6K22012	2.6	6.0	ND	1	11/22/06	11/22/06	
Iodomethane	EPA 8260B	6K22012	1.0	2.0	ND	1	11/22/06	11/22/06	C
Isopropylbenzene	EPA 8260B	6K22012	0.25	1.0	ND	1	11/22/06	11/22/06	

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

NM 04/24/07

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TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing 701 N. Parkcenter Drive Santa Ana, CA 92705 Attention: Mehmet Pehlivan	Project ID: Boeing C-6 Torrance EM2727 Report Number: IPK2310	Sampled: 11/20/06 Received: 11/20/06

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-06 (MWC016_WG112006_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6K22012	0.28	1.0	ND	1	11/22/06	11/22/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
Methylene chloride	EPA 8260B	6K22012	0.95	1.0	ND	1	11/22/06	11/22/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6K22012	3.5	5.0	ND	1	11/22/06	11/22/06	
n-Propylbenzene	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
Styrene	EPA 8260B	6K22012	0.16	1.0	ND	1	11/22/06	11/22/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6K22012	0.27	1.0	ND	1	11/22/06	11/22/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6K22012	0.24	1.0	ND	1	11/22/06	11/22/06	
Tetrachloroethene	EPA 8260B	6K22012	0.32	1.0	ND	1	11/22/06	11/22/06	
Tetrahydrofuran (THF)	EPA 8260B	6K22012	3.5	10	ND	1	11/22/06	11/22/06	
Toluene	EPA 8260B	6K22012	0.36	1.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichlorobenzene	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trichlorobenzene	EPA 8260B	6K22012	0.48	1.0	ND	1	11/22/06	11/22/06	
1,1,2-Trichloroethane	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
1,1,1-Trichloroethane	EPA 8260B	6K22012	0.30	1.0	ND	1	11/22/06	11/22/06	
Trichlorofluoromethane	EPA 8260B	6K22012	0.34	2.0	ND	1	11/22/06	11/22/06	
1,2,3-Trichloropropane	EPA 8260B	6K22012	0.40	1.0	ND	1	11/22/06	11/22/06	
1,2,4-Trimethylbenzene	EPA 8260B	6K22012	0.23	1.0	ND	1	11/22/06	11/22/06	
1,3,5-Trimethylbenzene	EPA 8260B	6K22012	0.26	1.0	ND	1	11/22/06	11/22/06	
Vinyl acetate	EPA 8260B	6K22012	1.7	6.0	ND	1	11/22/06	11/22/06	
Vinyl chloride	EPA 8260B	6K22012	0.30	0.50	ND	1	11/22/06	11/22/06	
Xylenes, Total	EPA 8260B	6K22012	0.90	1.0	ND	1	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*94 %*				
Surrogate: Dibromofluoromethane (80-120%)					*97 %*				
Surrogate: Toluene-d8 (80-120%)					*97 %*				

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

12/04/07

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TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number: IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-06RE1 (MWC016_WG112006_0001 - Water) - cont.									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	6K22012	2.6	10	**1100**	10	11/22/06	11/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*93 %*				
Surrogate: Dibromofluoromethane (80-120%)					*100 %*				
Surrogate: Toluene-d8 (80-120%)					*95 %*				

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

Mod 02/07

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LDC #: 16470B1
SDG #: IPK2310
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 1

Date: 3/30/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/20/06
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration	N	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N ~~SW~~	~~D = 1 & 3 2 + 4~~
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1 /	MWC015_WG112006_0001	11 /	6K22012	21		31	
2 /	MWC015_WG112006_0001RE1	12		22		32	
3 /	MWC016_WG112006_0001	13		23		33	
4 /	MWC016_WG112006_0001RE1	14		24		34	
5	MWC015_WG112006_0001MS	15		25		35	
6	MWC015_WG112006_0001MSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

16470B1W.wpd

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl choride**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Methyl ethyl ketone	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

BOE-C6-0054189

LDC #: 16470B1
SDG #: 1PK2310

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 11/22/06
Conc. units: ug/L
Associated Samples: All (ND)

Compound	Blank ID	Sample Identification								
	6K22012-BLK									
Tetrahydrofuran ~~Methylene chloride~~	4.41									
~~Acetone~~										
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BLANKS2.1SB

BOE-C6-0054190

LDC #: 16470B1
SDG #: 1PK2310

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		5 & 6	P	( )	( )	38 (20)	#1	J/4J/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	≤ 22%	61-145%	≤ 14%
S.	Trichloroethene	62-137%	≤ 24%	71-120%	≤ 14%
V.	Benzene	66-142%	≤ 21%	76-127%	≤ 11%
CC.	Toluene	59-139%	≤ 21%	76-125%	≤ 13%
DD.	Chlorobenzene	60-133%	≤ 21%	75-130%	≤ 13%

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 20, 2006

LDC Report Date: March 28, 2007

Matrix: Water

Parameters: Dissolved Manganese

Validation Level: Tier 1

Laboratory: TestAmerica

Sample Delivery Group (SDG): IPK2310

Sample Identification

MWC015_WG112006_0001
MWC015_WG112006_0001MS
MWC015_WG112006_0001MSD

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Dissolved Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Samples indicated by a double asterisk on the front cover underwent a Tier 2 review. A Tier 1 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 1 and 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

Calibration data were not reviewed for Tier 1.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the preparation blanks.

IV. ICP Interference Check Sample (ICS) Analysis

ICP interference check sample analysis data were not reviewed for Tier 1.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

BOE-C6-0054195

Boeing Realty Corp. C-6, EM2727
Dissolved Manganese - Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

Boeing Realty Corp. C-6, EM2727
Dissolved Manganese - Laboratory Blank Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number:	IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan			

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-05 (MWC015_WG112006_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	6K20133	N/A	0.020	**0.022**	1	11/20/06	11/20/06	

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

Nov 04 07

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LDC #: 16470B4
SDG #: IPK2310
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 1

Date: 3/27/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Dissolved Manganese (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/10/06
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	3 MS/MSD
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	} not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	not performed.
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: A2

1	MWC015_WG112006_0001	11		21		31	
2	MWC015_WG112006_0001MS	12		22		32	
3	MWC015_WG112006_0001MSD	13		23		33	
4	PB	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 21, 2006

LDC Report Date: April 4, 2007

Matrix: Water

Parameters: Dissolved Gases

Validation Level: Tler 2 & 3

Laboratory: TestAmerica, Inc./Air Technology Laboratory, Inc.

Sample Delivery Group (SDG): IPK2470/A6112208-01/02

Sample Identification

IWC001_WG112106_0001**
MWC024_WG112106_0001

**Indicates sample underwent Tier 3 review

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Dissolved Gases.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent a Tier 3 review. Samples indicated by a single asterisk on the front cover underwent a Tier 2 review. Raw data were not evaluated for the samples reviewed by Tier 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

Sample	Compound	Total Days From Sample Collection Until Analysis	Required Holding Time (in Days) From Sample Collection Until Analysis	Flag	A or P
All samples in SDG IPK2470/A6112208-01/02	All TCL compounds	8	7	J (all detects) UJ (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 25.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved gas contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

All target compound identifications were within validation criteria on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

VII. System Performance

The system performance was acceptable for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Dissolved Gases - Data Qualification Summary - SDG IPK2470/A6112208-01/02

SDG	Sample	Compound	Flag	A or P	Reason
IPK2470/ A6112208-01/02	IWC001_WG112106_0001** MWC024_WG112106_0001	All TCL compounds	J (all detects) UJ (all non-detects)	P	Technical holding times

Boeing Realty Corp. C-6, EM2727
Dissolved Gases - Laboratory Blank Data Qualification Summary - SDG IPK2470/A6112208-01/02

No Sample Data Qualified in this SDG

Client: TestAmerica
Attn: Michele Chamberlin

Client's Project: IPK2470
Date Received: 11/22/2006
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

		IWC001		MWC024		WG112106-0001					
Lab No.:		A6112208-01		A6112208-02							
Client Sample I.D.:		IPK2470-07		IPK2470-09							
Date Sampled:		11/21/2006		11/21/2006							
Date Analyzed:		11/29/2006		11/29/2006							
Analyst Initials:		DT		DT							
Data File:		29nov013		29nov014							
QC Batch:		061129GC8A1		061129GC8A1							
Dilution Factor:		1.0		1.0							
ANALYTE	PQL	RL	Results	RL	Results						
Methane	1.0	1.0	9.5 J	1.0	1,700	J					
Ethane	2.0	2.0	ND UJ	2.0	ND	UJ					
Ethylene	3.0	3.0	ND ↓	3.0	ND	↓					
Carbon Dioxide	200	200	16,000 J	200	17,000	J					
Nitrogen	1,500	1,500	31,000 ↓	1,500	26,000	↓					

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL)
RL = PQL X Dilution Factor

Reviewed/Approved By: [signature]
Mark J. Johnson
Operations Manager

Date: 12-4-06

The cover letter is an integral part of this analytical report.

MJ 4/04/07

LDC #: 16470A51a

VALIDATION COMPLETENESS WORKSHEET

Tier 2/3

Date: 3/30/07

SDG #: IPK2470/A6112208-01/02

Page: 1 of 1

Laboratory: TestAmerica/Air Technology Lab

Reviewer:

2nd Reviewer:

METHOD: GC Dissolved Gases (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 11/29/06
IIa.	Initial calibration	A	r^2 ≥ 0.990
IIb.	Calibration verification	A	CCV ≤ 25
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS/D
V.	Target compound identification	A	Not reviewed for Tier II validation.
VI.	Compound Quantitation and CRQLs	A	Not reviewed for Tier II validation.
VII.	System Performance	A	Not reviewed for Tier II validation.
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Tier III validation

1	IWC001_WG112106_0001** (water)	11	MB - 11/29/06	21		31	
2	MWC024_WG112106_0001	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16470A51
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Reviewer:
2nd Reviewer:

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.		✓		
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) < 20%?		✓		
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ 15%.0 or percent recoveries 85-115%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			

LDC #: 16470A51
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds idetected in the field duplicates?			✓	
XV. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	

LDC #: 16470A5 1
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

Reviewer: [illegible]
2nd Reviewer: [illegible]

All circled dates have exceeded the technical holding times.
Y N N/A Were all cooler temperatures within validation criteria?

METHOD: GC HPLC

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
all	water	no	11/21/06		11/29/06	8	J/UJ/P
				H.T. w/o preservation = 7 days.			

TECHNICAL HOLDING TIME CRITERIA

VOLATILES:
- Water unpreserved: Aromatic within 7 days, non-aromatic within 14 days of sample collection.
- Water preserved: Both within 14 days of sample collection.
- Soils: Both within 14 days of sample collection.

EXTRACTABLES:
- Water: Extracted within 7 days, analyzed within 40 days.
- Soil: Extracted within 14 days, analyzed within 40 days.

BOE-C6-0054208

LDC# 16470A51
SDG# see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Rviewer: m.
2nd Reviewer: a

METHOD: RSK-175

Callibration Date	Column/ Detector	Compound	Standard	X	Y	
05/23/06	FID (middle)	methane	Point 1	10	9309	
			Point 2	100	89744	
			Point 3	1000	863867	
			Point 4	5000	4401745	
			Point 5	10000	9597354	
			Point 6			
			Point 7			
			Point 7			
			Point 8			

	Recalculated Result	Result Reported by the Laboratory
Regression Output:		
Constant	0	0
Std Err of Y Est	181942.83552443456	
R Squared	0.99804	0.998417
No. of Observations	5	
Degrees of Freedom	4	
X Coefficient(s)	943.21962676	9.4322E+02
Std Err of Coef.	16.2081064622	

LDC #: 16470 A5-1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC_____ HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = Initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	CCV 8:16	11/29/07	methane	1000	1198.6	1198.6	19.8	20
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CONCLC.1S

BOE-C6-0054210

LDC #: 16470A51
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer:
2nd Reviewer:

_____METHOD: __GC __HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA Where SSC = Spiked concentration, SA = Spike added, SC = Sample concentration

RPD =(((SSCLCS - SSCLCSD) * 2) / (SSCLCS + SSCLCSD))*100 LCS = Laboratory Control Sample percent recovery LCSD = Laboratory Control Sample duplicate percent recovery

LCS/LCSD samples: LCS ID

Compound	Spike Added (ug/L) ppmv		Sample Conc. (ug/L) ppmv	Spike Sample Concentration (ug/L) ppmv		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	---	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)	6900	6900	0	7694.7	7376.5	111	111.5	106	106.9	4.2	4.2
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

BOE-C6-0054211

LDC #: 16470A51
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: ✓ GC ___ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound in the initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name Methane

Concentration =

$y = 9.4322 \times 10^2 (X)$

$94667 = 9.4322 \times 10^2 (X)$

$X = 100.4$

#	Sample ID	Compound	Reported Concentrations	Recalculated Results Concentrations	Qualifications
		gas in HS =	$\frac{(100.4)(55.51)}{(1000)}$	$\frac{(16.04)(1000)}{(41300)}$ =	2.1645
		gas in liquid =	$\frac{(100.4)(16.04)}{(1000)(22.4)}$	$\frac{(1000)(4)}{(36)(\frac{298}{273})}$ =	7.318
				Total	9.48 ug/L

Comments:

SAMPCALew.wpd

BOE-C6-0054212

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 20, 2006

LDC Report Date: April 4, 2007

Matrix: Water

Parameters: Dissolved Gases

Validation Level: Tier 1

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IPK2310

Sample Identification

MWC015_WG112006_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Dissolved Gases.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

BOE-C6-0054214

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

b. Calibration Verification

Calibration verification data were not reviewed for Tier 1.

III. Blanks

Method blanks were performed at the required frequency. No dissolved gas contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were analyzed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

BOE-C6-0054215

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Dissolved Gases - Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

Boeing Realty Corp. C-6, EM2727
Dissolved Gases - Laboratory Blank Data Qualification Summary - SDG IPK2310

No Sample Data Qualified in this SDG

TestAmerica
ANALYTICAL TESTING CORPORATION

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 11/20/06
Santa Ana, CA 92705	Report Number:	IPK2310	Received: 11/20/06
Attention: Mehmet Pehlivan			

RSK175 Dissolved Gases in Water

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2310-05 (MWC015_WG112006_0001 - Water) - cont.									
Reporting Units: ug/L									
Methane	RSK-175	061129GC8A	0.39	1.0	**10**	1	11/29/06	11/29/06	
Ethane	RSK-175	061129GC8A	0.50	2.0	ND	1	11/29/06	11/29/06	
Ethylene	RSK-175	061129GC8A	0.33	3.0	ND	1	11/29/06	11/29/06	
Nitrogen	RSK-175	061129GC8A	222	1500	**25000**	1	11/29/06	11/29/06	

TestAmerica - Irvine, CA
Nicholas Marz For Michele Chamberlin
Project Manager

N504407

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LDC #: 16470B51a

SDG #: IPK2310

Laboratory: TestAmerica

VALIDATION COMPLETENESS WORKSHEET

Tier 1

Date: 3/30/07

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: GC Dissolved Gases (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11/20/06
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS/D
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: waters

1	MWC015_WG112006_0001	11	MB - 11/29/06	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

16470B51aW.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp. C-6, EM2727

Collection Date: November 21, 2006

LDC Report Date: March 28, 2007

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 2 & 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IPK2470

Sample Identification

IWC001_WG112106_0001**
MWC024_WG112106_001

**Indicates sample underwent Tier 3 review

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Bromide, Chloride, Nitrate, Nitrite, and Sulfate, EPA Method 310.1 for Alkalinity, and EPA Method 415.1 Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent a Tier 3 review. A Tier 2 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Concentration	Associated Samples
MB	Sulfate Chloride	0.165 mg/L 0.220 mg/L	All samples in SDG IPK2470
ICB/CCB	Chloride	0.194 mg/L 0.189 mg/L	All samples in SDG IPK2470

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

All sample result verifications were acceptable for samples on which a Tier 3 review was performed. Raw data were not evaluated for the samples reviewed by Tier 2 criteria.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp. C-6, EM2727
Wet Chemistry - Data Qualification Summary - SDG IPK2470

No Sample Data Qualified in this SDG

Boeing Realty Corp. C-6, EM2727
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IPK2470

No Sample Data Qualified in this SDG

TestAmerica
ANALYTICAL TESTING CORPORATION
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 11/21/06
Santa Ana, CA 92705	Report Number: IPK2470	Received: 11/21/06
Attention: Mehmet Pehlivan		

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPK2470-07 (IWC001_WG112106_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	6L04068	2.0	2.0	**200**	1	12/04/06	12/04/06	
Bromide	EPA 300.0	6L01049	1.8	2.5	**2.8**	5	12/01/06	12/01/06	
Chloride	EPA 300.0	6L01049	5.0	25	**280**	50	12/01/06	12/02/06	
Nitrate-NO3	EPA 300.0	6K22067	0.25	0.50	**17**	1	11/22/06	11/22/06	
Nitrite-NO2	EPA 300.0	6K22067	0.30	0.50	ND	1	11/22/06	11/22/06	
Sulfate	EPA 300.0	6K22067	0.15	0.50	**52**	1	11/22/06	11/22/06	
Total Organic Carbon	EPA 415.1	6L03024	0.50	1.0	ND	1	12/03/06	12/03/06	
Sample ID: IPK2470-09 (MWC024_WG112106_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	6L04068	2.0	2.0	**180**	1	12/04/06	12/04/06	
Bromide	EPA 300.0	6L01049	1.8	2.5	**2.6**	5	12/01/06	12/02/06	
Chloride	EPA 300.0	6L01049	5.0	25	**480**	50	12/01/06	12/02/06	
Nitrate-NO3	EPA 300.0	6K22067	0.25	0.50	**25**	1	11/22/06	11/22/06	
Nitrite-NO2	EPA 300.0	6K22067	0.30	0.50	ND	1	11/22/06	11/22/06	
Sulfate	EPA 300.0	6K22067	0.15	0.50	**37**	1	11/22/06	11/22/06	
Total Organic Carbon	EPA 415.1	6L03024	0.50	1.0	ND	1	12/03/06	12/03/06	

K040407

TestAmerica - Irvine, CA
Michele Chamberlin
Project Manager

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LDC #: 16470A6
SDG #: IPK2470
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 2/3

Date: 3/27/07
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: Alkalinity (EPA Method 310.1), Bromide, Chloride, Nitrate-N, Nitrite-N, Sulfate (EPA Method 300.0), TOC (EPA Method 415.1)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	SW	
IVa.	Matrix Spike/(Matrix Spike) Duplicates	A	MS/MSD/DUP
IVb.	Laboratory control samples	A	LCS
V.	Sample result verification	A	Not reviewed for Tier II validation.
VI.	Overall assessment of data	A	
VII.	Field duplicates	N	
VIII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: ** Indicates sample underwent Tier III validation

1	IWC001_WG112106_0001**	11		21		31	
2	MWC024_WG112106_001	12		22		32	
3	MB	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

16470A6W.wpd

LDC #: 16470A6
SDG #: 7PK2470

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: MY
2nd Reviewer: R

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. Matrix spike/Matrix spike Duplicates-Sn Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL (≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control sample				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 16470A6
SDG #: See cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: MY
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 16470A6
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MY
2nd reviewer: A

All circled methods are applicable to each sample.

Sample ID	Parameter																
1,2	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}	Br		
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			

Comments:

METHODS.6

LDC #: 16470A6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: WM
2nd Reviewer: A

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Were all samples associated with a given method blank?
Y N N/A Were any inorganic contaminants detected above the reporting limit in the method blanks? If yes, please see qualifications below.

