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

July 17, 2006

SUBJECT: Boeing Realty Corp., Former C-6 Torrance, Dta Validation

Dear Mr. Hillman,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on June 27 and July 10, 2006. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 15169:

SDG #	Fraction
IPF1333, IPF1747, IPF1882	Volatiles, Sulfide

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 2004
- 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

15169COV.wpd

Attachment 1

LDC #15169 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Bldg C-1)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		S= (376.2)																													
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	IPF1333	06/27/06	07/19/06	2	0	1	0	Tier I																											
B	IPF1747	07/10/06	07/19/06	1	0	1	0																												
C	IPF1882	07/10/06	07/19/06	1	0	1	0																												
Total	B/SC			4	0	3	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	0	0	7

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

15169ST.wpd

Boeing Realty Corp., Bldg C-1
Data Validation Reports
LDC# 15169

Volatiles

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: June 13, 2006

LDC Report Date: July 17, 2006

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 1

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPF1333

Sample Identification

CMW001_WG061306_0001
MWB028_WG061306_0001
CMW001_WG061306_0001RE1
CMW001_WG061306_0001RE2
MWB028_WG061306_0001RE

Introduction

This data review covers 5 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 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.

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-C6-0053581

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 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
6F21007-BLK1	6/21/06	Tetrahydrofuran	6.05 ug/L	MWB028_WG061306_0001
6F26012-BLK1	6/26/06	Tetrahydrofuran	8.18 ug/L	CMW001_WG061306_0001RE2

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
6F21007-BS1	Acetone 2-Butanone 2-Hexanone	216 (25-135) 220 (40-135) 177 (40-135)	MWB028_WG061306_0001 6F21007-BLK1	J (all detects) J (all detects) J (all detects)	P
6F22036-BS1	Acetone	144 (25-135)	6F22036-BLK1	J (all detects)	P
6F22036-BS1	Chloromethane 2-Hexanone 4-Methyl-2-pentanone Vinyl acetate	151 (40-140) 159 (40-135) 155 (40-135) 169 (45-145)	CMW001_WG061306_0001 6F22036-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

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.

BOE-C6-0053584

Boeing Realty Corp., Former C-6 Torrance
Volatiles - Data Qualification Summary - SDG IPF1333

SDG	Sample	Compound	Flag	A or P	Reason
IPF1333	MWB028_WG061306_0001	Acetone 2-Butanone 2-Hexanone	J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R)
IPF1333	CMW001_WG061306_0001	Chloromethane 2-Hexanone 4-Methyl-2-pentanone Vinyl acetate	J (all detects) J (all detects) J (all detects) J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp., Former C-6 Torrance
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPF1333

No Sample Data Qualified in this SDG

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Boeing C-6 Torrance
EM2727/Quarterly GW Sampling
Report Number: IPF1333

Sampled: 06/13/06
Received: 06/13/06

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: IPF1333-04 (CMW001_WG061306_0001 - Water)									
Reporting Units: ug/l									
tert-Amyl Methyl Ether (TAME)	EPA 8260B	6F22036	0.33	2.0	ND	1	06/22/06	06/23/06	
Benzene	EPA 8260B	6F22036	0.28	1.0	**11**	1	06/22/06	06/23/06	
Bromobenzene	EPA 8260B	6F22036	0.27	1.0	ND	1	06/22/06	06/23/06	
Bromochloromethane	EPA 8260B	6F22036	0.32	1.0	ND	1	06/22/06	06/23/06	
Bromodichloromethane	EPA 8260B	6F22036	0.30	1.0	ND	1	06/22/06	06/23/06	
Bromoform	EPA 8260B	6F22036	0.32	1.0	ND	1	06/22/06	06/23/06	
Bromomethane	EPA 8260B	6F22036	0.42	1.0	ND	1	06/22/06	06/23/06	
tert-Butanol (TBA)	EPA 8260B	6F22036	3.1	25	ND	1	06/22/06	06/23/06	
2-Butanone (MEK)	EPA 8260B	6F22036	3.8	5.0	ND	1	06/22/06	06/23/06	
n-Butylbenzene	EPA 8260B	6F22036	0.37	1.0	ND	1	06/22/06	06/23/06	
sec-Butylbenzene	EPA 8260B	6F22036	0.25	1.0	ND	1	06/22/06	06/23/06	
tert-Butylbenzene	EPA 8260B	6F22036	0.22	1.0	ND	1	06/22/06	06/23/06	
Carbon Disulfide	EPA 8260B	6F22036	0.48	1.0	ND	1	06/22/06	06/23/06	
Carbon tetrachloride	EPA 8260B	6F22036	0.28	0.50	ND	1	06/22/06	06/23/06	
Chloroethane	EPA 8260B	6F22036	0.40	2.0	ND	1	06/22/06	06/23/06	
Chloroform	EPA 8260B	6F22036	0.33	1.0	ND	1	06/22/06	06/23/06	
Chloromethane	EPA 8260B	6F22036	0.30	2.0	ND	1	06/22/06	06/23/06	L
2-Chlorotoluene	EPA 8260B	6F22036	0.28	1.0	ND	1	06/22/06	06/23/06	
4-Chlorotoluene	EPA 8260B	6F22036	0.29	1.0	ND	1	06/22/06	06/23/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6F22036	0.92	2.0	ND	1	06/22/06	06/23/06	
Dibromochloromethane	EPA 8260B	6F22036	0.28	1.0	ND	1	06/22/06	06/23/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6F22036	0.32	1.0	ND	1	06/22/06	06/23/06	
1,4-Dichlorobenzene	EPA 8260B	6F22036	0.37	1.0	**13**	1	06/22/06	06/23/06	
1,2-Dichlorobenzene	EPA 8260B	6F22036	0.32	1.0	**1.9**	1	06/22/06	06/23/06	
1,3-Dichlorobenzene	EPA 8260B	6F22036	0.35	1.0	ND	1	06/22/06	06/23/06	
Dichlorodifluoromethane	EPA 8260B	6F22036	0.79	1.0	ND	1	06/22/06	06/23/06	
1,2-Dichloroethane	EPA 8260B	6F22036	0.28	0.50	ND	1	06/22/06	06/23/06	
1,1-Dichloroethane	EPA 8260B	6F22036	0.27	1.0	ND	1	06/22/06	06/23/06	
1,1-Dichloroethene	EPA 8260B	6F22036	0.42	1.0	ND	1	06/22/06	06/23/06	
cis-1,2-Dichloroethene	EPA 8260B	6F22036	0.32	1.0	ND	1	06/22/06	06/23/06	
trans-1,2-Dichloroethene	EPA 8260B	6F22036	0.27	1.0	ND	1	06/22/06	06/23/06	
1,2-Dichloropropane	EPA 8260B	6F22036	0.35	1.0	ND	1	06/22/06	06/23/06	
2,2-Dichloropropane	EPA 8260B	6F22036	0.34	1.0	ND	1	06/22/06	06/23/06	
cis-1,3-Dichloropropene	EPA 8260B	6F22036	0.22	0.50	ND	1	06/22/06	06/23/06	
1,1-Dichloropropene	EPA 8260B	6F22036	0.28	1.0	ND	1	06/22/06	06/23/06	
trans-1,3-Dichloropropene	EPA 8260B	6F22036	0.32	0.50	ND	1	06/22/06	06/23/06	
Ethylbenzene	EPA 8260B	6F22036	0.25	1.0	**1.5**	1	06/22/06	06/23/06	
Hexachlorobutadiene	EPA 8260B	6F22036	0.38	1.0	ND	1	06/22/06	06/23/06	
2-Hexanone	EPA 8260B	6F22036	2.6	6.0	ND	1	06/22/06	06/23/06	C, L
Iodomethane	EPA 8260B	6F22036	1.0	2.0	ND	1	06/22/06	06/23/06	
Isopropylbenzene	EPA 8260B	6F22036	0.25	1.0	ND	1	06/22/06	06/23/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

