AVOCET
ENVIRONMENTAL, INC.

November 3, 2008 Project No. 1155.006

Ms. Jennifer L. Wiley, PG, CEM
THE BOEING COMPANY
Environment, Health & Safety –
Environmental Remediation
4501 Conant Street, M/C D851-0097
Long Beach, California 90808

Field Data Report
September 2008 Groundwater Sampling and Analysis Plan
Site-Wide Semiannual Monitoring
Quarterly Monitoring at Building 1/36 Area
Month 2/Quarterly Monitoring at Building 2 Area
Waste Discharge Requirements Order No. R4-2007-0040
Boeing Corporate Real Estate Former C-6 Facility
Los Angeles, California

Dear Ms. Wiley:

This report has been prepared by Avocet Environmental, Inc. (Avocet) to summarize and present the field data collected during the September 2008 groundwater monitoring event at the Boeing Corporate Real Estate (CRE) Former C-6 Facility in Los Angeles, California. The September 2008 monitoring included sampling for the Building 1/36 Waste Discharge Requirements (WDR), Building 2 WDR, and Site-Wide Semiannual groundwater monitoring programs. The monitoring was conducted pursuant to and in accordance with the following:

Avocet Environmental, Inc., September 15, 2008, Technical Memorandum, September 2008 Groundwater Sampling and Analysis Plan, Site-Wide Semiannual Monitoring, Quarterly/Semiannual Monitoring at Building 1/36 Area, Month 2/Quarterly/Semiannual Monitoring at Building 2 Area, Waste Discharge Requirements Order No. R4-2007-0040, Boeing Corporate Real Estate Former C-6 Facility, Los Angeles, California (Attachment 1).

California Regional Water Quality Control Board, Los Angeles Region (LARWQCB), August 22, 2008, Approval of Revised Monitoring and Reporting Program CI-9310, Individual Waste Discharge Requirements Order No. R4-2007-0040, Boeing Corporate Real Estate, Former C-6 Facility, 19503 South Normandie, Los Angeles, California (File No. 95-036; SLIC No. 0410; Site ID No. 1846000).

Avocet Environmental, Inc., February 4, 2008, 2008 Groundwater Monitoring Work Plan, Boeing Former C-6 Facility, 19503 South Normandie Avenue, Los Angeles, California.

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Field activities performed during the September 2008 monitoring event are discussed in the following sections. Figures 1, 2, and 3 (Attachment 1) present the locations of the groundwater monitoring wells included in the programs.

GROUNDWATER SAMPLING ACTIVITIES

Groundwater monitoring in September 2008 was conducted in accordance with two separate programs: 1) the Site-Wide Groundwater Monitoring Program, which has been performed periodically at the site since 1987, and 2) Revised Monitoring and Reporting Program CI-9310 (MRP), which is conducted in accordance with Individual WDR Order No. R4-2007-0040 (August 22, 2008).

The Building 1/36 WDR, Building 2 WDR, and Site-Wide Semiannual groundwater monitoring programs called for fluid level measurements in 58 wells and sample collection from 45 wells, as follows:

Quarterly Building 1/36 WDR Monitoring – Pursuant to the MRP, 13 wells (Groups A1, A2, B1, C, and D) were gauged for fluid levels and sampled. Well WCC_12S was also part of the Site-Wide Program. Pursuant to comments received on the February SAP, the two B2 wells were also gauged as part of the Building 1/36 September 2008 WDR Monitoring program.

Month 2/Quarterly/Semiannual Building 2 WDR Monitoring - Pursuant to the MRP, six wells (Groups B, C, and D) were gauged for fluid levels and sampled. One of these wells, well CMW002, was also part of the Site-Wide Program.

Semiannual Site-Wide Groundwater Monitoring – Pursuant to the 2008 Work Plan, 40 wells were gauged for fluid levels and 28 wells were sampled. Two of these sampled wells are also part of the Building 1/36 or Building 2 WDR programs and were gauged and sampled in accordance with MCP requirements.

All wells were also inspected for any damage or missing materials and described on field data forms. Field data forms are included in Attachment 2.

Thirteen Building 1/36 WDR wells, six Building 2 WDR wells, and 26 Site-wide wells were purged and sampled on September 22 through 25, 2008 using either dedicated or portable low-flow bladder pumps and flow-through cells[1]. All WDR and site-wide wells were purged for sampling using low-flow (0.20-0.25 liters/minute) methods. For all of the WDR monitoring wells, ferrous iron testing was performed using HACH DR/890 Colorimeter. The flow-through cell dissolved oxygen measurements were confirmed in several wells using a CHEMetrics Inc.

[1] Due to atypical results, Well XMW-19 was re-sampled on October 24, 2008. This well was purged for sampling using a submersible centrifugal pump, dedicated tubing, and conventional (i.e., three wetted casing volumes) purging methods. The field data form is included in Attachment 2.

test kit. The field instruments were calibrated by Avocet staff prior to the event and the calibration data sheets are included in Attachment 2.

All 58 wells scheduled for water level measurement were gauged for depth to water on September 22, 2008 using a Solinst electronic water level sounder. The wells were also inspected for any damage or missing materials. All wells were in good condition. After sampling, the pumps in wells AW0073C, EWB002, AW0077UB, AW0075UB, and AW0076UB were temporarily removed in anticipation of the remediation contractor's upcoming vapor sampling activities.

At the completion of purging, groundwater samples were collected in laboratory supplied containers, properly labeled, identified on the chain-of-custody, and submitted to TestAmerica Laboratory, an appropriately certified environmental testing laboratory located in Irvine, California. A normal 10-day turn-around time was requested for the lab analyses. For the WDR wells, groundwater samples were analyzed for one or more of the following:

- Volatile organic compounds (VOCs) by EPA Method 8260B,
- Total organic carbon (TOC) by EPA Method 9060,
- Volatile fatty acids (VFAs) by IC Method 8M23G (subcontracted by TestAmerica to Microseeps, Inc., Pittsburg, PA),
- Dissolved gases (ethane, ethene, and methane) by RSK 175 (subcontracted by TestAmerica to Air Technology Laboratory, Inc., City of Industry, CA),
- Dissolved minerals (sulfate, nitrate, nitrite, and chloride) by EPA Method 300 Series,
- Total Alkalinity by EPA Method 310,
- Quantitative polymerase chain reaction (qPCR) analysis for DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA (subcontracted by TestAmerica to North Wind, Inc., Pocatello, ID, (four Building 2, group B wells only), and
- Total dissolved solids (TDS) by EPA Method 160.1 (for the group C and D wells only).

