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Tait Environmental Management, Inc.
Engineering • Environmental • Compliance

January 15, 2003

Ms. Stephanie M. Sibbett
Boeing Realty Corporation
3855 Lakewood Boulevard
Building 1A, MC D001-0097
Long Beach, CA 90846

Subject: **Field Data Report for Dissolved Carbon Dioxide Sampling at the Boeing Realty Corporation, Former C-6 Facility, Torrance, California**

Dear Ms. Sibbett:

This letter report is prepared to summarize and present the field data collected during the January 14, 2002 groundwater sampling and gauging activities conducted at the Boeing Realty Corporation (BRC), Former C-6 Facility, Torrance, California (Site). The groundwater gauging and sampling activities were performed in accordance with the following:

- *Waste Discharge (WDR) Permit Groundwater Sampling* by Haley & Aldrich, Inc., dated January 9, 2003.

The following is a brief summary of our field activities and observations:

- Groundwater monitoring wells TMW_2 and TMW_5 were gauged, purged and sampled on January 14, 2003.
- Groundwater samples collected from the two (2) wells were shipped via Federal Express to VaporTech Services, Inc. located in Valencia, Pennsylvania. The samples were analyzed for dissolved carbon dioxide.
- A total of two (2) 55-gallon drums were filled with decontamination and purged groundwater and were labeled per the Haley & Aldrich IDW numbering scheme.

Please call us if you have any questions or comments at (714) 560-8200. TEM is pleased to be of continued service to Boeing Realty Corporation.

Very Truly Yours,

Tait Environmental Management, Inc.

Scott Ek
Project Geologist

Attachments:

Groundwater Sampling Data Sheets (2), Analytical Report and Chain-of-Custody (2), Daily Field Report (2), Daily Tailgate Health and Safety Meeting Agreement and Acknowledgement Sheet (1), Instrument Calibration Sheet (1), and Investigation Derived Waste Inventory Records

Boeing Realty Corporation
15480 Laguna Canyon Road, Suite 200
Irvine, CA 92618
Telephone (949) 790-1900
Accounting Fax (949) 790-1907

21 January 03
C6-BRC-T-03-001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

BOEING

Attention: John Geroch

Subject: **FIELD DATA REPORT FOR DISSOLVED CARBON DIOXIDE SAMPLING AT THE BOEING REALTY CORPORATION, FORMER C-6 FACILITY, 19503 SOUTH NORMANDIE AVENUE, LOS ANGELES, CA**

Dear Mr. Geroch:

Please find enclosed for your review, a copy of the subject document prepared by Tait Environmental Management, Inc. for Boeing Realty Corporation.

If you have any questions concerning this document, please contact the undersigned at 562-593-8623.

Sincerely,

Stephanie Sibbett
Boeing Realty Corporation

Cc: Mario Stavale, Boeing Realty Corporation

enclosure

Tait Environmental Management, Inc.

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Groundwater Sampling Data Sheet

Project Name: BRC, Former C-6 Fac.	**Date:** 1/14/03
Project No.: EM 2303	**Prepared By:** SE
Well Identification: TMW-5	**Pump Intake Depth (ft-bmp):** ~ 71'
Measurement Point Description: TOC, blue mark	

Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	One (1) Casing Volume (gallons)	Three (3) Casing Volumes (gallons)
ND	67.64	83.13	15.49	ND	3	9

Well Diameter (in)				Gallons/Foot			
				0.75	2	4	6
0.75	(2)	4	6	0.02	(0.16)	0.65	1.47

Field Equipment: Solinst, Horiba U-22

Purge Method: 2" dia. Grundfos with ded. tubing

Well Condition: Good Condition, Soft well bottom

Time	Casing Volumes Purged	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph	Temperature (°C)	Turbidity (NTU)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
11:09	1	3	0.4	67.76	6.67	23.51	260	1.19	6.09	-10	clear
11:12	1.5	4.5	0.4	67.76	6.91	23.76	140	1.07	5.80	8	clear
11:16	2	6	0.4	67.76	7.01	23.93	110	1.05	5.70	14	clear
11:25	3	9	0.3	67.76	7.16	24.13	60	0.99	5.60	24	clear
11:34	4	12	0.3	67.74	7.19	24.30	10	0.96	5.56	27	clear
11:44	5	15	0.3	67.70	7.21	24.32	10	0.95	5.47	29	clear

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification
11:03	11:44	0.4	15	5	70.74	67.70	11:47	TMW-5_WG011403_0001

Notes:

ft-bmp = feet below measuring point
LNAPL = light non-aqueous phase liquid

BOE-C6-0130475

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Groundwater Sampling Data Sheet