Conc. units: mg/L

Associated Samples: A1 (75%)

Analyte	Blank ID	Maximum ICB/CCB	Blank Action Limit	Sample Identification								
	MB											
SO4	0.165	0.194	0.97									
Cl	0.220	0.189	1.1									
~~SO4~~												

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

BLANKS.6

BOE-C6-0054230

LDC #: 16470A6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MY
2nd Reviewer: R

METHOD: Inorganics, Method See cover

The correlation coefficient (r) for the calibration of TOC was recalculated. Calibration date: 12/31/06

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of Analysis	Analyte		conc. (mg/L) (units)	Area (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	TOC	Blank	0	0	r^2=0.99889	r^2=0.99889	Y
Calibration verification		Standard 1	1	944			
		Standard 2	10	6209			
		Standard 3	40	21870			
		Standard 4					
		Standard 5					
		Standard 6					
		Standard 7					
Calibration verification CCV	NO2	10	9.16		92	NR	Y
Calibration verification CCV	Cl	10	10.31		103	↓	↓
Calibration verification CCV	TOC	10	9.59		96	↓	↓

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CALCLC.6

BOE-C6-0054231

LDC #: 16490A6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MM
2nd Reviewer: DC

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	SO4	9.72	10	97	97	Y
TPK2374 A1	Matrix spike sample	Br	(SSR-SR) 5.67	5.0	113	113	↓
TPL0097	Duplicate sample	Al K	130	128	2	0	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.6

LDC #: 16490A6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MM
2nd reviewer: [illegible]

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for 1 reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

$$NO_3 = \frac{\sqrt{4 \times 398.3587 \times (1203521.12 + 634.044) + 61860.82^2} - 61860.82}{2 \times 398.3587} = 17.495 \text{ mg/L}$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	A/K	200	200	Y
		Br	2.8	2.8	
		Cl	280	280	
		NO3	17	17	
		SO4	52	52	

Note:

RECALC.6

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Tait Environmental Management, Inc.
701 N. Park Center Drive
Santa Ana, CA 92705
ATTN: Ms. Clara Boeru

May 11, 2007

SUBJECT: Boeing Realty Corp. Bldg C-6 Torrance, Data Validation

Dear Ms. Boeru,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on May 3, 2007. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 16739:

SDG #	Fraction
IQC1612, IQC2470, IQC2895	Volatiles,Maganese, Wet Chemistry, Dissolved Gases

The data validation was performed under Tier 1, Tier 2 and Tier 3 guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco

Stella S. Cuenco
Project Manager/Senior Chemist

16739COV.wpd

Attachment 1

LDC #16739 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Bldg C-6 Torrance)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		Mn (6010B)		Diss. Gases (175)		Alk. (310.1)		NH_3 (350.3)		Cl,SO_4 O-PO_4 (300.0)		NO_3-N NO_2-N (300.0)		S= (376.2)		TOC (415.1)															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	IQC1612	05/03/07	05/24/07	6	0	2	0	2	0	2	0	2	0	2	0	2	0	-	-	2	0	Tier I													
B	IQC2470	05/03/07	05/24/07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	Tier I													
B	IQC2470	05/03/07	05/24/07	4	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0														
C	IQC2895	05/03/07	05/24/07	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0														
Total	B/SC			11	0	4	0	4	0	0	0	4	0	4	0	4	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38

Shaded cells indicate Tier III validation (all other cells are Tier II validation). Sample counts do not include MS, MSD, or DUP's.

16739ST.wpd

Boeing Realty Corp., Bldg C-6 Torrance
Data Validation Reports
LDC# 16739

Volatiles

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 14, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 1

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC1612

Sample Identification

MWB013_WG031407_0001
MWG004_WG031407_0001
TMW_14_WG031407_0001
TMW_11_WG031407_0001
WCC_5S_WG031407_0001
MWC021_WG031407_0001
MWB013_WG031407_0001MS
MWB013_WG031407_0001MSD

Introduction

This data review covers 8 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance data were not reviewed for Tier 1.

III. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Tier 1.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards data were not reviewed for Tier 1.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Volatiles - Data Qualification Summary - SDG IQC1612

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQC1612

No Sample Data Qualified in this SDG

TestAmerica
ANALYTICAL TESTING CORPORATION
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-05 (MWB013_WG031407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C16022	4.5	10	ND	1	03/16/07	03/16/07	
Benzene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
Bromobenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
Bromochloromethane	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
Bromodichloromethane	EPA 8260B	7C16022	0.30	1.0	**0.37**	1	03/16/07	03/16/07	J
Bromoform	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/16/07	
Bromomethane	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/16/07	
2-Butanone (MEK)	EPA 8260B	7C16022	3.8	5.0	ND	1	03/16/07	03/16/07	
n-Butylbenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/16/07	
sec-Butylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/16/07	
tert-Butylbenzene	EPA 8260B	7C16022	0.22	1.0	ND	1	03/16/07	03/16/07	
Carbon Disulfide	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/16/07	
Carbon tetrachloride	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/16/07	
Chlorobenzene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/16/07	
Chloroethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/16/07	
Chloroform	EPA 8260B	7C16022	0.33	1.0	**0.54**	1	03/16/07	03/16/07	J
Chloromethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/16/07	
2-Chlorotoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
4-Chlorotoluene	EPA 8260B	7C16022	0.29	1.0	ND	1	03/16/07	03/16/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C16022	0.97	2.0	ND	1	03/16/07	03/16/07	
Dibromochloromethane	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/16/07	
1,4-Dichlorobenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/16/07	
1,2-Dichlorobenzene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
1,3-Dichlorobenzene	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/16/07	
Dichlorodifluoromethane	EPA 8260B	7C16022	0.79	1.0	ND	1	03/16/07	03/16/07	
1,2-Dichloroethane	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/16/07	
1,1-Dichloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
1,1-Dichloroethene	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/16/07	
cis-1,2-Dichloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
trans-1,2-Dichloroethene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
1,2-Dichloropropane	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/16/07	
2,2-Dichloropropane	EPA 8260B	7C16022	0.34	1.0	ND	1	03/16/07	03/16/07	
cis-1,3-Dichloropropene	EPA 8260B	7C16022	0.22	0.50	ND	1	03/16/07	03/16/07	
1,1-Dichloropropene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
trans-1,3-Dichloropropene	EPA 8260B	7C16022	0.32	0.50	ND	1	03/16/07	03/16/07	
Ethylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/16/07	
Hexachlorobutadiene	EPA 8260B	7C16022	0.38	1.0	ND	1	03/16/07	03/16/07	
2-Hexanone	EPA 8260B	7C16022	2.6	6.0	ND	1	03/16/07	03/16/07	
Iodomethane	EPA 8260B	7C16022	1.0	2.0	ND	1	03/16/07	03/16/07	
Isopropylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/16/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/25/07

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-05 (MWB013_WG031407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
Methylene chloride	EPA 8260B	7C16022	0.95	1.0	ND	1	03/16/07	03/16/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C16022	3.5	5.0	ND	1	03/16/07	03/16/07	
n-Propylbenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
Styrene	EPA 8260B	7C16022	0.16	1.0	ND	1	03/16/07	03/16/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C16022	0.24	1.0	ND	1	03/16/07	03/16/07	
Tetrachloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
Tetrahydrofuran (THF)	EPA 8260B	7C16022	3.5	10	ND	1	03/16/07	03/16/07	
Toluene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/16/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/16/07	
1,1,2-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
1,1,1-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
Trichloroethene	EPA 8260B	7C16022	0.26	1.0	**5.3**	1	03/16/07	03/16/07	
Trichlorofluoromethane	EPA 8260B	7C16022	0.34	2.0	ND	1	03/16/07	03/16/07	
1,2,3-Trichloropropane	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/16/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C16022	0.23	1.0	ND	1	03/16/07	03/16/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C16022	0.26	1.0	ND	1	03/16/07	03/16/07	
Vinyl acetate	EPA 8260B	7C16022	1.7	6.0	ND	1	03/16/07	03/16/07	
Vinyl chloride	EPA 8260B	7C16022	0.30	0.50	ND	1	03/16/07	03/16/07	
Xylenes, Total	EPA 8260B	7C16022	0.90	1.0	ND	1	03/16/07	03/16/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*108 %*				
Surrogate: Dibromofluoromethane (80-120%)					*109 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

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ANALYTICAL TESTING CORPORATION
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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-06 (MWG004_WG031407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C16022	4.5	10	ND	1	03/16/07	03/16/07	
Benzene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
Bromobenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
Bromochloromethane	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
Bromodichloromethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
Bromoform	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/16/07	
Bromomethane	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/16/07	
2-Butanone (MEK)	EPA 8260B	7C16022	3.8	5.0	ND	1	03/16/07	03/16/07	
n-Butylbenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/16/07	
sec-Butylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/16/07	
tert-Butylbenzene	EPA 8260B	7C16022	0.22	1.0	ND	1	03/16/07	03/16/07	
Carbon Disulfide	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/16/07	
Carbon tetrachloride	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/16/07	
Chlorobenzene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/16/07	
Chloroethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/16/07	
Chloroform	EPA 8260B	7C16022	0.33	1.0	ND	1	03/16/07	03/16/07	
Chloromethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/16/07	
2-Chlorotoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
4-Chlorotoluene	EPA 8260B	7C16022	0.29	1.0	ND	1	03/16/07	03/16/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C16022	0.97	2.0	ND	1	03/16/07	03/16/07	
Dibromochloromethane	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/16/07	
1,4-Dichlorobenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/16/07	
1,2-Dichlorobenzene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
1,3-Dichlorobenzene	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/16/07	
Dichlorodifluoromethane	EPA 8260B	7C16022	0.79	1.0	ND	1	03/16/07	03/16/07	
1,2-Dichloroethane	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/16/07	
1,1-Dichloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
1,1-Dichloroethene	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/16/07	
cis-1,2-Dichloroethene	EPA 8260B	7C16022	0.32	1.0	**0.34**	1	03/16/07	03/16/07	J
trans-1,2-Dichloroethene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
1,2-Dichloropropane	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/16/07	
2,2-Dichloropropane	EPA 8260B	7C16022	0.34	1.0	ND	1	03/16/07	03/16/07	
cis-1,3-Dichloropropene	EPA 8260B	7C16022	0.22	0.50	ND	1	03/16/07	03/16/07	
1,1-Dichloropropene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
trans-1,3-Dichloropropene	EPA 8260B	7C16022	0.32	0.50	ND	1	03/16/07	03/16/07	
Ethylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/16/07	
Hexachlorobutadiene	EPA 8260B	7C16022	0.38	1.0	ND	1	03/16/07	03/16/07	
2-Hexanone	EPA 8260B	7C16022	2.6	6.0	ND	1	03/16/07	03/16/07	
Iodomethane	EPA 8260B	7C16022	1.0	2.0	ND	1	03/16/07	03/16/07	
Isopropylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/16/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

NM 5/10/07

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TestAmerica
ANALYTICAL TESTING CORPORATION
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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-06 (MWG004_WG031407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/16/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
Methylene chloride	EPA 8260B	7C16022	0.95	1.0	ND	1	03/16/07	03/16/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C16022	3.5	5.0	ND	1	03/16/07	03/16/07	
n-Propylbenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
Styrene	EPA 8260B	7C16022	0.16	1.0	ND	1	03/16/07	03/16/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/16/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C16022	0.24	1.0	ND	1	03/16/07	03/16/07	
Tetrachloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/16/07	
Tetrahydrofuran (THF)	EPA 8260B	7C16022	3.5	10	ND	1	03/16/07	03/16/07	
Toluene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/16/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/16/07	
1,1,2-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
1,1,1-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/16/07	
Trichloroethene	EPA 8260B	7C16022	0.26	1.0	**17**	1	03/16/07	03/16/07	
Trichlorofluoromethane	EPA 8260B	7C16022	0.34	2.0	ND	1	03/16/07	03/16/07	
1,2,3-Trichloropropane	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/16/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C16022	0.23	1.0	ND	1	03/16/07	03/16/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C16022	0.26	1.0	ND	1	03/16/07	03/16/07	
Vinyl acetate	EPA 8260B	7C16022	1.7	6.0	ND	1	03/16/07	03/16/07	
Vinyl chloride	EPA 8260B	7C16022	0.30	0.50	ND	1	03/16/07	03/16/07	
Xylenes, Total	EPA 8260B	7C16022	0.90	1.0	ND	1	03/16/07	03/16/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*107 %*				
Surrogate: Dibromofluoromethane (80-120%)					*114 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

NM 5/10/07

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-07 (TMW_14_WG031407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C16022	4.5	10	ND	1	03/16/07	03/17/07	
Benzene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Bromobenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Bromochloromethane	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Bromodichloromethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Bromoform	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
Bromomethane	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/17/07	
2-Butanone (MEK)	EPA 8260B	7C16022	3.8	5.0	ND	1	03/16/07	03/17/07	
n-Butylbenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
sec-Butylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
tert-Butylbenzene	EPA 8260B	7C16022	0.22	1.0	ND	1	03/16/07	03/17/07	
Carbon Disulfide	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
Carbon tetrachloride	EPA 8260B	7C16022	0.28	0.50	**1.4**	1	03/16/07	03/17/07	
Chlorobenzene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
Chloroethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
Chloroform	EPA 8260B	7C16022	0.33	1.0	**2.7**	1	03/16/07	03/17/07	
Chloromethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
2-Chlorotoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
4-Chlorotoluene	EPA 8260B	7C16022	0.29	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C16022	0.97	2.0	ND	1	03/16/07	03/17/07	
Dibromochloromethane	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,4-Dichlorobenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichlorobenzene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
1,3-Dichlorobenzene	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
Dichlorodifluoromethane	EPA 8260B	7C16022	0.79	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloroethane	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,1-Dichloroethene	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/17/07	
cis-1,2-Dichloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
trans-1,2-Dichloroethene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloropropane	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
2,2-Dichloropropane	EPA 8260B	7C16022	0.34	1.0	ND	1	03/16/07	03/17/07	
cis-1,3-Dichloropropene	EPA 8260B	7C16022	0.22	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloropropene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
trans-1,3-Dichloropropene	EPA 8260B	7C16022	0.32	0.50	ND	1	03/16/07	03/17/07	
Ethylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
Hexachlorobutadiene	EPA 8260B	7C16022	0.38	1.0	ND	1	03/16/07	03/17/07	
2-Hexanone	EPA 8260B	7C16022	2.6	6.0	ND	1	03/16/07	03/17/07	
Iodomethane	EPA 8260B	7C16022	1.0	2.0	ND	1	03/16/07	03/17/07	
Isopropylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

03/17/07

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Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-07 (TMW_14_WG031407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Methylene chloride	EPA 8260B	7C16022	0.95	1.0	ND	1	03/16/07	03/17/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C16022	3.5	5.0	ND	1	03/16/07	03/17/07	
n-Propylbenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Styrene	EPA 8260B	7C16022	0.16	1.0	ND	1	03/16/07	03/17/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C16022	0.24	1.0	ND	1	03/16/07	03/17/07	
Tetrachloroethene	EPA 8260B	7C16022	0.32	1.0	**0.89**	1	03/16/07	03/17/07	J
Tetrahydrofuran (THF)	EPA 8260B	7C16022	3.5	10	ND	1	03/16/07	03/17/07	
Toluene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
1,1,2-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,1,1-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Trichloroethene	EPA 8260B	7C16022	0.26	1.0	6.7	1	03/16/07	03/17/07	
Trichlorofluoromethane	EPA 8260B	7C16022	0.34	2.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichloropropane	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C16022	0.23	1.0	ND	1	03/16/07	03/17/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C16022	0.26	1.0	ND	1	03/16/07	03/17/07	
Vinyl acetate	EPA 8260B	7C16022	1.7	6.0	ND	1	03/16/07	03/17/07	
Vinyl chloride	EPA 8260B	7C16022	0.30	0.50	ND	1	03/16/07	03/17/07	
Xylenes, Total	EPA 8260B	7C16022	0.90	1.0	ND	1	03/16/07	03/17/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*108 %*				
Surrogate: Dibromofluoromethane (80-120%)					*118 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

3/25/07

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-08 (TMW_11_WG031407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C16022	4.5	10	ND	1	03/16/07	03/17/07	
Benzene	EPA 8260B	7C16022	0.28	1.0	**0.28**	1	03/16/07	03/17/07	J
Bromobenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Bromochloromethane	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Bromodichloromethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Bromoform	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
Bromomethane	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/17/07	
2-Butanone (MEK)	EPA 8260B	7C16022	3.8	5.0	ND	1	03/16/07	03/17/07	
n-Butylbenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
sec-Butylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
tert-Butylbenzene	EPA 8260B	7C16022	0.22	1.0	ND	1	03/16/07	03/17/07	
Carbon Disulfide	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
Carbon tetrachloride	EPA 8260B	7C16022	0.28	0.50	**2.3**	1	03/16/07	03/17/07	
Chlorobenzene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
Chloroethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
Chloroform	EPA 8260B	7C16022	0.33	1.0	**170**	1	03/16/07	03/17/07	
Chloromethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
2-Chlorotoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
4-Chlorotoluene	EPA 8260B	7C16022	0.29	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C16022	0.97	2.0	ND	1	03/16/07	03/17/07	
Dibromochloromethane	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,4-Dichlorobenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichlorobenzene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
1,3-Dichlorobenzene	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
Dichlorodifluoromethane	EPA 8260B	7C16022	0.79	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloroethane	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,1-Dichloroethene	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/17/07	
cis-1,2-Dichloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
trans-1,2-Dichloroethene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloropropane	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
2,2-Dichloropropane	EPA 8260B	7C16022	0.34	1.0	ND	1	03/16/07	03/17/07	
cis-1,3-Dichloropropene	EPA 8260B	7C16022	0.22	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloropropene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
trans-1,3-Dichloropropene	EPA 8260B	7C16022	0.32	0.50	ND	1	03/16/07	03/17/07	
Ethylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
Hexachlorobutadiene	EPA 8260B	7C16022	0.38	1.0	ND	1	03/16/07	03/17/07	
2-Hexanone	EPA 8260B	7C16022	2.6	6.0	ND	1	03/16/07	03/17/07	
Iodomethane	EPA 8260B	7C16022	1.0	2.0	ND	1	03/16/07	03/17/07	
Isopropylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

3/25/2007

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-08 (TMW_11_WG031407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Methylene chloride	EPA 8260B	7C16022	0.95	1.0	ND	1	03/16/07	03/17/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C16022	3.5	5.0	ND	1	03/16/07	03/17/07	
n-Propylbenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Styrene	EPA 8260B	7C16022	0.16	1.0	ND	1	03/16/07	03/17/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C16022	0.24	1.0	ND	1	03/16/07	03/17/07	
Tetrachloroethene	EPA 8260B	7C16022	0.32	1.0	**3.7**	1	03/16/07	03/17/07	
Tetrahydrofuran (THF)	EPA 8260B	7C16022	3.5	10	ND	1	03/16/07	03/17/07	
Toluene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
1,1,2-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,1,1-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Trichloroethene	EPA 8260B	7C16022	0.26	1.0	**8.0**	1	03/16/07	03/17/07	
Trichlorofluoromethane	EPA 8260B	7C16022	0.34	2.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichloropropane	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C16022	0.23	1.0	ND	1	03/16/07	03/17/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C16022	0.26	1.0	ND	1	03/16/07	03/17/07	
Vinyl acetate	EPA 8260B	7C16022	1.7	6.0	ND	1	03/16/07	03/17/07	
Vinyl chloride	EPA 8260B	7C16022	0.30	0.50	ND	1	03/16/07	03/17/07	
Xylenes, Total	EPA 8260B	7C16022	0.90	1.0	ND	1	03/16/07	03/17/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*109 %*				
Surrogate: Dibromofluoromethane (80-120%)					*111 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

RL051007

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-09 (WCC_5S_WG031407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C16022	4.5	10	ND	1	03/16/07	03/17/07	
Benzene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Bromobenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Bromochloromethane	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Bromodichloromethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Bromoform	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
Bromomethane	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/17/07	
2-Butanone (MEK)	EPA 8260B	7C16022	3.8	5.0	ND	1	03/16/07	03/17/07	
n-Butylbenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
sec-Butylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
tert-Butylbenzene	EPA 8260B	7C16022	0.22	1.0	ND	1	03/16/07	03/17/07	
Carbon Disulfide	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
Carbon tetrachloride	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/17/07	
Chlorobenzene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
Chloroethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
Chloroform	EPA 8260B	7C16022	0.33	1.0	**0.40**	1	03/16/07	03/17/07	J
Chloromethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
2-Chlorotoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
4-Chlorotoluene	EPA 8260B	7C16022	0.29	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C16022	0.97	2.0	ND	1	03/16/07	03/17/07	
Dibromochloromethane	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,4-Dichlorobenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichlorobenzene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
1,3-Dichlorobenzene	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
Dichlorodifluoromethane	EPA 8260B	7C16022	0.79	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloroethane	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloroethane	EPA 8260B	7C16022	0.27	1.0	**0.68**	1	03/16/07	03/17/07	J
1,1-Dichloroethene	EPA 8260B	7C16022	0.42	1.0	**6.5**	1	03/16/07	03/17/07	
cis-1,2-Dichloroethene	EPA 8260B	7C16022	0.32	1.0	**0.54**	1	03/16/07	03/17/07	J
trans-1,2-Dichloroethene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloropropane	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
2,2-Dichloropropane	EPA 8260B	7C16022	0.34	1.0	ND	1	03/16/07	03/17/07	
cis-1,3-Dichloropropene	EPA 8260B	7C16022	0.22	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloropropene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
trans-1,3-Dichloropropene	EPA 8260B	7C16022	0.32	0.50	ND	1	03/16/07	03/17/07	
Ethylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
Hexachlorobutadiene	EPA 8260B	7C16022	0.38	1.0	ND	1	03/16/07	03/17/07	
2-Hexanone	EPA 8260B	7C16022	2.6	6.0	ND	1	03/16/07	03/17/07	
Iodomethane	EPA 8260B	7C16022	1.0	2.0	ND	1	03/16/07	03/17/07	
Isopropylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