9 27/2006

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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/Quarterly GW Sampling
Report Number: IPF1333

Sampled: 06/13/06
Received: 06/13/06

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: IPF1333-04 (CMW001_WG061306_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6F22036	0.28	1.0	ND	1	06/22/06	06/23/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6F22036	0.32	1.0	ND	1	06/22/06	06/23/06	
Methylene chloride	EPA 8260B	6F22036	0.70	1.0	ND	1	06/22/06	06/23/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6F22036	3.5	5.0	ND	1	06/22/06	06/23/06	L
n-Propylbenzene	EPA 8260B	6F22036	0.27	1.0	ND	1	06/22/06	06/23/06	
Styrene	EPA 8260B	6F22036	0.16	1.0	ND	1	06/22/06	06/23/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6F22036	0.27	1.0	ND	1	06/22/06	06/23/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6F22036	0.24	1.0	ND	1	06/22/06	06/23/06	
Tetrachloroethene	EPA 8260B	6F22036	0.32	1.0	**1.3**	1	06/22/06	06/23/06	
Toluene	EPA 8260B	6F22036	0.36	1.0	ND	1	06/22/06	06/23/06	
1,2,3-Trichlorobenzene	EPA 8260B	6F22036	0.45	1.0	ND	1	06/22/06	06/23/06	
1,2,4-Trichlorobenzene	EPA 8260B	6F22036	0.48	1.0	ND	1	06/22/06	06/23/06	
1,1,2-Trichloroethane	EPA 8260B	6F22036	0.30	1.0	ND	1	06/22/06	06/23/06	
1,1,1-Trichloroethane	EPA 8260B	6F22036	0.30	1.0	ND	1	06/22/06	06/23/06	
Trichloroethene	EPA 8260B	6F22036	0.26	1.0	**4.5**	1	06/22/06	06/23/06	
Trichlorofluoromethane	EPA 8260B	6F22036	0.34	2.0	ND	1	06/22/06	06/23/06	
1,2,3-Trichloropropane	EPA 8260B	6F22036	0.40	1.0	ND	1	06/22/06	06/23/06	
1,2,4-Trimethylbenzene	EPA 8260B	6F22036	0.23	1.0	ND	1	06/22/06	06/23/06	
1,3,5-Trimethylbenzene	EPA 8260B	6F22036	0.26	1.0	ND	1	06/22/06	06/23/06	
Vinyl acetate	EPA 8260B	6F22036	1.7	6.0	ND	1	06/22/06	06/23/06	L
Vinyl chloride	EPA 8260B	6F22036	0.26	0.50	ND	1	06/22/06	06/23/06	
Xylenes, Total	EPA 8260B	6F22036	0.90	1.0	**4.2**	1	06/22/06	06/23/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*116 %*				
Surrogate: Dibromofluoromethane (80-120%)					*103 %*				
Surrogate: Toluene-d8 (80-120%)					*90 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

K 07/3/06

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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/Quarterly GW Sampling
Report Number: IPF1333

Sampled: 06/13/06
Received: 06/13/06

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: IPF1333-04RE1 (CMW001_WG061306_0001 - Water) - cont.									
Reporting Units: ug/l									
Chlorobenzene	EPA 8260B	6F23024	18	50	**5500**	50	06/23/06	06/24/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*91 %*				
Surrogate: Dibromofluoromethane (80-120%)					*102 %*				
Surrogate: Toluene-d8 (80-120%)					*92 %*				

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Michele Chamberlin
Project Manager

M 07/20/06

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727/Quarterly GW Sampling	Sampled: 06/13/06
Santa Ana, CA 92705	Report Number:	IPF1333	Received: 06/13/06
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: IPF1333-04RE2 (CMW001_WG061306_0001 - Water) - cont.									**HS**
Reporting Units: ug/l									
Acetone	EPA 8260B	6F26012	4.5	10	ND	1	06/26/06	06/26/06	C
Tetrahydrofuran (THF)	EPA 8260B	6F26012	2.3	10	ND	1	06/26/06	06/26/06	N-2
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				
Surrogate: Dibromofluoromethane (80-120%)					*109 %*				
Surrogate: Toluene-d8 (80-120%)					*99 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

M 07/06

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TAIT Environmental/Boeing
701 N. Parkcenter Drive
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Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2727/Quarterly GW Sampling
Report Number: IPF1333

Sampled: 06/13/06
Received: 06/13/06

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: IPF1333-06 (MWB028_WG061306_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6F21007	4.5	10	ND	1	06/21/06	06/21/06	C, L
Benzene	EPA 8260B	6F21007	0.28	1.0	ND	1	06/21/06	06/21/06	
Bromobenzene	EPA 8260B	6F21007	0.27	1.0	ND	1	06/21/06	06/21/06	
Bromochloromethane	EPA 8260B	6F21007	0.32	1.0	ND	1	06/21/06	06/21/06	
Bromodichloromethane	EPA 8260B	6F21007	0.30	1.0	ND	1	06/21/06	06/21/06	
Bromoform	EPA 8260B	6F21007	0.32	1.0	ND	1	06/21/06	06/21/06	
Bromomethane	EPA 8260B	6F21007	0.42	1.0	ND	1	06/21/06	06/21/06	
2-Butanone (MEK)	EPA 8260B	6F21007	3.8	5.0	ND	1	06/21/06	06/21/06	C, L
n-Butylbenzene	EPA 8260B	6F21007	0.37	1.0	ND	1	06/21/06	06/21/06	
sec-Butylbenzene	EPA 8260B	6F21007	0.25	1.0	ND	1	06/21/06	06/21/06	
tert-Butylbenzene	EPA 8260B	6F21007	0.22	1.0	ND	1	06/21/06	06/21/06	
Carbon Disulfide	EPA 8260B	6F21007	0.48	1.0	ND	1	06/21/06	06/21/06	
Carbon tetrachloride	EPA 8260B	6F21007	0.28	0.50	ND	1	06/21/06	06/21/06	
Chlorobenzene	EPA 8260B	6F21007	0.36	1.0	**1.4**	1	06/21/06	06/21/06	
Chloroethane	EPA 8260B	6F21007	0.40	2.0	ND	1	06/21/06	06/21/06	
Chloroform	EPA 8260B	6F21007	0.33	1.0	**1.8**	1	06/21/06	06/21/06	
Chloromethane	EPA 8260B	6F21007	0.30	2.0	ND	1	06/21/06	06/21/06	
2-Chlorotoluene	EPA 8260B	6F21007	0.28	1.0	ND	1	06/21/06	06/21/06	
4-Chlorotoluene	EPA 8260B	6F21007	0.29	1.0	ND	1	06/21/06	06/21/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6F21007	0.92	2.0	ND	1	06/21/06	06/21/06	
Dibromochloromethane	EPA 8260B	6F21007	0.28	1.0	ND	1	06/21/06	06/21/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6F21007	0.32	1.0	ND	1	06/21/06	06/21/06	
1,4-Dichlorobenzene	EPA 8260B	6F21007	0.37	1.0	ND	1	06/21/06	06/21/06	
1,2-Dichlorobenzene	EPA 8260B	6F21007	0.32	1.0	ND	1	06/21/06	06/21/06	
1,3-Dichlorobenzene	EPA 8260B	6F21007	0.35	1.0	ND	1	06/21/06	06/21/06	
Dichlorodifluoromethane	EPA 8260B	6F21007	0.79	1.0	ND	1	06/21/06	06/21/06	
1,2-Dichloroethane	EPA 8260B	6F21007	0.28	0.50	ND	1	06/21/06	06/21/06	
1,1-Dichloroethane	EPA 8260B	6F21007	0.27	1.0	ND	1	06/21/06	06/21/06	
1,1-Dichloroethene	EPA 8260B	6F21007	0.42	1.0	**4.6**	1	06/21/06	06/21/06	
cis-1,2-Dichloroethene	EPA 8260B	6F21007	0.32	1.0	**0.75**	1	06/21/06	06/21/06	J
trans-1,2-Dichloroethene	EPA 8260B	6F21007	0.27	1.0	ND	1	06/21/06	06/21/06	
1,2-Dichloropropane	EPA 8260B	6F21007	0.35	1.0	ND	1	06/21/06	06/21/06	
2,2-Dichloropropane	EPA 8260B	6F21007	0.34	1.0	ND	1	06/21/06	06/21/06	
cis-1,3-Dichloropropene	EPA 8260B	6F21007	0.22	0.50	ND	1	06/21/06	06/21/06	
1,1-Dichloropropene	EPA 8260B	6F21007	0.28	1.0	ND	1	06/21/06	06/21/06	
trans-1,3-Dichloropropene	EPA 8260B	6F21007	0.32	0.50	ND	1	06/21/06	06/21/06	
Ethylbenzene	EPA 8260B	6F21007	0.25	1.0	ND	1	06/21/06	06/21/06	
Hexachlorobutadiene	EPA 8260B	6F21007	0.38	1.0	ND	1	06/21/06	06/21/06	
2-Hexanone	EPA 8260B	6F21007	2.6	6.0	ND	1	06/21/06	06/21/06	L
Iodomethane	EPA 8260B	6F21007	1.0	2.0	ND	1	06/21/06	06/21/06	
Isopropylbenzene	EPA 8260B	6F21007	0.25	1.0	ND	1	06/21/06	06/21/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