Samples from the non-WDR wells were analyzed for VOCs using EPA Method 8260B.

Purge water (approximately 90 gallons) was placed in two appropriately labeled 55-gallon drum located adjacent to the treatment compound. The analytical results will be used to profile the purge water for transport to an appropriate off-site facility for treatment and disposal. Management, containerization, staging, profiling, and transportation will be conducted in accordance with procedures established by Boeing CRE.

If you have any questions regarding this report or require additional information, please do not hesitate to call.

Respectfully submitted,

AVOCET ENVIRONMENTAL, INC.

Michael A. Rendina, C.Hg.
Principal

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Attachments:
Attachment 1: September 2008 Groundwater Sampling and Analysis Plan
Attachment 2: Field Data Forms

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Attachment 1

September 2008 Groundwater Sampling and Analysis Plan

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AVOCET
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September 15, 2008 Project No. 1155.006

Ms. Jennifer Wiley, P.G. (via electronic mail only)
THE BOEING COMPANY
Environment, Health & Safety –
Environmental Remediation
4501 East Conant Street, M/C D851-0097
Long Beach, California 90808

Technical Memorandum
September 2008 Groundwater Sampling and Analysis Plan
Site-Wide Semiannual Monitoring
Quarterly/Semiannual Monitoring at Building 1/36 Area
Month 2/Quarterly/Semiannual Monitoring at Building 2 Area
Waste Discharge Requirements Order No. R4-2007-0040
Boeing Corporate Real Estate Former C-6 Facility
Los Angeles, California

Dear Ms. Wiley:

This memorandum has been prepared by Avocet Environmental, Inc. (Avocet) and presents the sampling and analysis plan (SAP) for the September 2008 groundwater monitoring event at Boeing Corporate Real Estate's (CRE's) Former C-6 Facility in Los Angeles, California. Groundwater monitoring in September 2008 will be conducted in accordance with two separate programs: 1) the Site-Wide Groundwater Monitoring Program, which has been performed periodically at the site since 1987, and 2) Revised Monitoring and Reporting Program CI-9310 (MRP), which is conducted in accordance with Individual Waste Discharge Requirements (WDR) Order No. R4-2007-0040 (August 22, 2008). The details of the Semiannual Site-Wide Groundwater Monitoring Program are provided in the *2008 Groundwater Monitoring Work Plan* (the Work Plan; Avocet, February 4, 2008). This Work Plan was submitted to the Regional Water Quality Control Board, Los Angeles Region (LARWQCB) on February 5, 2008 and formally approved for implementation in a letter dated March 5, 2008 (LARWQCB, March 5, 2008). Under the revised WDR Order, the September 2008 MRP includes sample collection in two areas of the site in response to two separate bioremediation pilot tests: 1) quarterly/semiannual sampling of wells at the Former Building 1/36 Biorecirculation Pilot Test wells, and 2) Month 2 and quarterly/semiannual sampling of the Former Building 2 Periodic Slug Injection wells.

Field Activities

Ground water monitoring will be conducted in September of 2008 and include the Semiannual Site-Wide Groundwater Monitoring Program and the Building 2 and Building 1/36 WDR groundwater monitoring programs. Details of the Semiannual Site-Wide Groundwater

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Monitoring Program are presented in Table 1. The Building 2 and Building 1/36 WDR groundwater monitoring programs are summarized in Tables 2 and 3, respectively. Maps showing the well locations are provided in Figures 1 through 3. Collectively, the three programs call for fluid level measurements in 58 wells and sample collection from 45 wells, as follows:

Semiannual Site-Wide Groundwater Monitoring – Pursuant to the 2008 Work Plan, 40 wells will be gauged for fluid levels and 28 wells are scheduled for sampling. Three of these wells (WCC_06S, WCC_12S, and IRZCMW003) are also part of the Building 1/36 or Building 2 WDR programs and will be gauged and/or sampled in accordance with MCP requirements. The details of the Semiannual sampling program are presented in Table 1 and a map showing the well locations is provided in Figure 1.

Combined Month 2/Quarterly/Semiannual Building 2 WDR Monitoring - In accordance with the revised MRP, six wells are to be monitored at the Former Building 2 area. These six wells consist of the four Group B Wells (CMW026, IRZCMW002, IRZCMW003, and MWC024), the one Group C Well (CMW002), and the one Group D Well (IRZCMW001). Each of these wells will be gauged for water level and sampled. A list of the WDR wells to be monitored, broken out by Group, is provided in Table 2. A map showing the Building 2 WDR well locations is provided in Figure 2.

Quarterly Building 1/36 WDR Monitoring – Pursuant to the revised MRP, 15 wells in the Former Building 1/36 area will be gauged for fluid levels and 13[1] of the 15 wells will be sampled. The 13 wells scheduled for sampling include the four Group A1 Wells (AW0064UB through AW0067UB), the six Group B1 Wells (AW0075UB, AW0076UB, AW0077UB, EWB002, AW0055UB, and AW0073C), the Group C Wells (TMW_07 and WCC_12S) and the Group D Well (MWB006). The two wells scheduled for fluid level gauging only include the two Group B2 wells (WCC_06S and AW0074UB). A list of the WDR wells to be monitored, broken out by Group, is provided in Table 3. A map showing the WDR wells located in the Building 1/36 Area is provided in Figure 3.

The scope of work will include all tasks associated with collecting the field measurements and laboratory samples required to comply with the WDR Order and 2008 Work Plan. In brief, these activities will include water level measurements, groundwater well purging and sampling, and sample analyses. Additional activities such as pre-field documentation, waste management, and reporting are addressed in the Work Plan. Specifically, the September 2008 groundwater monitoring activities will include the following:

- Prior to any disturbance, depth to groundwater will be measured to the nearest one-hundredth of a foot in each of the 58 wells using a Solinst (or equivalent) well sounder. Monitoring well vapor concentrations will be measured with a photoionization detector (PID) following removal of the well cap. All water

[1] Per Camp Dresser & McKee (electronic mail dated September 10, 2008), this includes sampling of the Group A2 amendment wells. Sampling of the Group A2 wells is not required by the revised MRP.

level measurements will be collected within a single 24-hour period using calibrated water level sounders. Water levels in wells with submerged screens that are noted to be under pressure upon removal of the well cap will be allowed time to stabilize prior to water level gauging.

