Appendix E
Data Validation Reports

CDM

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

Tait Environmental Management, Inc.
701 N. Park Center Drive
Santa Ana, CA 92705
ATTN: Mr. Matt Hillman

May 16, 2005

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

Dear Mr. Hillman,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on October 20, 2005. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 14879:

SDG #	Fraction
IPC2080, IPC2190, IPC2325	Volatiles, Manganese, Wet Chemistry, Fixed Gases

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

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 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 S. Cuenco
Project Manager/Senior Chemist

14879COV.wpd

821 Pages

Attachment 1

LDC #14879 (Tait Environmenal Management, Inc. / Boeing Realty Corp., Former C-6 Facility, Torrance, CA)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		Mn (6010B)		Fixed Gases (175)		Alk. (310.1)		NH_3 (350.3)		Cl,SO_4 O-PO_4 (300.0)		NO_3-N NO_2-N (300.0)		TOC (415.1)		CO_2 (4500)		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	IPC2080	04/21/06	04/28/06	6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	Tier I											
B	IPC2190	04/21/06	04/28/06	5	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0												
C	IPC2325	04/21/06	04/28/06	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0												
Total	B/SC			12	0	3	0	0	0	3	0	3	0	0	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	33

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

14879ST.wpd

Boeing Realty Corp., Former C-6 Facility, Torrance CA
Data Validation Reports
LDC# 14879

Volatiles

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 20, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 1

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2080

Sample Identification

MWB003_WG032006_0001
MWC011_WG032006_0001
IRZMW002B_WG032006_0001
IRZMW002B_WG032006_0002
IRZB0081_WG032006_0001
MWB019_WG032006_0001
MWB019_WG032006_0001MS
MWB019_WG032006_0001MSD
IRZMW002B_WG032006_0002MS
IRZMW002B_WG032006_0002MSD

Introduction

This data review covers 10 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 check data were not reviewed for Tier 1.

III. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Tier 1.

V. Blanks

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

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
6C29002-BLK	3/29/06	Tetrahydrofuran	3.51 ug/L	MWB003_WG032006_0001 MWC011_WG032006_0001 IRZMW002B_WG032006_0001 IRZMW002B_WG032006_0002 IRZB0081_WG032006_0001
6C30003-BLK1	3/30/06	Tetrahydrofuran	7.19 ug/L	MWB019_WG032006_0001

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

VI. Surrogate Spikes

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

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
MWC011_WG032006_0001	Dibromofluoromethane	122 (80-120)	Tetrahydrofuran Iodomethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
IRZB0081_WG032006_0001	Dibromofluoromethane	121 (80-120)	Tetrahydrofuran Iodomethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

VII. Matrix Spike/Matrix Spike Duplicates

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

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
MWB019_WG032006_0001MS/MSD (MWB019_WG032006_0001)	n-Butylbenzene 1,2-Dichloropropane Ethylbenzene Hexachlorobutadiene	140 (65-135) 130 (60-125) 132 (65-130) 136 (60-135)	- - - -	- - - -	J (all detects) J (all detects) J (all detects) J (all detects)	A
MWB019_WG032006_0001MS/MSD (MWB019_WG032006_0001)	Styrene 1,2,4-Trimethylbenzene	- -	23 (45-145) 52 (55-130)	75 (≤30) 46 (≤25)	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
IRZMW002B_WG032006_0002MS/MSD (IRZMW002B_WG032006_0002RE2)	Acetone	-	-	42 (≤35)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

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

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
6C30003-BS1	4-Methyl-2-pentanone	136 (40-135)	MWB019_WG032006_0001 6C30003-BLK1	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

Samples IRZMW002B_WG032006_0001 and IRZMW002B_WG032006_0002 were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD
	IRZMW002B_WG032006_0001	IRZMW002B_WG032006_0002	
Trichloroethene	300	330	10
Chlorobenzene	0.42	0.48	13
Chloroform	1.5	1.3	14
1,1-Dichloroethene	6.2	3.9	46
cis-1,2-Dichloroethene	110	94	16
Toluene	1.4	1.3	7

Compound	Concentration (ug/L)		RPD
	IRZMW002B_WG032006_0001	IRZMW002B_WG032006_0002	
trans-1,2-Dichloroethene	1.0U	4.2	200

XVII. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Volatiles - Data Qualification Summary - SDG IPC2080

SDG	Sample	Compound	Flag	A or P	Reason
IPC2080	MWC011_WG032006_0001 IRZB0081_WG032006_0001	Tetrahydrofuran Iodomethane	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Surrogate recovery (%R)
	MWB019_WG032006_0001	n-Butylbenzene 1,2-Dichloropropane Ethylbenzene Hexachlorobutadiene	J (all detects) J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)
IPC2080	MWB019_WG032006_0001	Styrene 1,2,4-Trimethylbenzene	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (%R)(RPD)
IPC2080	IRZMW002B_WG032006_0002	Acetone	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (RPD)
IPC2080	MWB019_WG032006_0001	4-Methyl-2-pentanone	J (all detects)	P	Laboratory control samples (%R)

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPC2080

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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-06 (MWB003_WG032006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C29002	4.5	10	ND	1	03/29/06	03/29/06	
Benzene	EPA 8260B	6C29002	0.28	1.0	**9.3**	1	03/29/06	03/29/06	
Bromobenzene	EPA 8260B	6C29002	0.27	1.0	ND	1	03/29/06	03/29/06	
Bromochloromethane	EPA 8260B	6C29002	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromodichloromethane	EPA 8260B	6C29002	0.30	1.0	ND	1	03/29/06	03/29/06	
Bromoform	EPA 8260B	6C29002	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromomethane	EPA 8260B	6C29002	0.42	1.0	ND	1	03/29/06	03/29/06	
2-Butanone (MEK)	EPA 8260B	6C29002	3.8	5.0	ND	1	03/29/06	03/29/06	
n-Butylbenzene	EPA 8260B	6C29002	0.37	1.0	ND	1	03/29/06	03/29/06	
sec-Butylbenzene	EPA 8260B	6C29002	0.25	1.0	ND	1	03/29/06	03/29/06	
tert-Butylbenzene	EPA 8260B	6C29002	0.22	1.0	ND	1	03/29/06	03/29/06	
Carbon Disulfide	EPA 8260B	6C29002	0.48	1.0	ND	1	03/29/06	03/29/06	
Carbon tetrachloride	EPA 8260B	6C29002	0.28	0.50	ND	1	03/29/06	03/29/06	
Chlorobenzene	EPA 8260B	6C29002	0.36	1.0	ND	1	03/29/06	03/29/06	
Chloroethane	EPA 8260B	6C29002	0.40	2.0	ND	1	03/29/06	03/29/06	
Chloroform	EPA 8260B	6C29002	0.33	1.0	**25**	1	03/29/06	03/29/06	
Chloromethane	EPA 8260B	6C29002	0.30	2.0	ND	1	03/29/06	03/29/06	
2-Chlorotoluene	EPA 8260B	6C29002	0.28	1.0	ND	1	03/29/06	03/29/06	
4-Chlorotoluene	EPA 8260B	6C29002	0.29	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C29002	0.92	2.0	ND	1	03/29/06	03/29/06	
Dibromochloromethane	EPA 8260B	6C29002	0.28	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C29002	0.32	1.0	ND	1	03/29/06	03/29/06	
1,4-Dichlorobenzene	EPA 8260B	6C29002	0.37	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichlorobenzene	EPA 8260B	6C29002	0.32	1.0	ND	1	03/29/06	03/29/06	
1,3-Dichlorobenzene	EPA 8260B	6C29002	0.35	1.0	ND	1	03/29/06	03/29/06	
Dichlorodifluoromethane	EPA 8260B	6C29002	0.79	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichloroethane	EPA 8260B	6C29002	0.28	0.50	**41**	1	03/29/06	03/29/06	
1,1-Dichloroethane	EPA 8260B	6C29002	0.27	1.0	**89**	1	03/29/06	03/29/06	
cis-1,2-Dichloroethene	EPA 8260B	6C29002	0.32	1.0	**130**	1	03/29/06	03/29/06	
trans-1,2-Dichloroethene	EPA 8260B	6C29002	0.27	1.0	**98**	1	03/29/06	03/29/06	
1,2-Dichloropropane	EPA 8260B	6C29002	0.35	1.0	ND	1	03/29/06	03/29/06	
2,2-Dichloropropane	EPA 8260B	6C29002	0.34	1.0	ND	1	03/29/06	03/29/06	
cis-1,3-Dichloropropene	EPA 8260B	6C29002	0.22	0.50	ND	1	03/29/06	03/29/06	
1,1-Dichloropropene	EPA 8260B	6C29002	0.28	1.0	ND	1	03/29/06	03/29/06	
trans-1,3-Dichloropropene	EPA 8260B	6C29002	0.32	0.50	ND	1	03/29/06	03/29/06	
Ethylbenzene	EPA 8260B	6C29002	0.25	1.0	ND	1	03/29/06	03/29/06	
Hexachlorobutadiene	EPA 8260B	6C29002	0.38	1.0	ND	1	03/29/06	03/29/06	
2-Hexanone	EPA 8260B	6C29002	2.6	6.0	ND	1	03/29/06	03/29/06	
Iodomethane	EPA 8260B	6C29002	1.0	2.0	ND	1	03/29/06	03/29/06	
Isopropylbenzene	EPA 8260B	6C29002	0.25	1.0	ND	1	03/29/06	03/29/06	
p-Isopropyltoluene	EPA 8260B	6C29002	0.28	1.0	ND	1	03/29/06	03/29/06	

Del Mar Analytical - Irvine
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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-06 (MWB003_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C29002	0.32	1.0	ND	1	03/29/06	03/29/06	
Methylene chloride	EPA 8260B	6C29002	0.70	1.0	**2.2**	1	03/29/06	03/29/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C29002	3.5	5.0	ND	1	03/29/06	03/29/06	
n-Propylbenzene	EPA 8260B	6C29002	0.27	1.0	ND	1	03/29/06	03/29/06	
Styrene	EPA 8260B	6C29002	0.16	1.0	ND	1	03/29/06	03/29/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C29002	0.27	1.0	ND	1	03/29/06	03/29/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C29002	0.24	1.0	ND	1	03/29/06	03/29/06	
Tetrachloroethene	EPA 8260B	6C29002	0.32	1.0	**0.50**	1	03/29/06	03/29/06	J
Tetrahydrofuran (THF)	EPA 8260B	6C29002	2.3	10	ND	1	03/29/06	03/29/06	
Toluene	EPA 8260B	6C29002	0.36	1.0	ND	1	03/29/06	03/29/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C29002	0.45	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C29002	0.48	1.0	ND	1	03/29/06	03/29/06	
1,1,2-Trichloroethane	EPA 8260B	6C29002	0.30	1.0	**27**	1	03/29/06	03/29/06	
1,1,1-Trichloroethane	EPA 8260B	6C29002	0.30	1.0	**1.9**	1	03/29/06	03/29/06	
Trichlorofluoromethane	EPA 8260B	6C29002	0.34	2.0	ND	1	03/29/06	03/29/06	
1,2,3-Trichloropropane	EPA 8260B	6C29002	0.40	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C29002	0.23	1.0	ND	1	03/29/06	03/29/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C29002	0.26	1.0	ND	1	03/29/06	03/29/06	
Vinyl acetate	EPA 8260B	6C29002	1.7	6.0	ND	1	03/29/06	03/29/06	
Vinyl chloride	EPA 8260B	6C29002	0.26	0.50	ND	1	03/29/06	03/29/06	
Xylenes, Total	EPA 8260B	6C29002	0.90	1.0	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*116 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

4/25/06

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TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2303D/PHASE 01	Sampled: 03/20/06
Santa Ana, CA 92705	Report Number:	IPC2080	Received: 03/20/06
Attention: Mehmet Pehlivan			

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-06RE1 (MWB003_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloroethene	EPA 8260B	6C31009	42	100	**4800**	100	03/31/06	03/31/06	
Trichloroethene	EPA 8260B	6C31009	26	100	**4100**	100	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*112 %*				
Surrogate: Dibromofluoromethane (80-120%)					*109 %*				
Surrogate: Toluene-d8 (80-120%)					*110 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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Del Mar Analytical

TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2303D/PHASE 01	Sampled: 03/20/06
Santa Ana, CA 92705	Report Number:	IPC2080	Received: 03/20/06
Attention: Mehmet Pehlivan			

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-07 (MWC011_WG032006_0001 - Water)									
Reporting Units: ug/l									
Iodomethane	EPA 8260B	6C29002	1.0	2.0	ND	1	03/29/06	03/29/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29002	2.3	10	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*97 %*				
Surrogate: Dibromofluoromethane (80-120%)					*122 %*				*Z2*
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Sample ID: IPC2080-07RE1 (MWC011_WG032006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C31009	4.5	10	ND	1	03/31/06	03/31/06	
Benzene	EPA 8260B	6C31009	0.28	1.0	**0.30**	1	03/31/06	03/31/06	J
Bromobenzene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
Bromochloromethane	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Bromodichloromethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
Bromoform	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Bromomethane	EPA 8260B	6C31009	0.42	1.0	ND	1	03/31/06	03/31/06	
2-Butanone (MEK)	EPA 8260B	6C31009	3.8	5.0	ND	1	03/31/06	03/31/06	
n-Butylbenzene	EPA 8260B	6C31009	0.37	1.0	ND	1	03/31/06	03/31/06	
sec-Butylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
tert-Butylbenzene	EPA 8260B	6C31009	0.22	1.0	ND	1	03/31/06	03/31/06	
Carbon Disulfide	EPA 8260B	6C31009	0.48	1.0	ND	1	03/31/06	03/31/06	
Carbon tetrachloride	EPA 8260B	6C31009	0.28	0.50	ND	1	03/31/06	03/31/06	
Chlorobenzene	EPA 8260B	6C31009	0.36	1.0	ND	1	03/31/06	03/31/06	
Chloroethane	EPA 8260B	6C31009	0.40	2.0	ND	1	03/31/06	03/31/06	
Chloroform	EPA 8260B	6C31009	0.33	1.0	ND	1	03/31/06	03/31/06	
Chloromethane	EPA 8260B	6C31009	0.30	2.0	ND	1	03/31/06	03/31/06	
2-Chlorotoluene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
4-Chlorotoluene	EPA 8260B	6C31009	0.29	1.0	ND	1	03/31/06	03/31/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C31009	0.92	2.0	ND	1	03/31/06	03/31/06	
Dibromochloromethane	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
1,4-Dichlorobenzene	EPA 8260B	6C31009	0.37	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichlorobenzene	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
1,3-Dichlorobenzene	EPA 8260B	6C31009	0.35	1.0	ND	1	03/31/06	03/31/06	
Dichlorodifluoromethane	EPA 8260B	6C31009	0.79	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichloroethane	EPA 8260B	6C31009	0.28	0.50	**0.60**	1	03/31/06	03/31/06	
1,1-Dichloroethane	EPA 8260B	6C31009	0.27	1.0	**2.5**	1	03/31/06	03/31/06	
1,1-Dichloroethene	EPA 8260B	6C31009	0.42	1.0	**59**	1	03/31/06	03/31/06	
cis-1,2-Dichloroethene	EPA 8260B	6C31009	0.32	1.0	**51**	1	03/31/06	03/31/06	
trans-1,2-Dichloroethene	EPA 8260B	6C31009	0.27	1.0	**1.4**	1	03/31/06	03/31/06	
1,2-Dichloropropane	EPA 8260B	6C31009	0.35	1.0	ND	1	03/31/06	03/31/06	
2,2-Dichloropropane	EPA 8260B	6C31009	0.34	1.0	ND	1	03/31/06	03/31/06	

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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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-07RE1 (MWC011_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
cis-1,3-Dichloropropene	EPA 8260B	6C31009	0.22	0.50	ND	1	03/31/06	03/31/06	
1,1-Dichloropropene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
trans-1,3-Dichloropropene	EPA 8260B	6C31009	0.32	0.50	ND	1	03/31/06	03/31/06	
Ethylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
Hexachlorobutadiene	EPA 8260B	6C31009	0.38	1.0	ND	1	03/31/06	03/31/06	
2-Hexanone	EPA 8260B	6C31009	2.6	6.0	ND	1	03/31/06	03/31/06	
Isopropylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
p-Isopropyltoluene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Methylene chloride	EPA 8260B	6C31009	0.70	1.0	**1.5**	1	03/31/06	03/31/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C31009	3.5	5.0	ND	1	03/31/06	03/31/06	
n-Propylbenzene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
Styrene	EPA 8260B	6C31009	0.16	1.0	ND	1	03/31/06	03/31/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C31009	0.24	1.0	ND	1	03/31/06	03/31/06	
Tetrachloroethene	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Toluene	EPA 8260B	6C31009	0.36	1.0	ND	1	03/31/06	03/31/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C31009	0.45	1.0	ND	1	03/31/06	03/31/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C31009	0.48	1.0	ND	1	03/31/06	03/31/06	
1,1,2-Trichloroethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
1,1,1-Trichloroethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
Trichloroethene	EPA 8260B	6C31009	0.26	1.0	**33**	1	03/31/06	03/31/06	
Trichlorofluoromethane	EPA 8260B	6C31009	0.34	2.0	ND	1	03/31/06	03/31/06	
1,2,3-Trichloropropane	EPA 8260B	6C31009	0.40	1.0	ND	1	03/31/06	03/31/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C31009	0.23	1.0	ND	1	03/31/06	03/31/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C31009	0.26	1.0	ND	1	03/31/06	03/31/06	
Vinyl acetate	EPA 8260B	6C31009	1.7	6.0	ND	1	03/31/06	03/31/06	
Vinyl chloride	EPA 8260B	6C31009	0.26	0.50	ND	1	03/31/06	03/31/06	
Xylenes, Total	EPA 8260B	6C31009	0.90	1.0	ND	1	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*103 %*				
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				