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TestAmerica
ANALYTICAL TESTING CORPORATION
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727-01	Sampled: 03/14/07
Santa Ana, CA 92705	Report Number: IQC1612	Received: 03/14/07
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-09 (WCC_5S_WG031407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Methylene chloride	EPA 8260B	7C16022	0.95	1.0	ND	1	03/16/07	03/17/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C16022	3.5	5.0	ND	1	03/16/07	03/17/07	
n-Propylbenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Styrene	EPA 8260B	7C16022	0.16	1.0	ND	1	03/16/07	03/17/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C16022	0.24	1.0	ND	1	03/16/07	03/17/07	
Tetrachloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Tetrahydrofuran (THF)	EPA 8260B	7C16022	3.5	10	ND	1	03/16/07	03/17/07	
Toluene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
1,1,2-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,1,1-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Trichloroethene	EPA 8260B	7C16022	0.26	1.0	**2.9**	1	03/16/07	03/17/07	
Trichlorofluoromethane	EPA 8260B	7C16022	0.34	2.0	**1.2**	1	03/16/07	03/17/07	J
1,2,3-Trichloropropane	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C16022	0.23	1.0	ND	1	03/16/07	03/17/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C16022	0.26	1.0	ND	1	03/16/07	03/17/07	
Vinyl acetate	EPA 8260B	7C16022	1.7	6.0	ND	1	03/16/07	03/17/07	
Vinyl chloride	EPA 8260B	7C16022	0.30	0.50	ND	1	03/16/07	03/17/07	
Xylenes, Total	EPA 8260B	7C16022	0.90	1.0	ND	1	03/16/07	03/17/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*109 %*				
Surrogate: Dibromofluoromethane (80-120%)					*116 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

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ANALYTICAL TESTING CORPORATION
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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-10 (MWC021_WG031407_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C16022	4.5	10	ND	1	03/16/07	03/17/07	
Benzene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Bromobenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Bromochloromethane	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Bromodichloromethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Bromoform	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
Bromomethane	EPA 8260B	7C16022	0.42	1.0	ND	1	03/16/07	03/17/07	
2-Butanone (MEK)	EPA 8260B	7C16022	3.8	5.0	ND	1	03/16/07	03/17/07	
n-Butylbenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
sec-Butylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
tert-Butylbenzene	EPA 8260B	7C16022	0.22	1.0	ND	1	03/16/07	03/17/07	
Carbon Disulfide	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
Carbon tetrachloride	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/17/07	
Chlorobenzene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
Chloroethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
Chloroform	EPA 8260B	7C16022	0.33	1.0	**0.50**	1	03/16/07	03/17/07	J
Chloromethane	EPA 8260B	7C16022	0.40	2.0	ND	1	03/16/07	03/17/07	
2-Chlorotoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
4-Chlorotoluene	EPA 8260B	7C16022	0.29	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C16022	0.97	2.0	ND	1	03/16/07	03/17/07	
Dibromochloromethane	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,4-Dichlorobenzene	EPA 8260B	7C16022	0.37	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichlorobenzene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
1,3-Dichlorobenzene	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
Dichlorodifluoromethane	EPA 8260B	7C16022	0.79	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloroethane	EPA 8260B	7C16022	0.28	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloroethane	EPA 8260B	7C16022	0.27	1.0	**0.52**	1	03/16/07	03/17/07	J
1,1-Dichloroethene	EPA 8260B	7C16022	0.42	1.0	**0.46**	1	03/16/07	03/17/07	J
cis-1,2-Dichloroethene	EPA 8260B	7C16022	0.32	1.0	**4.1**	1	03/16/07	03/17/07	
trans-1,2-Dichloroethene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,2-Dichloropropane	EPA 8260B	7C16022	0.35	1.0	ND	1	03/16/07	03/17/07	
2,2-Dichloropropane	EPA 8260B	7C16022	0.34	1.0	ND	1	03/16/07	03/17/07	
cis-1,3-Dichloropropene	EPA 8260B	7C16022	0.22	0.50	ND	1	03/16/07	03/17/07	
1,1-Dichloropropene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
trans-1,3-Dichloropropene	EPA 8260B	7C16022	0.32	0.50	ND	1	03/16/07	03/17/07	
Ethylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	
Hexachlorobutadiene	EPA 8260B	7C16022	0.38	1.0	ND	1	03/16/07	03/17/07	
2-Hexanone	EPA 8260B	7C16022	2.6	6.0	ND	1	03/16/07	03/17/07	
Iodomethane	EPA 8260B	7C16022	1.0	2.0	ND	1	03/16/07	03/17/07	
Isopropylbenzene	EPA 8260B	7C16022	0.25	1.0	ND	1	03/16/07	03/17/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

NM 5/10/07

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: 1QC1612

Sampled: 03/14/07
Received: 03/14/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: 1QC1612-10 (MWC021_WG031407_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C16022	0.28	1.0	ND	1	03/16/07	03/17/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Methylene chloride	EPA 8260B	7C16022	0.95	1.0	ND	1	03/16/07	03/17/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C16022	3.5	5.0	ND	1	03/16/07	03/17/07	
n-Propylbenzene	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
Styrene	EPA 8260B	7C16022	0.16	1.0	ND	1	03/16/07	03/17/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C16022	0.27	1.0	ND	1	03/16/07	03/17/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C16022	0.24	1.0	ND	1	03/16/07	03/17/07	
Tetrachloroethene	EPA 8260B	7C16022	0.32	1.0	ND	1	03/16/07	03/17/07	
Tetrahydrofuran (THF)	EPA 8260B	7C16022	3.5	10	ND	1	03/16/07	03/17/07	
Toluene	EPA 8260B	7C16022	0.36	1.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C16022	0.48	1.0	ND	1	03/16/07	03/17/07	
1,1,2-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
1,1,1-Trichloroethane	EPA 8260B	7C16022	0.30	1.0	ND	1	03/16/07	03/17/07	
Trichloroethene	EPA 8260B	7C16022	0.26	1.0	**11**	1	03/16/07	03/17/07	
Trichlorofluoromethane	EPA 8260B	7C16022	0.34	2.0	ND	1	03/16/07	03/17/07	
1,2,3-Trichloropropane	EPA 8260B	7C16022	0.40	1.0	ND	1	03/16/07	03/17/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C16022	0.23	1.0	ND	1	03/16/07	03/17/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C16022	0.26	1.0	ND	1	03/16/07	03/17/07	
Vinyl acetate	EPA 8260B	7C16022	1.7	6.0	ND	1	03/16/07	03/17/07	
Vinyl chloride	EPA 8260B	7C16022	0.30	0.50	ND	1	03/16/07	03/17/07	
Xylenes, Total	EPA 8260B	7C16022	0.90	1.0	ND	1	03/16/07	03/17/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*109 %*				
Surrogate: Dibromofluoromethane (80-120%)					*115 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

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LDC #: 16739A1
SDG #: IQC1612
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 1

Date: 5/10/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/14/07
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration	N	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
water

5	1	MWB013_WG031407_0001	11	7C16022 - BLK1	21		31	
6	2	MWG004_WG031407_0001	12		22		32	
7	3	TMW_14_WG031407_0001	13		23		33	
8	4	TMW_11_WG031407_0001	14		24		34	
9	5	WCC_5S_WG031407_0001	15		25		35	
10	6	MWC021_WG031407_0001	16		26		36	
	7	MWB013_WG031407_0001MS	17		27		37	
	8	MWB013_WG031407_0001MSD	18		28		38	
	9		19		29		39	
	10		20		30		40	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 22, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 2

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC2470

Sample Identification

MWB028_WG032207_0001
MWB027_WG032207_0001
MWB027_WG032207_0002
CMW002_WG032207_0001
MWB028_WG032207_0001MS
MWB028_WG032207_0001MSD

Introduction

This data review covers 6 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
2/27/07	2-Butanone	0.044 (≥0.05)	MWB028_WG032207_0001 MWB027_WG032207_0001 MWB027_WG032207_0002 MWB028_WG032207_0001MS MWB028_WG032207_0001MSD 7C27024-BLK1	J (all detects) UJ (all non-detects)	A
3/21/07	2-Butanone	0.047 (≥0.05)	CMW002_WG032207_0001 7C29027-BLK1	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
3/27/07	Acetone	27.1	MWB028_WG032207_0001 MWB027_WG032207_0002 MWB028_WG032207_0001MS MWB028_WG032207_0001MSD 7C27024-BLK1	J (all detects) UJ (all non-detects)	A
3/29/07	Tetrahydrofuran 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	44 80.9 26.5 70.8	CMW002_WG032207_0001 7C29027-BLK1	J (all detects) UJ (all non-detects)	A
3/30/07	Acetone	41.3	CMW002_WG032207_0001 7C30007-BLK1	J (all detects) UJ (all non-detects)	A

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
7C27024-BLK1	3/27/07	Tetrahydrofuran Toluene	8.04 ug/L 0.440 ug/L	MWB028_WG032207_0001 MWB027_WG032207_0001 MWB027_WG032207_0002
7C29027-BLK1	3/29/07	Tetrahydrofuran	5.88 ug/L	CMW002_WG032207_0001
7C30007-BLK1	3/30/07	Methylene chloride	1.64 ug/L	CMW002_WG032207_0001

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
MWB028_WG032207_0001	Toluene	0.84 ug/L	1.0U ug/L
MWB027_WG032207_0001	Toluene	1.2 ug/L	1.2U ug/L
MWB027_WG032207_0002	Toluene	0.91 ug/L	1.0U ug/L

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
7C27024-BS1	Acetone	156 (30-140)	MWB028_WG032207_0001 MWB027_WG032207_0002 7C27024-BLK1	J (all detects)	P
7C27024-BS1	2-Butanone	150 (40-140)	MWB028_WG032207_0001 MWB027_WG032207_0001 MWB027_WG032207_0002 7C27024-BLK1	J (all detects)	P
7C29027-BS1	2-Butanone 1,2-Dibromo-3-chloropropane 2-Hexanone 4-Methyl-2-pentanone	268 (40-140) 142 (50-135) 248 (45-140) 170 (45-140)	CMW002_WG032207_0001 7C29027-BLK1	J (all detects) J (all detects) J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples MWB027_WG032207_0001 and MWB027_WG032207_0002 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	MWB027_WG032207_0001	MWB027_WG032207_0002	
Chloroform	4.8	4.1	16
1,1-Dichloroethene	170	160	6
cis-1,2-Dichloroethene	120	110	9
trans-1,2-Dichloroethene	1.1	0.72	42
Tetrachloroethene	2.2	1.8	20
Toluene	1.2	0.91	27

Compound	Concentration (ug/L)		RPD
	MWB027_WG032207_0001	MWB027_WG032207_0002	
Trichlorofluoromethane	22	19	15
Trichloroethene	400	370	8
1,1-Dichloroethane	1.0U	0.3	200

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Volatiles - Data Qualification Summary - SDG IQC2470

SDG	Sample	Compound	Flag	A or P	Reason
IQC2470	MWB028_WG032207_0001 MWB027_WG032207_0001 MWB027_WG032207_0002 CMW002_WG032207_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IQC2470	MWB028_WG032207_0001 MWB027_WG032207_0002 CMW002_WG032207_0001	Acetone	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
IQC2470	CMW002_WG032207_0001	Tetrahydrofuran 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
IQC2470	MWB028_WG032207_0001 MWB027_WG032207_0001 MWB027_WG032207_0002	2-Butanone	J (all detects)	P	Laboratory control samples (%R)
IQC2470	MWB028_WG032207_0001 MWB027_WG032207_0002	Acetone	J (all detects)	P	Laboratory control samples (%R)
IQC2470	CMW002_WG032207_0001	2-Butanone 1,2-Dibromo-3-chloropropane 2-Hexanone 4-Methyl-2-pentanone	J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp., Bldg C-6 Torrance
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQC2470

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
IQC2470	MWB028_WG032207_0001	Toluene	1.0U ug/L	A
IQC2470	MWB027_WG032207_0001	Toluene	1.2U ug/L	A
IQC2470	MWB027_WG032207_0002	Toluene	1.0U ug/L	A

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-05 (MWB028_WG032207_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C27024	4.5	10	ND UJ	1	03/27/07	03/27/07	L
Benzene	EPA 8260B	7C27024	0.28	1.0	**0.73**	1	03/27/07	03/27/07	J
Bromobenzene	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/27/07	
Bromochloromethane	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/27/07	
Bromodichloromethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/27/07	
Bromoform	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/27/07	
Bromomethane	EPA 8260B	7C27024	0.42	1.0	ND	1	03/27/07	03/27/07	
2-Butanone (MEK)	EPA 8260B	7C27024	3.8	5.0	ND UJ	1	03/27/07	03/27/07	L
n-Butylbenzene	EPA 8260B	7C27024	0.37	1.0	ND	1	03/27/07	03/27/07	
sec-Butylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/27/07	
tert-Butylbenzene	EPA 8260B	7C27024	0.22	1.0	ND	1	03/27/07	03/27/07	
Carbon Disulfide	EPA 8260B	7C27024	0.48	1.0	ND	1	03/27/07	03/27/07	
Carbon tetrachloride	EPA 8260B	7C27024	0.28	0.50	ND	1	03/27/07	03/27/07	
Chlorobenzene	EPA 8260B	7C27024	0.36	1.0	ND	1	03/27/07	03/27/07	
Chloroethane	EPA 8260B	7C27024	0.40	2.0	ND	1	03/27/07	03/27/07	
Chloroform	EPA 8260B	7C27024	0.33	1.0	**3.0**	1	03/27/07	03/27/07	
Chloromethane	EPA 8260B	7C27024	0.40	2.0	ND	1	03/27/07	03/27/07	
2-Chlorotoluene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/27/07	
4-Chlorotoluene	EPA 8260B	7C27024	0.29	1.0	ND	1	03/27/07	03/27/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C27024	0.97	2.0	ND	1	03/27/07	03/27/07	
Dibromochloromethane	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/27/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/27/07	
1,4-Dichlorobenzene	EPA 8260B	7C27024	0.37	1.0	ND	1	03/27/07	03/27/07	
1,2-Dichlorobenzene	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/27/07	
1,3-Dichlorobenzene	EPA 8260B	7C27024	0.35	1.0	ND	1	03/27/07	03/27/07	
Dichlorodifluoromethane	EPA 8260B	7C27024	0.79	1.0	ND	1	03/27/07	03/27/07	
1,2-Dichloroethane	EPA 8260B	7C27024	0.28	0.50	**0.53**	1	03/27/07	03/27/07	
1,1-Dichloroethane	EPA 8260B	7C27024	0.27	1.0	**8.8**	1	03/27/07	03/27/07	
1,1-Dichloroethene	EPA 8260B	7C27024	0.42	1.0	**280**	1	03/27/07	03/27/07	
cis-1,2-Dichloroethene	EPA 8260B	7C27024	0.32	1.0	**17**	1	03/27/07	03/27/07	
trans-1,2-Dichloroethene	EPA 8260B	7C27024	0.27	1.0	**6.0**	1	03/27/07	03/27/07	
1,2-Dichloropropane	EPA 8260B	7C27024	0.35	1.0	ND	1	03/27/07	03/27/07	
2,2-Dichloropropane	EPA 8260B	7C27024	0.34	1.0	ND	1	03/27/07	03/27/07	
cis-1,3-Dichloropropene	EPA 8260B	7C27024	0.22	0.50	ND	1	03/27/07	03/27/07	
1,1-Dichloropropene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/27/07	
trans-1,3-Dichloropropene	EPA 8260B	7C27024	0.32	0.50	ND	1	03/27/07	03/27/07	
Ethylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/27/07	
Hexachlorobutadiene	EPA 8260B	7C27024	0.38	1.0	ND	1	03/27/07	03/27/07	
2-Hexanone	EPA 8260B	7C27024	2.6	6.0	ND	1	03/27/07	03/27/07	
Iodomethane	EPA 8260B	7C27024	1.0	2.0	ND	1	03/27/07	03/27/07	
Isopropylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/27/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/25/2007

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-05 (MWB028_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/27/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/27/07	
Methylene chloride	EPA 8260B	7C27024	0.95	1.0	ND	1	03/27/07	03/27/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C27024	3.5	5.0	ND	1	03/27/07	03/27/07	
n-Propylbenzene	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/27/07	
Styrene	EPA 8260B	7C27024	0.16	1.0	ND	1	03/27/07	03/27/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/27/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C27024	0.24	1.0	ND	1	03/27/07	03/27/07	
Tetrachloroethene	EPA 8260B	7C27024	0.32	1.0	**1.9**	1	03/27/07	03/27/07	
Tetrahydrofuran (THF)	EPA 8260B	7C27024	3.5	10	ND	1	03/27/07	03/27/07	
Toluene	EPA 8260B	7C27024	0.36	1.0	**0.84** 1.0U	1	03/27/07	03/27/07	B, J
1,2,3-Trichlorobenzene	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/27/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C27024	0.48	1.0	ND	1	03/27/07	03/27/07	
1,1,2-Trichloroethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/27/07	
1,1,1-Trichloroethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/27/07	
Trichlorofluoromethane	EPA 8260B	7C27024	0.34	2.0	ND	1	03/27/07	03/27/07	
1,2,3-Trichloropropane	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/27/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C27024	0.23	1.0	ND	1	03/27/07	03/27/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C27024	0.26	1.0	ND	1	03/27/07	03/27/07	
Vinyl acetate	EPA 8260B	7C27024	1.7	6.0	ND	1	03/27/07	03/27/07	
Vinyl chloride	EPA 8260B	7C27024	0.30	0.50	ND	1	03/27/07	03/27/07	
Xylenes, Total	EPA 8260B	7C27024	0.90	1.0	ND	1	03/27/07	03/27/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

A25T007

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-05RE1 (MWB028_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	7C28004	2.6	10	**780**	10	03/28/07	03/28/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*106 %*				
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*110 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