↑ 07/20/06

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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/Quarterly GW Sampling
Report Number: IPF1333

Sampled: 06/13/06
Received: 06/13/06

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: IPF1333-06 (MWB028_WG061306_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6F21007	0.28	1.0	ND	1	06/21/06	06/21/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6F21007	0.32	1.0	ND	1	06/21/06	06/21/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6F21007	3.5	5.0	ND	1	06/21/06	06/21/06	
n-Propylbenzene	EPA 8260B	6F21007	0.27	1.0	ND	1	06/21/06	06/21/06	
Styrene	EPA 8260B	6F21007	0.16	1.0	ND	1	06/21/06	06/21/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6F21007	0.27	1.0	ND	1	06/21/06	06/21/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6F21007	0.24	1.0	ND	1	06/21/06	06/21/06	
Tetrachloroethene	EPA 8260B	6F21007	0.32	1.0	ND	1	06/21/06	06/21/06	
Tetrahydrofuran (THF)	EPA 8260B	6F21007	2.3	10	ND	1	06/21/06	06/21/06	
Toluene	EPA 8260B	6F21007	0.36	1.0	ND	1	06/21/06	06/21/06	
1,2,3-Trichlorobenzene	EPA 8260B	6F21007	0.45	1.0	ND	1	06/21/06	06/21/06	
1,2,4-Trichlorobenzene	EPA 8260B	6F21007	0.48	1.0	ND	1	06/21/06	06/21/06	
1,1,2-Trichloroethane	EPA 8260B	6F21007	0.30	1.0	ND	1	06/21/06	06/21/06	
1,1,1-Trichloroethane	EPA 8260B	6F21007	0.30	1.0	ND	1	06/21/06	06/21/06	
Trichloroethene	EPA 8260B	6F21007	0.26	1.0	**47**	1	06/21/06	06/21/06	
Trichlorofluoromethane	EPA 8260B	6F21007	0.34	2.0	ND	1	06/21/06	06/21/06	
1,2,3-Trichloropropane	EPA 8260B	6F21007	0.40	1.0	ND	1	06/21/06	06/21/06	
1,2,4-Trimethylbenzene	EPA 8260B	6F21007	0.23	1.0	ND	1	06/21/06	06/21/06	
1,3,5-Trimethylbenzene	EPA 8260B	6F21007	0.26	1.0	ND	1	06/21/06	06/21/06	
Vinyl acetate	EPA 8260B	6F21007	1.7	6.0	ND	1	06/21/06	06/21/06	
Vinyl chloride	EPA 8260B	6F21007	0.26	0.50	ND	1	06/21/06	06/21/06	
Xylenes, Total	EPA 8260B	6F21007	0.90	1.0	ND	1	06/21/06	06/21/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*97 %*				
Surrogate: Dibromofluoromethane (80-120%)					*116 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

4 07/7/06

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAIT Environmental/Boeing 701 N. Parkcenter Drive Santa Ana, CA 92705 Attention: Mehmet Pehlivan	Project ID: Boeing C-6 Torrance EM2727/Quarterly GW Sampling Report Number: IPF1333	Sampled: 06/13/06 Received: 06/13/06

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: IPF1333-06RE1 (MWB028_WG061306_0001 - Water) - cont.									
Reporting Units: ug/l									
Methylene chloride	EPA 8260B	6F21030	0.70	1.0	ND	1	06/21/06	06/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Surrogate: Dibromofluoromethane (80-120%)					*116 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				

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Michele Chamberlin
Project Manager

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LDC #: 15169A1
SDG #: IPF1333
Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 1

Date: 7/7/07
Page: 1 of 1
Reviewer: B
2nd Reviewer: C

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: 6/13/06
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	EB-TAITO61306-0001
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	
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:

1 1	CMW001_WG061306_0001	11 1	6F22036-BLK1 ✓	21		31	
2 4	MWB028_WG061306_0001	12 2	CMW001-WG061306-0001RE1	22	DD	32	
3		13 3	CMW001-WG061306-0001RE2	23	THF, F	33	
4		14 5	MWB028-WG061306-0001RE	24	E	34	
5		15		25		35	
6		16		26		36	
7 5	6F21030-BLK1 ✓	17		27		37	
8 4	6F21007-BLK1 ✓	18		28		38	
9 3	6F26012-BLK1	19		29		39	
10 2	6F23024-BLK1 ✓	20		30		40	

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.