- Groundwater samples are scheduled for collection from 26 non-WDR wells (Table 1) and from 19 WDR wells (Tables 2 and 3) during the September 2008 monitoring event. Prior to sampling, the wells will be purged using low-flow methods to assure representative samples are collected from the formation. During purging, the flow rate at each location will be maintained between 0.1 and 0.5 L/min, dependent on site-specific and well-specific factors as drawdown is not to exceed 0.3 feet in any well.

- During well purging, biogeochemical parameters including pH, temperature, electric conductivity (EC), dissolved oxygen (DO), and oxygen-reduction potential (ORP) will be periodically measured using a flow-thru cell and QED multiparameter meter or equivalent. In addition, turbidity will be measured using a Lamotte 2020 turbidimeter; approximately ten percent of the dissolved oxygen measurements will be confirmed using a CHEMetrics, Inc. test kit; and, for the WDR wells, ferrous iron (Fe(II)) will be measured using a Hach DR890 Colorimeter. Purging will continue until three consecutive measurements are within +/-0.2 for pH, +/-3% for EC, +/-10% for DO, and +/-20 mV for ORP (ATSM, 2002).

- At the completion of purging, groundwater samples will be collected in laboratory-supplied containers, labeled in accordance with Boeing's Data Management Plan (CH2M Hill, 2007), placed on ice in a cooler, identified on the chain-of-custody, and submitted to appropriately-certified environmental testing laboratories.

Samples collected from the Building 2 and Building 1/36 WDR wells will be analyzed for one or more of the following as detailed in Tables 2 and 3:

- volatile organic compounds (EPA Method 8260B);
- total organic carbon (EPA 9060);
- volatile fatty acids by IC Method 8M23G (Microseeps, Inc., Pittsburg, PA);
- dissolved hydrocarbon gases (ethene, ethane, and methane by RSK 175);
- total alkalinity (EPA Method 310.1);
- anions (sulfate, nitrate, nitrite, and chloride by EPA Method 300 Series);
- total dissolved solids (EPA Method 160.1); and
- Quantitative Polymerase Chain Reaction (qPCR) analysis for DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA (North Wind, Inc., Pocatello, ID).

Samples from the non-WDR wells will be analyzed for volatile organic compounds using EPA Method 8260B (Table 1).

Closing Remarks

Ground water monitoring is scheduled to commence at the site on Monday, September 22, 2008. Avocet Environmental, Inc. appreciates the opportunity to be of service to Boeing Corporate Real Estate. If you have any questions, please do not hesitate to call.

Respectfully submitted,

AVOCET ENVIRONMENTAL, INC.

Michael A. Rendina

Michael A. Rendina, P.G.
Principal

MAR:sh
Enclosure

cc: Mr. Joe Weidmann – Haley & Aldrich
Mr. Ravi Subramanian - CDM

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Tables

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Table 1
September 2008 Sitewide Groundwater Monitoring Program
Boeing CRE Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration[1] (µg/l)	Sampling Order	September 2008 Semi-Annual Event Analytical Program					Comments
				Water Level Gauging	VOCs (8260B)	Field Parameters[2]	Ferrous Iron[4]	WDR Analyses	
B-Sand Monitoring Wells									
BL-03	B-Sand	450	8	x					Not sampled in September
DAC-P1	B-Sand	9,400	31	x					Not sampled in September
EWB001	B-Sand	860	13						Not monitored in September
EWB002	B-Sand	2,500	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
MW0005	B-Sand	1,300	15	x					Not sampled in September
MWB003	B-Sand	3,500	28						Not monitored in September
MWB006	B-Sand	27,600	36	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
MWB007	B-Sand	1,300	NA	x	x	x			
MWB012	B-Sand	750	12						Not monitored in September
MWB013	B-Sand	7	NA	x	x	x			
MWB014	B-Sand	650	11	x					Not sampled in September
MWB019	B-Sand	3,800	NA	x	x	x			
MWB020	B-Sand	26	NA	x	x	x			
MWB027	B-Sand	750	NA	x	x	x			
MWB028	B-Sand	920	14	x					Not sampled in September
TMW_04	B-Sand	1,386	17						Not monitored in September
TMW_06	B-Sand	169	5	x					Not sampled in September
TMW_07	B-Sand	970	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
TMW_08	B-Sand	1,800	20						Not monitored in September
TMW_10	B-Sand	11	NA	x	x	x			
TMW_11	B-Sand	142	NA	x	x	x			
TMW_14	B-Sand	11	NA	x	x	x			
TMW_15	B-Sand	19	NA	x	x	x			
WCC_03S	B-Sand	11,060	NA	x	x	x			
WCC_04S	B-Sand	1,800	NA	x	x	x			
WCC_05S	B-Sand	6	NA	x	x	x			
WCC_06S	B-Sand	400	7	x					Monitored under Building 1/36 WDR Program
WCC_07S	B-Sand	174	NA	x	x	x			
WCC_09S	B-Sand	60	NA	x	x	x			
WCC_12S	B-Sand	48	NA	x	x	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
XMW-09	B-Sand	4,000	30	x	x	x			
XMW-19	B-Sand	63	3	x	x	x			
C-Sand Monitoring Wells									
CMW001	C-Sand	55	NA	x	x	x			
CMW002	C-Sand	405	NA	x	x	x	Yes	Yes[5]	Monitored under Building 2 WDR Program
CMW026	C-Sand	1,200	NA	x	x	x	Yes	Yes[5]	Monitored under Building 2 WDR Program
EWC001	C-Sand	1,900	21						Not monitored in September
EWC002	C-Sand	3,500	27	x					Not sampled in September
IWC001	C-Sand	2,200	22	x					Not sampled in September
IWC002	C-Sand	1,600	19						Not monitored in September
MWC004	C-Sand	121	NA	x	x	x			
MWC006	C-Sand	17	1						Not monitored in September
MWC007	C-Sand	4	NA	x	x	x			
MWC009	C-Sand	68	NA	x	x	x			
MWC011	C-Sand	46	2						Not monitored in September
MWC015	C-Sand	580	10	x					Not sampled in September
MWC016	C-Sand	1,300	16						Not monitored in September
MWC017	C-Sand	660	NA	x	x	x			
MWC021	C-Sand	17	NA	x	x	x			
MWC022	C-Sand	64	NA	x	x	x			
MWC023	C-Sand	752	NA	x	x	x			
MWC024	C-Sand	2,500	NA	x	x	x	Yes	Yes[5]	Monitored under Building 2 WDR Program