NM 51007

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-06 (MWB027_WG032207_0001 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
Bromobenzene	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
Bromochloromethane	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/28/07	
Bromodichloromethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
Bromoform	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/28/07	
Bromomethane	EPA 8260B	7C27024	0.42	1.0	ND	1	03/27/07	03/28/07	
2-Butanone (MEK)	EPA 8260B	7C27024	3.8	5.0	ND UJ	1	03/27/07	03/28/07	L
n-Butylbenzene	EPA 8260B	7C27024	0.37	1.0	ND	1	03/27/07	03/28/07	
sec-Butylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/28/07	
tert-Butylbenzene	EPA 8260B	7C27024	0.22	1.0	ND	1	03/27/07	03/28/07	
Carbon Disulfide	EPA 8260B	7C27024	0.48	1.0	ND	1	03/27/07	03/28/07	
Carbon tetrachloride	EPA 8260B	7C27024	0.28	0.50	ND	1	03/27/07	03/28/07	
Chlorobenzene	EPA 8260B	7C27024	0.36	1.0	ND	1	03/27/07	03/28/07	
Chloroethane	EPA 8260B	7C27024	0.40	2.0	ND	1	03/27/07	03/28/07	
Chloroform	EPA 8260B	7C27024	0.33	1.0	**4.8**	1	03/27/07	03/28/07	
Chloromethane	EPA 8260B	7C27024	0.40	2.0	ND	1	03/27/07	03/28/07	
2-Chlorotoluene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
4-Chlorotoluene	EPA 8260B	7C27024	0.29	1.0	ND	1	03/27/07	03/28/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C27024	0.97	2.0	ND	1	03/27/07	03/28/07	
Dibromochloromethane	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/28/07	
1,4-Dichlorobenzene	EPA 8260B	7C27024	0.37	1.0	ND	1	03/27/07	03/28/07	
1,2-Dichlorobenzene	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/28/07	
1,3-Dichlorobenzene	EPA 8260B	7C27024	0.35	1.0	ND	1	03/27/07	03/28/07	
Dichlorodifluoromethane	EPA 8260B	7C27024	0.79	1.0	ND	1	03/27/07	03/28/07	
1,2-Dichloroethane	EPA 8260B	7C27024	0.28	0.50	ND	1	03/27/07	03/28/07	
1,1-Dichloroethane	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
1,1-Dichloroethene	EPA 8260B	7C27024	0.42	1.0	**170**	1	03/27/07	03/28/07	
cis-1,2-Dichloroethene	EPA 8260B	7C27024	0.32	1.0	**120**	1	03/27/07	03/28/07	
trans-1,2-Dichloroethene	EPA 8260B	7C27024	0.27	1.0	**1.1**	1	03/27/07	03/28/07	
1,2-Dichloropropane	EPA 8260B	7C27024	0.35	1.0	ND	1	03/27/07	03/28/07	
2,2-Dichloropropane	EPA 8260B	7C27024	0.34	1.0	ND	1	03/27/07	03/28/07	
cis-1,3-Dichloropropene	EPA 8260B	7C27024	0.22	0.50	ND	1	03/27/07	03/28/07	
1,1-Dichloropropene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
trans-1,3-Dichloropropene	EPA 8260B	7C27024	0.32	0.50	ND	1	03/27/07	03/28/07	
Ethylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/28/07	
Hexachlorobutadiene	EPA 8260B	7C27024	0.38	1.0	ND	1	03/27/07	03/28/07	
2-Hexanone	EPA 8260B	7C27024	2.6	6.0	ND	1	03/27/07	03/28/07	
Iodomethane	EPA 8260B	7C27024	1.0	2.0	ND	1	03/27/07	03/28/07	
Isopropylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/28/07	
p-Isopropyltoluene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	

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Nicholas Marz
Project Manager

NM 5/10/07

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-06 (MWB027_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/28/07	
Methylene chloride	EPA 8260B	7C27024	0.95	1.0	ND	1	03/27/07	03/28/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C27024	3.5	5.0	ND	1	03/27/07	03/28/07	
n-Propylbenzene	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
Styrene	EPA 8260B	7C27024	0.16	1.0	ND	1	03/27/07	03/28/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C27024	0.24	1.0	ND	1	03/27/07	03/28/07	
Tetrachloroethene	EPA 8260B	7C27024	0.32	1.0	**2.2**	1	03/27/07	03/28/07	
Tetrahydrofuran (THF)	EPA 8260B	7C27024	3.5	10	ND	1	03/27/07	03/28/07	
Toluene	EPA 8260B	7C27024	0.36	1.0	**1.2** U	1	03/27/07	03/28/07	B
1,2,3-Trichlorobenzene	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C27024	0.48	1.0	ND	1	03/27/07	03/28/07	
1,1,2-Trichloroethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
1,1,1-Trichloroethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
Trichlorofluoromethane	EPA 8260B	7C27024	0.34	2.0	**22**	1	03/27/07	03/28/07	
1,2,3-Trichloropropane	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/28/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C27024	0.23	1.0	ND	1	03/27/07	03/28/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C27024	0.26	1.0	ND	1	03/27/07	03/28/07	
Vinyl acetate	EPA 8260B	7C27024	1.7	6.0	ND	1	03/27/07	03/28/07	
Vinyl chloride	EPA 8260B	7C27024	0.30	0.50	ND	1	03/27/07	03/28/07	
Xylenes, Total	EPA 8260B	7C27024	0.90	1.0	ND	1	03/27/07	03/28/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*101 %*				
Surrogate: Dibromofluoromethane (80-120%)					*120 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

R05/007

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-06RE1 (MWB027_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	7C28012	2.6	10	**400**	10	03/28/07	03/28/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*106 %*				
Surrogate: Dibromofluoromethane (80-120%)					*119 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/25/2007

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727	Sampled: 03/22/07
Santa Ana, CA 92705	Report Number: IQC2470	Received: 03/22/07
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-06RE2 (MWB027_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C29029	4.5	10	ND	1	03/29/07	03/30/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*96 %*				
Surrogate: Toluene-d8 (80-120%)					*99 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

Mz5/1007

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-07 (MWB027_WG032207_0002 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C27024	4.5	10	ND UJ	1	03/27/07	03/28/07	L
Benzene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
Bromobenzene	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
Bromochloromethane	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/28/07	
Bromodichloromethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
Bromoform	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/28/07	
Bromomethane	EPA 8260B	7C27024	0.42	1.0	ND	1	03/27/07	03/28/07	
2-Butanone (MEK)	EPA 8260B	7C27024	3.8	5.0	ND UJ	1	03/27/07	03/28/07	L
n-Butylbenzene	EPA 8260B	7C27024	0.37	1.0	ND	1	03/27/07	03/28/07	
sec-Butylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/28/07	
tert-Butylbenzene	EPA 8260B	7C27024	0.22	1.0	ND	1	03/27/07	03/28/07	
Carbon Disulfide	EPA 8260B	7C27024	0.48	1.0	ND	1	03/27/07	03/28/07	
Carbon tetrachloride	EPA 8260B	7C27024	0.28	0.50	ND	1	03/27/07	03/28/07	
Chlorobenzene	EPA 8260B	7C27024	0.36	1.0	ND	1	03/27/07	03/28/07	
Chloroethane	EPA 8260B	7C27024	0.40	2.0	ND	1	03/27/07	03/28/07	
Chloroform	EPA 8260B	7C27024	0.33	1.0	**4.1**	1	03/27/07	03/28/07	
Chloromethane	EPA 8260B	7C27024	0.40	2.0	ND	1	03/27/07	03/28/07	
2-Chlorotoluene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
4-Chlorotoluene	EPA 8260B	7C27024	0.29	1.0	ND	1	03/27/07	03/28/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C27024	0.97	2.0	ND	1	03/27/07	03/28/07	
Dibromochloromethane	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/28/07	
1,4-Dichlorobenzene	EPA 8260B	7C27024	0.37	1.0	ND	1	03/27/07	03/28/07	
1,2-Dichlorobenzene	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/28/07	
1,3-Dichlorobenzene	EPA 8260B	7C27024	0.35	1.0	ND	1	03/27/07	03/28/07	
Dichlorodifluoromethane	EPA 8260B	7C27024	0.79	1.0	ND	1	03/27/07	03/28/07	
1,2-Dichloroethane	EPA 8260B	7C27024	0.28	0.50	ND	1	03/27/07	03/28/07	
1,1-Dichloroethane	EPA 8260B	7C27024	0.27	1.0	**0.30**	1	03/27/07	03/28/07	J
1,1-Dichloroethene	EPA 8260B	7C27024	0.42	1.0	**160**	1	03/27/07	03/28/07	
cis-1,2-Dichloroethene	EPA 8260B	7C27024	0.32	1.0	**110**	1	03/27/07	03/28/07	
trans-1,2-Dichloroethene	EPA 8260B	7C27024	0.27	1.0	**0.72**	1	03/27/07	03/28/07	J
1,2-Dichloropropane	EPA 8260B	7C27024	0.35	1.0	ND	1	03/27/07	03/28/07	
2,2-Dichloropropane	EPA 8260B	7C27024	0.34	1.0	ND	1	03/27/07	03/28/07	
cis-1,3-Dichloropropene	EPA 8260B	7C27024	0.22	0.50	ND	1	03/27/07	03/28/07	
1,1-Dichloropropene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
trans-1,3-Dichloropropene	EPA 8260B	7C27024	0.32	0.50	ND	1	03/27/07	03/28/07	
Ethylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/28/07	
Hexachlorobutadiene	EPA 8260B	7C27024	0.38	1.0	ND	1	03/27/07	03/28/07	
2-Hexanone	EPA 8260B	7C27024	2.6	6.0	ND	1	03/27/07	03/28/07	
Iodomethane	EPA 8260B	7C27024	1.0	2.0	ND	1	03/27/07	03/28/07	
Isopropylbenzene	EPA 8260B	7C27024	0.25	1.0	ND	1	03/27/07	03/28/07	

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Project Manager

4/25/2007

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-07 (MWB027_WG032207_0002 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	7C27024	0.28	1.0	ND	1	03/27/07	03/28/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C27024	0.32	1.0	ND	1	03/27/07	03/28/07	
Methylene chloride	EPA 8260B	7C27024	0.95	1.0	ND	1	03/27/07	03/28/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C27024	3.5	5.0	ND	1	03/27/07	03/28/07	
n-Propylbenzene	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
Styrene	EPA 8260B	7C27024	0.16	1.0	ND	1	03/27/07	03/28/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C27024	0.27	1.0	ND	1	03/27/07	03/28/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C27024	0.24	1.0	ND	1	03/27/07	03/28/07	
Tetrachloroethene	EPA 8260B	7C27024	0.32	1.0	**1.8**	1	03/27/07	03/28/07	
Tetrahydrofuran (THF)	EPA 8260B	7C27024	3.5	10	ND	1	03/27/07	03/28/07	
Toluene	EPA 8260B	7C27024	0.36	1.0	**0.91** 1.04	1	03/27/07	03/28/07	B, J
1,2,3-Trichlorobenzene	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C27024	0.48	1.0	ND	1	03/27/07	03/28/07	
1,1,2-Trichloroethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
1,1,1-Trichloroethane	EPA 8260B	7C27024	0.30	1.0	ND	1	03/27/07	03/28/07	
Trichlorofluoromethane	EPA 8260B	7C27024	0.34	2.0	**19**	1	03/27/07	03/28/07	
1,2,3-Trichloropropane	EPA 8260B	7C27024	0.40	1.0	ND	1	03/27/07	03/28/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C27024	0.23	1.0	ND	1	03/27/07	03/28/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C27024	0.26	1.0	ND	1	03/27/07	03/28/07	
Vinyl acetate	EPA 8260B	7C27024	1.7	6.0	ND	1	03/27/07	03/28/07	
Vinyl chloride	EPA 8260B	7C27024	0.30	0.50	ND	1	03/27/07	03/28/07	
Xylenes, Total	EPA 8260B	7C27024	0.90	1.0	ND	1	03/27/07	03/28/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Surrogate: Dibromofluoromethane (80-120%)					*119 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				

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Nicholas Marz
Project Manager

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-07RE1 (MWB027_WG032207_0002 - Water) - cont.									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	7C28004	2.6	10	**370**	10	03/28/07	03/28/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*103 %*				
Surrogate: Dibromofluoromethane (80-120%)					*112 %*				
Surrogate: Toluene-d8 (80-120%)					*110 %*				

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Project Manager

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701 N. Parkcenter Drive
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Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-13 (CMW002_WG032207_0001 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	7C29027	0.28	1.0	**60**	1	03/29/07	03/29/07	
Bromobenzene	EPA 8260B	7C29027	0.27	1.0	ND	1	03/29/07	03/29/07	
Bromochloromethane	EPA 8260B	7C29027	0.32	1.0	ND	1	03/29/07	03/29/07	
Bromodichloromethane	EPA 8260B	7C29027	0.30	1.0	ND	1	03/29/07	03/29/07	
Bromoform	EPA 8260B	7C29027	0.40	1.0	ND	1	03/29/07	03/29/07	
Bromomethane	EPA 8260B	7C29027	0.42	1.0	ND	1	03/29/07	03/29/07	
2-Butanone (MEK)	EPA 8260B	7C29027	3.8	5.0	ND UJ	1	03/29/07	03/29/07	C, L
n-Butylbenzene	EPA 8260B	7C29027	0.37	1.0	ND	1	03/29/07	03/29/07	
sec-Butylbenzene	EPA 8260B	7C29027	0.25	1.0	ND	1	03/29/07	03/29/07	
tert-Butylbenzene	EPA 8260B	7C29027	0.22	1.0	ND	1	03/29/07	03/29/07	
Carbon Disulfide	EPA 8260B	7C29027	0.48	1.0	ND	1	03/29/07	03/29/07	
Carbon tetrachloride	EPA 8260B	7C29027	0.28	0.50	ND	1	03/29/07	03/29/07	
Chloroethane	EPA 8260B	7C29027	0.40	2.0	ND	1	03/29/07	03/29/07	
Chloroform	EPA 8260B	7C29027	0.33	1.0	**1.1**	1	03/29/07	03/29/07	
Chloromethane	EPA 8260B	7C29027	0.40	2.0	ND	1	03/29/07	03/29/07	
2-Chlorotoluene	EPA 8260B	7C29027	0.28	1.0	ND	1	03/29/07	03/29/07	
4-Chlorotoluene	EPA 8260B	7C29027	0.29	1.0	ND	1	03/29/07	03/29/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C29027	0.97	2.0	ND	1	03/29/07	03/29/07	L
Dibromochloromethane	EPA 8260B	7C29027	0.28	1.0	ND	1	03/29/07	03/29/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C29027	0.40	1.0	ND	1	03/29/07	03/29/07	
1,4-Dichlorobenzene	EPA 8260B	7C29027	0.37	1.0	**9.2**	1	03/29/07	03/29/07	
1,2-Dichlorobenzene	EPA 8260B	7C29027	0.32	1.0	**1.4**	1	03/29/07	03/29/07	
1,3-Dichlorobenzene	EPA 8260B	7C29027	0.35	1.0	ND	1	03/29/07	03/29/07	
Dichlorodifluoromethane	EPA 8260B	7C29027	0.79	1.0	ND	1	03/29/07	03/29/07	
1,2-Dichloroethane	EPA 8260B	7C29027	0.28	0.50	ND	1	03/29/07	03/29/07	
1,1-Dichloroethane	EPA 8260B	7C29027	0.27	1.0	ND	1	03/29/07	03/29/07	
1,1-Dichloroethene	EPA 8260B	7C29027	0.42	1.0	**1.2**	1	03/29/07	03/29/07	
cis-1,2-Dichloroethene	EPA 8260B	7C29027	0.32	1.0	**3.3**	1	03/29/07	03/29/07	
trans-1,2-Dichloroethene	EPA 8260B	7C29027	0.27	1.0	ND	1	03/29/07	03/29/07	
1,2-Dichloropropane	EPA 8260B	7C29027	0.35	1.0	ND	1	03/29/07	03/29/07	
2,2-Dichloropropane	EPA 8260B	7C29027	0.34	1.0	ND	1	03/29/07	03/29/07	
cis-1,3-Dichloropropene	EPA 8260B	7C29027	0.22	0.50	ND	1	03/29/07	03/29/07	
1,1-Dichloropropene	EPA 8260B	7C29027	0.28	1.0	ND	1	03/29/07	03/29/07	
trans-1,3-Dichloropropene	EPA 8260B	7C29027	0.32	0.50	ND	1	03/29/07	03/29/07	
Ethylbenzene	EPA 8260B	7C29027	0.25	1.0	**1.1**	1	03/29/07	03/29/07	
Hexachlorobutadiene	EPA 8260B	7C29027	0.38	1.0	ND	1	03/29/07	03/29/07	
2-Hexanone	EPA 8260B	7C29027	2.6	6.0	ND UJ	1	03/29/07	03/29/07	C, L
Iodomethane	EPA 8260B	7C29027	1.0	2.0	ND	1	03/29/07	03/29/07	
Isopropylbenzene	EPA 8260B	7C29027	0.25	1.0	ND	1	03/29/07	03/29/07	
p-Isopropyltoluene	EPA 8260B	7C29027	0.28	1.0	ND	1	03/29/07	03/29/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C29027	0.32	1.0	ND	1	03/29/07	03/29/07	

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Project Manager

4/25/07

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-13 (CMW002_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C29027	3.5	5.0	ND UJ	1	03/29/07	03/29/07	L
n-Propylbenzene	EPA 8260B	7C29027	0.27	1.0	ND	1	03/29/07	03/29/07	
Styrene	EPA 8260B	7C29027	0.16	1.0	ND	1	03/29/07	03/29/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C29027	0.27	1.0	ND	1	03/29/07	03/29/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C29027	0.24	1.0	ND	1	03/29/07	03/29/07	
Tetrachloroethene	EPA 8260B	7C29027	0.32	1.0	**1.8**	1	03/29/07	03/29/07	
Tetrahydrofuran (THF)	EPA 8260B	7C29027	3.5	10	ND UJ	1	03/29/07	03/29/07	C, L
Toluene	EPA 8260B	7C29027	0.36	1.0	ND	1	03/29/07	03/29/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C29027	0.30	1.0	ND	1	03/29/07	03/29/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C29027	0.48	1.0	ND	1	03/29/07	03/29/07	
1,1,2-Trichloroethane	EPA 8260B	7C29027	0.30	1.0	ND	1	03/29/07	03/29/07	
1,1,1-Trichloroethane	EPA 8260B	7C29027	0.30	1.0	ND	1	03/29/07	03/29/07	
Trichlorofluoromethane	EPA 8260B	7C29027	0.34	2.0	ND	1	03/29/07	03/29/07	
1,2,3-Trichloropropane	EPA 8260B	7C29027	0.40	1.0	ND	1	03/29/07	03/29/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C29027	0.23	1.0	ND	1	03/29/07	03/29/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C29027	0.26	1.0	ND	1	03/29/07	03/29/07	
Vinyl acetate	EPA 8260B	7C29027	1.7	6.0	ND	1	03/29/07	03/29/07	
Vinyl chloride	EPA 8260B	7C29027	0.30	0.50	ND	1	03/29/07	03/29/07	
Xylenes, Total	EPA 8260B	7C29027	0.90	1.0	**2.4**	1	03/29/07	03/29/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*92 %*				
Surrogate: Dibromofluoromethane (80-120%)					*98 %*				
Surrogate: Toluene-d8 (80-120%)					*97 %*				

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Project Manager

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TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 03/22/07
Santa Ana, CA 92705	Report Number:	IQC2470	Received: 03/22/07
Attention: Mehmet Pehlivan			

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-13RE1 (CMW002_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
Chlorobenzene	EPA 8260B	7C30007	18	50	**7400**	50	03/30/07	03/30/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*89 %*				
Surrogate: Dibromofluoromethane (80-120%)					*99 %*				
Surrogate: Toluene-d8 (80-120%)					*98 %*				

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Nicholas Marz
Project Manager

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TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 03/22/07
Santa Ana, CA 92705	Report Number:	IQC2470	Received: 03/22/07
Attention: Mehmet Pehlivan			

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2470-13RE2 (CMW002_WG032207_0001 - Water) - cont.									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C30007	22	50	ND UJ	5	03/30/07	03/30/07	
Methylene chloride	EPA 8260B	7C30007	4.8	5.0	ND	5	03/30/07	03/30/07	
Trichloroethene	EPA 8260B	7C30007	1.3	5.0	**340**	5	03/30/07	03/30/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*99 %*				
Surrogate: Toluene-d8 (80-120%)					*98 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

NDS 10-07

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LDC #: 16739B1
SDG #: IQC2470
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 2

Date: 5/10/07
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/22/07
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD, r^2 ≥0.990
IV.	Continuing calibration	SW	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	CMW001-WG032207-0001 MS/D
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 2 + 3
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

5	1	2=S MWB028_WG032207_0001	11	1	7C27024-BLK1	21		31
6	1	3=S 4=F MWB027_WG032207_0001 D	12	2	7C28004-BLK1	22		32
7	1	2=S MWB027_WG032207_0002 D	13	3	7C28012-BLK1	23		33
13	4 5	6=DD, F, E, S CMW002_WG032207_0001	14	4	7C29029-BLK1	24		34
	5 1	MWB028_WG032207_0001MS	15	5	7C29027-BLK1	25		35
	6 1	MWB028_WG032207_0001MSD	16	6	7C30007-BLK1	26		36
	7		17			27		37
	8		18			28		38
	9		19			29		39
	10		20			30		40

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL. Ethyl ether
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM. Benzyl chloride
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

BOE-C6-0054278

LDC #: K73913

SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?
Y N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	2/27/07	ICAL-3 1	M		0.044	7C27024-BLK1, 1→3, 5, 6	J/UJ/A
	3/21/07	ICAL-33	M		0.047	7C29027-BLK1, ~~5~~ 4	J/UJ/A