LDC #: 15169A1
SDG #: 1PF1333

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: 6/21/06
Conc. units: ng/L
Associated Samples: 2 (ND)

Compound	Blank ID	Sample Identification								
	6F21007-BLK1									
Tetrahydrofuran ~~Methylene chloride~~	6.05									
~~Acetone~~										
CRQL										

Blank analysis date: 6/26/06
Conc. units: ng/L
Associated Samples: 13 (ND)

Compound	Blank ID	Sample Identification								
	6F26012-BLK1									
Tetrahydrofuran ~~Methylene chloride~~	8.18									
~~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-C6-0053595

LDC #: 15169A1
SDG #: 1PF1333

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
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 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
		EB-TAITOG1306-0001MS/D	JJ	156 (15-155)	( )	( )	no ass. sample	no qual
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	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-C6-0053596

LDC #: 15169A1
SDG #: 18F1333

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
		6F21007-BS1	F	216 (25-135)	( )	( )	6F21007-BLK1,	J/P det
			M	220 (40-135)	( )	( )	2	
			Z	177 (40-135)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		6F22036-BS1	F	144 (25-135)	( )	( )	6F22036-BLK1,	J/P det
			A	151 (40-140)	( )	( )		
			Z	159 (40-135)	( )	( )		
			Y	155 (40-135)	( )	( )		
			HH	169 (45-145)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
			A	151 (40-140)	( )	( )	# 1	J/P det
			Z	159 (40-135)	( )	( )		
			Y	155 (40-135)	( )	( )		
			HH	169 (45-145)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LCSLCSD.1SB

BOE-C6-0053597

LDC Report# 15169B1

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: June 15, 2006

LDC Report Date: July 17, 2006

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 2

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IPF1747

Sample Identification

IRZMW001B_WG061506_0001
IRZMW001B_WG061506_0001RE1
IRZMW001B_WG061506_0001RE2

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 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 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.

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.

Date	Compound	%RSD	Associated Samples	Flag	A or P
6/14/06	Tetrahydrofuran	40.99	IRZMW001B_WG061506_0001RE2 6F27012-BLK1	J (all detects) UJ (all non-detects)	A

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
6/9/06	2-Butanone	0.034 (≥0.05)	IRZMW001B_WG061506_0001 6F26024-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
6/27/06	Tetrahydrofuran	30	IRZMW001B_WG061506_0001RE2 6F27012-BLK1	J (all detects) UJ (all non-detects)	A
6/26/06	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	75.0 76.5 35.5 40.4	IRZMW001B_WG061506_0001 6F26024-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.

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) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
6F26024-BS1	Trichlorofluoromethane	144 (60-140)	IRZMW001B_WG061506_0001 6F26024-BLK1	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

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp., Former C-6 Torrance
Volatiles - Data Qualification Summary - SDG IPF1747

SDG	Sample	Compound	Flag	A or P	Reason
IPF1747	IRZMW001B_WG061506_0001RE2	Tetrahydrofuran	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD)
IPF1747	IRZMW001B_WG061506_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IPF1747	IRZMW001B_WG061506_0001RE2	Tetrahydrofuran	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
IPF1747	IRZMW001B_WG061506_0001	Acetone 2-Butanone 4-Methyl-2-pentanone 2-Hexanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
IPF1747	IRZMW001B_WG061506_0001	Trichlorofluoromethane	J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp., Former C-6 Torrance
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPF1747

No Sample Data Qualified in this SDG

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Del Mar Analytical

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

Project ID: Boeing C-6 Torrance
EM2727/Quarterly GW Sampling
Report Number: IPF1747

Sampled: 06/15/06
Received: 06/15/06

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: IPF1747-02 (IRZMW001B_WG061506_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6F26024	4.5	10	ND UJ	1	06/26/06	06/27/06	C
Benzene	EPA 8260B	6F26024	0.28	1.0	ND	1	06/26/06	06/27/06	
Bromobenzene	EPA 8260B	6F26024	0.27	1.0	ND	1	06/26/06	06/27/06	
Bromochloromethane	EPA 8260B	6F26024	0.32	1.0	ND	1	06/26/06	06/27/06	
Bromodichloromethane	EPA 8260B	6F26024	0.30	1.0	ND	1	06/26/06	06/27/06	
Bromoform	EPA 8260B	6F26024	0.32	1.0	ND	1	06/26/06	06/27/06	
Bromomethane	EPA 8260B	6F26024	0.42	1.0	ND	1	06/26/06	06/27/06	
2-Butanone (MEK)	EPA 8260B	6F26024	3.8	5.0	ND UJ	1	06/26/06	06/27/06	C
n-Butylbenzene	EPA 8260B	6F26024	0.37	1.0	ND	1	06/26/06	06/27/06	
sec-Butylbenzene	EPA 8260B	6F26024	0.25	1.0	ND	1	06/26/06	06/27/06	
tert-Butylbenzene	EPA 8260B	6F26024	0.22	1.0	ND	1	06/26/06	06/27/06	
Carbon Disulfide	EPA 8260B	6F26024	0.48	1.0	ND	1	06/26/06	06/27/06	
Carbon tetrachloride	EPA 8260B	6F26024	0.28	0.50	ND	1	06/26/06	06/27/06	
Chlorobenzene	EPA 8260B	6F26024	0.36	1.0	ND	1	06/26/06	06/27/06	
Chloroethane	EPA 8260B	6F26024	0.40	2.0	ND	1	06/26/06	06/27/06	
Chloroform	EPA 8260B	6F26024	0.33	1.0	**1.5**	1	06/26/06	06/27/06	
Chloromethane	EPA 8260B	6F26024	0.30	2.0	ND	1	06/26/06	06/27/06	
2-Chlorotoluene	EPA 8260B	6F26024	0.28	1.0	ND	1	06/26/06	06/27/06	
4-Chlorotoluene	EPA 8260B	6F26024	0.29	1.0	ND	1	06/26/06	06/27/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6F26024	0.92	2.0	ND	1	06/26/06	06/27/06	
Dibromochloromethane	EPA 8260B	6F26024	0.28	1.0	ND	1	06/26/06	06/27/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6F26024	0.32	1.0	ND	1	06/26/06	06/27/06	
1,4-Dichlorobenzene	EPA 8260B	6F26024	0.37	1.0	ND	1	06/26/06	06/27/06	
1,2-Dichlorobenzene	EPA 8260B	6F26024	0.32	1.0	ND	1	06/26/06	06/27/06	
1,3-Dichlorobenzene	EPA 8260B	6F26024	0.35	1.0	ND	1	06/26/06	06/27/06	
Dichlorodifluoromethane	EPA 8260B	6F26024	0.79	1.0	ND	1	06/26/06	06/27/06	
1,2-Dichloroethane	EPA 8260B	6F26024	0.28	0.50	ND	1	06/26/06	06/27/06	
1,1-Dichloroethane	EPA 8260B	6F26024	0.27	1.0	**0.96**	1	06/26/06	06/27/06	J
1,1-Dichloroethene	EPA 8260B	6F26024	0.42	1.0	**28**	1	06/26/06	06/27/06	
trans-1,2-Dichloroethene	EPA 8260B	6F26024	0.27	1.0	**4.0**	1	06/26/06	06/27/06	
1,2-Dichloropropane	EPA 8260B	6F26024	0.35	1.0	ND	1	06/26/06	06/27/06	
2,2-Dichloropropane	EPA 8260B	6F26024	0.34	1.0	ND	1	06/26/06	06/27/06	
cis-1,3-Dichloropropene	EPA 8260B	6F26024	0.22	0.50	ND	1	06/26/06	06/27/06	
1,1-Dichloropropene	EPA 8260B	6F26024	0.28	1.0	ND	1	06/26/06	06/27/06	
trans-1,3-Dichloropropene	EPA 8260B	6F26024	0.32	0.50	ND	1	06/26/06	06/27/06	
Ethylbenzene	EPA 8260B	6F26024	0.25	1.0	ND	1	06/26/06	06/27/06	
Hexachlorobutadiene	EPA 8260B	6F26024	0.38	1.0	ND	1	06/26/06	06/27/06	
2-Hexanone	EPA 8260B	6F26024	2.6	6.0	ND UJ	1	06/26/06	06/27/06	C
Iodomethane	EPA 8260B	6F26024	1.0	2.0	ND	1	06/26/06	06/27/06	
Isopropylbenzene	EPA 8260B	6F26024	0.25	1.0	ND	1	06/26/06	06/27/06	
p-Isopropyltoluene	EPA 8260B	6F26024	0.28	1.0	ND	1	06/26/06	06/27/06	