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Table 1
September 2008 Sitewide Groundwater Monitoring Program
Boeing CRE Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration[1] (µg/l)	Sampling Order	September 2008 Semi-Annual Event Analytical Program					Comments
				Water Level Gauging	VOCs (8260B)	Field Parameters[2]	Ferrous Iron[4]	WDR Analyses	
Gage Monitoring Wells									
MWG001	Gage	25	NA	x	x	x			
MWG002	Gage	470	NA	x	x	x			
MWG003	Gage	33	NA	x					Not sampled in September
MWG004	Gage	4	NA	x					Not sampled in September
Bioremediation Monitoring Wells									
IRZB0081	B-Sand	476	9						Not monitored in September
IRZB0095	B-Sand	2,600	24						Not monitored in September
IRZMW001A	B-Sand	12,000	33						Not monitored in September
IRZMW001B	B-Sand	2,700	25						Not monitored in September
IRZMW002A	B-Sand	12,379	34						Not monitored in September
IRZMW002B	B-Sand	146	4						Not monitored in September
IRZMW003A	B-Sand	18,365	35						Not monitored in September
IRZMW003B	B-Sand	183	6						Not monitored in September
IRZMW004	B-Sand	3,600	29						Not monitored in September
IRZMW005	B-Sand	3,450	26						Not monitored in September
Building 2 WDR Monitoring Wells									
IRZCMW001	C-Sand	1,100	NA	x	x	x	Yes	Yes[5]	Monitored under Building 2 WDR Program
IRZCMW002	C-Sand	1,700	NA	x	x	x	Yes	Yes[5]	Monitored under Building 2 WDR Program
IRZCMW003	C-Sand	6,500	NA	x	x	x	Yes	Yes[5]	Monitored under Building 2 WDR Program
Building 1/36 WDR Monitoring Wells									
AW0055UB	B-Sand	18,526	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0064UB	B-Sand	11,213	32	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0065UB	B-Sand	86,600	37	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0066UB	B-Sand	2,444	23	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0067UB	B-Sand	1,401	18	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0073C	C-Sand	480	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0074UB	B-Sand	2,000	NA	x					Monitored under Building 1/36 WDR Program
AW0075UB	B-Sand	5,990	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0076UB	B-Sand	7,970	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
AW0077UB	B-Sand	4,600	NA	x	x[6]	x	Yes	Yes[6]	Monitored under Building 1/36 WDR Program
Subtotals		Sitewide Program		37	26	26	0	0	
		WDR Program		21	19	19	19	19	
Quality Control Samples[3]									
Duplicates (1 per 20 wells)					3				
Rinsate Blanks (1 per day) [wells with non-dedicated pumps]					1				
Trip Blanks (1 per day)					3				
Totals				58	52	45	19	19	

Notes:

VOCs = volatile organic compounds using EPA Method 8260B

Field Parameters = pH, dissolved oxygen (DO), redox, turbidity, electrical conductivity, and temperature.

NA = Not applicable - well equipped with dedicated pump and tubing.

(1) VOCs for Total Select VOC calculation include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, VC, and Chloroform (most recent through June 2008).

(2) As a quality assurance check on DO measurements, 10 percent of the samples will be analyzed in the field using a CHEMetrics, Inc test kit (K-7512 or K-7540).

(3) Quality control sample number based on estimated number of sampling days.

(4) Test for ferrous iron and hydrogen sulfide using the Hach DR890 Colorimeter.

(5) Analyze samples in accordance with the Building 2 WDR Program summarized in Table 2.

(6) Analyze samples in accordance with the Building 1/36 WDR Program summarized in Table 3.

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Table 2
September 2008 Former Building 2 WDR Groundwater Monitoring Program
Boeing CRE Former C-6 Facility,
Los Angeles, California

Well Information			Field Program				Laboratory Program								
Well Name	Sampling Group	Hydrostratigraphic Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Water Level Measurement	Field Parameters	VOCs EPA 8260B	TOC EPA 9060 Modified	Volatile Fatty Acids IC Method 8M23G (Microseeps)	Dissolved Hydrocarbon Gases (DHGs) Methane, Ethane, Ethene RSK 175	Alkalinity EPA SM2320B	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Total Dissolved Solids EPA SM2540C	DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA; by qPCR analysis (North Wind)	Comments
Group A Wells															
IRZC0001 & IRZC0003 through IRZC0020	A	C-Sand	-	-											Not accessible/required for monitoring
Group B Wells															
CMW026	B	C-Sand	1,200	NA	x	x	z	x	x	x	x	x	-	x	"Month 2" / Quarterly / Semi-Annual Monitoring
IRZCMW002	B	C-Sand	1,700	NA	x	x	x	x	x	x	x	x	-	x	"Month 2" / Quarterly / Semi-Annual Monitoring
IRZCMW003	B	C-Sand	6,500	NA	x	x	x	x	x	x	x	x	-	x	"Month 2" / Quarterly / Semi-Annual Monitoring
MWC024	B	C-Sand	2,500	NA	x	x	x	x	x	x	x	x	-	x	"Month 2" / Quarterly / Semi-Annual Monitoring
Group C Wells															
CMW002	C	C-Sand	405	NA	x	x	x	x	x	x	x	x	x	-	Quarterly / Semi-Annual Monitoring
Group D Well															
IRZCMW001	D	C-Sand	1,100	NA	x	x	x	x	x	x	x	x	x	-	Quarterly / Semi-Annual Monitoring
Quality Control Samples															
Duplicates (1 per 20 wells)							1								
Trip Blanks (1 per cooler)							1								
				Totals:	6	6	8	6	6	6	6	6	2	4	

Notes: Field Parameters = pH, DO, ORP, EC, temp, turb, and ferrous iron.
pH = Potential of Hydrogen
DO = Dissolved Oxygen
ORP = Oxidation Reduction Potential
EC = Electrical Conductivity
Temp = Temperature
Turb = Turbidity
µg/l = Micrograms per liter
VOCs = Volatile organic compounds
EPA = U.S. Environmental Protection Agency
TOC = Total Organic Carbon
DHGs = Dissolved hydrocarbon gases
NO_3 = Nitrate, NO_2 = Nitrite, Cl = Chloride, SO_4 = Sulfate
DHC = *dehalococcoides spp.* strains
qPCR = Quantitative Polymerase Chain Reaction
NA = Not applicable - well equipped with dedicated pump and tubing
VOCs for Total Select VOCs Concentration include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, VC, and Chloroform (most recent through June 2008).