INICAL.1SB

BOE-C6-0054279

LDC #: 16739B)
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 6 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: <25.0%)	Finding RRF (Limit: >0.05)	Associated Samples	Qualifications
	3/27/07 8:50PM	CCV	F	27.1		7C27024-BLK1, 1, 3, 5, 6	J/UJ/A
	3/29/07 4:40PM	CCV	Tetrahydrofuran	44		7C29027-BLK1, 4	J/UJ/A
+			~~F~~	~~119.8~~ M			
+			M	80.9			
			Y	26.5			
	~~3/29/07~~		Z	70.8			
	3/30/07 9:08AM	CCV	F	41.3		7C30007-BLK1, ~~5~~ 4	J/UJ/A

CONCAL.1SB

BOE-C6-0054280

LDC #: 16739B1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 2
Reviewer: B
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 3/27/07
Conc. units: ug/L
Associated Samples: 1 → 3

Compound	Blank ID	Sample Identification								
	7C27024-BLK1	1	2	3						
~~Methylene chloride~~ Tetrahydrofuran	8.04	—	—					—	—	—
~~Acetone~~ cc	0.440	0.84/1.0 U	1.2/U	0.91/1.0 U						
CRQL										

Blank analysis date: 3/29/07
Conc. units: ug/L
Associated Samples: 4 (ND)

Compound	Blank ID	Sample Identification								
	7C29027-BLK1									
~~Methylene chloride~~ Tetrahydrofuran	5.88									
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BLANKS2.1SB

BOE-C6-0054281

LDC #: 16739B1
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 3/30/07
Conc. units: ug/L
Associated Samples: 4 (ND)

Compound	Blank ID	Sample Identification								
	7C30007-BLK1									
Methylene chloride	1.64									
Acetone										
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BOE-C6-0054282

LDC #: 16739B1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: B
2nd Reviewer: A

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		CMW001-WG032207	F	163 (20-150)	156 (20-150)	( )	none	NO QUAL
		-0001MS/D	M	165 (30-145)	163 (30-145)	( )		
			Z	158 (25-140)	159 (25-140)	( )		
			Y	164 (40-140)	158 (40-140)	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	≤ 22%	61-145%	≤ 14%
S.	Trichloroethene	62-137%	≤ 24%	71-120%	≤ 14%
V.	Benzene	66-142%	≤ 21%	76-127%	≤ 11%
CC.	Toluene	59-139%	≤ 21%	76-125%	≤ 13%
DD.	Chlorobenzene	60-133%	≤ 21%	75-130%	≤ 13%

MSD.1SB

BOE-C6-0054283

LDC #: 16739B1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		7C27024-BS1	F	156 (30-140)	( )	( )	7C27024-BLK1,	J/Pdet
			M	150 (40-140)	( )	( )	1, ~~[illegible]~~ 3	↓
				( )	( )	( )	1	
			M	150 (40-140	( )	( )	2	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		7C29027-BS1	M	268 (40-140)	( )	( )	7C29027-BLK1,	J/Pdet
			M M	142 (50-135)	( )	( )	4	
			Z	248 (45-140)	( )	( )	↓	↓
			Y	170 (45-140)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		note #4 Tetrahydrofuran was qualified L in Form 1, but THF was not spiked in LCS/D						

LCSLCSD.1SB

BOE-C6-0054284

LDC #: 16739B1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD
	2	3	
K	4.8	4.1	16
H	170	160	6
QQQ	120	110	9
PPP	1.1	0.72	42
AA	2.2	1.8	20

Compound	Concentration ( )		RPD
CC	1.2	0.91	27
KK	22	19	15
S	400	370	8
I	1.0U	0.3	200

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

FLDUP4.1SB

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 27, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC2895

Sample Identification

MWB019_WG032707_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
2/28/07	2-Butanone	0.037 (≥0.05)	All samples in SDG IQC2895	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
4/3/07	Acetone 2-Butanone 2,2-Dichloropropane 2-Hexanone	109.3 70.3 29.1 63.9	All samples in SDG IQC2895	J (all detects) UJ (all non-detects)	A

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
7D03010-BLK1	4/3/07	Tetrahydrofuran Trichloroethene	8.04 ug/L 0.480 ug/L	All samples in SDG IQC2895

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
MWB019_WG032707_0001 (10X)	Tetrahydrofuran	64 ug/L	100U ug/L

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
7D03010-BS1	Acetone	263 (30-140)	All samples in SDG IQC2895	J (all detects)	P
	2-Butanone	237 (40-140)		J (all detects)	
	1,2-Dibromo-3-chloropropane	138 (50-135)		J (all detects)	
	2-Hexanone	211 (45-140)		J (all detects)	
	4-Methyl-2-pentanone	144 (45-140)		J (all detects)	
	1,1,2,2-Tetrachloroethane	134 (55-130)		J (all detects)	
	1,2,3-Trichloropropane	136 (60-130)		J (all detects)	

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Volatiles - Data Qualification Summary - SDG IQC2895

SDG	Sample	Compound	Flag	A or P	Reason
IQC2895	MWB019_WG032707_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IQC2895	MWB019_WG032707_0001	Acetone 2-Butanone 2,2-Dichloropropane 2-Hexanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
IQC2895	MWB019_WG032707_0001	Acetone 2-Butanone 1,2-Dibromo-3-chloropropane 2-Hexanone 4-Methyl-2-pentanone 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp., Bldg C-6 Torrance
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQC2895

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
IQC2895	MWB019_WG032707_0001 (10X)	Tetrahydrofuran	100U ug/L	A

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2895

Sampled: 03/27/07
Received: 03/27/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2895-07 (MWB019_WG032707_0001 - Water)									
Reporting Units: ug/l									
Chloroform	EPA 8260B	7D02027	16	50	**3600**	50	04/02/07	04/03/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Surrogate: Dibromofluoromethane (80-120%)					*116 %*				
Surrogate: Toluene-d8 (80-120%)					*110 %*				
Sample ID: IQC2895-07RE1 (MWB019_WG032707_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	7D03010	45	100	ND UJ	10	04/03/07	04/03/07	C, L
Benzene	EPA 8260B	7D03010	2.8	10	ND	10	04/03/07	04/03/07	
Bromobenzene	EPA 8260B	7D03010	2.7	10	ND	10	04/03/07	04/03/07	
Bromochloromethane	EPA 8260B	7D03010	3.2	10	ND	10	04/03/07	04/03/07	
Bromodichloromethane	EPA 8260B	7D03010	3.0	10	ND	10	04/03/07	04/03/07	
Bromoform	EPA 8260B	7D03010	4.0	10	ND	10	04/03/07	04/03/07	
Bromomethane	EPA 8260B	7D03010	4.2	10	ND	10	04/03/07	04/03/07	
2-Butanone (MEK)	EPA 8260B	7D03010	38	50	ND UJ	10	04/03/07	04/03/07	C, L
n-Butylbenzene	EPA 8260B	7D03010	3.7	10	ND	10	04/03/07	04/03/07	
sec-Butylbenzene	EPA 8260B	7D03010	2.5	10	ND	10	04/03/07	04/03/07	
tert-Butylbenzene	EPA 8260B	7D03010	2.2	10	ND	10	04/03/07	04/03/07	
Carbon Disulfide	EPA 8260B	7D03010	4.8	10	ND	10	04/03/07	04/03/07	
Carbon tetrachloride	EPA 8260B	7D03010	2.8	5.0	**10**	10	04/03/07	04/03/07	
Chlorobenzene	EPA 8260B	7D03010	3.6	10	ND	10	04/03/07	04/03/07	
Chloroethane	EPA 8260B	7D03010	4.0	20	ND	10	04/03/07	04/03/07	
Chloromethane	EPA 8260B	7D03010	4.0	20	ND	10	04/03/07	04/03/07	
2-Chlorotoluene	EPA 8260B	7D03010	2.8	10	ND	10	04/03/07	04/03/07	
4-Chlorotoluene	EPA 8260B	7D03010	2.9	10	ND	10	04/03/07	04/03/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7D03010	9.7	20	ND	10	04/03/07	04/03/07	L
Dibromochloromethane	EPA 8260B	7D03010	2.8	10	ND	10	04/03/07	04/03/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7D03010	4.0	10	ND	10	04/03/07	04/03/07	
1,4-Dichlorobenzene	EPA 8260B	7D03010	3.7	10	ND	10	04/03/07	04/03/07	
1,2-Dichlorobenzene	EPA 8260B	7D03010	3.2	10	ND	10	04/03/07	04/03/07	
1,3-Dichlorobenzene	EPA 8260B	7D03010	3.5	10	ND	10	04/03/07	04/03/07	
Dichlorodifluoromethane	EPA 8260B	7D03010	7.9	10	ND	10	04/03/07	04/03/07	
1,2-Dichloroethane	EPA 8260B	7D03010	2.8	5.0	ND	10	04/03/07	04/03/07	
1,1-Dichloroethane	EPA 8260B	7D03010	2.7	10	ND	10	04/03/07	04/03/07	
1,1-Dichloroethene	EPA 8260B	7D03010	4.2	10	**4.3**	10	04/03/07	04/03/07	J
cis-1,2-Dichloroethene	EPA 8260B	7D03010	3.2	10	ND	10	04/03/07	04/03/07	
trans-1,2-Dichloroethene	EPA 8260B	7D03010	2.7	10	ND	10	04/03/07	04/03/07	
1,2-Dichloropropane	EPA 8260B	7D03010	3.5	10	ND	10	04/03/07	04/03/07	
2,2-Dichloropropane	EPA 8260B	7D03010	3.4	10	ND UJ	10	04/03/07	04/03/07	
cis-1,3-Dichloropropene	EPA 8260B	7D03010	2.2	5.0	ND	10	04/03/07	04/03/07	
1,1-Dichloropropene	EPA 8260B	7D03010	2.8	10	ND	10	04/03/07	04/03/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/5/2007

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2895

Sampled: 03/27/07
Received: 03/27/07

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2895-07RE1 (MWB019_WG032707_0001 - Water) - cont.									
Reporting Units: ug/l									
trans-1,3-Dichloropropene	EPA 8260B	7D03010	3.2	5.0	ND	10	04/03/07	04/03/07	
Ethylbenzene	EPA 8260B	7D03010	2.5	10	ND	10	04/03/07	04/03/07	
Hexachlorobutadiene	EPA 8260B	7D03010	3.8	10	ND	10	04/03/07	04/03/07	
2-Hexanone	EPA 8260B	7D03010	26	60	ND UJ	10	04/03/07	04/03/07	C, L
Iodomethane	EPA 8260B	7D03010	10	20	ND	10	04/03/07	04/03/07	
Isopropylbenzene	EPA 8260B	7D03010	2.5	10	ND	10	04/03/07	04/03/07	
p-Isopropyltoluene	EPA 8260B	7D03010	2.8	10	ND	10	04/03/07	04/03/07	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7D03010	3.2	10	ND	10	04/03/07	04/03/07	
Methylene chloride	EPA 8260B	7D03010	9.5	10	ND	10	04/03/07	04/03/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7D03010	35	50	ND	10	04/03/07	04/03/07	L
n-Propylbenzene	EPA 8260B	7D03010	2.7	10	ND	10	04/03/07	04/03/07	
Styrene	EPA 8260B	7D03010	1.6	10	ND	10	04/03/07	04/03/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7D03010	2.7	10	ND	10	04/03/07	04/03/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7D03010	2.4	10	ND	10	04/03/07	04/03/07	L
Tetrachloroethene	EPA 8260B	7D03010	3.2	10	**150**	10	04/03/07	04/03/07	
Tetrahydrofuran (THF)	EPA 8260B	7D03010	35	100	**64** 100U	10	04/03/07	04/03/07	B, J
Toluene	EPA 8260B	7D03010	3.6	10	ND	10	04/03/07	04/03/07	
1,2,3-Trichlorobenzene	EPA 8260B	7D03010	3.0	10	ND	10	04/03/07	04/03/07	
1,2,4-Trichlorobenzene	EPA 8260B	7D03010	4.8	10	ND	10	04/03/07	04/03/07	
1,1,2-Trichloroethane	EPA 8260B	7D03010	3.0	10	ND	10	04/03/07	04/03/07	
1,1,1-Trichloroethane	EPA 8260B	7D03010	3.0	10	ND	10	04/03/07	04/03/07	
Trichloroethene	EPA 8260B	7D03010	2.6	10	**160**	10	04/03/07	04/03/07	
Trichlorofluoromethane	EPA 8260B	7D03010	3.4	20	ND	10	04/03/07	04/03/07	
1,2,3-Trichloropropane	EPA 8260B	7D03010	4.0	10	ND	10	04/03/07	04/03/07	L
1,2,4-Trimethylbenzene	EPA 8260B	7D03010	2.3	10	ND	10	04/03/07	04/03/07	
1,3,5-Trimethylbenzene	EPA 8260B	7D03010	2.6	10	ND	10	04/03/07	04/03/07	
Vinyl acetate	EPA 8260B	7D03010	17	60	ND	10	04/03/07	04/03/07	
Vinyl chloride	EPA 8260B	7D03010	3.0	5.0	ND	10	04/03/07	04/03/07	
Xylenes, Total	EPA 8260B	7D03010	9.0	10	ND	10	04/03/07	04/03/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*103 %*				
Surrogate: Dibromofluoromethane (80-120%)					*111 %*				
Surrogate: Toluene-d8 (80-120%)					*109 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/25/2007

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LDC #: 16739C1
SDG #: IQC2895
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 3

Date: 5/10/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/27/07
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD, r^2 ≥0.990
IV.	Continuing calibration	SW	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	TMW-06-WG032707-0001MS/D
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/CRQLs	A	
XIII.	Tentatively identified compounds (TICs)	N	not reported
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

7	1	1 MWB019_WG032707_0001 (water 2 = ~~BD~~ K)	11	1 7D03010-BLK1	21		31	
	2		12	2 7D02027-BLK1	22		32	
	3		13		23		33	
	4		14		24		34	
	5		15		25		35	
	6		16		26		36	
	7		17		27		37	
	8		18		28		38	
	9		19		29		39	
	10		20		30		40	

LDC #: 16739C1
SDG #: I QC2895

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: B
2nd Reviewer: A

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

.DC #: 1673901
SDG #: I02C2895

VALIDATION FINDINGS CHECKLIST

Reviewer: B
2nd Reviewer: C

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within + 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?		✓		
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.	✓			
Target compounds were detected in the field blanks.		✓		

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl chorlde**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Methyl ethyl ketone	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

BOE-C6-0054298

LDC #: 16739C1
SDG #: FQC2895

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?
Y N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	2/28/07	ICAL-60	M		0.037	All +BLK	J/UJ/A

INICAL.1SB

BOE-C6-0054299

LDC #: 1673901
SDG #: F QC2895

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: P
2nd Reviewer: L

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	4/3/07	CCV	F	109.3		All + BLK	J / UJ / A
			M	70.3		↓	↓
			BB	29.1			
			Z	63.9			

CONCAL.1SB

BOE-C6-0054300

LDC #: 16739C1
SDG #: I QC2895

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 4/3/07
Conc. units: ug/L
Associated Samples: A 11

Compound	Blank ID	Sample Identification								
	7D030410-BLK1	1 (10X)								
Tetrahydrofuran ~~Methylene chloride~~	8.04	64 /100U								
Acetone S	0.480	160								
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BOE-C6-0054301

LDC #: 16739C1
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: B
2nd Reviewer: A

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		TMW-06	S	( )	16 (65-125)	( )	none	NO QUAL
		WG032707_006		( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	≤ 22%	61-145%	≤ 14%
S.	Trichloroethene	62-137%	≤ 24%	71-120%	≤ 14%
V.	Benzene	66-142%	≤ 21%	76-127%	≤ 11%
CC.	Toluene	59-139%	≤ 21%	76-125%	≤ 13%
DD.	Chlorobenzene	60-133%	≤ 21%	75-130%	≤ 13%

MSD.1SB

LDC #: 16739C1
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: B
2nd Reviewer: R

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		7D03010-BS1	F	263 (30-140)	( )	( )	All + Blank	J | P det
			M	237 (40-140)	( )	( )		
			MM	138 (50-135)	( )	( )		
			Z	211 (45-140)	( )	( )		
			Y	144 (45-140)	( )	( )		
			BB	134 (55-130)	( )	( )		
			XX	136 (60-130)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LCSLCSD.1SB

BOE-C6-0054303

LDC #: 16739C1
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: B
2nd Reviewer: a

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (25 std)	Recalculated RRF (25 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	2/28/07	Methylene chloride (1st internal standard)	0.452	0.452	0.474	0.474	7.78	7.78
			Trichlorethene (2nd internal standard)	0.336	0.336	0.331	0.331	5.92	5.92
			~~Toluene~~ 1,2 - Dichlorobenzene (3rd internal standard)	1.365	1.365	1.314	1.314	10.24	10.24
2			~~Methylene chloride~~ Ethyl Benzene (1st internal standard)	1.639	1.639	1.623	1.623	4.92	4.92
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
4			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICLC.1SB

LDC #: 16739C1
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV 6:46	4/2/07	~~Methylene chloride~~ chloroform (1st internal standard)	0.756	0.872	0.872	15.3	15.3
			~~Trichlorethene (2nd internal standard)~~					
			~~Toluene (3rd internal standard)~~					
2	CCV 9:13	4/3/07	Methylene chloride (1st internal standard)	0.474	0.468	0.468	1.3	1.3
			Trichlorethene (2nd internal standard)	0.331	0.357	0.357	7.9	7.9
			~~Toluene~~ 1,2-DCB (3rd internal standard)	1.314	1.403	1.403	6.8	6.8
3			~~Methylene chloride~~ ethyl (1st internal standard)	1.623	1.767	1.767	8.9	8.9
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
4			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CONCLC.1SB

BOE-C6-0054305

LDC #: 16739C1
SDG #: I QC2895

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer:
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1 10X

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8	25.0	27.17	109	109	0
Bromofluorobenzene	↓	25.73	103	103	↓
1,2-Dichloroethane-d4					
Dibromofluoromethane	↓	27.66	111	~~32~~ 111	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

LDC #: 16739C1
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Reviewer: 7
2nd Reviewer: 2

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSDC | * 2/(MSC + MSDC)

MSC = Matrix spike percent recovery; MSDC = Matrix spike duplicate percent recovery

MS/MSD sample: TMW-06-WG032707-0001 MS ID

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	------	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	25.0	25.0	13	36.7	36.4	95	95	94	94	1	1
Trichloroethene	↓	↓	140	158	144	72	72	16	16	9	9
Benzene			ND	26.4	26.0	106	106	104	104	2	2
Toluene			ND	26.5	26.2	106	106	105	105	1	1
Chlorobenzene			ND	27.4	27.2	110	110	109	109	1	1

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

MSDCLC.1SB

LDC #: 1673921
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration
SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: TD03010-BS1

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene	25.0	NA	24.2	NA	97	97				
Trichloroethene			24.8		99	99				
Benzene			25.3		101	101				
Toluene			25.3		101	101				
Chlorobenzene			26.2		105	105	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LCSCLC.1SB

BOE-C6-0054308

LDC #: 167391
SDG #: IQC2895

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: K
2nd reviewer: A

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1 . 0 :

Conc. = $\frac{(1624)(25)(10)}{(\cancel{5415735})(0.423)}$

= 911668

10.5 ng/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Boeing Realty Corp., Bldg C-6 Torrance
Data Validation Reports
LDC# 16739

Maganese

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 14, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Manganese

Validation Level: Tier 1

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC1612

Sample Identification

MWB013_WG031407_0001
MWC021_WG031407_0001
MWB013_WG031407_0001MS
MWB013_WG031407_0001MSD

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Samples indicated by a double asterisk on the front cover underwent a Tier 2 review. A Tier 1 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 1 and 2 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

Calibration data were not reviewed for Tier 1.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the preparation blanks.