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Lisa Reightley For Michele Chamberlin
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/Quarterly GW Sampling
Report Number: IPF1747

Sampled: 06/15/06
Received: 06/15/06

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: IPF1747-02 (IRZMW001B_WG061506_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6F26024	0.32	1.0	ND	1	06/26/06	06/27/06	
Methylene chloride	EPA 8260B	6F26024	0.70	1.0	**0.84**	1	06/26/06	06/27/06	J
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6F26024	3.5	5.0	ND UJ	1	06/26/06	06/27/06	C
n-Propylbenzene	EPA 8260B	6F26024	0.27	1.0	ND	1	06/26/06	06/27/06	
Styrene	EPA 8260B	6F26024	0.16	1.0	ND	1	06/26/06	06/27/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6F26024	0.27	1.0	ND	1	06/26/06	06/27/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6F26024	0.24	1.0	ND	1	06/26/06	06/27/06	
Tetrachloroethene	EPA 8260B	6F26024	0.32	1.0	**0.32**	1	06/26/06	06/27/06	J
Toluene	EPA 8260B	6F26024	0.36	1.0	ND	1	06/26/06	06/27/06	
1,2,3-Trichlorobenzene	EPA 8260B	6F26024	0.45	1.0	ND	1	06/26/06	06/27/06	
1,2,4-Trichlorobenzene	EPA 8260B	6F26024	0.48	1.0	ND	1	06/26/06	06/27/06	
1,1,2-Trichloroethane	EPA 8260B	6F26024	0.30	1.0	ND	1	06/26/06	06/27/06	
1,1,1-Trichloroethane	EPA 8260B	6F26024	0.30	1.0	ND	1	06/26/06	06/27/06	
Trichlorofluoromethane	EPA 8260B	6F26024	0.34	2.0	ND	1	06/26/06	06/27/06	L
1,2,3-Trichloropropane	EPA 8260B	6F26024	0.40	1.0	ND	1	06/26/06	06/27/06	
1,2,4-Trimethylbenzene	EPA 8260B	6F26024	0.23	1.0	ND	1	06/26/06	06/27/06	
1,3,5-Trimethylbenzene	EPA 8260B	6F26024	0.26	1.0	ND	1	06/26/06	06/27/06	
Vinyl acetate	EPA 8260B	6F26024	1.7	6.0	ND	1	06/26/06	06/27/06	
Vinyl chloride	EPA 8260B	6F26024	0.26	0.50	**0.51**	1	06/26/06	06/27/06	
Xylenes, Total	EPA 8260B	6F26024	0.90	1.0	ND	1	06/26/06	06/27/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*86 %*				
Surrogate: Dibromofluoromethane (80-120%)					*110 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				

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RC 07/23/06

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TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727/Quarterly GW Sampling	Sampled: 06/15/06
Santa Ana, CA 92705	Report Number:	IPF1747	Received: 06/15/06
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: IPF1747-02RE1 (IRZMW001B_WG061506_0001 - Water) - cont.									
Reporting Units: ug/l									
cis-1,2-Dichloroethene	EPA 8260B	6F27007	6.4	20	**1100**	20	06/27/06	06/27/06	
Trichloroethene	EPA 8260B	6F27007	5.2	20	**870**	20	06/27/06	06/27/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*102 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				

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Lisa Reightley For Michele Chamberlin
Project Manager

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727/Quarterly GW Sampling	Sampled: 06/15/06
Santa Ana, CA 92705	Report Number:	IPF1747	Received: 06/15/06
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: IPF1747-02RE2 (IRZMW001B_WG061506_0001 - Water) - cont.									**N-2**
Reporting Units: ug/l									
Tetrahydrofuran (THF)	EPA 8260B	6F27012	4.6	20	**12** J	2	06/27/06	06/27/06	C, J
Surrogate: 4-Bromofluorobenzene (80-120%)					*89 %*				
Surrogate: Dibromofluoromethane (80-120%)					*101 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				

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Lisa Reightley For Michele Chamberlin
Project Manager

07/20

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LDC #: 15169B1
SDG #: IPF1747
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 2

Date: 7/12/06
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: 6/15/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	SW	% RSD, r^2 ≥ 0.990
IV.	Continuing calibration	SW	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
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	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

2 1	IRZMW001B_WG061506_0001	11 1	6F26024-BLK1	21		31	
2 2	IRZMW001B-WG061506-0001RE1	12 2	6F27007-BLK1	22	acq, S	32	
3 3	IRZMW001B-WG061506-0001RE2	13 3	6F27012-BLK1	23	THF ✓	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	

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-C6-0053609

DC #: 151698 1
SDG #: 1PF1747

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? $r^2 \geq 0.990$
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
	6/9/06	GCMS-13 ICAL	M		0.034	6F26024-BLK1 #1	J/UJ/A
	6/14/06	GCMS-1 ICAL	Tetrahydrofuran	40.99		6F27012-BLK1 #3	J/UJ/A

BOE-C6-0053610

INICAL 1SB

LDC #: 15169B1
SDG #: 1PF1747

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

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

METHOD: GC/MS VOA (EPA SW 846 Method 8260)
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
	6/27/06	CCV	Tetrahydrofuran	30		6F27012-BLK1,	J/UJ/A
	8:07AM					3	
	6/26/06	CCV	F	75.0		6F26024-BLK1	J/UJ/A
	6:47PM		M	76.5		# 1	
			Y	35.5		↓	↓
			Z	40.4			

BOE-C6-0053611

.DC #: 1516981
SDG #: 1PF1747

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
		6F26024-BS1	KK	144 (60-140)	( )	( )	6F26024-BLK1,	J/Pdt.
				( )	( )	( )	#1	
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LCSLCSD.1SB

BOE-C6-0053612

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: June 16, 2006

LDC Report Date: July 17, 2006

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 3

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IPF1882

Sample Identification

IRZB0081_WG061606_0001
IRZB0081_WG061606_0001RE

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 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 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.

BOE-C6-0053614

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 with the following exceptions:

Date	Compound	%RSD	Associated Samples	Flag	A or P
4/4/06	Tetrahydrofuran	36.17	IRZB0081_WG061606_0001RE 6F30022-BLK1	J (all detects) UJ (all non-detects)	A

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
6/28/06	2-Butanone	0.041 (≥0.05)	IRZB0081_WG061606_0001 6F29038-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.