Project Name: BRC, Former C-6 Facility	**Date:** 1/14/03
Project No.: EM 2303	**Prepared By:** SE
Well Identification: TMW-2	**Pump Intake Depth (ft-bmp):** ~ 72
Measurement Point Description: TOC, blackmark, north	

Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	One (1) Casing Volume (gallons)	Three (3) Casing Volumes (gallons)
ND	69.82	85.10	15.28	ND	2.5	7.5

Well Diameter (in)				Gallons/Foot			
				0.75	2	4	6
0.75	2	4	6	0.02	0.16	0.65	1.47

Field Equipment: Solinst, Horiba U-22

Purge Method: 2" dia. Grundfos with dedicated tubing

Well Condition: Good, Soft well bottom

Time	Casing Volumes Purged	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph	Temperature (°C)	Turbidity (NTU)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
12:21	1	2.5	0.6	71.05	6.21	22.98	640	3.92	9.95	-114	clear, black
12:27	2	5	0.4	71.00	6.24	24.04	290	3.88	3.89	-139	clear
12:39	3	7.5	0.2	69.97	6.35	24.43	70	3.68	4.52	-155	clear
12:46	4	10	0.3	71.22	6.42	23.58	69	3.55	3.35	-157	clear
12:54	5	12.5	0.3	71.27	6.45	23.56	69	3.47	3.26	-162	clear
-	-	-	-	-	-	-	-	-	-	-	-

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification
12:17	12:54	0.3	12.5	5	72.87	71.27	12:55	TMW-2_WG011403_0001

Notes:

ft-bmp = feet below measuring point
LNAPL = light non-aqueous phase liquid

BOE-C6-0130476

VAPORTECH Services, Inc.

Analytical Laboratory & Geoprobe Sampling

1/15/03

Mr. Scott Eck
Tait Environmental Mgmt., Inc.
701 North Parkcenter Dr.
Santa Ana, CA 92705

Dear Scott:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on January 15, 2003 for your project; BRC, Former C-6 Facility - EM-2303.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

TAT1-32034

Tait Environmental Mgmt., Inc.
Project: BRC, Former C-6 Facility EM-2303
-- WATER SAMPLES --

SAMPLE NAME	CARBON DIOXIDE (mg/l)	FILE NAME	DATE COLLECTED	DATE RECEIVED	DATE ANALYZED
TMW-5-WG011403-0001	15.0	D23B2.75A	01/14/2002	01/15/2003	01/15/2003
TMW-2-WG011403-0001	170.4	D23B2.76A	01/14/2002	01/15/2003	01/15/2003

MDL for above samples 0.4

MDL - denotes lower 'Method Detection Limit'

ND - denotes 'Not Detected' at or above the lower method detection limit

15-Jan-2003

Reviewed by:

Vaportech Services, Inc.

TAT1-32034

Tait Environmental Mgmt., Inc.
Project: BRC, Former C-6 Facility EM-2303
-- WATER SAMPLES --

QUALITY CONTROL

CONTINUING CALIBRATION CHECK (TCD)

STANDARD: "237"
FILE NAME: D23B2.67A

COMPOUND	KNOWN (%)	RESULT (%)	PERCENT DIFFERENCE
Carbon Dioxide	15.00	16.66	11.05

LABORATORY BLANK RESULTS (TCD)

BLANK: CARRIER IN LOOP
FILE NAME: D26B2.65A

COMPOUND	BLANK (%)	METHOD DETECTION LIMIT (%)
Carbon Dioxide	ND	0.02

ND - denotes 'Not Detected' at or above the lower method detection limit

15-Jan-2003

Reviewed by:

TAT 1 - 32034

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: Tait Environmental Mgmt., Inc.
Address: 701 North Parkcenter Dr.
City: Santa Ana State: CA Zip: 92705
Proj. Manager: Scott EK
Proj. Location: BRC, Former C-6 Facility
Proj. Number: EM-2303
Phone #: (714) 560-8694 Fax #: (714) 560-8235

Sampler's signature: Scott S. Ek

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
1/14/03	11:47	2	H_2O	TMW_5_WG011403_0001			B		Dissolved Carbon Dioxide	(24 hour Turn)
1/14/03	12:55	2	H_2O	TMW_2_WG011403_0001			B		Dissolved Carbon Dioxide	(24 hour Turn)

Results to : Tait Environmental Mgmt., Inc.

Invoice to : TAIT Environmental Mgmt., Inc.

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Scott S. Ek	TAIT	1/14/03	—	Via FED-EX		1/14/03	
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
				J. Montoya	VAportech	1/15/03	1000
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

BOE-C6-0130480

Tait Environmental Management, Inc.