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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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-08 (IRZMW002B_WG032006_0001 - Water)									
Reporting Units: ug/l									
Iodomethane	EPA 8260B	6C29002	1.0	2.0	ND	1	03/29/06	03/29/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29002	2.3	10	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*95 %*				
Surrogate: Dibromofluoromethane (80-120%)					*120 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Sample ID: IPC2080-08RE1 (IRZMW002B_WG032006_0001 - Water)									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	6C31009	1.3	5.0	**300**	5	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*110 %*				
Surrogate: Dibromofluoromethane (80-120%)					*110 %*				
Surrogate: Toluene-d8 (80-120%)					*108 %*				
Sample ID: IPC2080-08RE2 (IRZMW002B_WG032006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C31009	4.5	10	ND	1	03/31/06	03/31/06	
Benzene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
Bromobenzene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
Bromochloromethane	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Bromodichloromethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
Bromoform	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Bromomethane	EPA 8260B	6C31009	0.42	1.0	ND	1	03/31/06	03/31/06	
2-Butanone (MEK)	EPA 8260B	6C31009	3.8	5.0	ND	1	03/31/06	03/31/06	
n-Butylbenzene	EPA 8260B	6C31009	0.37	1.0	ND	1	03/31/06	03/31/06	
sec-Butylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
tert-Butylbenzene	EPA 8260B	6C31009	0.22	1.0	ND	1	03/31/06	03/31/06	
Carbon Disulfide	EPA 8260B	6C31009	0.48	1.0	ND	1	03/31/06	03/31/06	
Carbon tetrachloride	EPA 8260B	6C31009	0.28	0.50	ND	1	03/31/06	03/31/06	
Chlorobenzene	EPA 8260B	6C31009	0.36	1.0	**0.42**	1	03/31/06	03/31/06	J
Chloroethane	EPA 8260B	6C31009	0.40	2.0	ND	1	03/31/06	03/31/06	
Chloroform	EPA 8260B	6C31009	0.33	1.0	**1.5**	1	03/31/06	03/31/06	
Chloromethane	EPA 8260B	6C31009	0.30	2.0	ND	1	03/31/06	03/31/06	
2-Chlorotoluene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
4-Chlorotoluene	EPA 8260B	6C31009	0.29	1.0	ND	1	03/31/06	03/31/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C31009	0.92	2.0	ND	1	03/31/06	03/31/06	
Dibromochloromethane	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
1,4-Dichlorobenzene	EPA 8260B	6C31009	0.37	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichlorobenzene	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
1,3-Dichlorobenzene	EPA 8260B	6C31009	0.35	1.0	ND	1	03/31/06	03/31/06	
Dichlorodifluoromethane	EPA 8260B	6C31009	0.79	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichloroethane	EPA 8260B	6C31009	0.28	0.50	ND	1	03/31/06	03/31/06	

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Michele Chamberlin
Project Manager

4/27/06

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-08RE2 (IRZMW002B_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloroethane	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
1,1-Dichloroethene	EPA 8260B	6C31009	0.42	1.0	**6.2**	1	03/31/06	03/31/06	
cis-1,2-Dichloroethene	EPA 8260B	6C31009	0.32	1.0	**110**	1	03/31/06	03/31/06	
trans-1,2-Dichloroethene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichloropropane	EPA 8260B	6C31009	0.35	1.0	ND	1	03/31/06	03/31/06	
2,2-Dichloropropane	EPA 8260B	6C31009	0.34	1.0	ND	1	03/31/06	03/31/06	
cis-1,3-Dichloropropene	EPA 8260B	6C31009	0.22	0.50	ND	1	03/31/06	03/31/06	
1,1-Dichloropropene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
trans-1,3-Dichloropropene	EPA 8260B	6C31009	0.32	0.50	ND	1	03/31/06	03/31/06	
Ethylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
Hexachlorobutadiene	EPA 8260B	6C31009	0.38	1.0	ND	1	03/31/06	03/31/06	
2-Hexanone	EPA 8260B	6C31009	2.6	6.0	ND	1	03/31/06	03/31/06	
Isopropylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
p-Isopropyltoluene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Methylene chloride	EPA 8260B	6C31009	0.70	1.0	ND	1	03/31/06	03/31/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C31009	3.5	5.0	ND	1	03/31/06	03/31/06	
n-Propylbenzene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
Styrene	EPA 8260B	6C31009	0.16	1.0	ND	1	03/31/06	03/31/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C31009	0.24	1.0	ND	1	03/31/06	03/31/06	
Tetrachloroethene	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Toluene	EPA 8260B	6C31009	0.36	1.0	**1.4**	1	03/31/06	03/31/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C31009	0.45	1.0	ND	1	03/31/06	03/31/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C31009	0.48	1.0	ND	1	03/31/06	03/31/06	
1,1,2-Trichloroethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
1,1,1-Trichloroethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
Trichlorofluoromethane	EPA 8260B	6C31009	0.34	2.0	ND	1	03/31/06	03/31/06	
1,2,3-Trichloropropane	EPA 8260B	6C31009	0.40	1.0	ND	1	03/31/06	03/31/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C31009	0.23	1.0	ND	1	03/31/06	03/31/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C31009	0.26	1.0	ND	1	03/31/06	03/31/06	
Vinyl acetate	EPA 8260B	6C31009	1.7	6.0	ND	1	03/31/06	03/31/06	
Vinyl chloride	EPA 8260B	6C31009	0.26	0.50	ND	1	03/31/06	03/31/06	
Xylenes, Total	EPA 8260B	6C31009	0.90	1.0	ND	1	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*114 %*				
Surrogate: Dibromofluoromethane (80-120%)					*116 %*				
Surrogate: Toluene-d8 (80-120%)					*108 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

X 04/25/06

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-09 (IRZMW002B_WG032006_0002 - Water)									
Reporting Units: ug/l									
Iodomethane	EPA 8260B	6C29002	1.0	2.0	ND	1	03/29/06	03/29/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29002	2.3	10	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*119 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				
Sample ID: IPC2080-09RE1 (IRZMW002B_WG032006_0002 - Water)									
Reporting Units: ug/l									
Trichloroethene	EPA 8260B	6C31009	1.3	5.0	**330**	5	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*105 %*				
Surrogate: Dibromofluoromethane (80-120%)					*108 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				
Sample ID: IPC2080-09RE2 (IRZMW002B_WG032006_0002 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C31009	4.5	10	ND UJ	1	03/31/06	03/31/06	
Benzene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
Bromobenzene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
Bromochloromethane	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Bromodichloromethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
Bromoform	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Bromomethane	EPA 8260B	6C31009	0.42	1.0	ND	1	03/31/06	03/31/06	
2-Butanone (MEK)	EPA 8260B	6C31009	3.8	5.0	ND	1	03/31/06	03/31/06	
n-Butylbenzene	EPA 8260B	6C31009	0.37	1.0	ND	1	03/31/06	03/31/06	
sec-Butylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
tert-Butylbenzene	EPA 8260B	6C31009	0.22	1.0	ND	1	03/31/06	03/31/06	
Carbon Disulfide	EPA 8260B	6C31009	0.48	1.0	ND	1	03/31/06	03/31/06	
Carbon tetrachloride	EPA 8260B	6C31009	0.28	0.50	ND	1	03/31/06	03/31/06	
Chlorobenzene	EPA 8260B	6C31009	0.36	1.0	**0.48**	1	03/31/06	03/31/06	J
Chloroethane	EPA 8260B	6C31009	0.40	2.0	ND	1	03/31/06	03/31/06	
Chloroform	EPA 8260B	6C31009	0.33	1.0	**1.3**	1	03/31/06	03/31/06	
Chloromethane	EPA 8260B	6C31009	0.30	2.0	ND	1	03/31/06	03/31/06	
2-Chlorotoluene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
4-Chlorotoluene	EPA 8260B	6C31009	0.29	1.0	ND	1	03/31/06	03/31/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C31009	0.92	2.0	ND	1	03/31/06	03/31/06	
Dibromochloromethane	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
1,4-Dichlorobenzene	EPA 8260B	6C31009	0.37	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichlorobenzene	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
1,3-Dichlorobenzene	EPA 8260B	6C31009	0.35	1.0	ND	1	03/31/06	03/31/06	
Dichlorodifluoromethane	EPA 8260B	6C31009	0.79	1.0	ND	1	03/31/06	03/31/06	
1,2-Dichloroethane	EPA 8260B	6C31009	0.28	0.50	ND	1	03/31/06	03/31/06	

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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
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-09RE2 (IRZMW002B_WG032006_0002 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloroethane	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
1,1-Dichloroethene	EPA 8260B	6C31009	0.42	1.0	**3.9**	1	03/31/06	03/31/06	
cis-1,2-Dichloroethene	EPA 8260B	6C31009	0.32	1.0	**94**	1	03/31/06	03/31/06	
trans-1,2-Dichloroethene	EPA 8260B	6C31009	0.27	1.0	**4.2**	1	03/31/06	03/31/06	
1,2-Dichloropropane	EPA 8260B	6C31009	0.35	1.0	ND	1	03/31/06	03/31/06	
2,2-Dichloropropane	EPA 8260B	6C31009	0.34	1.0	ND	1	03/31/06	03/31/06	
cis-1,3-Dichloropropene	EPA 8260B	6C31009	0.22	0.50	ND	1	03/31/06	03/31/06	
1,1-Dichloropropene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
trans-1,3-Dichloropropene	EPA 8260B	6C31009	0.32	0.50	ND	1	03/31/06	03/31/06	
Ethylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
Hexachlorobutadiene	EPA 8260B	6C31009	0.38	1.0	ND	1	03/31/06	03/31/06	
2-Hexanone	EPA 8260B	6C31009	2.6	6.0	ND	1	03/31/06	03/31/06	
Isopropylbenzene	EPA 8260B	6C31009	0.25	1.0	ND	1	03/31/06	03/31/06	
p-Isopropyltoluene	EPA 8260B	6C31009	0.28	1.0	ND	1	03/31/06	03/31/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Methylene chloride	EPA 8260B	6C31009	0.70	1.0	ND	1	03/31/06	03/31/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C31009	3.5	5.0	ND	1	03/31/06	03/31/06	
n-Propylbenzene	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
Styrene	EPA 8260B	6C31009	0.16	1.0	ND	1	03/31/06	03/31/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C31009	0.27	1.0	ND	1	03/31/06	03/31/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C31009	0.24	1.0	ND	1	03/31/06	03/31/06	
Tetrachloroethene	EPA 8260B	6C31009	0.32	1.0	ND	1	03/31/06	03/31/06	
Toluene	EPA 8260B	6C31009	0.36	1.0	**1.3**	1	03/31/06	03/31/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C31009	0.45	1.0	ND	1	03/31/06	03/31/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C31009	0.48	1.0	ND	1	03/31/06	03/31/06	
1,1,2-Trichloroethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
1,1,1-Trichloroethane	EPA 8260B	6C31009	0.30	1.0	ND	1	03/31/06	03/31/06	
Trichlorofluoromethane	EPA 8260B	6C31009	0.34	2.0	ND	1	03/31/06	03/31/06	
1,2,3-Trichloropropane	EPA 8260B	6C31009	0.40	1.0	ND	1	03/31/06	03/31/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C31009	0.23	1.0	ND	1	03/31/06	03/31/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C31009	0.26	1.0	ND	1	03/31/06	03/31/06	
Vinyl acetate	EPA 8260B	6C31009	1.7	6.0	ND	1	03/31/06	03/31/06	
Vinyl chloride	EPA 8260B	6C31009	0.26	0.50	ND	1	03/31/06	03/31/06	
Xylenes, Total	EPA 8260B	6C31009	0.90	1.0	ND	1	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*113 %*				
Surrogate: Dibromofluoromethane (80-120%)					*106 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

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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
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-10 (IRZB0081_WG032006_0001 - Water)									
Reporting Units: ug/l									
Iodomethane	EPA 8260B	6C29002	1.0	2.0	ND	1	03/29/06	03/29/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29002	2.3	10	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*99 %*				
Surrogate: Dibromofluoromethane (80-120%)					*121 %*				*Z2*
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Sample ID: IPC2080-10RE1 (IRZB0081_WG032006_0001 - Water)									
Reporting Units: ug/l									
Vinyl chloride	EPA 8260B	6C31009	5.2	10	**1600**	20	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*104 %*				
Surrogate: Dibromofluoromethane (80-120%)					*112 %*				
Surrogate: Toluene-d8 (80-120%)					*104 %*				
Sample ID: IPC2080-10RE2 (IRZB0081_WG032006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C31009	22	50	ND	5	03/31/06	03/31/06	
Benzene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
Bromobenzene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
Bromochloromethane	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
Bromodichloromethane	EPA 8260B	6C31009	1.5	5.0	ND	5	03/31/06	03/31/06	
Bromoform	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
Bromomethane	EPA 8260B	6C31009	2.1	5.0	ND	5	03/31/06	03/31/06	
2-Butanone (MEK)	EPA 8260B	6C31009	19	25	ND	5	03/31/06	03/31/06	
n-Butylbenzene	EPA 8260B	6C31009	1.8	5.0	ND	5	03/31/06	03/31/06	
sec-Butylbenzene	EPA 8260B	6C31009	1.2	5.0	ND	5	03/31/06	03/31/06	
tert-Butylbenzene	EPA 8260B	6C31009	1.1	5.0	ND	5	03/31/06	03/31/06	
Carbon Disulfide	EPA 8260B	6C31009	2.4	5.0	ND	5	03/31/06	03/31/06	
Carbon tetrachloride	EPA 8260B	6C31009	1.4	2.5	ND	5	03/31/06	03/31/06	
Chlorobenzene	EPA 8260B	6C31009	1.8	5.0	ND	5	03/31/06	03/31/06	
Chloroethane	EPA 8260B	6C31009	2.0	10	ND	5	03/31/06	03/31/06	
Chloroform	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
Chloromethane	EPA 8260B	6C31009	1.5	10	ND	5	03/31/06	03/31/06	
2-Chlorotoluene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
4-Chlorotoluene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C31009	4.6	10	ND	5	03/31/06	03/31/06	
Dibromochloromethane	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
1,4-Dichlorobenzene	EPA 8260B	6C31009	1.8	5.0	ND	5	03/31/06	03/31/06	
1,2-Dichlorobenzene	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
1,3-Dichlorobenzene	EPA 8260B	6C31009	1.8	5.0	ND	5	03/31/06	03/31/06	
Dichlorodifluoromethane	EPA 8260B	6C31009	4.0	5.0	ND	5	03/31/06	03/31/06	
1,2-Dichloroethane	EPA 8260B	6C31009	1.4	2.5	ND	5	03/31/06	03/31/06	

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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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-10RE2 (IRZB0081_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloroethane	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
1,1-Dichloroethene	EPA 8260B	6C31009	2.1	5.0	**2.2**	5	03/31/06	03/31/06	J
cis-1,2-Dichloroethene	EPA 8260B	6C31009	1.6	5.0	**260**	5	03/31/06	03/31/06	
trans-1,2-Dichloroethene	EPA 8260B	6C31009	1.4	5.0	**8.1**	5	03/31/06	03/31/06	
1,2-Dichloropropane	EPA 8260B	6C31009	1.8	5.0	ND	5	03/31/06	03/31/06	
2,2-Dichloropropane	EPA 8260B	6C31009	1.7	5.0	ND	5	03/31/06	03/31/06	
cis-1,3-Dichloropropene	EPA 8260B	6C31009	1.1	2.5	ND	5	03/31/06	03/31/06	
1,1-Dichloropropene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
trans-1,3-Dichloropropene	EPA 8260B	6C31009	1.6	2.5	ND	5	03/31/06	03/31/06	
Ethylbenzene	EPA 8260B	6C31009	1.2	5.0	ND	5	03/31/06	03/31/06	
Hexachlorobutadiene	EPA 8260B	6C31009	1.9	5.0	ND	5	03/31/06	03/31/06	
2-Hexanone	EPA 8260B	6C31009	13	30	ND	5	03/31/06	03/31/06	
Isopropylbenzene	EPA 8260B	6C31009	1.2	5.0	ND	5	03/31/06	03/31/06	
p-Isopropyltoluene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
Methylene chloride	EPA 8260B	6C31009	3.5	5.0	ND	5	03/31/06	03/31/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C31009	18	25	ND	5	03/31/06	03/31/06	
n-Propylbenzene	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
Styrene	EPA 8260B	6C31009	0.80	5.0	ND	5	03/31/06	03/31/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C31009	1.4	5.0	ND	5	03/31/06	03/31/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C31009	1.2	5.0	ND	5	03/31/06	03/31/06	
Tetrachloroethene	EPA 8260B	6C31009	1.6	5.0	ND	5	03/31/06	03/31/06	
Toluene	EPA 8260B	6C31009	1.8	5.0	ND	5	03/31/06	03/31/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C31009	2.2	5.0	ND	5	03/31/06	03/31/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C31009	2.4	5.0	ND	5	03/31/06	03/31/06	
1,1,2-Trichloroethane	EPA 8260B	6C31009	1.5	5.0	ND	5	03/31/06	03/31/06	
1,1,1-Trichloroethane	EPA 8260B	6C31009	1.5	5.0	ND	5	03/31/06	03/31/06	
Trichloroethene	EPA 8260B	6C31009	1.3	5.0	**36**	5	03/31/06	03/31/06	
Trichlorofluoromethane	EPA 8260B	6C31009	1.7	10	ND	5	03/31/06	03/31/06	
1,2,3-Trichloropropane	EPA 8260B	6C31009	2.0	5.0	ND	5	03/31/06	03/31/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C31009	1.2	5.0	ND	5	03/31/06	03/31/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C31009	1.3	5.0	ND	5	03/31/06	03/31/06	
Vinyl acetate	EPA 8260B	6C31009	8.5	30	ND	5	03/31/06	03/31/06	
Xylenes, Total	EPA 8260B	6C31009	4.5	5.0	ND	5	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*106 %*				
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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TAIT Environmental/Boeing	Project ID:	Boeing C-6 Torrance	
701 N. Parkcenter Drive		EM2303D/PHASE 01	Sampled: 03/20/06
Santa Ana, CA 92705	Report Number:	IPC2080	Received: 03/20/06
Attention: Mehmet Pehlivan			