IV. ICP Interference Check Sample (ICS) Analysis

ICP interference check sample analysis data were not reviewed for Tier 1.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Manganese - Data Qualification Summary - SDG IQC1612

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Manganese - Laboratory Blank Data Qualification Summary - SDG IQC1612

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-05 (MWB013_WG031407_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	7C14164	N/A	0.020	ND	1	03/14/07	03/15/07	
Sample ID: IQC1612-10 (MWC021_WG031407_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	7C14164	N/A	0.020	**0.030**	1	03/14/07	03/15/07	
~~**Sample ID: IQC1612-11 (TMW_10_WG031407_0001 - Water)**~~									
Reporting Units: mg/l									
~~Manganese~~	~~EPA 6010B-Diss~~	~~7C14164~~	~~N/A~~	~~0.020~~	~~ND~~	~~1~~	~~03/14/07~~	~~03/15/07~~	
~~**Sample ID: IQC1612-12 (TMW_15_WG031407_0001 - Water)**~~									
Reporting Units: mg/l									
~~Manganese~~	~~EPA 6010B-Diss~~	~~7C14164~~	~~N/A~~	~~0.020~~	~~ND~~	~~1~~	~~03/14/07~~	~~03/15/07~~	

05/10/07

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

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LDC #: 16739A4
SDG #: IQC1612
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET

EPA ~~Region~~ 1 - Tier 1

Date: 5/10/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Manganese (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/14/07
II.	Calibration	N	
III.	Blanks	A	PB
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	3 MS/MSD
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: All

1	MWB013_WG031407_0001	11		21		31	
2	MWC021_WG031407_0001	12		22		32	
3	MWB013_WG031407_0001MS	13		23		33	
4	MWB013_WG031407_0001MSD	14		24		34	
5	PB	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 22, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Manganese

Validation Level: Tier 2

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC2470

Sample Identification

CMW002_WG032207_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Manganese - Data Qualification Summary - SDG IQC2470

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Manganese - Laboratory Blank Data Qualification Summary - SDG IQC2470

No Sample Data Qualified in this SDG

TestAmerica

ANALYTICAL TESTING CORPORATION

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

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727	Sampled: 03/22/07
Santa Ana, CA 92705	Report Number:	IQC2470	Received: 03/22/07
Attention: Mehmet Pehlivan			

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
~~**Sample ID: IQC2470-08 (MWB003_WG032207_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~7C23136~~	~~0.0070~~	~~0.020~~	~~**0.31**~~	~~1~~	~~03/23/07~~	~~03/24/07~~	
~~**Sample ID: IQC2470-10 (WCC06S_WG032207_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~7C23136~~	~~0.0070~~	~~0.020~~	~~**4.5**~~	~~1~~	~~03/23/07~~	~~03/24/07~~	
Sample ID: IQC2470-13 (CMW002_WG032207_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	7C23136	0.0070	0.020	**0.15**	1	03/23/07	03/24/07	
~~**Sample ID: IQC2470-14 (IRZCMW002_WG032207_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~7C23136~~	~~0.0070~~	~~0.020~~	~~**2.8**~~	~~1~~	~~03/23/07~~	~~03/24/07~~	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/25/2007

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LDC #: 16739B4
SDG #: IQC2470
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET

EPA ~~Region~~ 1 - Tier 2

Date: 5/10/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Manganese (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/22/07
II.	Calibration	A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	non client.
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	yes
VIII.	Internal Standard (ICP-MS)	N	not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: A2

1	CMW002_WG032207_0001	11		21		31	
2	PB	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 27, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Manganese

Validation Level: Tier 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC2895

Sample Identification

MWB019_WG032707_0001
MWB019_WG032707_0001MS
MWB019_WG032707_0001MSD

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Manganese.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standard (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

All sample result verifications were acceptable.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Manganese - Data Qualification Summary - SDG IQC2895

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Manganese - Laboratory Blank Data Qualification Summary - SDG IQC2895

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2895

Sampled: 03/27/07
Received: 03/27/07

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2895-07 (MWB019_WG032707_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	7C28102	0.0070	0.020	ND	1	03/28/07	03/29/07	
Sample ID: IQC2895-08 (MWC017_WG032707_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	7C28102	0.0070	0.020	**0.082**	1	03/28/07	03/29/07	
Sample ID: IQC2895-09 (IRZMW005_WG032707_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	7C28102	0.0070	0.020	**1.6**	1	03/28/07	03/29/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

LDC #: 16739C4
SDG #: IQC2895
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET

~~EPA Region~~ 1 - Tier 3

Date: 5/10/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Manganese (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/27/07
II.	Calibration	A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	3 MS/MSD
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	not performed
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: As

1	MWB019_WG032707_0001	11		21		31	
2	MWB019_WG032707_0001MS	12		22		32	
3	MWB019_WG032707_0001MSD	13		23		33	
4	PB	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16739c4
SDG #: JAC2895

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: MM
2nd Reviewer: ✓

Method: Metals (EPA SW 846 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury and 85-115% for cyanide) QC limits?	✓			
Were all initial calibration correlation coefficients > 0.995? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. ICP Interference Check Sample				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
V. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VI. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			
VII. Furnace Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analysies have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	

LDC #: 16739
SDG #: 72C895

VALIDATION FINDINGS CHECKLIST

Page: 2 of 4
Reviewer: MM
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
VII. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the IDL?			✓	
Were all percent differences (%Ds) < 10%?			✓	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.			✓	
VIII. Internal Standards (EPA-SW-846 Method 6020)				
Were all the percent recoveries (%R) within the 30-120% of the intensity of the internal standard in the associated initial calibration?			✓	
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XIII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 16739 C4
SDG #: I02895

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: MJ
2nd Reviewer: a

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Mn	1.92	2	96	NR	Y
	GFAA (Initial calibration)						
	CVAA (Initial calibration)						
CCV	ICP (Continuing calibration)	Mn	1.03	1	103	NR	Y
	GFAA (Continuing calibration)						
	CVAA (Continuing calibration)						
	Cyanide (Initial calibration)						
	Cyanide (Continuing calibation)						

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CALCLC.4SW

BOE-C6-0054334

LDC #: 16739c4
SDG #: TAC1895

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MM
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recaluculated using the following formula:

$$\%R = \frac{Found}{True} \times 100$$

Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$$\%D = \frac{|I-SDR|}{I} \times 100$$

Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interferance check	Mn	0.4985	0.500	100	NR	Y
LCS	Laboratory control sample		1.063	1.00	106	106	
2	Matrix spike		(SSR-SR) 1.059	1.00	106	106	
2/3	Duplicate		1.07	1.059	1	1	
MD	ICP serial dilution						

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.4SW

BOE-C6-0054335

LDC #:_____
SDG #:_____

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MW
2nd reviewer: N

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for _____ were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)(\%S)}$

Recalculation:

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor
%S = Decimal percent solids

Sample ID	Analyte	Reported Concentration ( )	Calculated Concentration ( )	Acceptable (Y/N)

RECALC.4S2

Boeing Realty Corp., Bldg C-6 Torrance
Data Validation Reports
LDC# 16739

Wet Chemistry

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 14, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 1

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC1612

Sample Identification

MWB013_WG031407_0001
MWC021_WG031407_0001
MWC021_WG031407_0001MS
MWC021_WG031407_0001MSD

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Chloride, Nitrate, Nitrite, Sulfate, and Orthophosphate, EPA Method 310.1 for Alkalinity, EPA Method 350.3 for Ammonia as Nitrogen, and EPA Method 415.1 for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

b. Calibration Verification

Calibration verification data were not reviewed for Tier 1.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Wet Chemistry - Data Qualification Summary - SDG IQC1612

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IQC1612

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727-01
Report Number: IQC1612

Sampled: 03/14/07
Received: 03/14/07

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1612-05 (MWB013_WG031407_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7C23075	N/A	2.0	**150**	1	03/23/07	03/23/07	
Ammonia-N	EPA 350.3	7C26085	N/A	0.50	ND	1	03/26/07	03/26/07	
Chloride	EPA 300.0	7C14053	N/A	25	**300**	50	03/14/07	03/14/07	
Nitrate-NO3	EPA 300.0	7C14053	N/A	25	**60**	50	03/14/07	03/14/07	
Nitrite-NO2	EPA 300.0	7C14053	N/A	0.50	ND	1	03/14/07	03/14/07	
Orthophosphate - PO4	EPA 300.0	7C14053	N/A	0.50	ND	1	03/14/07	03/14/07	
Sulfate	EPA 300.0	7C14053	N/A	25	**320**	50	03/14/07	03/14/07	
Total Organic Carbon	EPA 415.1	7C20118	N/A	1.0	**2.1**	1	03/20/07	03/20/07	
Sample ID: IQC1612-10 (MWC021_WG031407_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7C23075	N/A	2.0	**160**	1	03/23/07	03/23/07	
Ammonia-N	EPA 350.3	7C26085	N/A	0.50	ND	1	03/26/07	03/26/07	
Chloride	EPA 300.0	7C14053	N/A	25	**120**	50	03/14/07	03/14/07	
Nitrate-NO3	EPA 300.0	7C14053	N/A	0.50	**9.9**	1	03/14/07	03/14/07	
Nitrite-NO2	EPA 300.0	7C14053	N/A	0.50	ND	1	03/14/07	03/14/07	
Orthophosphate - PO4	EPA 300.0	7C14053	N/A	0.50	ND	1	03/14/07	03/14/07	
Sulfate	EPA 300.0	7C14053	N/A	0.50	**57**	1	03/14/07	03/14/07	
Total Organic Carbon	EPA 415.1	7C20118	N/A	1.0	ND	1	03/20/07	03/20/07	
~~**Sample ID: IQC1612-11 (TMW_10_WG031407_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Alkalinity as CaCO3**~~	~~EPA 310.1~~	~~7C23075~~	~~N/A~~	~~2.0~~	~~**280**~~	~~1~~	~~03/23/07~~	~~03/23/07~~	
Ammonia-N	EPA 350.3	7C26085	N/A	0.50	ND	1	03/26/07	03/26/07	
Chloride	EPA 300.0	7C14053	N/A	25	**560**	50	03/14/07	03/14/07	
Nitrate-NO3	EPA 300.0	7C14053	N/A	25	**61**	50	03/14/07	03/14/07	
Nitrite-NO2	EPA 300.0	7C14053	N/A	0.50	ND	1	03/14/07	03/14/07	
Orthophosphate - PO4	EPA 300.0	7C14053	N/A	0.50	**6.4**	1	03/14/07	03/14/07	
Sulfate	EPA 300.0	7C14053	N/A	0.50	**48**	1	03/14/07	03/14/07	
~~**Total Organic Carbon**~~	~~EPA 415.1~~	~~7C20118~~	~~N/A~~	~~1.0~~	~~**1.8**~~	~~1~~	~~03/20/07~~	~~03/20/07~~	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

3/20/07

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LDC #: 16739A6
SDG #: IQC1612
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET

EPA Region 1 - Tier 1

Date: 8/10/07
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: Alkalinity (EPA Method 310.1), Ammonia-N (EPA Method 350.3), Chloride, Nitrate-N, Nitrite-N, Sulfate, Orthophosphate-P (EPA Method 300.0), TOC (EPA Method 415.1)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/14/07
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	A	MB
IVa.	Matrix Spike/(Matrix Spike) Duplicates	A	MS/MSD/Dup
IVb.	Laboratory control samples	A	LCS
V.	Sample result verification	N	
VI.	Overall assessment of data	A	
VII.	Field duplicates	N	
VIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: A2

1	MWB013_WG031407_0001	11		21		31	
2	MWC021_WG031407_0001	12		22		32	
3	MWC021_WG031407_0001MS	13		23		33	
4	MWC021_WG031407_0001MSD	14		24		34	
5	MB	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16739 A6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: _____

All circled methods are applicable to each sample.

Sample ID	Parameter
1, 2	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
3, 4	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____

Comments: _____

METHODS.6

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 22, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 1 & 2

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC2470

Sample Identification

CMW001_WG032207_0001
CMW002_WG032207_0001**
CMW001_WG032207_0001MS
CMW001_WG032207_0001MSD

**Indicates sample underwent Tier 2 review

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Chloride, Nitrate, Nitrite, Sulfate, and Orthophosphate, EPA Method 310.1 for Alkalinity, EPA Method 350.3 for Ammonia as Nitrogen, EPA Method 376.2 for Sulfide, and EPA Method 415.1 for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent a Tier 2 review. A Tier 1 review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Tier 1 criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

Initial calibration data were not reviewed for Tier 1.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

Calibration verification data were not reviewed for Tier 1.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

BOE-C6-0054349

Boeing Realty Corp., Bldg C-6 Torrance
Wet Chemistry - Data Qualification Summary - SDG IQC2470

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IQC2470

No Sample Data Qualified in this SDG

TestAmerica

ANALYTICAL TESTING CORPORATION

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

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2470

Sampled: 03/22/07
Received: 03/22/07

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
~~**Sample ID: IQC2470-08 (MWB003_WG032207_0001 - Water)**~~									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7D02058	2.0	2.0	**340**	1	04/02/07	04/02/07	
Ammonia-N	EPA 350.3	7D03070	0.070	0.50	**0.089**	1	04/03/07	04/03/07	J
Chloride	EPA 300.0	7C23041	5.0	25	**460**	50	03/23/07	03/24/07	
Nitrate-NO3	EPA 300.0	7C22150	0.25	0.50	**8.4**	1	03/22/07	03/23/07	
Nitrite-NO2	EPA 300.0	7C22150	3.0	5.0	ND	10	03/22/07	03/23/07	RL1
Orthophosphate - PO4	EPA 300.0	7C22150	0.40	0.50	ND	1	03/22/07	03/23/07	
Sulfate	EPA 300.0	7C22150	0.15	0.50	**32**	1	03/22/07	03/23/07	
Total Organic Carbon	EPA 415.1	7C29166	0.50	1.0	**1.6**	1	03/29/07	03/29/07	
Sample ID: IQC2470-10 (WCC06S_WG032207_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7D02058	2.0	2.0	**340**	1	04/02/07	04/02/07	
Ammonia-N	EPA 350.3	7D03070	0.070	0.50	**0.35**	1	04/03/07	04/03/07	J
Chloride	EPA 300.0	7C23041	5.0	25	**520**	50	03/23/07	03/24/07	
Nitrate-NO3	EPA 300.0	7C22150	0.25	0.50	**2.9**	1	03/22/07	03/23/07	
Nitrite-NO2	EPA 300.0	7C22150	3.0	5.0	ND	10	03/22/07	03/23/07	RL1
Orthophosphate - PO4	EPA 300.0	7C22150	0.40	0.50	ND	1	03/22/07	03/23/07	
Sulfate	EPA 300.0	7C22150	0.15	0.50	**18**	1	03/22/07	03/23/07	
~~**Total Organic Carbon**~~	~~EPA 415.1~~	~~7C29166~~	~~0.50~~	~~1.0~~	~~**5.2**~~	~~1~~	~~03/29/07~~	~~03/29/07~~	
Sample ID: IQC2470-11 (CMW001_WG032207_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	7C27124	0.010	0.10	**0.032**	1	03/27/07	03/27/07	J
Sample ID: IQC2470-13 (CMW002_WG032207_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7D02058	2.0	2.0	ND	1	04/02/07	04/02/07	
Ammonia-N	EPA 350.3	7D03070	0.070	0.50	**0.17**	1	04/03/07	04/03/07	J
Chloride	EPA 300.0	7C22150	1.0	5.0	**120**	10	03/22/07	03/23/07	
Nitrate-NO3	EPA 300.0	7C22150	0.25	0.50	ND	1	03/22/07	03/23/07	
Nitrite-NO2	EPA 300.0	7C22150	3.0	5.0	ND	10	03/22/07	03/23/07	RL1
Orthophosphate - PO4	EPA 300.0	7C22150	0.40	0.50	ND	1	03/22/07	03/23/07	
Sulfate	EPA 300.0	7C22150	1.5	5.0	**98**	10	03/22/07	03/23/07	
Sulfide	EPA 376.2	7C27124	0.010	0.10	**0.081**	1	03/27/07	03/27/07	J
Total Organic Carbon	EPA 415.1	7C29166	0.50	1.0	**14**	1	03/29/07	03/29/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

NM 1507

The results pertain only to the samples tested in the laboratory. This report shall not be repraduced, except in full, without written permission from TestAmerica.

LDC #: 16739B6
SDG #: IQC2470
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET

EPA ~~Region~~ 1 - Tier 1/2

Date: 5/10/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Alkalinity (EPA Method 310.1), Ammonia-N (EPA Method 350.3), Chloride, Nitrate-~~N~~, Nitrite-~~N~~, Sulfate, Orthophosphate-~~P~~ (EPA Method 300.0), Sulfide (EPA Method 376.2), TOC (EPA Method 415.1)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/22/07
IIa.	Initial calibration	A	Not reviewed for Tier I validation.
IIb.	Calibration verification	A	Not reviewed for Tier I validation.
III.	Blanks	A	
IVa.	Matrix Spike/(Matrix Spike) Duplicates	A	MS/MSD/[illegible]
IVb.	Laboratory control samples	A	LCS
V.	Sample result verification	N	
VI.	Overall assessment of data	A	
VII.	Field duplicates	N	
VIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:* Indicates sample underwent Tier II validation

1	CMW001_WG032207_0001*	11		21		31	
2	CMW002_WG032207_0001 **	12		22		32	
3	CMW001_WG032207_0001MS	13		23		33	
4	CMW001_WG032207_0001MSD	14		24		34	
5	MB	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16739B6
SDG #: 40-2470

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: [illegible]
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter				
1	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}	(S)			
2	pH TDS (Cl) F (NO3) (NO2) (SO4) (PO4) (ALK) CN- (NH3) TKN (TOC) CR6+	(S)			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
M3,4	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}	(S)			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 27, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 3

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IQC2895

Sample Identification

MWB019_WG032707_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Chloride, Nitrate, Nitrite, Sulfate, and Orthophosphate, EPA Method 310.1 for Alkalinity, EPA Method 350.3 for Ammonia as Nitrogen, EPA Method 376.2 for Sulfide, and EPA Method 415.1 for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of this method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for this method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Concentration	Associated Samples
MB	Ammonia as N	0.0783 mg/L	All samples in SDG IQC2895
ICB/CCB	Ammonia as N Orthophosphate	0.1038 mg/L 0.436 mg/L	All samples in SDG IQC2895

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
MWB019_WG032707_0001	Ammonia as N	0.19 mg/L	0.19U mg/L

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

All sample result verifications were acceptable.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Wet Chemistry - Data Qualification Summary - SDG IQC2895

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IQC2895

SDG	Sample	Analyte	Modified Final Concentration	A or P
IQC2895	MWB019_WG032707_0001	Ammonia as N	0.19U mg/L	A

TestAmerica
ANALYTICAL TESTING CORPORATION
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

TAIT Environmental/Boeing
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727
Report Number: IQC2895

Sampled: 03/27/07
Received: 03/27/07

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC2895-07 (MWB019_WG032707_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7D05119	2.0	2.0	**390**	1	04/05/07	04/05/07	
Ammonia-N	EPA 350.3	7D09073	0.070	0.50	**0.19** U	1	04/09/07	04/09/07	B, J
Chloride	EPA 300.0	7C27042	2.0	10	**290**	20	03/27/07	03/28/07	
Nitrate-NO3	EPA 300.0	7C27042	5.0	10	**110**	20	03/27/07	03/28/07	
Nitrite-NO2	EPA 300.0	7C27042	6.0	10	ND	20	03/27/07	03/28/07	RL1
Orthophosphate - PO4	EPA 300.0	7C27042	0.40	0.50	ND	1	03/27/07	03/27/07	
Sulfate	EPA 300.0	7C27042	3.0	10	**560**	20	03/27/07	03/28/07	
Sulfide	EPA 376.2	7D02095	0.010	0.10	**0.026**	1	04/02/07	04/02/07	J
Total Organic Carbon	EPA 415.1	7D03118	0.50	1.0	**1.5**	1	04/03/07	04/03/07	
Sample ID: IQC2895-08 (MWC017_WG032707_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7D05119	2.0	2.0	**200**	1	04/05/07	04/05/07	
Ammonia-N	EPA 350.3	7D09073	0.070	0.50	**0.12**	1	04/09/07	04/09/07	B, J
Chloride	EPA 300.0	7C27042	1.0	5.0	**99**	10	03/27/07	03/28/07	
Nitrate-NO3	EPA 300.0	7C27042	0.25	0.50	**11**	1	03/27/07	03/27/07	
Nitrite-NO2	EPA 300.0	7C27042	0.30	0.50	ND	1	03/27/07	03/27/07	
Orthophosphate - PO4	EPA 300.0	7C27042	0.40	0.50	ND	1	03/27/07	03/27/07	
Sulfate	EPA 300.0	7C27042	0.15	0.50	**58**	1	03/27/07	03/27/07	
Sulfide	EPA 376.2	7D02095	0.010	0.10	**0.023**	1	04/02/07	04/02/07	J
Total Organic Carbon	EPA 415.1	7D03118	0.50	1.0	ND	1	04/03/07	04/03/07	
Sample ID: IQC2895-09 (IRZMW005_WG032707_0001 - Water)									
Reporting Units: mg/l									
Alkalinity as CaCO3	EPA 310.1	7D05119	2.0	2.0	**360**	1	04/05/07	04/05/07	
Ammonia-N	EPA 350.3	7D09073	0.070	0.50	**3.8**	1	04/09/07	04/09/07	
Chloride	EPA 300.0	7C27042	2.0	10	**290**	20	03/27/07	03/28/07	
Nitrate-NO3	EPA 300.0	7C27042	0.25	0.50	**1.5**	1	03/27/07	03/27/07	
Nitrite-NO2	EPA 300.0	7C27042	0.30	0.50	ND	1	03/27/07	03/27/07	
Orthophosphate - PO4	EPA 300.0	7C27042	0.40	0.50	ND	1	03/27/07	03/27/07	
Sulfate	EPA 300.0	7C27042	0.15	0.50	**30**	1	03/27/07	03/27/07	
Sulfide	EPA 376.2	7D02095	0.20	2.0	**4.1**	20	04/02/07	04/02/07	
Total Organic Carbon	EPA 415.1	7D03118	0.50	1.0	**3.2**	1	04/03/07	04/03/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/5/2007

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LDC #: 16739C6
SDG #: IQC2895
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET

~~EPA Region~~ 1 - Tier 3

Date: 5/10/07
Page: 1 of 1
Reviewer: W
2nd Reviewer: L

METHOD: Alkalinity (EPA Method 310.1), Ammonia-N (EPA Method 350.3), Chloride, Nitrate-~~N~~, Nitrite-~~N~~, Sulfate, Orthophosphate-~~P~~ (EPA Method 300.0), Sulfide (EPA Method 376.2), TOC (EPA Method 415.1)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/27/07
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	SW	
IVa.	Matrix Spike/(Matrix Spike) Duplicates	A	non direct MS/MSD/Dup
IVb.	Laboratory control samples	A	LCS
V.	Sample result verification	A	
VI.	Overall assessment of data	A	
VII.	Field duplicates	N	
VIII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	MWB019_WG032707_0001	11		21		31	
2	MB	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16935C6
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: MY
2nd Reviewer: N

Method: Inorganics (EPA Method See cover

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		(non client)
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were < 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 16739C6
SDG #: See cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 1
Reviewer: MY
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
VI. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VII. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 16739C6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MY
2nd reviewer: d

All circled methods are applicable to each sample.