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
6/29/06	2-Butanone	0.047 (≥0.05)	IRZB0081_WG061606_0001 6F29038-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
6F29038-BLK1	6/29/06	Methylene chloride	0.720 ug/L	IRZB0081_WG061606_0001
6F30022-BLK1	6/30/06	Tetrahydrofuran	7.47 ug/L	IRZB0081_WG061606_0001RE

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
IRZB0081_WG061606_0001 (20X)	Methylene chloride	34 ug/L	34U 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

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) were within QC limits with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
6F29038-BS1	Dichlorodifluoromethane	166 (25-155)	IRZB0081_WG061606_0001 6F29038-BLK1	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., Former C-6 Torrance
Volatiles - Data Qualification Summary - SDG IPF1882

SDG	Sample	Compound	Flag	A or P	Reason
IPF1882	IRZB0081_WG061606_0001RE	Tetrahydrofuran	J (all detects) UJ (all non-detects)	A	Initial calibration (%RSD)
IPF1882	IRZB0081_WG061606_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IPF1882	IRZB0081_WG061606_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)
IPF1882	IRZB0081_WG061606_0001	Dichlorodifluoromethane	J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp., Former C-6 Torrance
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPF1882

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
IPF1882	IRZB0081_WG061606_0001 (20X)	Methylene chloride	34U ug/L	A

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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/Quarterly GW Sampling
Report Number: IPF1882

Sampled: 06/16/06
Received: 06/16/06

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: IPF1882-10 (IRZB0081_WG061606_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6F29038	90	200	ND	20	06/29/06	06/30/06	
Benzene	EPA 8260B	6F29038	5.6	20	ND	20	06/29/06	06/30/06	
Bromobenzene	EPA 8260B	6F29038	5.4	20	ND	20	06/29/06	06/30/06	
Bromochloromethane	EPA 8260B	6F29038	6.4	20	ND	20	06/29/06	06/30/06	
Bromodichloromethane	EPA 8260B	6F29038	6.0	20	ND	20	06/29/06	06/30/06	
Bromoform	EPA 8260B	6F29038	6.4	20	ND	20	06/29/06	06/30/06	
Bromomethane	EPA 8260B	6F29038	8.4	20	ND	20	06/29/06	06/30/06	
2-Butanone (MEK)	EPA 8260B	6F29038	76	100	ND UJ	20	06/29/06	06/30/06	
n-Butylbenzene	EPA 8260B	6F29038	7.4	20	ND	20	06/29/06	06/30/06	
sec-Butylbenzene	EPA 8260B	6F29038	5.0	20	ND	20	06/29/06	06/30/06	
tert-Butylbenzene	EPA 8260B	6F29038	4.4	20	ND	20	06/29/06	06/30/06	
Carbon Disulfide	EPA 8260B	6F29038	9.6	20	ND	20	06/29/06	06/30/06	
Carbon tetrachloride	EPA 8260B	6F29038	5.6	10	ND	20	06/29/06	06/30/06	
Chlorobenzene	EPA 8260B	6F29038	7.2	20	ND	20	06/29/06	06/30/06	
Chloroethane	EPA 8260B	6F29038	8.0	40	ND	20	06/29/06	06/30/06	
Chloroform	EPA 8260B	6F29038	6.6	20	ND	20	06/29/06	06/30/06	
Chloromethane	EPA 8260B	6F29038	6.0	40	ND	20	06/29/06	06/30/06	
2-Chlorotoluene	EPA 8260B	6F29038	5.6	20	ND	20	06/29/06	06/30/06	
4-Chlorotoluene	EPA 8260B	6F29038	5.8	20	ND	20	06/29/06	06/30/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6F29038	18	40	ND	20	06/29/06	06/30/06	
Dibromochloromethane	EPA 8260B	6F29038	5.6	20	ND	20	06/29/06	06/30/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6F29038	6.4	20	ND	20	06/29/06	06/30/06	
1,4-Dichlorobenzene	EPA 8260B	6F29038	7.4	20	ND	20	06/29/06	06/30/06	
1,2-Dichlorobenzene	EPA 8260B	6F29038	6.4	20	ND	20	06/29/06	06/30/06	
1,3-Dichlorobenzene	EPA 8260B	6F29038	7.0	20	ND	20	06/29/06	06/30/06	
Dichlorodifluoromethane	EPA 8260B	6F29038	16	20	ND	20	06/29/06	06/30/06	L
1,2-Dichloroethane	EPA 8260B	6F29038	5.6	10	ND	20	06/29/06	06/30/06	
1,1-Dichloroethane	EPA 8260B	6F29038	5.4	20	ND	20	06/29/06	06/30/06	
1,1-Dichloroethene	EPA 8260B	6F29038	8.4	20	ND	20	06/29/06	06/30/06	
cis-1,2-Dichloroethene	EPA 8260B	6F29038	6.4	20	**98**	20	06/29/06	06/30/06	
trans-1,2-Dichloroethene	EPA 8260B	6F29038	5.4	20	**8.2**	20	06/29/06	06/30/06	J
1,2-Dichloropropane	EPA 8260B	6F29038	7.0	20	ND	20	06/29/06	06/30/06	
2,2-Dichloropropane	EPA 8260B	6F29038	6.8	20	ND	20	06/29/06	06/30/06	
cis-1,3-Dichloropropene	EPA 8260B	6F29038	4.4	10	ND	20	06/29/06	06/30/06	
1,1-Dichloropropene	EPA 8260B	6F29038	5.6	20	ND	20	06/29/06	06/30/06	
trans-1,3-Dichloropropene	EPA 8260B	6F29038	6.4	10	ND	20	06/29/06	06/30/06	
Ethylbenzene	EPA 8260B	6F29038	5.0	20	ND	20	06/29/06	06/30/06	
Hexachlorobutadiene	EPA 8260B	6F29038	7.6	20	ND	20	06/29/06	06/30/06	
2-Hexanone	EPA 8260B	6F29038	52	120	ND	20	06/29/06	06/30/06	
Iodomethane	EPA 8260B	6F29038	20	40	ND	20	06/29/06	06/30/06	
Isopropylbenzene	EPA 8260B	6F29038	5.0	20	ND	20	06/29/06	06/30/06	

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Lisa Reightley For Michele Chamberlin
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/Quarterly GW Sampling
Report Number: IPF1882

Sampled: 06/16/06
Received: 06/16/06

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: IPF1882-10 (IRZB0081_WG061606_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6F29038	5.6	20	ND	20	06/29/06	06/30/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6F29038	6.4	20	ND	20	06/29/06	06/30/06	
Methylene chloride	EPA 8260B	6F29038	14	20	**34** U	20	06/29/06	06/30/06	B-1
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6F29038	70	100	ND	20	06/29/06	06/30/06	
n-Propylbenzene	EPA 8260B	6F29038	5.4	20	ND	20	06/29/06	06/30/06	
Styrene	EPA 8260B	6F29038	3.2	20	ND	20	06/29/06	06/30/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6F29038	5.4	20	ND	20	06/29/06	06/30/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6F29038	4.8	20	ND	20	06/29/06	06/30/06	
Tetrachloroethene	EPA 8260B	6F29038	6.4	20	ND	20	06/29/06	06/30/06	
Toluene	EPA 8260B	6F29038	7.2	20	ND	20	06/29/06	06/30/06	
1,2,3-Trichlorobenzene	EPA 8260B	6F29038	9.0	20	ND	20	06/29/06	06/30/06	
1,2,4-Trichlorobenzene	EPA 8260B	6F29038	9.6	20	ND	20	06/29/06	06/30/06	
1,1,2-Trichloroethane	EPA 8260B	6F29038	6.0	20	ND	20	06/29/06	06/30/06	
1,1,1-Trichloroethane	EPA 8260B	6F29038	6.0	20	ND	20	06/29/06	06/30/06	
Trichloroethene	EPA 8260B	6F29038	5.2	20	**110**	20	06/29/06	06/30/06	
Trichlorofluoromethane	EPA 8260B	6F29038	6.8	40	ND	20	06/29/06	06/30/06	
1,2,3-Trichloropropane	EPA 8260B	6F29038	8.0	20	ND	20	06/29/06	06/30/06	
1,2,4-Trimethylbenzene	EPA 8260B	6F29038	4.6	20	ND	20	06/29/06	06/30/06	
1,3,5-Trimethylbenzene	EPA 8260B	6F29038	5.2	20	ND	20	06/29/06	06/30/06	
Vinyl acetate	EPA 8260B	6F29038	34	120	ND	20	06/29/06	06/30/06	
Vinyl chloride	EPA 8260B	6F29038	5.2	10	**2300**	20	06/29/06	06/30/06	
Xylenes, Total	EPA 8260B	6F29038	18	20	ND	20	06/29/06	06/30/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*104 %*				
Surrogate: Dibromofluoromethane (80-120%)					*114 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				