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-11 (MWB019_WG032006_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C30003	4.5	10	ND	1	03/30/06	03/30/06	
Benzene	EPA 8260B	6C30003	0.28	1.0	ND	1	03/30/06	03/30/06	
Bromobenzene	EPA 8260B	6C30003	0.27	1.0	ND	1	03/30/06	03/30/06	
Bromochloromethane	EPA 8260B	6C30003	0.32	1.0	ND	1	03/30/06	03/30/06	
Bromodichloromethane	EPA 8260B	6C30003	0.30	1.0	ND	1	03/30/06	03/30/06	
Bromoform	EPA 8260B	6C30003	0.32	1.0	ND	1	03/30/06	03/30/06	
Bromomethane	EPA 8260B	6C30003	0.42	1.0	ND	1	03/30/06	03/30/06	
2-Butanone (MEK)	EPA 8260B	6C30003	3.8	5.0	ND	1	03/30/06	03/30/06	
n-Butylbenzene	EPA 8260B	6C30003	0.37	1.0	ND	1	03/30/06	03/30/06	M1
sec-Butylbenzene	EPA 8260B	6C30003	0.25	1.0	ND	1	03/30/06	03/30/06	
tert-Butylbenzene	EPA 8260B	6C30003	0.22	1.0	ND	1	03/30/06	03/30/06	
Carbon Disulfide	EPA 8260B	6C30003	0.48	1.0	ND	1	03/30/06	03/30/06	
Carbon tetrachloride	EPA 8260B	6C30003	0.28	0.50	**15**	1	03/30/06	03/30/06	
Chlorobenzene	EPA 8260B	6C30003	0.36	1.0	ND	1	03/30/06	03/30/06	
Chloroethane	EPA 8260B	6C30003	0.40	2.0	ND	1	03/30/06	03/30/06	
Chloromethane	EPA 8260B	6C30003	0.30	2.0	ND	1	03/30/06	03/30/06	
2-Chlorotoluene	EPA 8260B	6C30003	0.28	1.0	ND	1	03/30/06	03/30/06	
4-Chlorotoluene	EPA 8260B	6C30003	0.29	1.0	ND	1	03/30/06	03/30/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C30003	0.92	2.0	ND	1	03/30/06	03/30/06	
Dibromochloromethane	EPA 8260B	6C30003	0.28	1.0	ND	1	03/30/06	03/30/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C30003	0.32	1.0	ND	1	03/30/06	03/30/06	
1,4-Dichlorobenzene	EPA 8260B	6C30003	0.37	1.0	ND	1	03/30/06	03/30/06	
1,2-Dichlorobenzene	EPA 8260B	6C30003	0.32	1.0	ND	1	03/30/06	03/30/06	
1,3-Dichlorobenzene	EPA 8260B	6C30003	0.35	1.0	ND	1	03/30/06	03/30/06	
Dichlorodifluoromethane	EPA 8260B	6C30003	0.79	1.0	ND	1	03/30/06	03/30/06	
1,2-Dichloroethane	EPA 8260B	6C30003	0.28	0.50	**0.40**	1	03/30/06	03/30/06	J
1,1-Dichloroethane	EPA 8260B	6C30003	0.27	1.0	**0.45**	1	03/30/06	03/30/06	J
1,1-Dichloroethene	EPA 8260B	6C30003	0.42	1.0	**4.3**	1	03/30/06	03/30/06	
cis-1,2-Dichloroethene	EPA 8260B	6C30003	0.32	1.0	ND	1	03/30/06	03/30/06	
trans-1,2-Dichloroethene	EPA 8260B	6C30003	0.27	1.0	ND	1	03/30/06	03/30/06	
1,2-Dichloropropane	EPA 8260B	6C30003	0.35	1.0	ND	1	03/30/06	03/30/06	M1
2,2-Dichloropropane	EPA 8260B	6C30003	0.34	1.0	ND	1	03/30/06	03/30/06	
cis-1,3-Dichloropropene	EPA 8260B	6C30003	0.22	0.50	ND	1	03/30/06	03/30/06	
1,1-Dichloropropene	EPA 8260B	6C30003	0.28	1.0	ND	1	03/30/06	03/30/06	
trans-1,3-Dichloropropene	EPA 8260B	6C30003	0.32	0.50	ND	1	03/30/06	03/30/06	
Ethylbenzene	EPA 8260B	6C30003	0.25	1.0	ND	1	03/30/06	03/30/06	M1
Hexachlorobutadiene	EPA 8260B	6C30003	0.38	1.0	ND	1	03/30/06	03/30/06	M1
2-Hexanone	EPA 8260B	6C30003	2.6	6.0	ND	1	03/30/06	03/30/06	
Iodomethane	EPA 8260B	6C30003	1.0	2.0	ND	1	03/30/06	03/30/06	
Isopropylbenzene	EPA 8260B	6C30003	0.25	1.0	ND	1	03/30/06	03/30/06	
p-Isopropyltoluene	EPA 8260B	6C30003	0.28	1.0	ND	1	03/30/06	03/30/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

M 04/06

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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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-11 (MWB019_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C30003	0.32	1.0	ND	1	03/30/06	03/30/06	
Methylene chloride	EPA 8260B	6C30003	0.70	1.0	ND	1	03/30/06	03/30/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C30003	3.5	5.0	ND	1	03/30/06	03/30/06	L
n-Propylbenzene	EPA 8260B	6C30003	0.27	1.0	ND	1	03/30/06	03/30/06	
Styrene	EPA 8260B	6C30003	0.16	1.0	ND UJ	1	03/30/06	03/30/06	M2, R-3
1,1,1,2-Tetrachloroethane	EPA 8260B	6C30003	0.27	1.0	ND	1	03/30/06	03/30/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C30003	0.24	1.0	ND	1	03/30/06	03/30/06	
Tetrahydrofuran (THF)	EPA 8260B	6C30003	2.3	10	ND	1	03/30/06	03/30/06	
Toluene	EPA 8260B	6C30003	0.36	1.0	ND	1	03/30/06	03/30/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C30003	0.45	1.0	ND	1	03/30/06	03/30/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C30003	0.48	1.0	ND	1	03/30/06	03/30/06	
1,1,2-Trichloroethane	EPA 8260B	6C30003	0.30	1.0	ND	1	03/30/06	03/30/06	
1,1,1-Trichloroethane	EPA 8260B	6C30003	0.30	1.0	ND	1	03/30/06	03/30/06	
Trichlorofluoromethane	EPA 8260B	6C30003	0.34	2.0	ND	1	03/30/06	03/30/06	
1,2,3-Trichloropropane	EPA 8260B	6C30003	0.40	1.0	ND	1	03/30/06	03/30/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C30003	0.23	1.0	ND UJ	1	03/30/06	03/30/06	M2, R-3
1,3,5-Trimethylbenzene	EPA 8260B	6C30003	0.26	1.0	ND	1	03/30/06	03/30/06	
Vinyl acetate	EPA 8260B	6C30003	1.7	6.0	ND	1	03/30/06	03/30/06	
Vinyl chloride	EPA 8260B	6C30003	0.26	0.50	ND	1	03/30/06	03/30/06	
Xylenes, Total	EPA 8260B	6C30003	0.90	1.0	ND	1	03/30/06	03/30/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*96 %*				
Surrogate: Dibromofluoromethane (80-120%)					*102 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

X 05/15/06

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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		EM2303D/PHASE 01	Sampled: 03/20/06
Santa Ana, CA 92705	Report Number:	IPC2080	Received: 03/20/06
Attention: Mehmet Pehlivan			

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-11RE1 (MWB019_WG032006_0001 - Water) - cont.									
Reporting Units: ug/l									
Chloroform	EPA 8260B	6C31008	6.6	20	**2600**	20	03/31/06	03/31/06	
Tetrachloroethene	EPA 8260B	6C31008	6.4	20	**190**	20	03/31/06	03/31/06	
Trichloroethene	EPA 8260B	6C31008	5.2	20	**120**	20	03/31/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*99 %*				
Surrogate: Dibromofluoromethane (80-120%)					*97 %*				
Surrogate: Toluene-d8 (80-120%)					*98 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

X 03/06

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LDC #: 14879A1
SDG #: IPC2080
Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET
Tier 1

Date: 5/12/06
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	Δ	Sampling dates: 3/20/06
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	N	
IV.	Continuing calibration	N	
V.	Blanks	SW	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW	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	Δ	
XVI.	Field duplicates	SW	D = 3 + 4 13 + 15 14 + 16
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Water

1	MWB003_WG032006_0001	11	MWB003_WG032006_0001RE H,S		31 1	6C29002	
2	MWC011_WG032006_0001	12	MWC011_WG032006_0001RE		32 2	6C31009	
3	IRZMW002B_WG032006_0001	13	IRZMW002B_WG032006_0001RE1		33 3	6C30003	
4	IRZMW002B_WG032006_0002	14	IRZMW002B_WG032006_0001RE2		34 4	6C31008	
5	IRZB0081_WG032006_0001	15	IRZMW002B_WG032006_0002RE1		35		
6	MWB019_WG032006_0001	16	IRZMW002B_WG032006_0002RE2		36		
7	MWB019_WG032006_0001MS	17	IRZB0081_WG032006_0001RE1		37		
8	MWB019_WG032006_0001MSD	18	IRZB0081_WG032006_0001RE2		38		
9	IRZMW002B_WG032006_0002MS RE1		MWB019_WG032006_0001RE		39		
10	IRZMW002B_WG032006_0002MSD RE1	20		30	40		

14879A1W.wpd

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

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

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

BOE-C6-0050678

LDC #: 14879A1
SDG #: LPC2080

VALIDATION FINDINGS WORKSHEET
Blanks

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

Blank analysis date: 3/29/06
Conc. units: ug/L
Associated Samples: (1 → 5) ND

Compound	Blank ID	Sample Identification								
	6C29002-BLK1									
Tetrahydrofuran ~~Methylene chloride~~	3.51									
~~Acetone~~										
CRQL										

Blank analysis date: 3/30/06
Conc. units: ug/L
Associated Samples: 6 (ND)

Compound	Blank ID	Sample Identification								
	6E30003-BLK1									
Tetrahydrofuran ~~Methylene chloride~~	7.19									
~~Acetone~~										
CRQL										

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

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

BOE-C6-0050679

LDC #: 14879A'
SDG #: 1PC2080

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

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

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

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

Y N N/A Were all surrogate %R within QC limits?

Y N N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
		2	DFM	122 (80-120)	J/A dit (Iodomethane & Tetrahydrofuran)
				( )	
				( )	
		5	↓	121 (↓)	J/A dit ↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	QC Limits (Soil)	QC Limits (Water)
SMC1 (TOL) = Toluene-d8	81-117	88-110
SMC2 (BFB) = Bromofluorobenzene	74-121	86-115
SMC3 (DCE) = 1,2-Dichloroethane-d4	80-120	80-120
SMC4 (DFM) = Dibromofluoromethane	80-120	86-118

SUR.1SB

BOE-C6-0050680

LDC #: 14879A1
SDG #: 1PC2080

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
		7+8	III	140 (65-135)	( )	( )	6	J/A dit
			Q	130 (60-125)	( )	( )		
			~~XXX~~	~~143 (60-140)~~	( )	( )		
			EE	132 (65-130)	( )	( )		
			LLL	136 (60-135)	( )	( )		
			~~S~~	( )	~~8 (60-125)~~	( )		~~no qual parent 72x~~
			FF	( )	23 (45-145)	75 (30)		J/UJ/A
			DDD	( )	52 (55-130)	46 (25)		J/UJ/A
				( )	( )	( )		
		7+8	S	( )	8 (60-125)	( )	19	no qual parent 72x spike Amt
				( )	( )	( )		
				( )	( )	( )		
		~~[illegible]~~ 9+10	F	( )	( )	42 (35)	16	J/UJ/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

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

MSD.1SB

BOE-C6-0050681

LDC #: 14879A1
SDG #: 1Pd2080

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
		6C30003-BS1	Y	136 (40-135)	( )	( )	6C30003-BK1, 6	J/Pdet
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LCSLCSD.1SB

BOE-C6-0050682

LDC#: 14879A1
SDG#: IPC2080

VALIDATION FINDINGS WORKSHEET
Field Duplicates

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

METHOD: GC/MS VOA(EPA SW846 8260)
Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD	
	13	15		
Trichloroethene	300	330	10	

Compound	Concentration (ug/L)		RPD	
	14	16		
Chlorobenzene	0.42	0.48	13	
Chloroform	1.5	1.3	14	
1,1-Dichloroethene	6.2	3.9	46	
cis-1,2-Dichloroethene	110	94	16	
Toluene	1.4	1.3	7	
trans-1,2-Dichloroethene	1.0u	4.2	~~123~~ 200	

V:\FIELD DUPLICATES\14879A1.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 21, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 2

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2190

Sample Identification

IRZMW001B_WG032106_0001
IRZB0095_WG032106_0001
IRZCMW003B_WG032106_0001
WCC_6S_WG032106_0001
CMW026_WG032106_0001
IRZMW001B_WG032106_0001MS
IRZMW001B_WG032106_0001MSD

Introduction

This data review covers 7 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.

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
3/28/06	2-Butanone	0.031 (≥0.05)	IRZMW001B_WG032106_0001 IRZB0095_WG032106_0001 IRZCMW003B_WG032106_0001 WCC_6S_WG032106_0001 CMW026_WG032106_0001 IRZMW001B_WG032106_0001MS IRZMW001B_WG032106_0001MSD 6C29016-BLK	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

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

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

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

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
3/29/06	2-Butanone	0.032 (≥0.05)	IRZMW001B_WG032106_0001 IRZB0095_WG032106_0001 IRZCMW003B_WG032106_0001 WCC_6S_WG032106_0001 CMW026_WG032106_0001 IRZMW001B_WG032106_0001MS IRZMW001B_WG032106_0001MSD 6C29016-BLK	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
6C29016-BLK	3/29/06	Tetrahydrofuran	6.98 ug/L	IRZMW001B_WG032106_0001 IRZB0095_WG032106_0001 IRZCMW003B_WG032106_0001 WCC_6S_WG032106_0001 CMW026_WG032106_0001

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

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
IRZB0095_WG032106_0001 (10x)	Tetrahydrofuran	64 ug/L	100U ug/L

VI. Surrogate Spikes

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

VII. Matrix Spike/Matrix Spike Duplicates

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

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
IRZMW001B_WG032106_0001MS/MSD (IRZMW001B_WG032106_0001)	1,2-Dichloropropane	137 (60-125)	129 (60-125)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

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

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

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 Facility, Torrance CA
Volatiles - Data Qualification Summary - SDG IPC2190

SDG	Sample	Compound	Flag	A or P	Reason
IPC2190	IRZMW001B_WG032106_0001 IRZB0095_WG032106_0001 IRZCMW003B_WG032106_0001 WCC_6S_WG032106_0001 CMW026_WG032106_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IPC2190	IRZMW001B_WG032106_0001 IRZB0095_WG032106_0001 IRZCMW003B_WG032106_0001 WCC_6S_WG032106_0001 CMW026_WG032106_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)
IPC2190	IRZMW001B_WG032106_0001	1,2-Dichloropropane	J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPC2190