Sample ID	Parameter
1	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} S ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} ____ ____ ____ ____

Comments:

METHODS.6

LDC #: 16739C6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: MY
2nd Reviewer: [illegible]

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y N N/A Were all samples associated with a given method blank?
Y N N/A Were any inorganic contaminants detected above the reporting limit in the method blanks? If yes, please see qualifications below.

Conc. units: mg/L **Associated Samples:** All

Analyte	Blank ID	Maximum ICB/CCB	Blank Action Limit	Sample Identification								
	MB			1								
NH_3-N	0.0783	0.1038	0.519	0.19								
O-PO4		0.436	2.18									

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the methoc blank concentration were qualified as not detected, "U".

BLANKS.6

BOE-C6-0054364

LDC #: 16739C6
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: WM
2nd Reviewer: JL

METHOD: Inorganics, Method See cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$$\%R = \frac{Found}{True} \times 100$$

Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCS	Laboratory control sample	PO4	4.67	5.00	93	93	Y
IPC3093-36	Matrix spike sample	NH3-N	(SSR-SR) 2.15	2.00	108	108	↓
IPC3848-5	Duplicate sample	b/L	~~2.00~~ 1.80	1.80	0	0	↓

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

TOTCLC.6

BOE-C6-0054365

LDC #: 16739 c6
SDG #: See cover

Validatin Findings Worksheet
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: w
2nd Reviewer: R

Method: Inorganics, Method See cover

The correlation coefficient (r) for the calibration of Cl was recalculated.Calibration date: 3/20/07

An initial or continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	conc. Mg/L	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration Calibration verification	Cl	s1	0	7197.84	*0.999986*	0.999986	Y
		s2	0.2	21609.41			
		s3	0.5	57145.97			
		s4	5	589558.07			
		s5	10	1264022.24			
		s6	20	2754745.98			
		s7	30	4466513.23			
CCV Calibration verification	NO2	10	10.28		103	NR	Y
CCV Calibration verification	NO3-N	10	10.82		108		
CCV Calibration verification	S	0.342	0.347		101		

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

BOE-C6-0054366

LDC #: 167396
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MT
2nd reviewer: A

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for _____ reported with a positive detect were recalculated and verified using the following equation:

Concentration =

$$TOC = \frac{Area - 96.918}{312.24}$$

Recalculation:

$$TOC = \frac{554 - 96.918}{312.24} = 1.464 \text{ mg/L}$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	Alk	390	390	Y
		NH3-N	0.19	0.19	
		Cl	290	290	
		NO3	110	110	
		SO4	560	560	
		S	0.026	0.026	
		TOC	1.5	1.5	Y

Note: _____

RECALC.6

Boeing Realty Corp., Bldg C-6 Torrance
Data Validation Reports
LDC# 16739

Dissolved Gases

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 14, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Dissolved Gases

Validation Level: Tier 1

Laboratory: TestAmerica/Air Technology Laboratories, Inc.

Sample Delivery Group (SDG): IQC1612/A7031508

Sample Identification

MWB013_WG031407_0001
MWC021_WG031407_0001

Introduction

This data review covers 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Dissolved Gases.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

b. Calibration Verification

Calibration verification data were not reviewed for Tier 1.

III. Blanks

Method blanks were performed at the required frequency. No dissolved gas contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were analyzed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Dissolved Gases - Data Qualification Summary - SDG IQC1612/A7031508

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Dissolved Gases - Laboratory Blank Data Qualification Summary - SDG IQC1612/A7031508

No Sample Data Qualified in this SDG

Client: TestAmerica
Attn: Nicholas Marz

Client's Project: IQC1612
Date Received: 3/15/2007
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

MWB013 MWC021 - WG031407_0001

Lab No.:	A7031508-01		A7031508-02		~~A7031508-03~~		~~A7031508-04~~			
Client Sample I.D.:	IQC1612-05		IQC1612-10		IQC1612-11		IQC1612-12			
Date Sampled:	3/14/2007		3/14/2007		3/14/2007		3/14/2007			
Date Analyzed:	3/20/2007		3/20/2007		3/20/2007		3/20/2007			
Analyst Initials:	DT		DT		DT		DT			
Data File:	20mar018		20mar019		20mar020		20mar021			
QC Batch:	070320GC8A1		070320GC8A1		070320GC8A1		070320GC8A1			
Dilution Factor:	1.0		1.0		1.0		1.0			
ANALYTE / PQL	RL	Results	RL	Results	RL	Results	RL	Results		
Methane / 1.0	1.0	2.3	1.0	67	1.0	13	1.0	12		
Ethane / 2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND		
Ethylene / 3.0	3.0	ND	3.0	ND	3.0	ND	3.0	ND		
Carbon Dioxide / 200	200	8,500	200	13,000	200	53,000	200	28,000		
Nitrogen / 1,500	1,500	94,000	1,500	94,000	~~1,500~~	~~90,000~~	1,500	~~91,000~~		

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL)
RL = PQL X Dilution Factor

Reviewed/Approved By: Mark J. Johnson
Operations Manager

Date: 3-27-07

The cover letter is an integral part of this analytical report.

4/5/007

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

LDC #: 16739A51 **VALIDATION COMPLETENESS WORKSHEET** Date: 5/10/07

SDG #: IQC1612/A7031508 Tier 1 Page: 1 of 1

Laboratory: ~~Del Mar Analytical~~/Air Technology Laboratory, Inc. Reviewer: [illegible]

Test America 2nd Reviewer: [illegible]

METHOD: GC Dissolved Gases (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/14/07
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS/D
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

5	1 †	MWB013_WG031407_0001	11	MB - 3/20/07	21		31	
97	2 †	MWC021_WG031407_0001	12		22		32	
	3		13		23		33	
	4		14		24		34	
	5		15		25		35	
	6		16		26		36	
	7		17		27		37	
	8		18		28		38	
	9		19		29		39	
	10		20		30		40	

Notes:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 22, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Dissolved Gases

Validation Level: Tier 2

Laboratory: TestAmerica/Air Technology Laboratory, Inc.

Sample Delivery Group (SDG): IQC2470/A7032601

Sample Identification

CMW002_WG032207_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Dissolved Gases.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 25.0% QC limits.

III. Blanks

Method blanks were performed at the required frequency. No dissolved gas contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were analyzed at the required frequency. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-6 Torrance
Dissolved Gases - Data Qualification Summary - SDG IQC2470/A7032601

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Dissolved Gases - Laboratory Blank Data Qualification Summary - SDG IQC2470/A7032601

No Sample Data Qualified in this SDG

Client: TestAmerica
Attn: Nicholas Marz

Client's Project: IQC2470
Date Received: 3/23/2007
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

CMW002-WG032207-000

Lab No.:		A7032601-01		A7032601-02		A7032601-03		A7032601-04			
Client Sample I.D.:		IQC2470-08		IQC2470-10		IQC2470-13		IQC2470-14			
Date Sampled:		3/22/2007		3/22/2007		3/22/2007		3/22/2007			
Date Analyzed:		3/27/2007		3/27/2007		3/27/2007		3/27/2007			
Analyst Initials:		DT		DT		DT		DT			
Data File:		27mar012		27mar013		27mar014		27mar015			
QC Batch:		070327GC8A1		070327GC8A1		070327GC8A1		070327GC8A1			
Dilution Factor:		1.0		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	RL	Results	RL	Results	RL	Results		
Methane	1.0	1.0	8.8	1.0	3.4	1.0	1.8	1.0	17,000		
Ethane	2.0	2.0	ND	2.0	ND	2.0	ND	2.0	ND		
Ethylene	3.0	3.0	ND	3.0	ND	3.0	5.9	3.0	12		
Carbon Dioxide	200	200	50,000	200	92,000	200	13,000	200	210,000		
Nitrogen	1,500	1,500	110,000	1,500	110,000	1,500	110,000	1,500	81,000		

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL)
RL = PQL X Dilution Factor

Reviewed/Approved By: Mark J. Johnson, Operations Manager **Date:** 4/2/07

The cover letter is an integral part of this analytical report.

KC 57007

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

LDC #: 16739B51

VALIDATION COMPLETENESS WORKSHEET

Date: 5/10/07

SDG #: IQC2470/A7032601

Tier 2

Page: 1 of 1

Laboratory: ~~Del Mar Analytical~~/Air Technology Laboratory, Inc.
Test America

Reviewer:

2nd Reviewer:

METHOD: GC Dissolved Gases (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/22/07
IIa.	Initial calibration	A	$r^2 \geq 0.990$
IIb.	Calibration verification	A	% D ≤ 25
III.	Blanks	A	
IVa.	Surrogate recovery	N	not Required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS ID
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

water

1	CMW002_WG032207_0001	11	MB - 3/27/07	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-6 Torrance

Collection Date: March 27, 2007

LDC Report Date: May 10, 2007

Matrix: Water

Parameters: Dissolved Gases

Validation Level: Tier 3

Laboratory: TestAmerica/Air Technology Laboratory, Inc.

Sample Delivery Group (SDG): IQC2895/A7032807

Sample Identification

MWB019_WG032707_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method RSK-175 for Dissolved Gases.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 25.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No dissolved gas contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

All target compound identifications were within validation criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

VII. System Performance

The system performance was acceptable.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

BOE-C6-0054386

Boeing Realty Corp., Bldg C-6 Torrance
Dissolved Gases - Data Qualification Summary - SDG IQC2895/A7032807

No Sample Data Qualified in this SDG

Boeing Realty Corp., Bldg C-6 Torrance
Dissolved Gases - Laboratory Blank Data Qualification Summary - SDG IQC2895/A7032807

No Sample Data Qualified in this SDG

Client: TestAmerica
Attn: Nicholas Marz

Client's Project: IQC2895
Date Received: 3/28/2007
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

MWB019-WG032707-000

Lab No.:		A7032807-01		A7032807-02		A7032807-03					
Client Sample I.D.:		IQC2895-07		IQC2895-08		IQC2895-09					
Date Sampled:		3/27/2007		3/27/2007		3/27/2007					
Date Analyzed:		4/2/2007		4/2/2007		4/2/2007					
Analyst Initials:		DT		DT		DT					
Data File:		02apr009		02apr010		02apr011					
QC Batch:		070402GC8A1		070402GC8A1		070402GC8A1					
Dilution Factor:		1.0		1.0		1.0					
ANALYTE	PQL	RL	Results	RL	Results	RL	Results				
Methane	1.0	1.0	ND	1.0	10,000	1.0	3.5				
Ethane	2.0	2.0	ND	2.0	ND	2.0	ND				
Ethylene	3.0	3.0	ND	3.0	14	3.0	ND				
Carbon Dioxide	200	200	78,000	200	83,000	200	11,000				
Nitrogen	1,500	1,500	110,000	1,500	100,000	1,500	110,000				

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL)
RL = PQL X Dilution Factor

Reviewed/Approved By: _____ **Date:** 4/6/07
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

LDC #: 16739C51 **VALIDATION COMPLETENESS WORKSHEET** Date: 5/10/07

SDG #: IQC2895/A7032807 Tier 3 Page: 1 of 1

Laboratory: ~~Del Mar Analytical~~/Air Technology Laboratory, Inc. Reviewer: [illegible]

Test America 2nd Reviewer: [illegible]

METHOD: GC Dissolved Gases (Method RSK-175)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/27/07
IIa.	Initial calibration	A	$r^2 \geq 0.990$
IIb.	Calibration verification	A	% D ≤ 25
III.	Blanks	A	
IVa.	Surrogate recovery	N	not Required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS/D
V.	Target compound identification	A	
VI.	Compound Quantitation and CRQLs	A	
VII.	System Performance	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	MWB019_WG032707_0001	11	MB - 4/2/07	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 16739C5 /
SDG #: All cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ ~~15%~~ 25.0 or percent recoveries 85-115%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			

LDC #: 16739C51
SDG #: all cover

VALIDATION FINDINGS CHECKLIST

Reviewer:
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Target compound identification				
Were the retention times of reported detects within the RT windows?	✓			
XI. Compound quantitation/CRQLs				
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. System performance				
System performance was found to be acceptable.	✓			
XIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XIV. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds idetected in the field duplicates?			✓	
XV. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	

LDC # 16739C5 /
SDG# pu cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Carbon Dioxide (Method RSK-175)

Parameter: ~~Methane~~ Carbon Dioxide

Order of regression: 1

Date	Column/Detector	Compound	X Mass (ppmV)	Y Area
05/24/2007	TCD	CO2	100	552
			1000	3718
	Front		5000	18595
			10000	40200
			100000	428338
			500000	1987935.0

Regression Output:		Reported	
Constant	0.0	Constant	0.0
Std Err of Y Est	13500.069		
R Squared	0.99971	R Squared	0.999749
No. of Observations	6.000		
Degrees of Freedom	5.000		
X Coefficient(s)	3.98768E+000	X Coefficient(s)	3.98770E+000
Std Err of Coef.	0.03		

BOE-C6-0054392

LDC #: 16739C51
SDG #: all cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC_____

The percent difference (%D) of the initial calibration average Calibration Factors (CF) and the continuing calibration CF were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. CF - CF)/ave. CF
CF = A/C

Where: ave. CF = initial calibration average CF
CF = continuing calibration CF
A = Area of compound
C = Concentration of compound

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %R	Recalculated %D
1	CCV	4/2/07	CO_2	10000	12151	12151	21.5	21.5
	9:09							
2								
3								
4								

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CONCLC.1S

BOE-C6-0054393

LDC #: 16739C5 1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

_____METHOD: ___GC ___HPLC

The percent recoveries (%R) and relative percent differences (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

%Recovery = 100 * (SSC - SC)/SA

RPD =(({SSCLCS - SSCLCSD} * 2) / (SSCLCS + SSCLCSD))*100

Where SSC = Spiked sample concentration
SA = Spike added
LCS = Laboratory Control Sample
SC = Sample concentration
LCSD = Laboratory Control Sample duplicate

LCS/LCSD samples: Les 1P

Compound	Spike Added (ppm)		Sample Conc. (ppm)	Spike Sample Concentration (ppm)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	---	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)	7000	7000	0	7484.3	6375.8	108	108	92	91.1	16	16
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicate findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

BOE-C6-0054394

LDC #: 16739C51
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: B
2nd Reviewer: U

METHOD: __ GC __ HPLC

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10% of the reported results?

Concentration= (A)(Fv)(Df) / (RF)(Vs or Ws)(%S/100)

A= Area or height of the compound to be measured
Fv= Final Volume of extract
Df= Dilution Factor
RF= Average response factor of the compound In the Initial calibration
Vs= Initial volume of the sample
Ws= Initial weight of the sample
%S= Percent Solid

Example:

Sample ID. #1 Compound Name CO_2

Concentration =

$y = mx$

$183283 = (3.9877)(x)$

$x = 45962.258 = 0.04596$ ppm

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
		gas in HS =	$\frac{0.04596(55.51)(44)(1000)}{1640}$	= 68.44	
		gas in liquid =	$\frac{(0.04596)(44)(4)(1000)(273)}{(22.4)(36)(298)}$	= 9.18 mg/L	
		TOTAL =	(68.44 + 9.18)(1000) =	78,000 ug/L	

Comments:

SAMPCALew.wpd

BOE-C6-0054395

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

Tait Environmental Management, Inc.
701 N. Park Center Drive
Santa Ana, CA 92705
ATTN: Mr. Matt Hillman

May 1, 2007

SUBJECT: Boeing Realty Corp. Bldg C-1 Long Beach, Data Validation

Dear Mr. Hillman,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on April 9, 2007. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 16591:

SDG #	Fraction
IQC0980, IQC1776	Volatiles, Semivolatiles, TPH as Extractables, Hexavalent Chromium

The data validation was performed under Tier 1, Tier 2 and Tier 3 guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 1999
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco
Project Manager/Senior Chemist

16591COV.wpd

Attachment 1

LDC #16591 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Bldg C-1 Long Beach)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		SVOA (8270C)		TPH-E (8015)		Cr(VI) (7196A)																									
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	IQC0980	04/11/07	05/02/07	-	-	-	-	-	-	1	0	Tier I																							
A	IQC0980	04/11/07	05/02/07	-	-	-	-	-	-	1	0																								
A	IQC0980	04/11/07	05/02/07	-	-	-	-	-	-	1	0																								
B	IQC1776	04/11/07	05/02/07	1	0	1	0	1	0	-	-																								
Total	B/SC			1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

Shaded cells indicate Tier III validation (all other cells are Tier II validation). Sample counts do not include MS, MSD, or DUP's.