AVOCET ENVIRONMENTAL, INC.

Table 3
September 2008 Former Building 1/36 WDR Groundwater Monitoring Program
Boeing CRE Former C-6 Facility,
Los Angeles, California

Well Information			Field Program				Laboratory Program								
Well Name	Sampling Group	Hydrostratigraphic Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Water Level Measurement	Field Parameters	VOCs EPA 8260B	TOC EPA 9060 Modified	Volatile Fatty Acids IC Method 8M23G (Microseeps)	Dissolved Hydrocarbon Gases (DHGs) Methane, Ethane, Ethene RSK 175	Alkalinity EPA SM2320B	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Total Dissolved Solids EPA SM2540C	DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA: by qPCR analysis (North Wind)	Comments
Group A Wells															
AW0066UB	A1	B-Sand	2,444	4	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
AW0067UB	A1	B-Sand	1,401	3	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
AW0064UB	A2	B-Sand	11,213	5	x	x	x	x	x	x	x	x	-	-	Non-WDR Monitoring
AW0065UB	A2	B-Sand	86,600	7	x	x	x	x	x	x	x	x	-	-	Non-WDR Monitoring
Group B Wells															
AW0075UB	B1	B-Sand	5,990	NA	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
AW0076UB	B1	B-Sand	7,970	NA	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
AW0077UB	B1	B-Sand	4,600	NA	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
EWB002	B1	B-Sand	2,500	NA	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
AW0055UB	B1	B-Sand	18,526	NA	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
AW0073C	B1	C-Sand	480	NA	x	x	x	x	x	x	x	x	-	-	Quarterly / Semi-Annual Monitoring
WCC_06S	B2	B-Sand	400	-	x	-	-	-	-	-	-	-	-	-	Not monitored in September
AW0074UB	B2	B-Sand	2,000	-	x	-	-	-	-	-	-	-	-	-	Not monitored in September
Group C Wells															
TMW_07	C	B-Sand	970	2	x	x	x	x	x	x	x	x	x	-	Quarterly / Semi-Annual Monitoring
WCC_12S	C	B-Sand	48	1	x	x	x	x	x	x	x	x	x	-	Quarterly / Semi-Annual Monitoring
Group D Well															
MWB006	D	B-Sand	27,600	6	x	x	x	x	x	x	x	x	x	-	Quarterly / Semi-Annual Monitoring
Quality Control Samples															
Duplicates (1 per 20 wells)							1								
Rinsate Blanks (1 per day)							1								
Trip Blanks (1 per cooler)							1								
			Totals:		15	13	16	13	13	13	13	13	3	0	

Notes: Field Parameters = pH, DO, ORP, EC, temp, turb, and ferrous iron.
pH = Potential of Hydrogen
DO = Dissolved Oxygen
ORP = Oxidation Reduction Potential
EC = Electrical Conductivity
Temp = Temperature
Turb = Turbidity
µg/l = Micrograms per liter
VOCs for Total Select VOCs Concentration include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, VC, and Chloroform (most recent through June 2008).

VOCs = Volatile organic compounds
EPA = U.S. Environmental Protection Agency
TOC = Total Organic Carbon
DHGs = Dissolved hydrocarbon gases
NO_3 = Nitrate, NO_2 = Nitrite, Cl = Chloride, SO_4 = Sulfate
DHC = *dehalococcoides spp.* strains
qPCR = Quantitative Polymerase Chain Reaction
NA = Not applicable - well equipped with dedicated pump and tubing.

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Figures

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S:\GIS\1155 Boeing C6\001\ArcMapDocuments\008 1155.006 Groundwater Monitoring Well Locations.mxd\05/21/08

LEGEND

- Parcel Boundary
- B-Sand IRZ Bioremediation Monitoring Well
- C-Sand IRZ Bioremediation Monitoring Well
- B-Sand Montrose Monitoring Well
- B-Sand Monitoring Well
- C-Sand Monitoring Well
- Gage Monitoring Well
- B-Sand Observation Well
- C-Sand Observation Well
- B-Sand Ammendment Wells
- C-Sand Ammendment Wells