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
IPC2190	IRZB0095_WG032106_0001 (10x)	Tetrahydrofuran	100U 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
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-03 (IRZMW001B_WG032106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C29016	4.5	10	ND	1	03/29/06	03/29/06	
Benzene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
Bromobenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
Bromochloromethane	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromodichloromethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/29/06	
Bromoform	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromomethane	EPA 8260B	6C29016	0.42	1.0	ND	1	03/29/06	03/29/06	
2-Butanone (MEK)	EPA 8260B	6C29016	3.8	5.0	ND UJ	1	03/29/06	03/29/06	
n-Butylbenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/29/06	
sec-Butylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
tert-Butylbenzene	EPA 8260B	6C29016	0.22	1.0	ND	1	03/29/06	03/29/06	
Carbon Disulfide	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/29/06	
Carbon tetrachloride	EPA 8260B	6C29016	0.28	0.50	ND	1	03/29/06	03/29/06	
Chlorobenzene	EPA 8260B	6C29016	0.36	1.0	ND	1	03/29/06	03/29/06	
Chloroethane	EPA 8260B	6C29016	0.40	2.0	ND	1	03/29/06	03/29/06	
Chloroform	EPA 8260B	6C29016	0.33	1.0	**2.2**	1	03/29/06	03/29/06	
Chloromethane	EPA 8260B	6C29016	0.30	2.0	ND	1	03/29/06	03/29/06	
2-Chlorotoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
4-Chlorotoluene	EPA 8260B	6C29016	0.29	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C29016	0.92	2.0	ND	1	03/29/06	03/29/06	
Dibromochloromethane	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
1,4-Dichlorobenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichlorobenzene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
1,3-Dichlorobenzene	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/29/06	
Dichlorodifluoromethane	EPA 8260B	6C29016	0.79	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichloroethane	EPA 8260B	6C29016	0.28	0.50	ND	1	03/29/06	03/29/06	
1,1-Dichloroethane	EPA 8260B	6C29016	0.27	1.0	**0.65**	1	03/29/06	03/29/06	J
1,1-Dichloroethene	EPA 8260B	6C29016	0.42	1.0	**31**	1	03/29/06	03/29/06	
trans-1,2-Dichloroethene	EPA 8260B	6C29016	0.27	1.0	**1.2**	1	03/29/06	03/29/06	
1,2-Dichloropropane	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/29/06	M1
2,2-Dichloropropane	EPA 8260B	6C29016	0.34	1.0	ND	1	03/29/06	03/29/06	
cis-1,3-Dichloropropene	EPA 8260B	6C29016	0.22	0.50	ND	1	03/29/06	03/29/06	
1,1-Dichloropropene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
trans-1,3-Dichloropropene	EPA 8260B	6C29016	0.32	0.50	ND	1	03/29/06	03/29/06	
Ethylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
Hexachlorobutadiene	EPA 8260B	6C29016	0.38	1.0	ND	1	03/29/06	03/29/06	
2-Hexanone	EPA 8260B	6C29016	2.6	6.0	ND	1	03/29/06	03/29/06	
Iodomethane	EPA 8260B	6C29016	1.0	2.0	ND	1	03/29/06	03/29/06	
Isopropylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
p-Isopropyltoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

X 25 Apr 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
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-03 (IRZMW001B_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Methylene chloride	EPA 8260B	6C29016	0.70	1.0	**0.77**	1	03/29/06	03/29/06	J
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C29016	3.5	5.0	ND	1	03/29/06	03/29/06	
n-Propylbenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
Styrene	EPA 8260B	6C29016	0.16	1.0	ND	1	03/29/06	03/29/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C29016	0.24	1.0	ND	1	03/29/06	03/29/06	
Tetrachloroethene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29016	2.3	10	ND	1	03/29/06	03/29/06	
Toluene	EPA 8260B	6C29016	0.36	1.0	ND	1	03/29/06	03/29/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C29016	0.45	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/29/06	
1,1,2-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	**0.37**	1	03/29/06	03/29/06	J
1,1,1-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/29/06	
Trichlorofluoromethane	EPA 8260B	6C29016	0.34	2.0	ND	1	03/29/06	03/29/06	
1,2,3-Trichloropropane	EPA 8260B	6C29016	0.40	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C29016	0.23	1.0	ND	1	03/29/06	03/29/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C29016	0.26	1.0	ND	1	03/29/06	03/29/06	
Vinyl acetate	EPA 8260B	6C29016	1.7	6.0	ND	1	03/29/06	03/29/06	
Vinyl chloride	EPA 8260B	6C29016	0.26	0.50	ND	1	03/29/06	03/29/06	
Xylenes, Total	EPA 8260B	6C29016	0.90	1.0	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*110 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

4/07/06

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-03RE1 (IRZMW001B_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
cis-1,2-Dichloroethene	EPA 8260B	6C30011	6.4	20	**560**	20	03/30/06	03/30/06	
Trichloroethene	EPA 8260B	6C30011	5.2	20	**1200**	20	03/30/06	03/30/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*104 %*				
Surrogate: Dibromofluoromethane (80-120%)					*118 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

K 05/5/06

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Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-04 (IRZB0095_WG032106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C29016	45	100	ND	10	03/29/06	03/29/06	
Benzene	EPA 8260B	6C29016	2.8	10	ND	10	03/29/06	03/29/06	
Bromobenzene	EPA 8260B	6C29016	2.7	10	ND	10	03/29/06	03/29/06	
Bromochloromethane	EPA 8260B	6C29016	3.2	10	ND	10	03/29/06	03/29/06	
Bromodichloromethane	EPA 8260B	6C29016	3.0	10	ND	10	03/29/06	03/29/06	
Bromoform	EPA 8260B	6C29016	3.2	10	ND	10	03/29/06	03/29/06	
Bromomethane	EPA 8260B	6C29016	4.2	10	ND	10	03/29/06	03/29/06	
2-Butanone (MEK)	EPA 8260B	6C29016	38	50	ND UJ	10	03/29/06	03/29/06	
n-Butylbenzene	EPA 8260B	6C29016	3.7	10	ND	10	03/29/06	03/29/06	
sec-Butylbenzene	EPA 8260B	6C29016	2.5	10	ND	10	03/29/06	03/29/06	
tert-Butylbenzene	EPA 8260B	6C29016	2.2	10	ND	10	03/29/06	03/29/06	
Carbon Disulfide	EPA 8260B	6C29016	4.8	10	ND	10	03/29/06	03/29/06	
Carbon tetrachloride	EPA 8260B	6C29016	2.8	5.0	ND	10	03/29/06	03/29/06	
Chlorobenzene	EPA 8260B	6C29016	3.6	10	ND	10	03/29/06	03/29/06	
Chloroethane	EPA 8260B	6C29016	4.0	20	ND	10	03/29/06	03/29/06	
Chloroform	EPA 8260B	6C29016	3.3	10	**7.2**	10	03/29/06	03/29/06	J
Chloromethane	EPA 8260B	6C29016	3.0	20	ND	10	03/29/06	03/29/06	
2-Chlorotoluene	EPA 8260B	6C29016	2.8	10	ND	10	03/29/06	03/29/06	
4-Chlorotoluene	EPA 8260B	6C29016	2.9	10	ND	10	03/29/06	03/29/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C29016	9.2	20	ND	10	03/29/06	03/29/06	
Dibromochloromethane	EPA 8260B	6C29016	2.8	10	ND	10	03/29/06	03/29/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C29016	3.2	10	ND	10	03/29/06	03/29/06	
1,4-Dichlorobenzene	EPA 8260B	6C29016	3.7	10	ND	10	03/29/06	03/29/06	
1,2-Dichlorobenzene	EPA 8260B	6C29016	3.2	10	ND	10	03/29/06	03/29/06	
1,3-Dichlorobenzene	EPA 8260B	6C29016	3.5	10	ND	10	03/29/06	03/29/06	
Dichlorodifluoromethane	EPA 8260B	6C29016	7.9	10	ND	10	03/29/06	03/29/06	
1,2-Dichloroethane	EPA 8260B	6C29016	2.8	5.0	ND	10	03/29/06	03/29/06	
1,1-Dichloroethane	EPA 8260B	6C29016	2.7	10	ND	10	03/29/06	03/29/06	
1,1-Dichloroethene	EPA 8260B	6C29016	4.2	10	**12**	10	03/29/06	03/29/06	
cis-1,2-Dichloroethene	EPA 8260B	6C29016	3.2	10	**320**	10	03/29/06	03/29/06	
trans-1,2-Dichloroethene	EPA 8260B	6C29016	2.7	10	**4.5**	10	03/29/06	03/29/06	J
1,2-Dichloropropane	EPA 8260B	6C29016	3.5	10	ND	10	03/29/06	03/29/06	
2,2-Dichloropropane	EPA 8260B	6C29016	3.4	10	ND	10	03/29/06	03/29/06	
cis-1,3-Dichloropropene	EPA 8260B	6C29016	2.2	5.0	ND	10	03/29/06	03/29/06	
1,1-Dichloropropene	EPA 8260B	6C29016	2.8	10	ND	10	03/29/06	03/29/06	
trans-1,3-Dichloropropene	EPA 8260B	6C29016	3.2	5.0	ND	10	03/29/06	03/29/06	
Ethylbenzene	EPA 8260B	6C29016	2.5	10	ND	10	03/29/06	03/29/06	
Hexachlorobutadiene	EPA 8260B	6C29016	3.8	10	ND	10	03/29/06	03/29/06	
2-Hexanone	EPA 8260B	6C29016	26	60	ND	10	03/29/06	03/29/06	
Iodomethane	EPA 8260B	6C29016	10	20	ND	10	03/29/06	03/29/06	
Isopropylbenzene	EPA 8260B	6C29016	2.5	10	ND	10	03/29/06	03/29/06	

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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
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-04 (IRZB0095_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6C29016	2.8	10	ND	10	03/29/06	03/29/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C29016	3.2	10	ND	10	03/29/06	03/29/06	
Methylene chloride	EPA 8260B	6C29016	7.0	10	**8.0**	10	03/29/06	03/29/06	J
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C29016	35	50	ND	10	03/29/06	03/29/06	
n-Propylbenzene	EPA 8260B	6C29016	2.7	10	ND	10	03/29/06	03/29/06	
Styrene	EPA 8260B	6C29016	1.6	10	ND	10	03/29/06	03/29/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C29016	2.7	10	ND	10	03/29/06	03/29/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C29016	2.4	10	ND	10	03/29/06	03/29/06	
Tetrachloroethene	EPA 8260B	6C29016	3.2	10	**6.0**	10	03/29/06	03/29/06	J
Tetrahydrofuran (THF)	EPA 8260B	6C29016	23	100	**64** 1000U	10	03/29/06	03/29/06	B, J
Toluene	EPA 8260B	6C29016	3.6	10	ND	10	03/29/06	03/29/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C29016	4.5	10	ND	10	03/29/06	03/29/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C29016	4.8	10	ND	10	03/29/06	03/29/06	
1,1,2-Trichloroethane	EPA 8260B	6C29016	3.0	10	ND	10	03/29/06	03/29/06	
1,1,1-Trichloroethane	EPA 8260B	6C29016	3.0	10	ND	10	03/29/06	03/29/06	
Trichloroethene	EPA 8260B	6C29016	2.6	10	**1100**	10	03/29/06	03/29/06	
Trichlorofluoromethane	EPA 8260B	6C29016	3.4	20	ND	10	03/29/06	03/29/06	
1,2,3-Trichloropropane	EPA 8260B	6C29016	4.0	10	ND	10	03/29/06	03/29/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C29016	2.3	10	ND	10	03/29/06	03/29/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C29016	2.6	10	ND	10	03/29/06	03/29/06	
Vinyl acetate	EPA 8260B	6C29016	17	60	ND	10	03/29/06	03/29/06	
Vinyl chloride	EPA 8260B	6C29016	2.6	5.0	**590**	10	03/29/06	03/29/06	
Xylenes, Total	EPA 8260B	6C29016	9.0	10	ND	10	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*95 %*				
Surrogate: Dibromofluoromethane (80-120%)					*108 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

MC 04/7/06

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-08 (IRZCMW003B_WG032106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C29016	4.5	10	ND	1	03/29/06	03/29/06	
Benzene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
Bromobenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
Bromochloromethane	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromodichloromethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/29/06	
Bromoform	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromomethane	EPA 8260B	6C29016	0.42	1.0	ND	1	03/29/06	03/29/06	
2-Butanone (MEK)	EPA 8260B	6C29016	3.8	5.0	ND UJ	1	03/29/06	03/29/06	
n-Butylbenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/29/06	
sec-Butylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
tert-Butylbenzene	EPA 8260B	6C29016	0.22	1.0	ND	1	03/29/06	03/29/06	
Carbon Disulfide	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/29/06	
Carbon tetrachloride	EPA 8260B	6C29016	0.28	0.50	ND	1	03/29/06	03/29/06	
Chlorobenzene	EPA 8260B	6C29016	0.36	1.0	**1.1**	1	03/29/06	03/29/06	
Chloroethane	EPA 8260B	6C29016	0.40	2.0	ND	1	03/29/06	03/29/06	
Chloroform	EPA 8260B	6C29016	0.33	1.0	**2.1**	1	03/29/06	03/29/06	
Chloromethane	EPA 8260B	6C29016	0.30	2.0	ND	1	03/29/06	03/29/06	
2-Chlorotoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
4-Chlorotoluene	EPA 8260B	6C29016	0.29	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C29016	0.92	2.0	ND	1	03/29/06	03/29/06	
Dibromochloromethane	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
1,4-Dichlorobenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichlorobenzene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
1,3-Dichlorobenzene	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/29/06	
Dichlorodifluoromethane	EPA 8260B	6C29016	0.79	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichloroethane	EPA 8260B	6C29016	0.28	0.50	**0.31**	1	03/29/06	03/29/06	J
1,1-Dichloroethane	EPA 8260B	6C29016	0.27	1.0	**0.86**	1	03/29/06	03/29/06	J
1,1-Dichloroethene	EPA 8260B	6C29016	0.42	1.0	**37**	1	03/29/06	03/29/06	
trans-1,2-Dichloroethene	EPA 8260B	6C29016	0.27	1.0	**2.2**	1	03/29/06	03/29/06	
1,2-Dichloropropane	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/29/06	
2,2-Dichloropropane	EPA 8260B	6C29016	0.34	1.0	ND	1	03/29/06	03/29/06	
cis-1,3-Dichloropropene	EPA 8260B	6C29016	0.22	0.50	ND	1	03/29/06	03/29/06	
1,1-Dichloropropene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
trans-1,3-Dichloropropene	EPA 8260B	6C29016	0.32	0.50	ND	1	03/29/06	03/29/06	
Ethylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
Hexachlorobutadiene	EPA 8260B	6C29016	0.38	1.0	ND	1	03/29/06	03/29/06	
2-Hexanone	EPA 8260B	6C29016	2.6	6.0	ND	1	03/29/06	03/29/06	
Iodomethane	EPA 8260B	6C29016	1.0	2.0	ND	1	03/29/06	03/29/06	
Isopropylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
p-Isopropyltoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	

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Michele Chamberlin
Project Manager

MC 03/29/06

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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
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-08 (IRZCMW003B_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Methylene chloride	EPA 8260B	6C29016	0.70	1.0	ND	1	03/29/06	03/29/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C29016	3.5	5.0	ND	1	03/29/06	03/29/06	
n-Propylbenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
Styrene	EPA 8260B	6C29016	0.16	1.0	ND	1	03/29/06	03/29/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C29016	0.24	1.0	ND	1	03/29/06	03/29/06	
Tetrachloroethene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29016	2.3	10	ND	1	03/29/06	03/29/06	
Toluene	EPA 8260B	6C29016	0.36	1.0	**3.6**	1	03/29/06	03/29/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C29016	0.45	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/29/06	
1,1,2-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	**0.41**	1	03/29/06	03/29/06	J
1,1,1-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/29/06	
Trichlorofluoromethane	EPA 8260B	6C29016	0.34	2.0	ND	1	03/29/06	03/29/06	
1,2,3-Trichloropropane	EPA 8260B	6C29016	0.40	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C29016	0.23	1.0	ND	1	03/29/06	03/29/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C29016	0.26	1.0	ND	1	03/29/06	03/29/06	
Vinyl acetate	EPA 8260B	6C29016	1.7	6.0	ND	1	03/29/06	03/29/06	
Vinyl chloride	EPA 8260B	6C29016	0.26	0.50	**3.5**	1	03/29/06	03/29/06	
Xylenes, Total	EPA 8260B	6C29016	0.90	1.0	ND	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*99 %*				
Surrogate: Dibromofluoromethane (80-120%)					*114 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

4/27/06

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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		EM2303D/PHASE 01	Sampled: 03/21/06
Santa Ana, CA 92705	Report Number:	IPC2190	Received: 03/21/06
Attention: Mehmet Pehlivan			

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-08RE1 (IRZCMW003B_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
cis-1,2-Dichloroethene	EPA 8260B	6C30026	6.4	20	**930**	20	03/30/06	03/31/06	
Trichloroethene	EPA 8260B	6C30026	5.2	20	**990**	20	03/30/06	03/31/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*105 %*				
Surrogate: Dibromofluoromethane (80-120%)					*119 %*				
Surrogate: Toluene-d8 (80-120%)					*114 %*				

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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
701 N. Parkcenter Drive
Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-09 (WCC_6S_WG032106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C29016	4.5	10	**41**	1	03/29/06	03/29/06	
Benzene	EPA 8260B	6C29016	0.28	1.0	**74**	1	03/29/06	03/29/06	
Bromobenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
Bromochloromethane	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromodichloromethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/29/06	
Bromoform	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Bromomethane	EPA 8260B	6C29016	0.42	1.0	ND	1	03/29/06	03/29/06	
2-Butanone (MEK)	EPA 8260B	6C29016	3.8	5.0	ND UJ	1	03/29/06	03/29/06	
n-Butylbenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/29/06	
sec-Butylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/29/06	
tert-Butylbenzene	EPA 8260B	6C29016	0.22	1.0	ND	1	03/29/06	03/29/06	
Carbon Disulfide	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/29/06	
Carbon tetrachloride	EPA 8260B	6C29016	0.28	0.50	ND	1	03/29/06	03/29/06	
Chlorobenzene	EPA 8260B	6C29016	0.36	1.0	ND	1	03/29/06	03/29/06	
Chloroethane	EPA 8260B	6C29016	0.40	2.0	ND	1	03/29/06	03/29/06	
Chloroform	EPA 8260B	6C29016	0.33	1.0	**25**	1	03/29/06	03/29/06	
Chloromethane	EPA 8260B	6C29016	0.30	2.0	ND	1	03/29/06	03/29/06	
2-Chlorotoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
4-Chlorotoluene	EPA 8260B	6C29016	0.29	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C29016	0.92	2.0	ND	1	03/29/06	03/29/06	
Dibromochloromethane	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
1,4-Dichlorobenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichlorobenzene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
1,3-Dichlorobenzene	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/29/06	
Dichlorodifluoromethane	EPA 8260B	6C29016	0.79	1.0	ND	1	03/29/06	03/29/06	
1,2-Dichloroethane	EPA 8260B	6C29016	0.28	0.50	**61**	1	03/29/06	03/29/06	
1,2-Dichloropropane	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/29/06	
2,2-Dichloropropane	EPA 8260B	6C29016	0.34	1.0	ND	1	03/29/06	03/29/06	
cis-1,3-Dichloropropene	EPA 8260B	6C29016	0.22	0.50	ND	1	03/29/06	03/29/06	
1,1-Dichloropropene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
trans-1,3-Dichloropropene	EPA 8260B	6C29016	0.32	0.50	ND	1	03/29/06	03/29/06	
Ethylbenzene	EPA 8260B	6C29016	0.25	1.0	**8.8**	1	03/29/06	03/29/06	
Hexachlorobutadiene	EPA 8260B	6C29016	0.38	1.0	ND	1	03/29/06	03/29/06	
2-Hexanone	EPA 8260B	6C29016	2.6	6.0	ND	1	03/29/06	03/29/06	
Iodomethane	EPA 8260B	6C29016	1.0	2.0	ND	1	03/29/06	03/29/06	
Isopropylbenzene	EPA 8260B	6C29016	0.25	1.0	**0.39**	1	03/29/06	03/29/06	J
p-Isopropyltoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/29/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/29/06	
Methylene chloride	EPA 8260B	6C29016	0.70	1.0	ND	1	03/29/06	03/29/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C29016	3.5	5.0	**4.3**	1	03/29/06	03/29/06	J