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DAILY FIELD REPORT

Project Name: BRC, C-6 Fac.	**Project #:** EM 2303	**Date:** 1/14/03
Personnel: SE	**Sub Contractors:** NA	

Task: Sample wells TMW-2 and TMW-5 for CO_2.

Time Arrived at Site: —	**Time Left Site:** —	**Total Hours at Site:** —
Odometer (Start): —	**Odometer (End):** —	**Total Miles:** —

Equipment List:

- [x] Solinst Water Level Meter Serial #: #1
- [ ] Solinst Water/Product Level Interface Meter Serial #: _____
- [x] Horiba U-22 Water Quality Meter Serial #: _____
- [ ] PID/FID Type: _____ Serial #: _____
- [x] Submbersible Pump Type: Grundfos Serial #: _____
- [x] Generator Type: MultiQuip Serial #: _____
- [x] Company Truck License #: 6P41975
- [ ] Other(s): _____

Desription of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

9:55 - Arrived at Site. Reviewed Health & Safety procedures

10:01 - Calibrated Solinst with Steel tape to 50'. Calibration was good.

Client Signature (if applicable): _____ **Date:** _____

Tait Environmental Management, Inc.

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Project Name: BRC, C-6 Facil.	Project #: EM-2303	Date: 1/14/03

10:14 - Measured TMW-2: DTW = 69.82' TD = 85.10' - Soft bottom.

10:19 - Calibrate Horiba U-22 with Ph 4 Auto cal Solution.
Calibration good on all parameters

10:44 Measured TMW-5: DTW = 67.64' TD = 83.13' - Soft bottom.

11:03 Start purge of TMW-5. Pump set depth at ~ 71'
Per instructions from Jim Nguyen (Arcadis)

11:47 Collect sample from TMW-5.
Left drum at well properly labeled.
Decontaminated all downhole equipment. Prior to next well.

12:17 Start purge of well TMW-2.

12:54 Collected sample from TMW-2.

13:35 Locked both gates on North and South of Knox St. Prior to leaving Site

15:00 Delivered Samples to FED-EX for shipment to Vapor Tech.

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Daily Tailgate Health & Safety Meeting Agreement and Acknowledgement Sheet

Project Name: BRC, Former C-6	**Project #:** EM 2303
Site/Area Location/Well ID: TMW-2, TMW-5	
Date(s) Work Performed: 1/14/03	**Time:** 9:55
Name Of Person Giving Tailgate **Print Name:** Scott Ek **Signature:** Scott E. Ek	**Affiliation:** TAIT
Site-Specific Health & Safety Meeting Topics: Security, PPE, Waste handling, Scope	

I have reviewed the plan, understand it, and agree to comply with all of the health and safety requirements. I understand that I may be prohibited from working on the project for violating any of the requirements. Visitors will be required to be escorted in the restricted access zone. Visitors must comply with Tait Environmental Management, Inc. escort directions while on site at all times. Non-compliance with escort directions will not be tolerated, and violators will be requested to leave the site immediately.

A physician based on medical examination has approved me to wear a respirator. I have been trained in the appropriate use, care, and storage of respiratory equipment. I have been respirator fit tested; and I have my respirator available for use in the field. I understand that I am to use the equipment supplied to me by my employer. I further understand that this equipment is provided solely for my benefit with the intent to minimize my exposure to potentially hazardous conditions. In the event of such usage, I agree to indemnify and hold harmless Tait Environmental Management, Inc. and all of its employees from and against any and all losses, demands, claims, liabilities, lawsuits, damages, costs, and expenses arising, in any way, from the use of the equipment.

Date	Name	Company Name	Signature
1/14/03	Scott Ek	TAIT	Scott E. Ek

Tait Environmental Management, Inc.

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Instrument Calibration Sheet

Project Name: BRC, Former C-6: CO_2 Sampling	Project #: EM 2303

Date	Time	Instrument Type	Instrument Serial No.	Calibration Method	Calibrated By	Remarks
1/14/03	10:01	Solinst	#1	steel tape	SE	Good
1/14/03	10:19	Horiba U-22	0082133	Auto Cal.	SE	Good

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Investigation Derived Waste (IDW) Inventory Record

Project Name: BRC, C-6 Fac.

Project No.: EM-2303

Accumulation Date	Drum/Bin	Identifier	Waste Origination	Contents	Accumulation Depth (feet-bgs)	Container Location	Inventoried By	Labeled By
1/14/03	Drum	C6-HA-173T	TMW-5	GW	71'	@ TMW-5	SE	SE
1/14/03	Drum	C6-HA-174T	TMW-2	GW	72'	@ TMW-2	SE	SE
1/14/03	Drum	NA	NA	Empty	NA	Knox/HarborGate	SE	SE

BOE-C6-0130485