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Lisa Reightley For Michele Chamberlin
Project Manager

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TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2727/Quarterly GW Sampling	Sampled: 06/16/06
Santa Ana, CA 92705	Report Number:	IPF1882	Received: 06/16/06
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: IPF1882-10RE1 (IRZB0081_WG061606_0001 - Water) - cont.									
Reporting Units: ug/l									
Tetrahydrofuran (THF)	EPA 8260B	6F30022	23	100	**61** J	10	06/30/06	06/30/06	J
Surrogate: 4-Bromofluorobenzene (80-120%)					*108 %*				
Surrogate: Dibromofluoromethane (80-120%)					*114 %*				
Surrogate: Toluene-d8 (80-120%)					*109 %*				

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Lisa Reightley For Michele Chamberlin
Project Manager

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LDC #: 15169C1
SDG #: IPF1882
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
EPA Region 1 - Tier 3

Date: 7/12/06
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: 6/16/06
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	N	client specified
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

10 1	IRZB0081_WG061606_0001	11 1	6F29038-BLK1	21		31	
2 2	IRZB0081-WG061606-0001 RE	12 2	6F30022-BLK1	22	THF	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 #: 15169C1
SDG #: 1PF1882

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: P
2nd Reviewer: K

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?	✓			

LDC #: 15169C1
SDG #: 1PF1882

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: F
2nd Reviewer: d

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.

COMPNDL.wpd

BOE-C6-0053626

LDC #: 15169C1
SDG #: 1PF1882

VALIDATION FINDINGS WORKSHEET
Initial Calibration

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 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? $r^2 \geq 0.990$
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
	6/28/06	GCMS-1 ICAL	M		0.041	6F29038-BLK1, #1	J/UJ/A
	4/4/06	GCMS-34 ICAL	Tetrahydrofuran	36.17		6F30082-BLK1, 2	J/UJ/A

INICAL 1SB

BOE-C6-0053627

LDC #: 15169C1
SDG #: 1PF1882

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

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

METHOD: GC/MS VOA (EPA SW 846 Method 8260)
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
	6/29/06	CCV	M		0.047	6F29038-BLK1	J/UJ/A
	7:15 PM					#1	

BOE-C6-0053628

LDC #: 15169C1
SDG #: 18F1882

VALIDATION FINDINGS WORKSHEET
Blanks

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 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: 6/29/06
Conc. units: ug/L
Associated Samples: 1

Compound	Blank ID	Sample Identification								
	6F29038-BLK1	20X 1								
Methylene chloride	0.720	34/U								
~~Acetone~~										
CRQL										

Blank analysis date: 6/30/06
Conc. units: ug/L
Associated Samples: 2

Compound	Blank ID	Sample Identification								
	6F30022-BLK1	2								
~~Methylene chloride~~ Tetrahydrofuran	7.47	61								
~~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-C6-0053629

LDC #: 15169C1
SDG #: 1PF1882

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
		6F29038-BS1	JJ	166 (25-155)	( )	( )	6F29038-BLK1,	J/P det
				( )	( )	( )	#1	
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
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				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LCSLCSD.1SB

BOE-C6-0053630

LDC #: 15169C1
SDG #: 1PF182

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

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 GCMS-1	6/28/06	Methylene chloride (1st internal standard)	0.497	0.497	0.472	0.472	8.00	8.00
			Trichlorethene (2nd internal standard)	0.403	0.403	0.366	0.366	7.94	7.94
			~~Toluene~~ Ethylbenzene (3rd internal standard)	1.942	1.942	1.770	1.770	9.49	9.49
2			~~Methylene chloride~~ 1,1,2,2-Tetrachloroethane (1st internal standard)	0.656	0.656	0.633	0.633	8.58	8.58
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3	GCMS 34	4/4/06	~~Methylene chloride~~ Tetrahydrofuran (50) (1st internal standard)	0.142	0.142	0.167	0.167	36.17	36.17
			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 #: 151690I
SDG #: 1PF182

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	6/29/06 7:15	Methylene chloride (1st internal standard)	0.472	0.463	0.463	1.9	1.9
			Trichlorethene (2nd internal standard)	0.366	0.385	0.385	5.2	5.2
			~~Toluene~~ Ethyl Benzene (3rd internal standard)	1.770	1.879	1.879	6.2	6.2
2			~~Methylene chloride~~ 1,1,2,2 - Tetrachloroethane (1st internal standard)	0.633	0.584	0.584	7.7	7.7
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
3	CCV	6/30/06 8:57	~~Methylene chloride~~ Tetrahydrofuran (1st internal standard)	~~0.129~~ 0.167	0.129	0.129	22.8	22.8
			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-C6-0053632

LDC #: 15169C1
SDG #: 1PF1882

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: #1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8	25.0	25.90	104	104.	0
Bromofluorobenzene		25.86	104	104	
1,2-Dichloroethane-d4					
Dibromofluoromethane		28.50	114	114	

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 #: 15169C1
SDG #: 1PF1882

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 = | LCS - LCSD | * 2/(LCS + LCSD)

LCS = Laboraotry control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS ID: 6F29038-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	23.9	NA	96	96				
Trichloroethene	↓	↓	26.1	↓	104	104				
Benzene	↓	↓	24.7	↓	99	99				
Toluene	↓	↓	24.4	↓	98	98				
Chlorobenzene	↓	↓	25.5	↓	102	102	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

LDC #: 151691
SDG #: 181-1882

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 5
2nd reviewer: M

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, QQQ:

Conc. = $\frac{(40965)(25)(20)}{(432311)(0.481)(\quad)(\quad)}$

= 98 ug/L

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

Boeing Realty Corp., Bldg C-1
Data Validation Reports
LDC# 15169

Sulfide

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: June 13, 2006

LDC Report Date: July 17, 2006

Matrix: Water

Parameters: Sulfide

Validation Level: Tier 1

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPF1333

Sample Identification

CMW001_WG061306_0001
CMW001_WG061306_0001MS
CMW001_WG061306_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 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 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-C6-0053638

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 I.

b. Calibration Verification

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 method 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.

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., Former C-6 Torrance
Sulfide - Data Qualification Summary - SDG IPF1333

No Sample Data Qualified in this SDG

Boeing Realty Corp., Former C-6 Torrance
Sulfide - Laboratory Blank Data Qualification Summary - SDG IPF1333

No Sample Data Qualified in this SDG

Del Mar Analytical

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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/Quarterly GW Sampling
Report Number: IPF1333

Sampled: 06/13/06
Received: 06/13/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPF1333-04 (CMW001_WG061306_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F15076	0.010	0.10	**0.025**	1	06/15/06	06/15/06	J

K 07/20L

Del Mar Analytical - Irvine
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 Del Mar Analytical.