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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		EM2303D/PHASE 01	Sampled: 03/21/06
Santa Ana, CA 92705	Report Number:	IPC2190	Received: 03/21/06
Attention: Mehmet Pehlivan			

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-09 (WCC_6S_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
n-Propylbenzene	EPA 8260B	6C29016	0.27	1.0	**0.30**	1	03/29/06	03/29/06	J
Styrene	EPA 8260B	6C29016	0.16	1.0	ND	1	03/29/06	03/29/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/29/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C29016	0.24	1.0	ND	1	03/29/06	03/29/06	
Tetrachloroethene	EPA 8260B	6C29016	0.32	1.0	**0.47**	1	03/29/06	03/29/06	J
Tetrahydrofuran (THF)	EPA 8260B	6C29016	2.3	10	ND	1	03/29/06	03/29/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C29016	0.45	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/29/06	
1,1,2-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	**46**	1	03/29/06	03/29/06	
1,1,1-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	**4.0**	1	03/29/06	03/29/06	
Trichlorofluoromethane	EPA 8260B	6C29016	0.34	2.0	ND	1	03/29/06	03/29/06	
1,2,3-Trichloropropane	EPA 8260B	6C29016	0.40	1.0	ND	1	03/29/06	03/29/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C29016	0.23	1.0	**1.4**	1	03/29/06	03/29/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C29016	0.26	1.0	**0.61**	1	03/29/06	03/29/06	J
Vinyl acetate	EPA 8260B	6C29016	1.7	6.0	ND	1	03/29/06	03/29/06	
Vinyl chloride	EPA 8260B	6C29016	0.26	0.50	**5.8**	1	03/29/06	03/29/06	
Xylenes, Total	EPA 8260B	6C29016	0.90	1.0	**53**	1	03/29/06	03/29/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*94 %*				
Surrogate: Dibromofluoromethane (80-120%)					*109 %*				
Surrogate: Toluene-d8 (80-120%)					*108 %*				

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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	EM2303D/PHASE 01	Sampled: 03/21/06
Santa Ana, CA 92705	Report Number: IPC2190	Received: 03/21/06
Attention: Mehmet Pehlivan		

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-09RE1 (WCC_6S_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
1,1-Dichloroethane	EPA 8260B	6C30011	27	100	**310**	100	03/30/06	03/30/06	
1,1-Dichloroethene	EPA 8260B	6C30011	42	100	**12000**	100	03/30/06	03/30/06	
cis-1,2-Dichloroethene	EPA 8260B	6C30011	32	100	**5500**	100	03/30/06	03/30/06	
trans-1,2-Dichloroethene	EPA 8260B	6C30011	27	100	**270**	100	03/30/06	03/30/06	
Toluene	EPA 8260B	6C30011	36	100	**2600**	100	03/30/06	03/30/06	
Trichloroethene	EPA 8260B	6C30011	26	100	**1300**	100	03/30/06	03/30/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*104 %*				
Surrogate: Dibromofluoromethane (80-120%)					*118 %*				
Surrogate: Toluene-d8 (80-120%)					*106 %*				

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-11 (CMW026_WG032106_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6C29016	4.5	10	ND	1	03/29/06	03/30/06	
Benzene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/30/06	
Bromobenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/30/06	
Bromochloromethane	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/30/06	
Bromodichloromethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/30/06	
Bromoform	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/30/06	
Bromomethane	EPA 8260B	6C29016	0.42	1.0	ND	1	03/29/06	03/30/06	
2-Butanone (MEK)	EPA 8260B	6C29016	3.8	5.0	ND UJ	1	03/29/06	03/30/06	
n-Butylbenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/30/06	
sec-Butylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/30/06	
tert-Butylbenzene	EPA 8260B	6C29016	0.22	1.0	ND	1	03/29/06	03/30/06	
Carbon Disulfide	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/30/06	
Carbon tetrachloride	EPA 8260B	6C29016	0.28	0.50	ND	1	03/29/06	03/30/06	
Chlorobenzene	EPA 8260B	6C29016	0.36	1.0	ND	1	03/29/06	03/30/06	
Chloroethane	EPA 8260B	6C29016	0.40	2.0	ND	1	03/29/06	03/30/06	
Chloroform	EPA 8260B	6C29016	0.33	1.0	ND	1	03/29/06	03/30/06	
Chloromethane	EPA 8260B	6C29016	0.30	2.0	ND	1	03/29/06	03/30/06	
2-Chlorotoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/30/06	
4-Chlorotoluene	EPA 8260B	6C29016	0.29	1.0	ND	1	03/29/06	03/30/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6C29016	0.92	2.0	ND	1	03/29/06	03/30/06	
Dibromochloromethane	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/30/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/30/06	
1,4-Dichlorobenzene	EPA 8260B	6C29016	0.37	1.0	ND	1	03/29/06	03/30/06	
1,2-Dichlorobenzene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/30/06	
1,3-Dichlorobenzene	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/30/06	
Dichlorodifluoromethane	EPA 8260B	6C29016	0.79	1.0	ND	1	03/29/06	03/30/06	
1,2-Dichloroethane	EPA 8260B	6C29016	0.28	0.50	ND	1	03/29/06	03/30/06	
1,1-Dichloroethane	EPA 8260B	6C29016	0.27	1.0	**0.27**	1	03/29/06	03/30/06	J
1,1-Dichloroethene	EPA 8260B	6C29016	0.42	1.0	**8.4**	1	03/29/06	03/30/06	
cis-1,2-Dichloroethene	EPA 8260B	6C29016	0.32	1.0	**43**	1	03/29/06	03/30/06	
trans-1,2-Dichloroethene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/30/06	
1,2-Dichloropropane	EPA 8260B	6C29016	0.35	1.0	ND	1	03/29/06	03/30/06	
2,2-Dichloropropane	EPA 8260B	6C29016	0.34	1.0	ND	1	03/29/06	03/30/06	
cis-1,3-Dichloropropene	EPA 8260B	6C29016	0.22	0.50	ND	1	03/29/06	03/30/06	
1,1-Dichloropropene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/30/06	
trans-1,3-Dichloropropene	EPA 8260B	6C29016	0.32	0.50	ND	1	03/29/06	03/30/06	
Ethylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/30/06	
Hexachlorobutadiene	EPA 8260B	6C29016	0.38	1.0	ND	1	03/29/06	03/30/06	
2-Hexanone	EPA 8260B	6C29016	2.6	6.0	ND	1	03/29/06	03/30/06	
Iodomethane	EPA 8260B	6C29016	1.0	2.0	ND	1	03/29/06	03/30/06	
Isopropylbenzene	EPA 8260B	6C29016	0.25	1.0	ND	1	03/29/06	03/30/06	

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2190-11 (CMW026_WG032106_0001 - Water) - cont.									
Reporting Units: ug/l									
p-Isopropyltoluene	EPA 8260B	6C29016	0.28	1.0	ND	1	03/29/06	03/30/06	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/30/06	
Methylene chloride	EPA 8260B	6C29016	0.70	1.0	ND	1	03/29/06	03/30/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6C29016	3.5	5.0	ND	1	03/29/06	03/30/06	
n-Propylbenzene	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/30/06	
Styrene	EPA 8260B	6C29016	0.16	1.0	ND	1	03/29/06	03/30/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6C29016	0.27	1.0	ND	1	03/29/06	03/30/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6C29016	0.24	1.0	ND	1	03/29/06	03/30/06	
Tetrachloroethene	EPA 8260B	6C29016	0.32	1.0	ND	1	03/29/06	03/30/06	
Tetrahydrofuran (THF)	EPA 8260B	6C29016	2.3	10	ND	1	03/29/06	03/30/06	
Toluene	EPA 8260B	6C29016	0.36	1.0	ND	1	03/29/06	03/30/06	
1,2,3-Trichlorobenzene	EPA 8260B	6C29016	0.45	1.0	ND	1	03/29/06	03/30/06	
1,2,4-Trichlorobenzene	EPA 8260B	6C29016	0.48	1.0	ND	1	03/29/06	03/30/06	
1,1,2-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/30/06	
1,1,1-Trichloroethane	EPA 8260B	6C29016	0.30	1.0	ND	1	03/29/06	03/30/06	
Trichloroethene	EPA 8260B	6C29016	0.26	1.0	**12**	1	03/29/06	03/30/06	
Trichlorofluoromethane	EPA 8260B	6C29016	0.34	2.0	ND	1	03/29/06	03/30/06	
1,2,3-Trichloropropane	EPA 8260B	6C29016	0.40	1.0	ND	1	03/29/06	03/30/06	
1,2,4-Trimethylbenzene	EPA 8260B	6C29016	0.23	1.0	ND	1	03/29/06	03/30/06	
1,3,5-Trimethylbenzene	EPA 8260B	6C29016	0.26	1.0	ND	1	03/29/06	03/30/06	
Vinyl acetate	EPA 8260B	6C29016	1.7	6.0	ND	1	03/29/06	03/30/06	
Vinyl chloride	EPA 8260B	6C29016	0.26	0.50	ND	1	03/29/06	03/30/06	
Xylenes, Total	EPA 8260B	6C29016	0.90	1.0	ND	1	03/29/06	03/30/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*98 %*				
Surrogate: Dibromofluoromethane (80-120%)					*112 %*				
Surrogate: Toluene-d8 (80-120%)					*105 %*				

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Project Manager

10 JUN 06

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LDC #: 14879B1

SDG #: IPC2190

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 2

Date: 5/12/06

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/21/06
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	SW	
VIII.	Laboratory control samples	A	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

✓	1 1	IRZMW001B_WG032106_0001	11 1	6C29016-BLK	21	3/29	31	
✓	2 1	IRZB0095_WG032106_0001	12 2	6C30011-BLK	22	3/30	32	
✓	3 1	IRZCMW003B_WG032106_0001	13 3	6C30026-BLK	23	3/31	33	
✓	4 1	WCC_6S_WG032106_0001	14		24		34	
✓	5 1	CMW026_WG032106_0001	15		25		35	
	6 2	IRZMW001B_WG032106_0001	RE		26		36	
	7 3	IRZCMW003B_WG032106_0001	RE		27		37	
	8 2	WCC-6S_WG032106_0001	RE		28		38	
	9 1	IRZMW001B_WG032106_0001	MS		29		39	
	10 1	IRZMW001B_WG032106_0001	MSD		30		40	

14879B1W.wpd

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

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

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

BOE-C6-0050705

LDC #: 14879B1
SDG #: 1PC2190

VALIDATION FINDINGS WORKSHEET
Initial Calibration

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

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

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

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

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	3/28/06	QSC28VOC	M		0.031	6C29016-BLK	J/UJ/A
						1-5, 9,10	— — —

INICAL1SB

BOE-C6-0050706

LDC #: 14879B1
SDG #: IPC2190

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

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
	3/29/06 3:48PM	VSTD025A	M		0.032	6C29016-BLK, 1→5, 9, 10	J/UJ/A

LDC #: 14879B1
SDG #: 1PC2199

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: 3/29/06
Conc. units: ug/L
Associated Samples: 1 → 5

Compound	Blank ID	Sample Identification								
		10x								
	6C29016-BLK		2							
~~Methylene chloride~~ Tetrahydrofuran	6.98		64/100U							
Acetone										
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

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

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

BLANKS2.1SB

BOE-C6-0050708

LDC #: 14879B1
SDG #: 1PC2190

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

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

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

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

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

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

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

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		9 & 10	Q	137 (60-125)	129 (60-125)	( )	#1	J/A dit
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	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-C6-0050709

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 22, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Volatiles

Validation Level: Tier 3

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2080

Sample Identification

CMW0002_WG032206_0001

Introduction

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

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

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

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

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

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

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

Average relative response factors (RRF) for all 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
3/26/06	2-Butanone	0.040 (≥0.05)	CMW0002_WG032206_0001 6D03015-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
4/3/06	2-Butanone	0.040 (≥0.05)	CMW0002_WG032206_0001 6D03015-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
6D03015-BLK	4/3/06	Tetrahydrofuran	3.42 ug/L	CMW0002_WG032206_0001

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

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
CMW0002_WG032206_0001 (2x)	Tetrahydrofuran	6.1 ug/L	20U 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 with the following exceptions:

Sample	Surrogate	%R (Limits)	Compound	Flag	A or P
CMW0002_WG032206_0001	Bromofluorobenzene	128 (80-120)	All TCL compounds except Chlorobenzene	J (all detects)	A

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.

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 Facility, Torrance CA
Volatiles - Data Qualification Summary - SDG IPC2080

SDG	Sample	Compound	Flag	A or P	Reason
IPC2080	CMW0002_WG032206_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Initial calibration (RRF)
IPC2080	CMW0002_WG032206_0001	2-Butanone	J (all detects) UJ (all non-detects)	A	Continuing calibration (RRF)
IPC2080	CMW0002_WG032206_0001	All TCL compounds except Chlorobenzene	J (all detects)	A	Surrogate recovery (%R)

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Volatiles - Laboratory Blank Data Qualification Summary - SDG IPC2080

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
IPC2080	CMW0002_WG032206_0001 (2x)	Tetrahydrofuran	20U 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
EM2303D/PHASE 01
Report Number: IPC2325

Sampled: 03/22/06
Received: 03/22/06

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: IPC2325-09 (CMW0002_WG032206_0001 - Water)									
Reporting Units: ug/l									
Acetone	EPA 8260B	6D03015	9.0	20	ND	2	04/03/06	04/03/06	
Benzene	EPA 8260B	6D03015	0.56	2.0	**70** J	2	04/03/06	04/03/06	
Bromobenzene	EPA 8260B	6D03015	0.54	2.0	ND	2	04/03/06	04/03/06	
Bromochloromethane	EPA 8260B	6D03015	0.64	2.0	ND	2	04/03/06	04/03/06	
Bromodichloromethane	EPA 8260B	6D03015	0.60	2.0	ND	2	04/03/06	04/03/06	
Bromoform	EPA 8260B	6D03015	0.64	2.0	ND	2	04/03/06	04/03/06	
Bromomethane	EPA 8260B	6D03015	0.84	2.0	ND	2	04/03/06	04/03/06	
2-Butanone (MEK)	EPA 8260B	6D03015	7.6	10	ND UJ	2	04/03/06	04/03/06	
n-Butylbenzene	EPA 8260B	6D03015	0.74	2.0	ND	2	04/03/06	04/03/06	
sec-Butylbenzene	EPA 8260B	6D03015	0.50	2.0	ND	2	04/03/06	04/03/06	
tert-Butylbenzene	EPA 8260B	6D03015	0.44	2.0	ND	2	04/03/06	04/03/06	
Carbon Disulfide	EPA 8260B	6D03015	0.96	2.0	ND	2	04/03/06	04/03/06	
Carbon tetrachloride	EPA 8260B	6D03015	0.56	1.0	ND	2	04/03/06	04/03/06	
Chloroethane	EPA 8260B	6D03015	0.80	4.0	ND	2	04/03/06	04/03/06	
Chloroform	EPA 8260B	6D03015	0.66	2.0	**1.2** J	2	04/03/06	04/03/06	J
Chloromethane	EPA 8260B	6D03015	0.60	4.0	ND	2	04/03/06	04/03/06	
2-Chlorotoluene	EPA 8260B	6D03015	0.56	2.0	ND	2	04/03/06	04/03/06	
4-Chlorotoluene	EPA 8260B	6D03015	0.58	2.0	ND	2	04/03/06	04/03/06	
1,2-Dibromo-3-chloropropane	EPA 8260B	6D03015	1.8	4.0	ND	2	04/03/06	04/03/06	
Dibromochloromethane	EPA 8260B	6D03015	0.56	2.0	ND	2	04/03/06	04/03/06	
1,2-Dibromoethane (EDB)	EPA 8260B	6D03015	0.64	2.0	ND	2	04/03/06	04/03/06	
1,4-Dichlorobenzene	EPA 8260B	6D03015	0.74	2.0	**8.9** J	2	04/03/06	04/03/06	
1,2-Dichlorobenzene	EPA 8260B	6D03015	0.64	2.0	**1.4** J	2	04/03/06	04/03/06	J
1,3-Dichlorobenzene	EPA 8260B	6D03015	0.70	2.0	ND	2	04/03/06	04/03/06	
Dichlorodifluoromethane	EPA 8260B	6D03015	1.6	2.0	ND	2	04/03/06	04/03/06	
1,2-Dichloroethane	EPA 8260B	6D03015	0.56	1.0	ND	2	04/03/06	04/03/06	
1,1-Dichloroethane	EPA 8260B	6D03015	0.54	2.0	ND	2	04/03/06	04/03/06	
1,1-Dichloroethene	EPA 8260B	6D03015	0.84	2.0	**1.5** J	2	04/03/06	04/03/06	J
cis-1,2-Dichloroethene	EPA 8260B	6D03015	0.64	2.0	**11** J	2	04/03/06	04/03/06	
trans-1,2-Dichloroethene	EPA 8260B	6D03015	0.54	2.0	ND	2	04/03/06	04/03/06	
1,2-Dichloropropane	EPA 8260B	6D03015	0.70	2.0	ND	2	04/03/06	04/03/06	
2,2-Dichloropropane	EPA 8260B	6D03015	0.68	2.0	ND	2	04/03/06	04/03/06	
cis-1,3-Dichloropropene	EPA 8260B	6D03015	0.44	1.0	ND	2	04/03/06	04/03/06	
1,1-Dichloropropene	EPA 8260B	6D03015	0.56	2.0	ND	2	04/03/06	04/03/06	
trans-1,3-Dichloropropene	EPA 8260B	6D03015	0.64	1.0	ND	2	04/03/06	04/03/06	
Ethylbenzene	EPA 8260B	6D03015	0.50	2.0	**1.3** J	2	04/03/06	04/03/06	J
Hexachlorobutadiene	EPA 8260B	6D03015	0.76	2.0	ND	2	04/03/06	04/03/06	
2-Hexanone	EPA 8260B	6D03015	5.2	12	ND	2	04/03/06	04/03/06	
Iodomethane	EPA 8260B	6D03015	2.0	4.0	ND	2	04/03/06	04/03/06	
Isopropylbenzene	EPA 8260B	6D03015	0.50	2.0	ND	2	04/03/06	04/03/06	
p-Isopropyltoluene	EPA 8260B	6D03015	0.56	2.0	ND	2	04/03/06	04/03/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