16591ST.wpd

Boeing Realty Corp., Bldg C-1 Long Beach
Data Validation Reports
LDC# 16591

Volatiles

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-1 Long Beach

Collection Date: March 15, 2007

LDC Report Date: April 30, 2007

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC1776

Sample Identification

MW3017_WG031507_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
2/28/07	2-Butanone	0.037 (≥0.05)	All samples in SDG IQC1776	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

All of the continuing calibration RRF values were within method and validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
3/20/07	2-Butanone	0.040 (≥0.05)	All samples in SDG IQC1776	J (all detects) UJ (all non-detects)	A

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
7C20023-BLK1	3/20/07	Tetrahydrofuran	8.39 ug/L	All samples in SDG IQC1776

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
7C20023-BS1	2-Butanone 2-Hexanone	160 (40-140 151 (45-140)	All samples in SDG IQC1776	J (all detects) J (all detects)	P

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Bldg C-1 Long Beach
Volatiles - Data Qualification Summary - SDG IQC1776

SDG	Sample	Compound	Flag	A or P	Reason
IQC1776	MW3017_WG031507_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IQC1776	MW3017_WG031507_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)
IQC1776	MW3017_WG031507_0001	2-Butanone 2-Hexanone	J (all detects) J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp., Bldg C-1 Long Beach
Volatiles - Laboratory Blank Data Qualification Summary - SDG IQC1776

No Sample Data Qualified in this SDG

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

TAIT Environmental/Boeing	Project ID: Boeing C-1 Long Beach	
701 N. Parkcenter Drive	EM-2701	Sampled: 03/15/07
Santa Ana, CA 92705	Report Number: IQC1776	Received: 03/15/07
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1776-04 (MW3017_WG031507_0001 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	7C20023	0.28	1.0	**1.1**	1	03/20/07	03/20/07	
Bromobenzene	EPA 8260B	7C20023	0.27	1.0	ND	1	03/20/07	03/20/07	
Bromochloromethane	EPA 8260B	7C20023	0.32	1.0	ND	1	03/20/07	03/20/07	
Bromodichloromethane	EPA 8260B	7C20023	0.30	1.0	ND	1	03/20/07	03/20/07	
Bromoform	EPA 8260B	7C20023	0.40	1.0	ND	1	03/20/07	03/20/07	
Bromomethane	EPA 8260B	7C20023	0.42	1.0	ND	1	03/20/07	03/20/07	
2-Butanone (MEK)	EPA 8260B	7C20023	3.8	5.0	ND UJ	1	03/20/07	03/20/07	L
n-Butylbenzene	EPA 8260B	7C20023	0.37	1.0	ND	1	03/20/07	03/20/07	
sec-Butylbenzene	EPA 8260B	7C20023	0.25	1.0	**8.3**	1	03/20/07	03/20/07	
tert-Butylbenzene	EPA 8260B	7C20023	0.22	1.0	**0.89**	1	03/20/07	03/20/07	J
Carbon Disulfide	EPA 8260B	7C20023	0.48	1.0	**0.68**	1	03/20/07	03/20/07	J
Carbon tetrachloride	EPA 8260B	7C20023	0.28	0.50	ND	1	03/20/07	03/20/07	
Chlorobenzene	EPA 8260B	7C20023	0.36	1.0	ND	1	03/20/07	03/20/07	
Chloroethane	EPA 8260B	7C20023	0.40	2.0	**0.65**	1	03/20/07	03/20/07	J
Chloroform	EPA 8260B	7C20023	0.33	1.0	ND	1	03/20/07	03/20/07	
Chloromethane	EPA 8260B	7C20023	0.40	2.0	ND	1	03/20/07	03/20/07	
2-Chlorotoluene	EPA 8260B	7C20023	0.28	1.0	ND	1	03/20/07	03/20/07	
4-Chlorotoluene	EPA 8260B	7C20023	0.29	1.0	ND	1	03/20/07	03/20/07	
1,2-Dibromo-3-chloropropane	EPA 8260B	7C20023	0.97	2.0	ND	1	03/20/07	03/20/07	
Dibromochloromethane	EPA 8260B	7C20023	0.28	1.0	ND	1	03/20/07	03/20/07	
1,2-Dibromoethane (EDB)	EPA 8260B	7C20023	0.40	1.0	ND	1	03/20/07	03/20/07	
1,4-Dichlorobenzene	EPA 8260B	7C20023	0.37	1.0	ND	1	03/20/07	03/20/07	
1,2-Dichlorobenzene	EPA 8260B	7C20023	0.32	1.0	ND	1	03/20/07	03/20/07	
1,3-Dichlorobenzene	EPA 8260B	7C20023	0.35	1.0	ND	1	03/20/07	03/20/07	
Dichlorodifluoromethane	EPA 8260B	7C20023	0.79	1.0	ND	1	03/20/07	03/20/07	
1,2-Dichloroethane	EPA 8260B	7C20023	0.28	0.50	**1.2**	1	03/20/07	03/20/07	
1,1-Dichloroethane	EPA 8260B	7C20023	0.27	1.0	**2.6**	1	03/20/07	03/20/07	
1,1-Dichloroethene	EPA 8260B	7C20023	0.42	1.0	ND	1	03/20/07	03/20/07	
cis-1,2-Dichloroethene	EPA 8260B	7C20023	0.32	1.0	ND	1	03/20/07	03/20/07	
trans-1,2-Dichloroethene	EPA 8260B	7C20023	0.27	1.0	ND	1	03/20/07	03/20/07	
1,2-Dichloropropane	EPA 8260B	7C20023	0.35	1.0	ND	1	03/20/07	03/20/07	
2,2-Dichloropropane	EPA 8260B	7C20023	0.34	1.0	ND	1	03/20/07	03/20/07	
cis-1,3-Dichloropropene	EPA 8260B	7C20023	0.22	0.50	ND	1	03/20/07	03/20/07	
1,1-Dichloropropene	EPA 8260B	7C20023	0.28	1.0	ND	1	03/20/07	03/20/07	
trans-1,3-Dichloropropene	EPA 8260B	7C20023	0.32	0.50	ND	1	03/20/07	03/20/07	
Ethylbenzene	EPA 8260B	7C20023	0.25	1.0	**9.4**	1	03/20/07	03/20/07	
Hexachlorobutadiene	EPA 8260B	7C20023	0.38	1.0	ND	1	03/20/07	03/20/07	
2-Hexanone	EPA 8260B	7C20023	2.6	6.0	ND	1	03/20/07	03/20/07	L
Iodomethane	EPA 8260B	7C20023	1.0	2.0	ND	1	03/20/07	03/20/07	
Isopropylbenzene	EPA 8260B	7C20023	0.25	1.0	**8.8**	1	03/20/07	03/20/07	
p-Isopropyltoluene	EPA 8260B	7C20023	0.28	1.0	**1.6**	1	03/20/07	03/20/07	

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

4/04/07

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

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

TAIT Environmental/Boeing	Project ID: Boeing C-1 Long Beach	
701 N. Parkcenter Drive	EM-2701	Sampled: 03/15/07
Santa Ana, CA 92705	Report Number: IQC1776	Received: 03/15/07
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1776-04 (MW3017_WG031507_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	7C20023	0.32	1.0	ND	1	03/20/07	03/20/07	
Methylene chloride	EPA 8260B	7C20023	0.95	1.0	ND	1	03/20/07	03/20/07	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	7C20023	3.5	5.0	ND	1	03/20/07	03/20/07	
n-Propylbenzene	EPA 8260B	7C20023	0.27	1.0	**9.4**	1	03/20/07	03/20/07	
Styrene	EPA 8260B	7C20023	0.16	1.0	ND	1	03/20/07	03/20/07	
1,1,1,2-Tetrachloroethane	EPA 8260B	7C20023	0.27	1.0	ND	1	03/20/07	03/20/07	
1,1,2,2-Tetrachloroethane	EPA 8260B	7C20023	0.24	1.0	ND	1	03/20/07	03/20/07	
Tetrachloroethene	EPA 8260B	7C20023	0.32	1.0	ND	1	03/20/07	03/20/07	
Tetrahydrofuran (THF)	EPA 8260B	7C20023	3.5	10	ND	1	03/20/07	03/20/07	
Toluene	EPA 8260B	7C20023	0.36	1.0	ND	1	03/20/07	03/20/07	
1,2,3-Trichlorobenzene	EPA 8260B	7C20023	0.30	1.0	ND	1	03/20/07	03/20/07	
1,2,4-Trichlorobenzene	EPA 8260B	7C20023	0.48	1.0	ND	1	03/20/07	03/20/07	
1,1,2-Trichloroethane	EPA 8260B	7C20023	0.30	1.0	ND	1	03/20/07	03/20/07	
1,1,1-Trichloroethane	EPA 8260B	7C20023	0.30	1.0	ND	1	03/20/07	03/20/07	
Trichloroethene	EPA 8260B	7C20023	0.26	1.0	ND	1	03/20/07	03/20/07	
Trichlorofluoromethane	EPA 8260B	7C20023	0.34	2.0	ND	1	03/20/07	03/20/07	
1,2,3-Trichloropropane	EPA 8260B	7C20023	0.40	1.0	ND	1	03/20/07	03/20/07	
1,2,4-Trimethylbenzene	EPA 8260B	7C20023	0.23	1.0	**8.3**	1	03/20/07	03/20/07	
1,3,5-Trimethylbenzene	EPA 8260B	7C20023	0.26	1.0	**2.5**	1	03/20/07	03/20/07	
Vinyl acetate	EPA 8260B	7C20023	1.7	6.0	ND	1	03/20/07	03/20/07	
Vinyl chloride	EPA 8260B	7C20023	0.30	0.50	ND	1	03/20/07	03/20/07	
Xylenes, Total	EPA 8260B	7C20023	0.90	1.0	**1.9**	1	03/20/07	03/20/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*111 %*				
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

Rev 2-07

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

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

TAIT Environmental/Boeing	Project ID: Boeing C-1 Long Beach	
701 N. Parkcenter Drive	EM-2701	Sampled: 03/15/07
Santa Ana, CA 92705	Report Number: IQC1776	Received: 03/15/07
Attention: Mehmet Pehlivan		

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQC1776-04RE1 (MW3017_WG031507_0001 - Water) - cont.									
Reporting Units: ug/l									
Acetone	EPA 8260B	7C22010	4.5	10	ND	1	03/22/07	03/22/07	
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				
Surrogate: Dibromofluoromethane (80-120%)					*96 %*				
Surrogate: Toluene-d8 (80-120%)					*98 %*				

TestAmerica - Irvine, CA
Nicholas Marz
Project Manager

3/24/07

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

LDC #: 16591B1
SDG #: IQC1776
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 3

Date: 4/25/07
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/15/07
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD, r^2 ≥0.990
IV.	Continuing calibration	SW	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	MW3018_WG031507_0001
VIII.	Laboratory control samples	SW	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/CRQLs	A	
XIII.	Tentatively identified compounds (TICs)	N	not reported
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: water

1	1 2=F MW3017-WG031507_0001	11	1 TC20023-BLK1	21		31	
2	~~MW3017-WG031507_0001MS~~	12	2 TC22010-BLK1	22		32	
3	MW~~3017-WG031507_0001MSD~~	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 16591 B1
SDG #: see cover

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: [illegible]
2nd Reviewer: [illegible]

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation?	✓			
Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
Were all percent relative standard deviations (%RSD) ≤ 30% and relative response factors (RRF) ≥ 0.05?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) ≤ 25% and relative response factors (RRF) ≥ 0.05?		✓		
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.	✓			
Was a MS/MSD analyzed every 20 samples of each matrix?	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		✓		
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			

DC #: 1659 | B1
SDG #: per cover

VALIDATION FINDINGS CHECKLIST

Reviewer: [illegible]
2nd Reviewer: [illegible]

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?			✓	
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?			✓	
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl choride**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Methyl ethyl ketone	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

BOE-C6-0054411

LDC #: 16591B1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory perform a 5 point calibration prior to sample analysis?
Y N N/A Were percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCC's and SPCC's?
Y N N/A Was a curve fit used for evaluation? If yes, what was the acceptance criteria used for evaluation?_____
Y N N/A Did the initial calibration meet the acceptance criteria?
Y N N/A Were all %RSDs and RRFs within the validation criteria of ≤30 %RSD and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	2/28/07	ICAL	M		0.037	All ~~FBK~~ + 7C20023-BLK1	J/UJ/A

INICAL.1SB

BOE-C6-0054412

LDC #: 16591B1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤25 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤25.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	3/20/07 6:19PM	CCV	M		0.040	All + BLK 7C20023-BLK1	J/UJ/A

CONCAL.1SB

LDC #: 16591B1
SDG #: FQC1776

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer:
2nd Reviewer: AK

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 3/20/07
Conc. units: ug/L
Associated Samples: #1 (ND)

Compound	Blank ID	Sample Identification								
	TC20023-BLK1									
Tetrahydrofuran ~~Methylene chloride~~	8.39									
Acetone										
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

BOE-C6-0054414

LDC #: 16591B1
SDG #: see cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD : GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		MW 301B-WG031587- 0001	III	156 (65-135)	151 (65-135)	( )	none	no QUAL
			MM	151 (45-145)	151 (45-145)	( )	↓	↓
			JJ	160 (25-155)	160 (25-155)	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
H.	1,1-Dichloroethene	59-172%	≤ 22%	61-145%	≤ 14%
S.	Trichloroethene	62-137%	≤ 24%	71-120%	≤ 14%
V.	Benzene	66-142%	≤ 21%	76-127%	≤ 11%
CC.	Toluene	59-139%	≤ 21%	76-125%	≤ 13%
DD.	Chlorobenzene	60-133%	≤ 21%	75-130%	≤ 13%

BOE-C6-0054415

LDC #: 16591B
SDG #: FQC1776

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: B
2nd Reviewer: L

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		TC20023-BS1	M	160 (40-140)	( )	( )	TC20023-BK1,	J/P det
			Z	151 (45-140)	( )	( )	1	J
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LCSLCSD.1SB

BOE-C6-0054416

LDC #: 16591B1
SDG #: IG01776

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL	2/28/07	Methylene chloride (1st internal standard)	0.436	0.436	0.474	0.474	7.78	7.78
			Trichlorethene (2nd internal standard)	0.314	0.314	0.331	0.331	5.92	5.92
			~~Toluene~~ Tetrachloroethane (3rd internal standard)	0.269	0.269	0.281	0.281	5.18	5.18
2			~~Methylene chloride~~ 1,2-DCB (1st internal standard)	1.306	1.306	1.314	1.314	10.24	10.24
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3	ICAL		~~Methylene chloride~~ Acetone (1st internal standard)	0.169	0.169	0.179	0.179	22.59	22.59
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
4			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

INICLC.1SB

BOE-C6-0054417

LDC #: 16591B
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	3/20/07	Methylene chloride (1st internal standard)	0.474	0.492	0.492	3.8	3.8
	6:19PM		Trichlorethene (2nd internal standard)	0.331	0.339	0.339	2.4	2.4
			~~Toluene~~ Tetrachloroethene (3rd internal standard)	0.281	0.281	0.281	0	0
2			~~Methylene chloride~~ 1,2-DCB (1st internal standard)	1.314	1.334	1.334	1.5	1.5
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
3	CCV	3/22/07	~~Methylene chloride~~ Acetone (1st internal standard)	0.179	0.207	0.207	15.6	15.6
	7:10 AM		~~Trichlorethene (2nd internal standard)~~					
			~~Toluene (3rd internal standard)~~					
4			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

CONCLC.1SB

BOE-C6-0054418

LDC #: 16591B
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer:
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8	25.0	26.85	107	107	0
Bromofluorobenzene	↓	27.67	111	111	↓
1,2-Dichloroethane-d4	↓				↓
Dibromofluoromethane	↓	26.84	107	107	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

LDC #: 16591B
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates Results Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SSC - SC)/SA

Where: SSC = Spiked sample concentration; SA = Spike added; SC = Sample concentration

RPD = | MSC - MSDC | * 2/(MSC + MSDC)

MSC = Matrix spike percent recovery; MSDC = Matrix spike duplicate percent recovery

MS/MSD sample: MW3018_WG031507_0001

Compound	Spike Added (ug/L)		Sample Concentration (ug/L)	Spiked Sample Concentration (ug/L)		Matrix Spike Percent Recovery		Matrix Spike Duplicate Percent Recovery		MS/MSD RPD	
	MS	MSD	-----	MS	MSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	25.0	25.0	ND	24.7	24.4	99	99	98	98	1	1
Trichloroethene	↓		ND	25.7	25.6	103	103	102	102	0	0
Benzene	25.0		0.94	27.9	27.7	108	108	107	107	1	1
Toluene			ND	27.0	26.9	108	108	108	108	0	0
Chlorobenzene	↓	↓	ND	27.6	27.3	110	110	109	109	1	1

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

MSDCLC.1SB

LDC #: 16591B)
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SA = Spike added

RPD = i LCS - LCSD I * 2/(LCS + LCSD)

LCS = Laboraotry control sample percent recovery

LCSD = Laboratory control sample dupiicate percent recovery

LCS ID: 7C20023 - BS1

Compound	Spike Added (ug/L)		Spiked Sample Concentration (ug/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	25.0	NA	23.8	NA	95	95				
Trichloroethene			26.4		106	106				
Benzene			27.4		110	110				
Toluene			27.2		109	109				
Chlorobenzene			27.7		111	111	NA			

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LCSCLC.1SB

BOE-C6-0054421

LDC #: 16591B1
SDG #: per cover

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 5
2nd reviewer: R

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were all reported results recalculated and verified for all level IV samples?

Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. #1 . Benzene

Conc. = $\frac{(69826)(25)(\quad)(\quad)}{(1440237)(1.069)(\quad)(\quad)}$

= 1.13 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

Boeing Realty Corp., Bldg C-1 Long Beach
Data Validation Reports
LDC# 16591

Semivolatiles

LDC

LDC Report# 16591B2

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Boeing Realty Corp., Bldg C-1 Long Beach

Collection Date: March 15, 2007

LDC Report Date: April 30, 2007

Matrix: Water

Parameters: Semivolatiles

Validation Level: Tier 3

Laboratory: TestAmerica

Sample Delivery Group (SDG): IQC1776

Sample Identification

MW3017_WG031507_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination (r^2) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

Average relative response factors (RRF) for all semivolatile target compounds and system performance check compounds (SPCCs) were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

The percent difference (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Flag	A or P
7C16066-LCS/D (All samples in SDG IQC1776)	1,3-Dichlorobenzene	29 (35-120)	-	34 (≤25)	J (all detects) UJ (all non-detects)	P
	1,4-Dichlorobenzene	34 (35-120)	-	27 (≤25)		
	1,2-Dichlorobenzene	35 (40-120)	-	31 (≤25)		
	Hexachlorobutadiene	37 (40-120)	-	32 (≤25)		
	Hexachloroethane	28 (35-120)	-	32 (≤25)		
	1,2,4-Trichlorobenzene	41 (45-120)	-	35 (≤20)		
	Acenaphthene	-	-	33 (≤20)		
	Acenaphthylene	-	-	30 (≤20)		
	Anthracene	-	-	23 (≤20)		
	Benzo(a)anthracene	-	-	24 (≤20)		
	Benzo(k)fluoranthene	-	-	23 (≤20)		
	Benzyl alcohol	-	-	33 (≤20)		
	Bis(2-chloroethoxy)methane	-	-	32 (≤20)		
	Bis(2-chloroethyl) ether	-	-	30 (≤20)		
	Bis(2-chloroisopropyl)ether	-	-	31 (≤20)		
	Bis(2-ethylhexyl)phthalate	-	-	25 (≤20)		
	4-Bromophenyl-phenyl ether	-	-	29 (≤25)		
	Butylbenzylphthalate	-	-	26 (≤20)		
	4-Chloroaniline	-	-	32 (≤25)		
	2-Chloronaphthalene	-	-	32 (≤20)		
	4-Chloro-3-methylphenol	-	-	33 (≤25)		
	2-Chlorophenol	-	-	30 (≤25)		
	4-Chlorophenyl-phenyl ether	-	-	33 (≤20)		
	Chrysene	-	-	28 (≤20)		
	Dibenzofuran	-	-	31 (≤20)		
	3,3'-Dichlorobenzidine	-	-	31 (≤25)		
	2,4-Dichlorophenol	-	-	33 (≤20)		
	2,4-Dimethylphenol	-	-	39 (≤25)		
	2,4-Dinitrophenol	-	-	26 (≤25)		
	2,4-Dinitrotoluene	-	-	24 (≤20)		
	2,6-Dinitrotoluene	-	-	30 (≤20)		
	Di-n-octylphthalate	-	-	30 (≤20)		
	Fluoranthene	-	-	21 (≤20)		
	Fluorene	-	-	34 (≤20)		
	Hexachlorobenzene	-	-	24 (≤20)		
	Hexachlorocyclopentadiene	-	-	70 (≤30)		
	Isophorone	-	-	32 (≤20)		
	2-Methylnaphthalene	-	-	31 (≤20)		
	2-Methylphenol	-	-	33 (≤20)		
	4-Methylphenol	-	-	30 (≤20)		
	Naphthalene	-	-	29 (≤20)		
	2-Nitroaniline	-	-	32 (≤20)		
	3-Nitroaniline	-	-	30 (≤25)		
	4-Nitroaniline	-	-	27 (≤20)		
	Nitrobenzene	-	-	34 (≤25)		
	2-Nitrophenol	-	-	37 (≤25)		
	N-Nitrosodiphenylamine	-	-	24 (≤20		
	N-Nitroso-di-n-propylamine	-	-	32 (≤20)		
	Phenanthrene	-	-	22 (≤20)		
	Phenol	-	-	29 (≤25)		
	2,4,5-Trichlorophenol	-	-	35 (≤30)		
	N-Nitrosodimethylamine	-	-	30 (≤20)		
	1,2-Diphenylhydrazine/Azobenzene	-	-	27 (≤25)		

IX. Regional Quality Assurance and Quality Control

Not applicable.