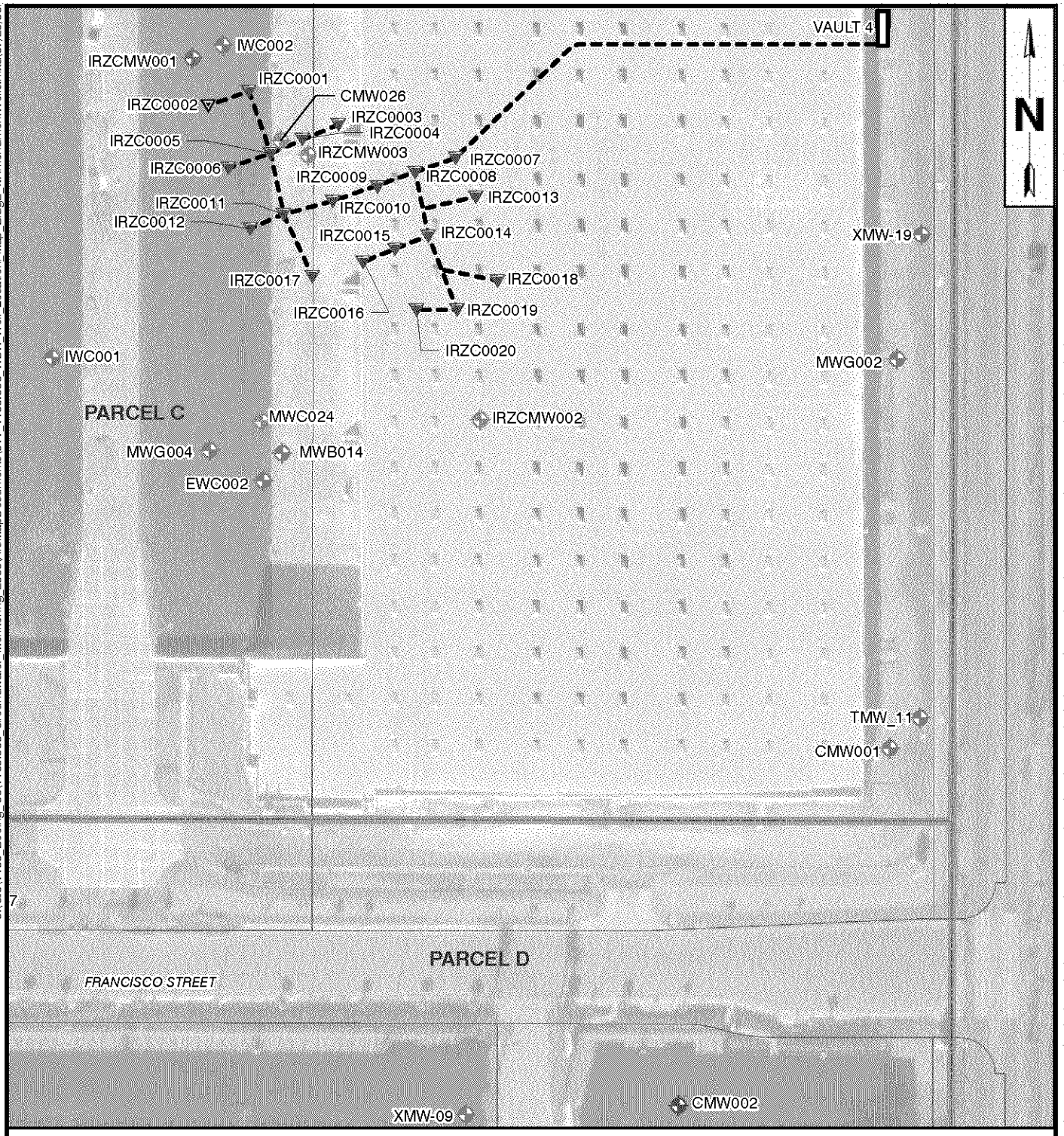
0 250 500
SCALE

FIGURE 1

GROUNDWATER MONITORING WELL LOCATION MAP

BOEING CORPORATE REAL ESTATE
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.



S:\GIS\1155_Boeing_C6\1155.006_Groundwater_Monitoring_2008\ArcMapDocuments\011_1155.006_WDR_Well_Location_Map_Bldg2_wAmendmentWells.mxd\07/25/08

LEGEND

- WDR Amendment Point
- Non-WDR Amendment Point
- Group B WDR Monitoring Well
- Group C WDR Monitoring Well
- Group D WDR Monitoring Well
- Non-WDR Groundwater Monitoring Well
- Amendment Well Piping System