4/5/06

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

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2325

Sampled: 03/22/06
Received: 03/22/06

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: IPC2325-09 (CMW0002_WG032206_0001 - Water) - cont.									
Reporting Units: ug/l									
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	6D03015	0.64	2.0	ND	2	04/03/06	04/03/06	
Methylene chloride	EPA 8260B	6D03015	1.4	2.0	ND	2	04/03/06	04/03/06	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	6D03015	7.0	10	ND	2	04/03/06	04/03/06	
n-Propylbenzene	EPA 8260B	6D03015	0.54	2.0	ND	2	04/03/06	04/03/06	
Styrene	EPA 8260B	6D03015	0.32	2.0	ND	2	04/03/06	04/03/06	
1,1,1,2-Tetrachloroethane	EPA 8260B	6D03015	0.54	2.0	ND	2	04/03/06	04/03/06	
1,1,2,2-Tetrachloroethane	EPA 8260B	6D03015	0.48	2.0	ND	2	04/03/06	04/03/06	
Tetrachloroethene	EPA 8260B	6D03015	0.64	2.0	**3.2** J	2	04/03/06	04/03/06	
Tetrahydrofuran (THF)	EPA 8260B	6D03015	4.6	20	**6.1** 20 UJ	2	04/03/06	04/03/06	B, J
Toluene	EPA 8260B	6D03015	0.72	2.0	ND	2	04/03/06	04/03/06	
1,2,3-Trichlorobenzene	EPA 8260B	6D03015	0.90	2.0	ND	2	04/03/06	04/03/06	
1,2,4-Trichlorobenzene	EPA 8260B	6D03015	0.96	2.0	ND	2	04/03/06	04/03/06	
1,1,2-Trichloroethane	EPA 8260B	6D03015	0.60	2.0	ND	2	04/03/06	04/03/06	
1,1,1-Trichloroethane	EPA 8260B	6D03015	0.60	2.0	ND	2	04/03/06	04/03/06	
Trichloroethene	EPA 8260B	6D03015	0.52	2.0	**330** J	2	04/03/06	04/03/06	
Trichlorofluoromethane	EPA 8260B	6D03015	0.68	4.0	ND	2	04/03/06	04/03/06	
1,2,3-Trichloropropane	EPA 8260B	6D03015	0.80	2.0	ND	2	04/03/06	04/03/06	
1,2,4-Trimethylbenzene	EPA 8260B	6D03015	0.46	2.0	ND	2	04/03/06	04/03/06	
1,3,5-Trimethylbenzene	EPA 8260B	6D03015	0.52	2.0	ND	2	04/03/06	04/03/06	
Vinyl acetate	EPA 8260B	6D03015	3.4	12	ND	2	04/03/06	04/03/06	
Vinyl chloride	EPA 8260B	6D03015	0.52	1.0	ND	2	04/03/06	04/03/06	
Xylenes, Total	EPA 8260B	6D03015	1.8	2.0	**2.3** J	2	04/03/06	04/03/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*128 %*				*A-01, ZX*
Surrogate: Dibromofluoromethane (80-120%)					*111 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

MC 05/15/06

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TAIT Environmental/Boeing	Project ID: Boeing C-6 Torrance	
701 N. Parkcenter Drive	EM2303D/PHASE 01	Sampled: 03/22/06
Santa Ana, CA 92705	Report Number: IPC2325	Received: 03/22/06
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: IPC2325-09RE1 (CMW0002_WG032206_0001 - Water) - cont.									
Reporting Units: ug/l									
Chlorobenzene	EPA 8260B	6D01007	18	50	**6900**	50	04/01/06	04/01/06	
Surrogate: 4-Bromofluorobenzene (80-120%)					*104 %*				
Surrogate: Dibromofluoromethane (80-120%)					*112 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

L27576

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LDC #: 14879C1
SDG #: IPC2325
Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET
Tier 3

Date: 5/15/06
Page: 1 of 1
Reviewer: B
2nd Reviewer: K

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/22/06
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	SW	
VII.	Matrix spike/Matrix spike duplicates	N	client specified
VIII.	Laboratory control samples	A	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

9	1	CMW0002_WG032206_0001	11	6D03015-BLK1	21		31	
	2	CMW0002_WG032206_000	12	6D01007-BLK1	22	for DD only	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	

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-C6-0050720

LDC #: 148791
SDG #: 1PC2325

VALIDATION FINDINGS CHECKLIST

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

Method: Volatiles (EPA SW 846 Method 8260B)

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

LDC #: 14879C1
SDG #: 1PC2325

VALIDATION FINDINGS CHECKLIST

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

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.			✓	

LDC #: 14879C1
SDG #: 1PC2325

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: B
2nd Reviewer: [illegible]

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

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

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

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤30.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	3/26/06	ICAL	M		0.040	6003015-BLK1, 1	J/UJ/A

LDC #: 148791
SDG #: 1PC2325

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
	4/3/06	VSTD025A	M		0.040	6D03015-BLK1, 1	J/UJ/A

LDC #: 14879C1
SDG #: 1PC2375

VALIDATION FINDINGS WORKSHEET
Blanks

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

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

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

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

Blank analysis date: 4/3/06
Conc. units: ug/L
Associated Samples: 1

Compound	Blank ID	2X	Sample Identification							
	6D03015-BL1	1								
~~Methylene chloride~~ Tetrahydrofuran	3.42	6.1/20µ								
~~Acetone~~										
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

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

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

BOE-C6-0050725

LDC #: 14879C1
SDG #: 1PC2375

VALIDATION FINDINGS WORKSHEET
Surrogate Spikes

Reviewer: [signature]
2nd Reviewer: [signature]

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 all surrogate %R within QC limits?

(Y) N N/A If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R out of outside of criteria?

#	Date	Sample ID	Surrogate	%Recovery (Limits)	Qualifications
		1	BFB	128 (80-120)	J/Adet (All except PD)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	QC Limits (Soil)	QC Limits (Water)
SMC1 (TOL) = Toluene-d8	81-117	88-110
SMC2 (BFB) = Bromofluorobenzene	74-121	86-115
SMC3 (DCE) = 1,2-Dichloroethane-d4	80-120	80-120
SMC4 (DFM) = Dibromofluoromethane	80-120	86-118

SUR.1SB

LDC #: 14019C1
SDG #: LPC2375

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer:
2nd Reviewer:

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

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

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

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

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

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (std)	Recalculated RRF (std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	3/26/00	ICAL	Methylene chloride (1st internal standard)	0.484	0.484	0.498	0.498	5.05	5.05
			Trichlorethene (2nd internal standard)	0.344	0.344	0.351	0.351	9.24	9.24
			~~Toluene~~ EE (3rd internal standard)	1.636	1.636	1.738	1.738	8.09	8.09
2			~~Methylene chloride~~ JJJ (1st internal standard)	1.471	1.471	1.481	1.481	10.98	10.98
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
4			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

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

INICLC.1SB

BOE-C6-0050727

.DC #: 148194
SDG #: 1PC2325

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

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

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	VSTD025	4/1/06	chlorobenzene ~~Methylene chloride~~ (1st internal standard)	25 ~~1.007~~	28 ~~0.999~~	28 ~~0.999~~	12 ~~0.8~~	12 ~~0.8~~
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
2	VSTD025A	4/3/06	Methylene chloride (1st internal standard)	0.498	0.517	0.517	3.8	3.8
			Trichlorethene (2nd internal standard)	0.351	0.353	0.353	0.6	0.6
			EE ~~Toluene~~ (3rd internal standard)	1.738	1.622	1.622	6.7	6.7
3			JJJ ~~Methylene chloride~~ (1st internal standard)	1.481	1.474	1.474	0.5	0.5
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
4	EXT025A	4/3/06	Tetrahydrofuran ~~Methylene chloride~~ (1st internal standard)	0.063	0.065	0.065	3.2	3.2
			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-C6-0050728

LDC #: 14879C1
SDG #: 1PC2375

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	25.17	101	101	0
Bromofluorobenzene	25	31.99	128	128	0
1,2-Dichloroethane-d4					
Dibromofluoromethane	25	27.83	111	111	0

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 #: 14879C1
SDG #: 18C2325

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: B
2nd Reviewer: VC

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

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

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SA = Spike added

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

LCS = Laboraotry control sample percent recovery

LCSD = Laboratory control sample duplicate percent recovery

LCS ID: 6D03015-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	25.1	NA	100	100				
Trichloroethene	↓	↓	25.0	↓	100	100				
Benzene			24.2		97	97				
Toluene			23.7		95	95				
Chlorobenzene			24.5		98	98				

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 #: 148790
SDG #: 1PC 2325

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

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

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

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

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

RRF = Relative response factor of the calibration standard.

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

Df = Dilution factor.

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

Example:

Sample I.D. #1, 1,4-Dichlorobenzene

Conc. = $\frac{(147977)(25)(2)}{(509472)(1.639)(\quad)(\quad)}$

=

8.9 ug/L

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

Boeing Realty Corp., Former C-6 Facility, Torrance CA
Data Validation Reports
LDC# 14879

Manganese

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 20, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Manganese

Validation Level: Tier 1

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2080

Sample Identification

MWC011_WG032006_0001

Introduction

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

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

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified 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.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

Calibration data were not reviewed for Tier 1.

III. Blanks

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

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

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

VI. Duplicate Sample Analysis

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

VII. Laboratory Control Samples (LCS)

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

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

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

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Manganese - Data Qualification Summary - SDG IPC2080

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Manganese - Laboratory Blank Data Qualification Summary - SDG IPC2080

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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-07 (MWC011_WG032006_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	6C20131	0.0070	0.020	**0.25**	1	03/20/06	03/23/06	
~~**Sample ID: IPC2080-11 (MWB019_WG032006_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~6C20131~~	~~0.0070~~	~~0.020~~	~~**0.0094**~~	~~1~~	~~03/20/06~~	~~03/23/06~~	~~J~~

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

R 251506

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LDC #: 14879A4

SDG #: IPC2080

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 1

Date: 5/15/06

Page: 1 of 1

Reviewer: MM

2nd Reviewer: a

METHOD: Manganese (EPA SW 846 Method 6010B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/20/06
II.	Calibration	N	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Matrix Spike Analysis	A	~~MS/MSD~~ non client sample.
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

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

Validated Samples: 12

1	MWC011_WG032006_0001	11		21		31	
2	RB	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 Report# 14879B4

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 21, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Manganese

Validation Level: Tier 2

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2190

Sample Identification

IRZB0095_WG032106_0001

Introduction

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

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

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified 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.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

An initial calibration was performed.

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

III. Blanks

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

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

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

VI. Duplicate Sample Analysis

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

VII. Laboratory Control Samples (LCS)

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

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

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

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Manganese - Data Qualification Summary - SDG IPC2190

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Manganese - Laboratory Blank Data Qualification Summary - SDG IPC2190

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
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
~~**Sample ID: IPC2190-03 (IRZMW001B_WG032106_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~6C22121~~	~~0.0070~~	~~0.020~~	~~**0.025**~~	~~1~~	~~03/22/06~~	~~03/23/06~~	
Sample ID: IPC2190-04 (IRZB0095_WG032106_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	6C22121	0.0070	0.020	**1.7**	1	03/22/06	03/23/06	
~~**Sample ID: IPC2190-09 (WCC_6S_WG032106_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~6C22121~~	~~0.0070~~	~~0.020~~	~~**6.3**~~	~~1~~	~~03/22/06~~	~~03/23/06~~	
~~**Sample ID: IPC2190-11 (CMW026_WG032106_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~6C22121~~	~~0.0070~~	~~0.020~~	~~**0.064**~~	~~1~~	~~03/22/06~~	~~03/23/06~~	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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LDC #: 14879B4

SDG #: IPC2190

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 2

Date: 5/15/06

Page: 1 of 1

Reviewer: MM

2nd Reviewer: A

METHOD: Manganese (EPA SW 846 Method 6010B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/21/06
II.	Calibration	A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	MS/MSD IPC2190-3
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed.
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

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

Validated Samples:

1	IRZB0095_WG032106_0001	11		21		31	
2	PB	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC Report# 14879C4

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 22, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Manganese

Validation Level: Tier 3

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2325

Sample Identification

CMW0002_WG032206_0001

Introduction

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

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

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified 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.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

An initial calibration was performed.

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

III. Blanks

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

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

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

VI. Duplicate Sample Analysis

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

VII. Laboratory Control Samples (LCS)

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

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

All sample result verifications were acceptable.

XII. Overall Assessment of Data

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

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Manganese - Data Qualification Summary - SDG IPC2325

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Manganese - Laboratory Blank Data Qualification Summary - SDG IPC2325

No Sample Data Qualified in this SDG

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TAIT Environmental/Boeing
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Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2325

Sampled: 03/22/06
Received: 03/22/06

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
~~**Sample ID: IPC2325-04 (IRZCMW002_WG032206_0001 - Water)**~~									
Reporting Units: mg/l									
~~**Manganese**~~	~~EPA 6010B-Diss~~	~~6C23108~~	~~0.0070~~	~~0.020~~	~~**3.8**~~	~~1~~	~~03/23/06~~	~~03/23/06~~	
Sample ID: IPC2325-09 (CMW0002_WG032206_0001 - Water)									
Reporting Units: mg/l									
Manganese	EPA 6010B-Diss	6C23108	0.0070	0.020	**0.21**	1	03/23/06	03/23/06	

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Michele Chamberlin
Project Manager

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LDC #: 14879C4

SDG #: IPC2325

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 3

Date: 5/15/06

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: Manganese (EPA SW 846 Method 6010B)

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 3/22/06
II.	Calibration	A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	MS/MSD Non client sample.
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

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

Validated Samples: 12

1	CMW0002_WG032206_0001	11		21		31	
2	PB	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 14879c4
SDG #: [illegible]

VALIDATION FINDINGS CHECKLIST

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

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

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

LDC #: 14879C4
SDG #: TPC2325

VALIDATION FINDINGS CHECKLIST

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

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

LDC #: 14879C4
SDG #: IPC2325

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

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

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

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

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

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

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated %R	Reported %R	Acceptable (Y/N)
ICV	ICP (Initial calibration)	Mn	2.014	2.0	107	~~107~~ NR	Y
	GFAA (Initial calibration)						
	CVAA (Initial calibration)						
CCV	ICP (Continuing calibration)	Mn	1.001	1.0	100	NR	Y
	GFAA (Continuing calibration)						
	CVAA (Continuing calibration)						
	Cyanide (Initial calibration)						
	Cyanide (Continuing calibation)						

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

CALCLC.4SW

LDC #: 14879 c4
SDG #: JPC 2325

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

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

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

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

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

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

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

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

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

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

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

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

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
ICSAB	ICP interference check	Mn	0.4681	0.500	94	NR	Y
LCS	Laboratory control sample	↓	0.9798	1.00	98	98	↓
~~SOP~~ JPC 2309-1	Matrix spike	↓	(SSR-SR) 0.9367	↓	94	94	↓
↓	Duplicate	↓	0.9159	0.9367	2	2	↓
MA	ICP serial dilution						

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

TOTCLC.4SW

BOE-C6-0050757

LDC #: 14879C4
SDG #: J1C3325

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

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

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

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

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

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

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

Recalculation:

From the raw data
Mn = 0.2057 mg/L

Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	Mn	0.21	0.21	Y

RECALC.4S2

Boeing Realty Corp., Former C-6 Facility, Torrance CA
Data Validation Reports
LDC# 14879

Wet Chemistry

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 20, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 1