LDC #: 15169A6

SDG #: IPF1333

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 1

Date: 6/29/06

Page: 1 of 1

Reviewer: mm

2nd Reviewer: c

METHOD: (Analyte) 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: 6/13/06
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	A	MB
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/MSD
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	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:

1	CMW001_WG061306_0001	11		21		31	
2	CMW001_WG061306_0001MS	12		22		32	
3	CMW001_WG061306_0001MSD	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:

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: June 15, 2006

LDC Report Date: July 17, 2006

Matrix: Water

Parameters: Sulfide

Validation Level: Tier 2

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IPF1747

Sample Identification

IRZMW001B_WG061506_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 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 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.

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Field duplicates are summarized in Section IX.

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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 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 not within QC limits. Since there were no associated samples, no data were qualified.

V. Duplicates

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

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., Former C-6 Torrance
Sulfide - Data Qualification Summary - SDG IPF1747

No Sample Data Qualified in this SDG

Boeing Realty Corp., Former C-6 Torrance
Sulfide - Laboratory Blank Data Qualification Summary - SDG IPF1747

No Sample Data Qualified in this SDG

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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/Quarterly GW Sampling
Report Number: IPF1747

Sampled: 06/15/06
Received: 06/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPF1747-02 (IRZMW001B_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.036**	1	06/16/06	06/16/06	J
~~**Sample ID: IPF1747-05 (IRZMW005_WG061506_0001 - Water)**~~									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.020	0.20	**0.95**	2	06/16/06	06/16/06	
Sample ID: IPF1747-06 (IRZMW002B_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.035**	1	06/16/06	06/16/06	J
Sample ID: IPF1747-07 (IRZMW003B_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.027**	1	06/16/06	06/16/06	J
Sample ID: IPF1747-09 (IRZMW002A_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	ND	1	06/16/06	06/16/06	
Sample ID: IPF1747-10 (IRZMW004_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.052**	1	06/16/06	06/16/06	J
Sample ID: IPF1747-11 (IRZMW004_WG061506_0002 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.044**	1	06/16/06	06/16/06	J
Sample ID: IPF1747-12 (IRZMW001A_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.035**	1	06/16/06	06/16/06	J
Sample ID: IPF1747-13 (IRZMW003_WG061506_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F16150	0.010	0.10	**0.031**	1	06/16/06	06/16/06	J
Sample ID: IPF1747-14 (IRZMW003A_WG061506_0001 - Water)									
Reporting Units: mg/l									
~~**Sulfide**~~	~~EPA 376.2~~	~~6F16150~~	~~0.010~~	~~0.10~~	~~**0.073**~~	~~1~~	~~06/16/06~~	~~06/16/06~~	~~J~~

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Del Mar Analytical - Irvine
Lisa Reightley For Michele Chamberlin
Project Manager

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LDC #: 15169B6
SDG #: IPF1747
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 2

Date: 7/10/06
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) 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: 6/15/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	SW	
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	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: 42

1	IRZMW001B_WG061506_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 #: 15169B6
SDG #: IPF1747

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

METHOD: Inorganics, EPA Method 376.2

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

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the control limits of ~~75-125~~? 70-130 If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water samples and ≤35% for soil samples?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (Limits)	Associated Samples	Qualifications
1	IPF1588-01 (non client)	A2	S	57	59		none	No qual

Comments:

MSD.6

BOE-C6-0053651

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: June 16, 2006

LDC Report Date: July 17, 2006

Matrix: Water

Parameters: Sulfide

Validation Level: Tier 3

Laboratory: TestAmerica, Inc.

Sample Delivery Group (SDG): IPF1882

Sample Identification

IRZB0081_WG061606_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 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 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.

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 method 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.

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., Former C-6 Torrance
Sulfide - Data Qualification Summary - SDG IPF1882

No Sample Data Qualified in this SDG

Boeing Realty Corp., Former C-6 Torrance
Sulfide - Laboratory Blank Data Qualification Summary - SDG IPF1882

No Sample Data Qualified in this SDG

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2727/Quarterly GW Sampling	Sampled: 06/16/06
Santa Ana, CA 92705	Report Number: IPF1882	Received: 06/16/06
Attention: Mehmet Pehlivan		

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
~~**Sample ID: IPF1882-05 (IRZMW002_WG061606_0001 - Water)**~~									
Reporting Units: mg/l									
~~Sulfide~~	~~EPA 376.2~~	~~6F23069~~	~~0.010~~	~~0.10~~	~~**0.52**~~	~~1~~	~~06/23/06~~	~~06/23/06~~	
Sample ID: IPF1882-10 (IRZB0081_WG061606_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6F23069	0.010	0.10	ND	1	06/23/06	06/23/06	
~~**Sample ID: IPF1882-11 (IRZB0095_WG061606_0001 - Water)**~~									
Reporting Units: mg/l									
~~Sulfide~~	~~EPA 376.2~~	~~6F23069~~	~~0.010~~	~~0.10~~	~~**0.49**~~	~~1~~	~~06/23/06~~	~~06/23/06~~	

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Del Mar Analytical - Irvine
Lisa Reightley For Michele Chamberlin
Project Manager

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LDC #: 15169C6
SDG #: IPF1882
Laboratory: Test America

VALIDATION COMPLETENESS WORKSHEET
Tier 3

Date: 7/10/06
Page: 1 of 1
Reviewer: km
2nd Reviewer: x

METHOD: (Analyte) 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: 6/16/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	km client
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	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: All

1	IRZB0081_WG061606_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 #: 15169C6
SDG #: TPF1882

VALIDATION FINDINGS CHECKLIST

Reviewer: MY
2nd Reviewer: [illegible]

Method: Inorganics (EPA Method 3196.2)

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 #: 151696
SDG #: TPF188

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 #: 15169C6
SDG #: IPT-1882

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

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

METHOD: Inorganics, Method 376.2

The correlation coefficient (r) for the calibration of S was recalculated. Calibration date: 6/23/06

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. (ppm) (units)	Abs (units)	Recalculated r or %R	Reported r or %R	Acceptable (Y/N)
Initial calibration	S	Blank	0	0	r = 0.9952	r = 0.9956	Y
Calibration verification		Standard 1	0.114	0.062			
		Standard 2	0.342	0.133			
		Standard 3	0.57	0.190			
		Standard 4	1.14	0.348			
		Standard 5					
		Standard 6					
		Standard 7					
Calibration verification ICV	S	0.348	0.353		101	WR	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

BOE-C6-0053661

LDC #: 15169C6
SDG #: JPF1882

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

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

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	0.598	0.570	105	105	Y
JPF20130)	Matrix spike sample	↓	(SSR-SR) 0.628	↓	110	111	↓
↓	Duplicate sample	↓	0.611	0.628	3	3	

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-C6-0053662

LDC #: 15169c6
SDG #: JPF1882

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: MM
2nd reviewer: DL

METHOD: Inorganics, Method 3016.2

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 | (Mo) reported with a positive detect were recalculated and verified using the following equation:

Concentration = Recalculation:

#	Sample ID	Analyte	Reported Concentration ( )	Calculated Concentration ( )	Acceptable (Y/N)

Note:

RECALC.6