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2080

Sample Identification

MWC011_WG032006_0001
IRZMW002B_WG032006_0001
IRZMW002B_WG032006_0001DUP

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 300.0 for Chloride, Nitrate, Nitrite, Orthophosphate, and Sulfate, EPA Method 310.1 for Alkalinity, EPA Method 350.3 for Ammonia, EPA Method 415.1 for Total Organic Carbon, and Standard Method 4500-CO_2 for Carbon Dioxide.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

a. Initial Calibration

Initial calibration data were not reviewed for Tier 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 with the following exceptions:

Method Blank ID	Analyte	Concentration	Associated Samples
MB	Chloride	0.164 mg/L	MWC011_WG032006_0001

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

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) 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. Relative percent differences (RPD) were within QC limits.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Wet Chemistry - Data Qualification Summary - SDG IPC2080

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IPC2080

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
EM2303D/PHASE 01
Report Number: IPC2080

Sampled: 03/20/06
Received: 03/20/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2080-07 (MWC011_WG032006_0001 - Water)									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C20139	2.0	2.0	**5.3**	1	03/20/06	03/20/06	
Ammonia-NH3	EPA 350.3	6C27056	0.14	0.60	ND	1	03/24/06	03/24/06	
Alkalinity as CaCO3	EPA 310.1	6C23139	2.0	2.0	**180**	1	03/23/06	03/23/06	
Chloride	EPA 300.0	6C20055	1.5	5.0	**200**	10	03/20/06	03/20/06	
Nitrate-NO3	EPA 300.0	6C20055	0.35	0.50	**5.2**	1	03/20/06	03/20/06	
Nitrite-NO2	EPA 300.0	6C20055	3.0	5.0	ND	10	03/20/06	03/20/06	RL-1
Orthophosphate - PO4	EPA 300.0	6C20055	0.40	0.50	ND	1	03/20/06	03/20/06	
Sulfate	EPA 300.0	6C20055	0.45	0.50	**20**	1	03/20/06	03/20/06	
Total Organic Carbon	EPA 415.1	6C23066	0.25	1.0	**5.3**	1	03/22/06	03/22/06	
~~**Sample ID: IPC2080-08 (IRZMW002B_WG032006_0001 - Water)**~~									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C21070	0.010	0.10	ND	1	03/21/06	03/21/06	
Sample ID: IPC2080-09 (IRZMW002B_WG032006_0002 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C21070	0.010	0.10	ND	1	03/21/06	03/21/06	
Sample ID: IPC2080-10 (IRZB0081_WG032006_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C21070	0.010	0.10	ND	1	03/21/06	03/21/06	
Sample ID: IPC2080-11 (MWB019_WG032006_0001 - Water)									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C20139	2.0	2.0	**62**	1	03/20/06	03/20/06	
Ammonia-NH3	EPA 350.3	6C27056	0.14	0.60	ND	1	03/24/06	03/24/06	
Alkalinity as CaCO3	EPA 310.1	6C23139	2.0	2.0	**390**	1	03/23/06	03/23/06	
Chloride	EPA 300.0	6C20055	3.0	10	**260**	20	03/20/06	03/20/06	
Nitrate-NO3	EPA 300.0	6C20055	7.0	10	**90**	20	03/20/06	03/20/06	
Nitrite-NO2	EPA 300.0	6C20055	6.0	10	ND	20	03/20/06	03/20/06	RL-1
Orthophosphate - PO4	EPA 300.0	6C20055	0.40	0.50	ND	1	03/20/06	03/20/06	
Sulfate	EPA 300.0	6C20055	9.0	10	**610**	20	03/20/06	03/20/06	
~~**Total Organic Carbon**~~	~~EPA 415.1~~	~~6C23066~~	~~0.25~~	~~1.0~~	~~**2.0**~~	~~1~~	~~03/22/06~~	~~03/22/06~~	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

M 05/06

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LDC #: 14879A6

SDG #: IPC2080

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 1

Date: ~~6~~ 5/15/06

Page: 1 of 1

Reviewer: MH

2nd Reviewer: [illegible]

METHOD: (Analyte) ~~PO4~~ Alkalinity (EPA Method 310.1), Ammonia-~~N~~ ~~NH3~~ (EPA Method 350.3), Chloride, Nitrate-~~N~~, Nitrite-~~N~~, Orthophosphate-~~R~~, Sulfate (EPA Method 300.0), TOC (EPA Method 415.1), Carbon Dioxide (SM4500 CO_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: 3/20/06
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	SW	
IV	Matrix Spike/Matrix Spike Duplicates	A	3 LCS MSD / Dup.
V	Duplicates	A	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N ~~ND~~	~~(2, IRZMW002B_WG032006_0002)~~
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: A2

1	MWC011_WG032006_0001	11		21		31	
2	IRZMW002B_WG032006_0001	12		22		32	
3	↓ Dup	13		23		33	
4	MB	14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 14879A6
SDG #: TPC2080

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

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

All circled methods are applicable to each sample.

Sample ID	Parameter																
1	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}		CO_2	
2	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}	S		
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			
	pH	TDS	Cl	F	NO_3	NO_2	SO_4	PO_4	ALK	CN^-	NH_3	TKN	TOC	CR^{6+}			

Comments:

METHODS.6

LDC #: 14879A6
SDG #: IPC2080

VALIDATION FINDINGS WORKSHEET
Blanks

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

METHOD: Inorganics, Method See cover

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

Conc. units: mg/L **Associated Samples:** 1 (75x)

Analyte	Blank ID	Maximum ICB/CCB	Blank Action Limit	Sample Identification								
	MB											
Ca	0.164		0.82									

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

BLANKS.6

BOE-C6-0050768

LDC Report# 14879B6

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 21, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 2

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2190

Sample Identification

IRZB0095_WG032106_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Chloride, Nitrate, Nitrite, Orthophosphate, and Sulfate, EPA Method 310.1 for Alkalinity, EPA Method 350.3 for Ammonia, EPA Method 376.2 for Sulfide, EPA Method 415.1 for Total Organic Carbon, and Standard Method 4500-CO_2 for Carbon Dioxide.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

a. Initial Calibration

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

b. Calibration Verification

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

III. Blanks

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

Method Blank ID	Analyte	Concentration	Associated Samples
ICB/CCB	Chloride	0.18 mg/L	All samples in SDG IPC2190

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

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) 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. Relative percent differences (RPD) were within QC limits.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Wet Chemistry - Data Qualification Summary - SDG IPC2190

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IPC2190

No Sample Data Qualified in this SDG

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TAIT Environmental/Boeing
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Santa Ana, CA 92705
Attention: Mehmet Pehlivan

Project ID: Boeing C-6 Torrance
EM2303D/PHASE 01
Report Number: IPC2190

Sampled: 03/21/06
Received: 03/21/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
~~**Sample ID: IPC2190-03 (IRZMW001B_WG032106_0001 - Water)**~~									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C21139	2.0	2.0	**72**	1	03/21/06	03/21/06	
Ammonia-NH3	EPA 350.3	6C27083	0.14	0.60	ND	1	03/27/06	03/27/06	
Alkalinity as CaCO3	EPA 310.1	6C24119	2.0	2.0	**440**	1	03/24/06	03/24/06	
Chloride	EPA 300.0	6C21049	3.0	10	**220**	20	03/21/06	03/21/06	
Nitrate-NO3	EPA 300.0	6C21049	0.35	0.50	**8.0**	1	03/21/06	03/21/06	
Nitrite-NO2	EPA 300.0	6C21049	6.0	10	ND	20	03/21/06	03/21/06	RL-1
Orthophosphate - PO4	EPA 300.0	6C21049	0.40	0.50	ND	1	03/21/06	03/21/06	
Sulfate	EPA 300.0	6C21049	9.0	10	**69**	20	03/21/06	03/21/06	
Sulfide	EPA 376.2	6C22079	0.010	0.10	ND	1	03/22/06	03/22/06	
~~**Total Organic Carbon**~~	~~EPA 415.1~~	~~6C24062~~	~~0.25~~	~~1.0~~	~~**2.3**~~	~~1~~	~~03/23/06~~	~~03/23/06~~	
Sample ID: IPC2190-04 (IRZB0095_WG032106_0001 - Water)									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C21139	2.0	2.0	**55**	1	03/21/06	03/21/06	
Ammonia-NH3	EPA 350.3	6C27083	0.14	0.60	**1.1**	1	03/27/06	03/27/06	
Alkalinity as CaCO3	EPA 310.1	6C24119	2.0	2.0	**640**	1	03/24/06	03/24/06	
Chloride	EPA 300.0	6C21049	3.0	10	**120**	20	03/21/06	03/21/06	
Nitrate-NO3	EPA 300.0	6C21049	0.35	0.50	**1.3**	1	03/21/06	03/21/06	
Nitrite-NO2	EPA 300.0	6C21049	0.30	0.50	ND	1	03/21/06	03/21/06	
Orthophosphate - PO4	EPA 300.0	6C21049	0.40	0.50	ND	1	03/21/06	03/21/06	
Sulfate	EPA 300.0	6C21049	9.0	10	**79**	20	03/21/06	03/21/06	
Sulfide	EPA 376.2	6C22079	0.010	0.10	**0.014**	1	03/22/06	03/22/06	J
Total Organic Carbon	EPA 415.1	6C24062	0.25	1.0	**4.0**	1	03/23/06	03/23/06	
~~**Sample ID: IPC2190-06 (IRZCMW001_WG032106_0001 - Water)**~~									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C22079	0.010	0.10	ND	1	03/22/06	03/22/06	
Sample ID: IPC2190-08 (IRZCMW003B_WG032106_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C22079	0.010	0.10	ND	1	03/22/06	03/22/06	
Sample ID: IPC2190-09 (WCC_6S_WG032106_0001 - Water)									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C21139	2.0	2.0	**140**	1	03/21/06	03/21/06	
Ammonia-NH3	EPA 350.3	6C27083	0.14	0.60	**0.52**	1	03/27/06	03/27/06	J
Alkalinity as CaCO3	EPA 310.1	6C24119	2.0	2.0	**520**	1	03/24/06	03/24/06	
Chloride	EPA 300.0	6C21049	3.0	10	**460**	20	03/21/06	03/22/06	
Nitrate-NO3	EPA 300.0	6C21049	0.35	0.50	ND	1	03/21/06	03/22/06	
Nitrite-NO2	EPA 300.0	6C21049	6.0	10	ND	20	03/21/06	03/22/06	RL-1
Orthophosphate - PO4	EPA 300.0	6C21049	0.40	0.50	ND	1	03/21/06	03/22/06	
Sulfate	EPA 300.0	6C21049	0.45	0.50	**12**	1	03/21/06	03/22/06	
~~**Total Organic Carbon**~~	~~EPA 415.1~~	~~6C24062~~	~~0.25~~	~~1.0~~	~~**17**~~	~~1~~	~~03/23/06~~	~~03/23/06~~	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

C 2/5/06

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LDC #: 14879B6

SDG #: IPC2190

Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET

Tier 2

Date: 5/15/06

Page: 1 of 1

Reviewer: MM

2nd Reviewer: K

METHOD: (Analyte) Alkalinity (EPA Method 310.1), Ammonia-~~N~~ (EPA Method 350.3), Chloride, Nitrate-~~N~~, Nitrite-~~N~~, Orthophosphate-~~P~~, Sulfate (EPA Method 300.0), Sulfide (EPA Method 376.2), TOC (EPA Method 415.1), Carbon Dioxide (SM4500-CO_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: 3/21/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	SW ~~A~~	
IV	Matrix Spike/Matrix Spike Duplicates	A	~~IPC2190-3 MS/MSD~~ MS/MSD non client
V	Duplicates	~~A~~ A	Dup IPC2190-3
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	IRZB0095_WG032106_0001	11		21		31	
2	PB	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 14879B6
SDG #: IPC290

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

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

All circled methods are applicable to each sample.

Sample ID	Parameter				
1	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}	S	CO_2		
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}				

Comments:

METHODS.6

LDC #: 14879B6
SDG #: IPC2190

VALIDATION FINDINGS WORKSHEET
Blanks

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

METHOD: Inorganics, Method See cover

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

Conc. units: ug/L **Associated Samples:** A1 (75%)

Analyte	Blank ID	Maximum ICB/CCB	Blank Action Limit	Sample Identification								
cl		0.18	0.90									

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

BOE-C6-0050777

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 22, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Wet Chemistry

Validation Level: Tier 3

Laboratory: Del Mar Analytical

Sample Delivery Group (SDG): IPC2325

Sample Identification

CMW0002_WG032206_0001

Introduction

This data review covers one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Chloride, Nitrate, Nitrite, Orthophosphate, and Sulfate, EPA Method 310.1 for Alkalinity, EPA Method 350.3 for Ammonia, EPA Method 376.2 for Sulfide, EPA Method 415.1 for Total Organic Carbon, and Standard Method 4500-CO_2 for Carbon Dioxide.

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

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

II. Calibration

a. Initial Calibration

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

b. Calibration Verification

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

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the 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. Relative percent differences (RPD) were within QC limits.

VI. Laboratory Control Samples

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

VII. Sample Result Verification

All sample result verifications were acceptable.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Wet Chemistry - Data Qualification Summary - SDG IPC2325

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG IPC2325

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
EM2303D/PHASE 01
Report Number: IPC2325

Sampled: 03/22/06
Received: 03/22/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2325-04 (IRZCMW002_WG032206_0001 - Water)									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C23143	2.0	2.0	**180**	1	03/23/06	03/23/06	
Ammonia-NH3	EPA 350.3	6C29112	0.14	0.60	**0.14**	1	03/29/06	03/29/06	J
Alkalinity as CaCO3	EPA 310.1	6C27104	2.0	2.0	**1000**	1	03/27/06	03/27/06	
Chloride	EPA 300.0	6C22049	7.5	25	**190**	50	03/22/06	03/22/06	
Nitrate-NO3	EPA 300.0	6C22049	0.35	0.50	**1.2**	1	03/22/06	03/22/06	
Nitrite-NO2	EPA 300.0	6C22049	15	25	**35**	50	03/22/06	03/22/06	
Orthophosphate - PO4	EPA 300.0	6C22049	0.40	0.50	ND	1	03/22/06	03/22/06	
Sulfate	EPA 300.0	6C22049	0.45	0.50	**11**	1	03/22/06	03/22/06	
Sulfide	EPA 376.2	6C23091	0.010	0.10	**0.035**	1	03/23/06	03/23/06	J
Total Organic Carbon	EPA 415.1	6C31057	12	50	**510**	50	03/30/06	03/30/06	
Sample ID: IPC2325-06 (IRZMW004_WG032206_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C23091	0.010	0.10	ND	1	03/23/06	03/23/06	
Sample ID: IPC2325-07 (IRZMW004_WG032206_0002 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C23091	0.010	0.10	ND	1	03/23/06	03/23/06	
Sample ID: IPC2325-08 (IRZMW002A_WG032206_0001 - Water)									
Reporting Units: mg/l									
Sulfide	EPA 376.2	6C23091	0.010	0.10	ND	1	03/23/06	03/23/06	
Sample ID: IPC2325-09 (CMW0002_WG032206_0001 - Water)									
Reporting Units: mg/l									
Carbon Dioxide	SM4500-CO2	6C23143	2.0	2.0	**12**	1	03/23/06	03/23/06	
Ammonia-NH3	EPA 350.3	6C29112	0.14	0.60	**0.14**	1	03/29/06	03/29/06	J
Alkalinity as CaCO3	EPA 310.1	6C27104	2.0	2.0	**190**	1	03/27/06	03/27/06	
Chloride	EPA 300.0	6C22049	1.5	5.0	**120**	10	03/22/06	03/22/06	
Nitrate-NO3	EPA 300.0	6C22049	0.35	0.50	ND	1	03/22/06	03/22/06	
Nitrite-NO2	EPA 300.0	6C22049	0.30	0.50	ND	1	03/22/06	03/22/06	
Orthophosphate - PO4	EPA 300.0	6C22049	0.40	0.50	ND	1	03/22/06	03/22/06	
Sulfate	EPA 300.0	6C22049	4.5	5.0	**91**	10	03/22/06	03/22/06	
Sulfide	EPA 376.2	6C23091	0.010	0.10	**0.014**	1	03/23/06	03/23/06	J
Total Organic Carbon	EPA 415.1	6C31057	0.25	1.0	**15**	1	03/30/06	03/30/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

K 05/30/06

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 #: 14879C6
SDG #: IPC2325
Laboratory: Del Mar Analytical

VALIDATION COMPLETENESS WORKSHEET
Tier 3

Date: 5/15/06
Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Alkalinity (EPA Method 310.1), Ammonia-~~N~~ (EPA Method 350.3), Chloride, Nitrate-~~N~~, Nitrite-~~N~~, Orthophosphate-~~P~~, Sulfate (EPA Method 300.0), Sulfide (EPA Method 376.2), TOC (EPA Method 415.1), Carbon Dioxide (SM4500) CO_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: 3/22/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	} [illegible]
V	Duplicates	A	
VI.	Laboratory control samples	A	[illegible]
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: [illegible]

1	CMW0002_WG032206_0001	11		21		31	
2	MB ~~[illegible]~~	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:

14879C6W.wpd

LDC #: 14879c6
SDG #: TPC2325

VALIDATION FINDINGS CHECKLIST

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

Method: Inorganics (EPA Method See cover

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?	✓			
Were titrant checks performed as required? (Level IV only)	✓			
Were balance checks performed as required? (Level IV only)			✓	
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			non client
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 #: 14879c6
SDG #: [illegible]

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 #: 14879c6
SDG #: 7P02325

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

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

All circled methods are applicable to each sample.

Sample ID	Parameter			
1	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}	CO_3	S	
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}			

Comments:

LDC #: 14879C6
SDG #: TPC2328

Validatin Findings Worksheet
Initial and Continuing Calibration Calculation Verification

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

Method: Inorganics, Method See com

The correlation coefficient (r) for the calibration of SO4 was recalculated.Calibration date: 2/10/06

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

%R = Found X 100 / True

Where, Found = concentration of each analyte measured in the analysis of the ICV or CCV solution
True = concentration of each analyte in the ICV or CCV source

Type of analysis	Analyte	Standard	Conc. (mg/L)	Area	Recalculated r or r^2	Reported r or r^2	Acceptable (Y/N)
Initial calibration	SO4	s1	0	0	0.999994	0.999994	Y
Calibration verification		s2	0.4	37086.13			
		s3	1	78840.36			
		s4	10	882302.78			
		s5	20	1859685.6			
		s6	40	4073330.88			
		s7	60	6589508.82			
CCV Calibration verification	Cl	10	9.8077		98	NR	Y
CCV Calibration verification	NH3 N	4	4.08		102	↓	↓
CCV Calibration verification	TOC	10	9.023		90	↓	↓

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

BOE-C6-0050788

LDC #: 14879C6
SDG #: IPC2325

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

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

METHOD: Inorganics, Method See comm

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	WO_2	4.89	5.0	98	98	Y
IPC 2307-1	Matrix spike sample	S	(SSR-SR) 0.467	0.580	81	80	↓
IPC 2325-4 *	Duplicate sample	CO_2	180	180	0	0	↓

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

TOTCLC.6

BOE-C6-0050789

LDC #: 14879C6
SDG #: IPC2325

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: Inorganics, Method See cover

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

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

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

Concentration =

Recalculation:

$$\text{Alkalinity} = \frac{N_{titrant} \times V_{titrant} \times 50000}{\text{Sample Volume}}$$

$$\text{Alkalinity} = \frac{4.70 \times 0.02 \times 50000}{25.0} = 188 \text{ mg/L}$$

#	Sample ID	Analyte	Reported Concentration (mg/L)	Calculated Concentration (mg/L)	Acceptable (Y/N)
1	1	CO_2	12	12	Y
		NH_3	0.14	0.14	
		Alkalinity	190	190	
		Cl	120	120	
		SO_4	91	91	
		S	0.014	0.014	
		TOC	15	15	

Note:

RECALC.6

Boeing Realty Corp., Former C-6 Facility, Torrance CA
Data Validation Reports
LDC# 14879

Fixed Gases

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 20, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Fixed Gases

Validation Level: Tier 1

Laboratory: Del Mar Analytical\Air Technology Laboratory, Inc.

Sample Delivery Group (SDG): IPC2080/A6032106

Sample Identification

MWC011_WG032006_0001

Introduction

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

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures.

The cooler temperatures for sample MWC011_WG032006_0001 was reported at 10°C upon receipt by the laboratory.

II. Calibration

a. Initial Calibration

Initial calibration data were not reviewed for Tier 1.

b. Calibration Verification

Calibration verification data were not reviewed for Tier 1.

III. Blanks

Method blanks were performed at the required frequency. No fixed gases contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the method.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Fixed Gases - Data Qualification Summary - SDG IPC2080/A6032106

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Fixed Gases - Laboratory Blank Data Qualification Summary - SDG IPC2080/A6032106

No Sample Data Qualified in this SDG

Client: Del Mar Analytical, Irvine
Attn: Michele Chamberlin

Client's Project: IPC2080
Date Received: 3/21/2006
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

Lab No.:		A6032106-01		~~A6032106-02~~							
Client Sample I.D.:		IPC2080-07		IPC2080-11							
Date Sampled:		3/20/2006		3/20/2006							
Date Analyzed:		3/27/2006		3/27/2006							
Analyst Initials:		DT		DT							
Data File:		27mar011		27mar012							
QC Batch:		060327GC8A1		060327GC8A1							
Dilution Factor:		1.0		1.0							
ANALYTE	**PQL**	**RL**	**Results**	**RL**	**Results**						
Methane	1.0	1.0	88	1.0	ND						
Ethane	2.0	2.0	ND	2.0	ND						
Ethylene	3.0	3.0	ND	3.0	ND						
Nitrogen	1500	1500	110,000	~~1500~~	~~97,000~~						

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

Reviewed/Approved By: Mark J. Johnson
Operations Manager

Date: 3-31-06

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

K 2/5/06

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

LDC #: 14879A51

VALIDATION COMPLETENESS WORKSHEET

Date: 5/12/06

SDG #: IPC2080/A6032106

Tier 1

Page: 1 of 1

Laboratory: Del Mar Analytical/Air Technology Laboratory, Inc.

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Fixed Gases (Method RSK-175)

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

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 3/20/06
IIa.	Initial calibration	N	
IIb.	Calibration verification	N	
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS ID
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

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

Validated Samples: water

1	MWC011_WG032006_0001	11	Method Blk 3/27/06	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 14879 A51
SDG #: IPC2080 / A6032106

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

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

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

METHOD: GC HPLC

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	water	cooler	temp =	10°C			Text

TECHNICAL HOLDING TIME CRITERIA

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

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

BOE-C6-0050799

LDC Report# 14879B51

Laboratory Data Consultants, Inc.
Data Validation Report

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

Collection Date: March 21, 2006

LDC Report Date: May 15, 2006

Matrix: Water

Parameters: Fixed Gases

Validation Level: Tier 2

Laboratory: Del Mar Analytical\Air Technology Laboratory, Inc.

Sample Delivery Group (SDG): IPC2190/A6032203

Sample Identification

IRZB0095_WG032106_0001

Introduction

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

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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

The following are definitions of the data qualifiers:

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

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

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

A Indicates the finding is based upon technical validation criteria.

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

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

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 with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
IRZB0095_WG032106_0001	All TCL compounds	Cooler temperature was reported at 11°C upon receipt by the laboratory.	Cooler temperature must be 4±2°C .	J (all detects) UJ (all non-detects)	A

II. Calibration

a. Initial Calibration

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

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

b. Calibration Verification

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

III. Blanks

Method blanks were performed at the required frequency. No fixed gases contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the method.

c. Laboratory Control Samples

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

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Fixed Gases - Data Qualification Summary - SDG IPC2190/A6032203

SDG	Sample	Compound	Flag	A or P	Reason
IPC2190/ A6032203	IRZB0095_WG032106_0001	All TCL compounds	J (all detects) UJ (all non-detects)	A	Cooler temperature

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Fixed Gases - Laboratory Blank Data Qualification Summary - SDG IPC2190/A6032203

No Sample Data Qualified in this SDG

Client: Del Mar Analytical, Irvine
Attn: Michele Chamberlin

Client's Project: IPC2190
Date Received: 3/22/2006
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

Lab No.:		~~A6032203-01~~		A6032203-02		~~A6032203-03~~		~~A6032203-04~~			
Client Sample I.D.:		IPC2190-03		IPC2190-04		IPC2190-09		IPC2190-11			
Date Sampled:		3/21/2006		3/21/2006		3/21/2006		3/21/2006			
Date Analyzed:		3/27/2006		3/27/2006		3/27/2006		3/27/2006			
Analyst Initials:		DT		DT		DT		DT			
Data File:		27mar013		27mar014		27mar015		27mar016			
QC Batch:		060327GC8A1		060327GC8A1		060327GC8A1		060327GC8A1			
Dilution Factor:		1.0		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	RL	Results	RL	Results	RL	Results		
Methane	1.0	1.0	1,800	1.0	12,000 J	1.0	67	1.0	2,400		
Ethane	2.0	2.0	ND	2.0	ND UJ	2.0	ND	2.0	ND		
Ethylene	3.0	3.0	ND	3.0	4.1 J	3.0	ND	3.0	ND		
Nitrogen	1500	~~1500~~	~~97,000~~	1500	82,000 J	~~1500~~	~~94,000~~	~~1500~~	~~110,000~~		

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

Reviewed/Approved By: Mark J. Johnson
Operations Manager

Date: 3-31-06

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

L 05750c

AIrTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

LDC #: 14879B51 **VALIDATION COMPLETENESS WORKSHEET** Date: 5/12/06

SDG #: IPC2190/A6032203 Tier 2 Page: 1 of 1

Laboratory: Del Mar Analytical/Air Technology Laboratory, Inc. Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Fixed Gases (Method RSK-175)

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

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 3/21/06
IIa.	Initial calibration	A	~~%RSD ≤ 25~~ $r^2 \geq 0.990$
IIb.	Calibration verification	A	% D ≤ 25
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS ID
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

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

Validated Samples: Water

1	IRZB0095_WG032106_0001	11	Method Blank 3/27/06	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 14879B51
SDG #: 1PG2190/AG03220 3

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

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

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

METHOD: ✓ GC ___ HPLC

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	water	cooler	temp	= 11°C			J/UJ/A

TECHNICAL HOLDING TIME CRITERIA

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

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

BOE-C6-0050807

LDC Report# 14879C51

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Boeing Realty Corp, Former C-6 Facility, Torrance CA
Collection Date:	March 22, 2006
LDC Report Date:	May 15, 2006
Matrix:	Water
Parameters:	Fixed Gases
Validation Level:	Tier 3
Laboratory:	Del Mar Analytical\Air Technology Laboratory, Inc.
Sample Delivery Group (SDG):	IPC2325/A6032303

Sample Identification

CMW0002_WG032206_0001

Introduction

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

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

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

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

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.

The cooler temperature for sample CMW0002_WG032206_000 was reported at 10°C upon receipt by the laboratory.

II. Calibration

a. Initial Calibration

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

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

b. Calibration Verification

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

III. Blanks

Method blanks were performed at the required frequency. No fixed gases contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were not required by the method.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the method.

c. Laboratory Control Samples

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

V. Target Compound Identification

All target compound identifications were within validation criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

VII. System Performance

The system performance was acceptable.

VIII. Overall Assessment of Data

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

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Fixed Gases - Data Qualification Summary - SDG IPC2325/A6032303

No Sample Data Qualified in this SDG

Boeing Realty Corp, Former C-6 Facility, Torrance CA
Fixed Gases - Laboratory Blank Data Qualification Summary - SDG IPC2325/A6032303

No Sample Data Qualified in this SDG

Client: Del Mar Analytical, Irvine
Attn: Michele Chamberlin

Client's Project: IPC2325
Date Received: 3/23/2006
Matrix: Water
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

Lab No.:		~~A6032303-01~~		A6032303-02							
Client Sample I.D.:		IPC2325-04		IPC2325-09							
Date Sampled:		3/22/2006		3/22/2006							
Date Analyzed:		3/27/2006		3/27/2006							
Analyst Initials:		DT		DT							
Data File:		27mar017		27mar018							
QC Batch:		060327GC8A1		060327GC8A1							
Dilution Factor:		1.0		1.0							
ANALYTE	PQL	RL	Results	RL	Results						
Methane	1.0	1.0	12,000	1.0	1.6						
Ethane	2.0	2.0	ND	2.0	ND						
Ethylene	3.0	3.0	ND	3.0	ND						
Nitrogen	1500	~~1500~~	~~52,000~~	1500	110,000						

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

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

Date: 3-31-06

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

Lor 150s

LDC #: 14879C51 **VALIDATION COMPLETENESS WORKSHEET** Date: 5/15/06

SDG #: IPC2325/A6032303 Tier 3 Page: 1 of 1

Laboratory: Del Mar Analytical/Air Technology Laboratory, Inc. Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC Fixed Gases (Method RSK-175)

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

	Validation Area		Comments
I.	Technical holding times	SW	Sampling dates: 3/22/06
IIa.	Initial calibration	A	$r^2 \geq 0.990$
IIb.	Calibration verification	A	cav ≤ 25%
III.	Blanks	A	
IVa.	Surrogate recovery	N	not required
IVb.	Matrix spike/Matrix spike duplicates	N	client specified
IVc.	Laboratory control samples	A	LCS ID
V.	Target compound identification	A	
VI.	Compound Quantitation and CRQLs	A	
VII.	System Performance	A	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

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

Validated Samples: water

1	CMW0002_WG032206_0001	11	Method Blank 3/27/06	21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 14879C51
SDG #: 1PC2325/A6032303

VALIDATION FINDINGS CHECKLIST

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

Method: ✓ GC ____ HPLC

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓	/		
Cooler temperature criteria was met.		✓		
II. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Was a linear fit used for evaluation? If yes, were all percent relative standard deviations (%RSD) ≤ 20%?		✓		
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?	✓			
Did the initial calibration meet the curve fit acceptance criteria?	✓			
Were the RT windows properly established?	✓			
IV. Continuing calibration				
What type of continuing calibration calculation was performed? ____%D or ____%R	✓			
Was a continuing calibration analyzed daily?	✓			
Were all percent differences (%D) ≤ ~~15%~~ 25.0 or percent recoveries 85-115%?	✓			
Were all the retention times within the acceptance windows?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within the QC limits?			✓	
If the percent recovery (%R) of one or more surrogates was outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any %R was less than 10 percent, was a reanalysis performed to confirm %R?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.			✓	
Was a MS/MSD analyzed every 20 samples of each matrix?			✓	
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			

LDC #: 14879C51
SDG #: IPC2325/A6032303

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: 15
2nd Reviewer: K

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

LDC #: 14879051
SDG #: 1PC2325/A6032303

VALIDATION FINDINGS WORKSHEET
Technical Holding Times

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

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

METHOD: GC HPLC

Sample ID	Matrix	Preserved	Sampling Date	Extraction date	Analysis date	Total # of Days	Qualifier
1	water	cooler	temp =	10°C			Text

TECHNICAL HOLDING TIME CRITERIA

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

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

BOE-C6-0050817

LDC# 14879C5 1
SDG# 1PC2325 /A6032303

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: 8082

Callibration Date	Column/ Detector	Compound	Standard	X	Y	
04/20/05	FID	methane	Point 1	10	13683	
			Point 2	100	121591	
			Point 3	1000	1260392	
			Point 4	5000	6514911	
			Point 5	10000	13405678	
			Point 6			
			Point 7			
			Point 7			
			Point 8			

	Recalculated Result	Result Reported by the Laboratory	
Regression Output:			
Constant	0	0.00E+00	
Std Err of Y Est	91688.222524795768		
R Squared	0.99975	0.999811	
No. of Observations	5		
Degrees of Freedom	4		
X Coefficient(s)	1332.46480187		1.3325E+03
Std Err of Coef.	8.16790871554		

BOE-C6-0050818

LDC# 14879C5 1
SDG# 1PC2325/A6032303

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

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

METHOD: 8082

Callibration Date	Column/ Detector	Compound	Standard	X	Y	
03/13/06	TCD	nitrogen	Point 1	1.56	63916	
			Point 2	7.81	290198	
			Point 3	39.099998	1393537	
			Point 4	100	3442888	
			Point 5			
			Point 6			
			Point 7			
			Point 7			
			Point 8			

	Recalculated Result	Result Reported by the Laboratory
Regression Output:		
Constant	0	0.00E+00
Std Err of Y Est	28547.659624440576	
R Squared	0.99966	0.999818
No. of Observations	4	
Degrees of Freedom	3	
X Coefficient(s)	34604.3788816	3.4604E+04
Std Err of Coef.	265.147072585	

BOE-C6-0050819

LDC #: 14879C51
SDG #: 11PC2325/A6032303

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 6 of 7
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC ✓ HPLC ____

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

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

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

#	Standard ID	Calibration Date	Compound	Average CF(Ical)/ CCV Conc.	Reported CF/Conc. CCV	Recalculated CF/Conc. CCV	Reported %D	Recalculated %D
1	methane ccv	3/27/06 7:52AM	methane	5000	4467.8	4467.8	10.6	10.6
2	nitrogen ccv	3/27/06 8:21 AM	nitrogen	39.10	39.115	39.115	0	0
3								
4								

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

CONCLC.1S

BOE-C6-0050820

LDC #: 14879CS1
SDG #: 1PC2325/A6032303

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

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

_____METHOD: ✓ GC ___HPLC

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

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

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

LCS/LCSD samples: LCS/D 3/27/06

Compound	Spike Added (ppmv)		Sample Conc. (ppmv)	Spike Sample Concentration (ppmv)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	---	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalc.
Gasoline (8015)											
Diesel (8015)											
Benzene (8021B)											
Methane (RSK-175)	6900.0	6900	0	6761.3	6516.7	97	98	94	94	3.7	3.7
2,4-D (8151)											
Dinoseb (8151)											
Naphthalene (8310)											
Anthracene (8310)											
HMX (8330)											
2,4,6-Trinitrotoluene (8330)											

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

LCSCLCNew.wpd

BOE-C6-0050821

LDC #: 14879C51
SDG #: IPC 2325 / A6032303

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

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

METHOD: ___ GC ___ HPLC

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

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

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

Example:

Sample ID. #1 Compound Name Methane

Concentration = (0.00037 + 0.00114667) 1000

= 1.52 ug/L

$\frac{1.6 - 1.52}{1.6} \times 100 = 5\%$

#	Sample ID	Compound	Reported Concentrations ( )	Recalculated Results Concentrations ( )	Qualifications
	#1 Methane	y = 1.3325 x 10^3 (x)			
		22900 = 1.3325 x 10^3 (x)			
		x = 17.2 ppmv			
	in water =	17.2/10^6 x 55.51 x 16.04 x 1000/41300		= 0.00037	
	in HS =	17.2/10^6 x 1/24.06 x 16.04 x 1000 x 1000/1000 x 4/40		= 0.00114667	

Comments:

SAMPCALew.wpd

BOE-C6-0050822