0 100 200

SCALE

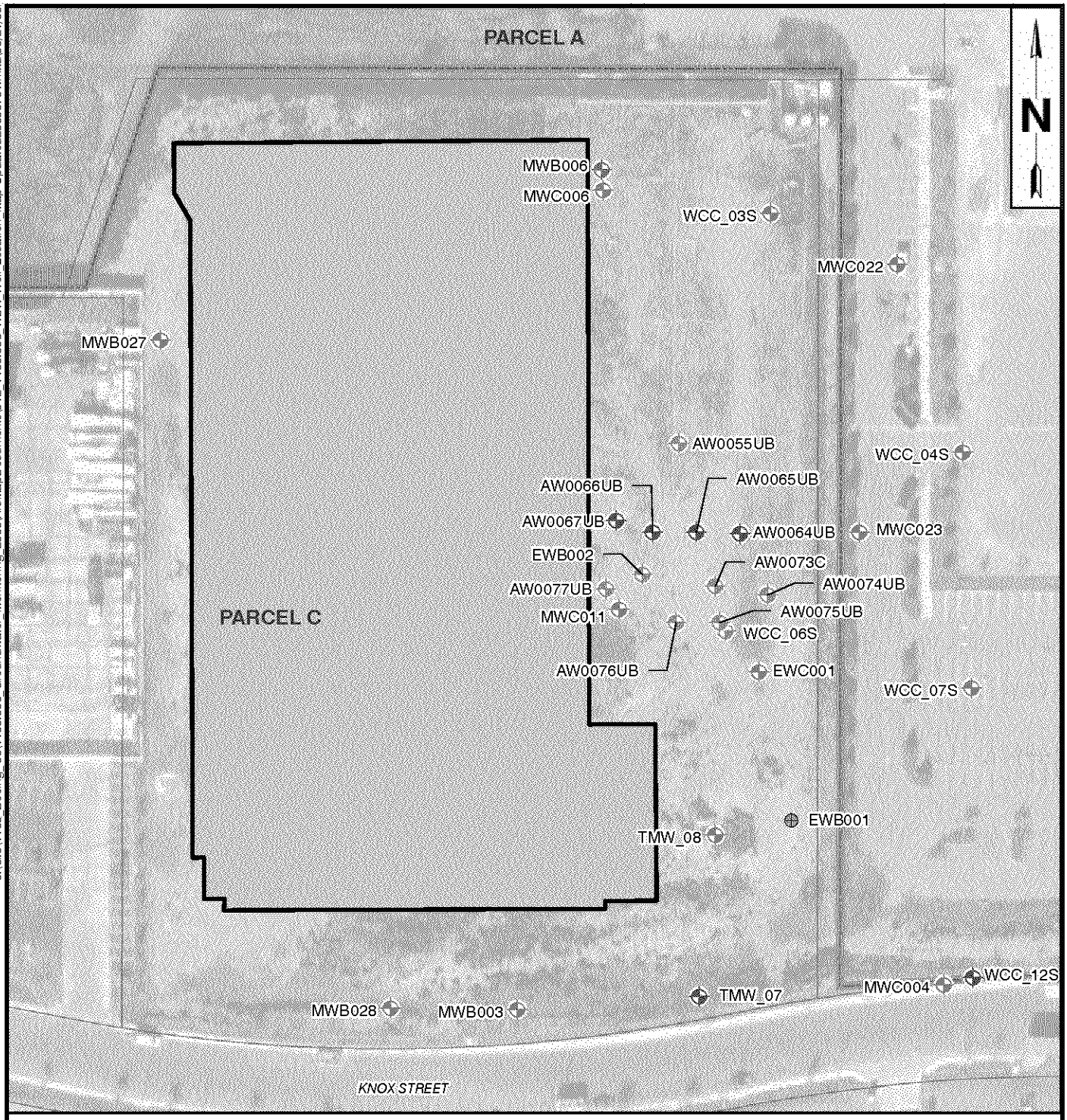
FIGURE 2

WDR WELL LOCATION MAP
FORMER BUILDING 2 AREA

BOEING CORPORATE REAL ESTATE
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1155_Boeing_C6\1155.006_Groundwater_Monitoring_2008\ArcMapDocuments\012_1155.006_WDR_Well_Location_Map-Updated20080731.mxd08/21/08



LEGEND

- Group A WDR Monitoring Well
- Group B WDR Monitoring Well
- Group C WDR Monitoring Well
- Group D WDR Monitoring Well
- Non-WDR Groundwater Monitoring Well
- Pilot Test Groundater Extraction Well
- 1451 Knox St.
- Parcel Boundary

0 100 200

SCALE

FIGURE 3

WDR WELL LOCATION MAP
FORMER BUILDING 1/36 AREA

BOEING CORPORATE REAL ESTATE
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

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Attachment 2

Field Data Forms

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AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 Sep-08 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.006

Location: Los Angeles, CA **Field Personnel:** BCB/DML/EMC **Date:** 9/22/2008

Field Conditions: overcast, cool - sunny, warm

Well ID	Previous Measurement Date	Previous Depth to Water	Date	Time	Field Personnel	Well Diameter	PID (ppm)	Measurement Point	Depth to Water	Change in DTW	Comments/Well Conditon
MWC007	Mar-08	58.18	9/22/08	9:10	BCB	4"	0.0	TOC-N	57.78	<1	Good
WCC_05S	Mar-08	59.45	9/22/08	9:22	BCB	4"	0.0	TOC-N	59.17	<1	in planter, need to chase threads & replace bolt
MWB020	Mar-08	57.15	9/22/08	10:25	BCB	4"	0.0	TOC-N	56.73	<1	Good
WCC_12S	Jun-08	58.07	9/22/08	10:34	BCB	4"	0.0	TOC-N	57.90	<1	Good
WCC_09S	Mar-08	61.92	9/22/08	10:42	BCB	4"	0.0	TOC-N	61.57	<1	Good
MWC022	Mar-08	58.41	9/22/08	10:53	BCB	4"	14.7	TOC-N	57.94	<1	missing short (2') 1/4" purge tubing
MWC004	Mar-08	59.03	9/22/08	11:04	BCB	4"	2.9	TOC-N	58.60	<1	Good
WCC_07S	Mar-08	59.27	9/22/08	11:17	BCB	4"	0.0	TOC-N	58.70	<1	Good
MWC023	Mar-08	58.01	9/22/08	11:59	BCB	4"	0.0	TOC-N	57.85	<1	Good
MWB007	Mar-08	57.95	9/22/08	12:12	BCB	4"	94.7	TOC-N	57.57	<1	Good
WCC_04S	Mar-08	59.08	9/22/08	12:34	BCB	4"	2.2	TOC-N	58.78	<1	Good
MWB013	Mar-08	62.21	9/22/08	9:41	BCB	4"	0.0	TOC-N	61.85	<1	Good
TMW_14	Mar-08	66.82	9/22/08	9:58	BCB	2"	0.0	TOC-N	66.48	<1	Good
TMW_15	Mar-08	64.89	9/22/08	10:10	BCB	2"	0.0	TOC-N	64.60	<1	Good
BL-03	Mar-08	66.28	9/22/08	11:40	BCB	2"	0.0	TOC-N	65.90	<1	* Removed dedicated tubing for portable low flow, someone primered and glued 2" coupler TOC, well seal does not fit properly (loose)
DAC-P1	Mar-08	61.75	9/22/08	12:52	BCB	4"	0.0	TOC-N	61.51	<1	Good - replaced new 4" well seal end cap

AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 Sep-08 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.006

Location: Los Angeles, CA **Field Personnel:** BCB/DML/EMC **Date:** 9/22/2008

Field Conditions: overcast, cool - sunny, warm

Well ID	Previous Measurement Date	Previous Depth to Water	Date	Time	Field Personnel	Well Diameter	PID (ppm)	Measurement Point	Depth to Water	Change in DTW	Comments/Well Conditon
WCC_06S	Aug-08	59.11	9/22/08	9:00	DML	4"	8.5	TOC-N	58.85	<1	good, no tubing
AW0073C	Aug-08	60.05	9/22/08	9:15	DML	2"	1.0	TOC-N	59.89	<1	under pallet, good
MWB027	Mar-08	63.67	9/22/08	9:15	DML	2"	1.0	TOC-N	63.35	<1	good, pump ok
MWB028	Mar-08	63.94	9/22/08	9:25	DML	2"	4.6	TOC-N	63.58	<1	good, tubing ok
TMW_07	Jun-08	60.78	9/22/08	11:20	DML	2"	0.0	TOC-N	60.61	<1	good pump ok
AW0067UB	Jun-08	58.52	9/22/08	13:00	DML	2"	2.0	TOC-N	59.52	<1	under pallet, multiple readings
AW0074UB	Aug-08	59.34	9/22/08	11:40	DML	2"	0.5	TOC-N	59.16	<1	under pallet, no riser, no cap
AW0066UB	Jun-08	58.98	9/22/08	9:40	DML	2"	0.9	TOC-N	59.54	<1	stinger in well
EWB002	Aug-08	60.38	9/22/08	10:00	DML	6"	7.0	TOC-N	60.21	<1	move 1 pallet, good
AW0077UB	Aug-08	60.64	9/22/08	10:20	DML	2"	0.7	TOC-N	60.38	<1	under pallet, access blocked
AW0075UB	Aug-08	59.83	9/22/08	10:25	DML	2"	480	TOC-N	59.72	<1	under pallet, good, stinger in well
AW0076UB	Aug-08	60.37	9/22/08	10:30	DML	2"	22.6	TOC-N	60.20	<1	under trailer, access blocked, good
WCC_03S	Mar-08	59.35	9/22/08	10:37	DML	4"	0.3	TOC-N	59.07	<1	good, pump ok
AW0064UB	Jun-08	58.85	9/22/08	10:45	DML	2"	0.0	TOC-N	58.73	<1	ok, no tubing, no stinger
AW0055UB	Aug-08	60.1	9/22/08	10:55	DML	2"	107	TOC-N	59.91	<1	good, pump ok
MWB006	Aug-08	60.32	9/22/08	11:00	DML	4"	155	TOC-N	60.46	<1	good, tubing ok
AW0065UB	Jun-08	59.32	9/22/08	13:10	DML	2"	0.3	TOC-N	59.09	<1	good, transducer in well

AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 Sep-08 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.006

Location: Los Angeles, CA **Field Personnel:** BCB/DML/EMC **Date:** 9/22/2008

Field Conditions: overcast, cool - sunny, warm

Well ID	Previous Measurement Date	Previous Depth to Water	Date	Time	Field Personnel	Well Diameter	PID (ppm)	Measurement Point	Depth to Water	Change in DTW	Comments/Well Conditon
MWG004	Mar-08	59.7	9/22/08	14:20	DML	2"	0.0	TOC-N	60.44	0.74	good, blocked by car
MWG003	Mar-08	61.53	9/22/08	11:20	EMC	2"	0.0	TOC-N	61.40	0.13	replace gasket (EMCO)
TMW_06	Mar-08	59.16	9/22/08	10:58	EMC	2"	0.1	TOC-N	59.03	0.13	good
CMW002	Mar-08	60.87	9/22/08	8:50	EMC	4"	0.0	TOC-N	60.77	0.1	good
MWC015	Mar-08	59.89	9/22/08	11:08	EMC	4"	0.9	TOC-N	59.85	0.04	good
MWB014	Mar-08	59.24	9/22/08	10:22	EMC	4"	0.0	TOC-N	59.15	0.09	missing gasket (morris)
IRZCMW001	Mar-08	59.45	9/22/08	10:44	EMC	4"	0.1	TOC-N	59.27	0.18	missing gasket (EMCO)
CMW026	Aug-08	59.14	9/22/08	10:39	EMC	4"	0.0	TOC-N	59.15	-0.01	replace gasket (EMCO)
MW0005	Mar-08	59.37	9/22/08	11:32	EMC	4"	0.1	TOC-N	59.32	0.05	needs gasket(emco)
IRZCMW002	Aug-08	53.32	9/22/08	10:12	EMC	4"	1.6	TOC-N	63.40	-10.08	checked 3x
IWC001	Mar-08	61.08	9/22/08	12:00	EMC	4"	0.0	TOC-N	60.82	0.26	good
MWC024	Aug-08	59.24	9/22/08	10:29	EMC	4"	0.0	TOC-N	59.38	-0.14	ok
EWC002	Feb-08	59.6	9/22/08	10:17	EMC	4"	0.2	TOC-N	59.50	0.1	ok
IRZCMW003	Aug-08	59.17	9/22/08	10:26	EMC	4"	0.0	TOC-N	59.29	-0.12	missing gasket (EMCO)
TMW_10	Mar-08	57.12	9/22/08	9:57	EMC	2"	0.2	TOC-N	56.99	0.13	ok
MWC021	Mar-08	61.93	9/22/08	9:42	EMC	4"	0.2	TOC-N	61.87	0.06	missing gasket (morris)
MWG001	Mar-08	62.69	9/22/08	11:45	EMC	2"	0.1	TOC-N	62.54	0.15	ok
CMW001	Mar-08	62.52	9/22/08	9:25	EMC	4"	0.1	TOC-N	62.31	0.21	ok
XMW-19	Mar-08	57.11	9/22/08	9:32	EMC	4"	0.0	TOC-N	56.36	0.75	no bolts/no cap (QED) 1/4"
MWC009	Mar-08	61.34	9/22/08	9:57	EMC	4"	0.4	TOC-N	61.10	0.24	ok
TMW_11	Mar-08	57.4	9/22/08	9:36	EMC	2"	0.1	TOC-N	57.27	0.13	ok
MWG002	Mar-08	63.67	9/22/08	9:35	EMC	2"	0.2	TOC-N	63.53	0.14	missing gasket (EMCO)
MWC017	Mar-08	63.34	9/22/08	9:05	EMC	4"	0.0	TOC-N	63.17	0.17	ok
MWB019	Mar-08	63.07	9/22/08	9:10	EMC	4"	0.1	TOC-N	63.19	-0.12	ok
XMW-09	Mar-08	61.99	9/22/08	8:59	EMC	4"	0.0	TOC-N	60.71	1.28	missing bolt 15/16"

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/24/2008
Project No.:	1155.006	**Prepared by:**	TMC
Well Identification:	AW0055UB	**Weather:**	Sunny 70s
Measurement Point Description:	TOC	**Pump Intake:** 79	**Screen:** 69 - 89

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.04	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: o/c

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1336	cpm4	0	200	60.14	25.86	2.86	1.34	6.54	18	195	Cloudy
1339		600		60.26	23.28	3.13	0.38	6.53	-80	68.6	Cloudy
1342		1200		60.30	22.86	3.16	0.19	6.49	-98	40.2	Cloudy
1345		1800		60.31	22.82	3.16	0.15	6.44	-104	34.7	Cloudy
1348		2400		60.30	22.77	3.16	0.14	6.49	-108	31.7	Cloudy
1351		3000		60.31	22.78	3.16	0.14	6.49	-110	30.5	Cloudy

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1336		200	3000	N/A	NA	60.14	1357	AW0055UB_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/24/2008
Project No.:	1155.006	**Prepared by:**	GMC
Well Identification:	AW0064UB	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 78	**Screen:** 68.5 - 88.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	58.87	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - Gallons per foot of casing	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow
Purge Method: Micropurge
Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1010	CPM-4	0	200mL	58.87	24.88	3.03	1.23	6.72	-118	214	Cloudy
1013		600		58.87	23.07	3.58	0.21	6.67	-117	5999	Cloudy
1016		1200		58.87	22.65	3.36	0.13	6.71	-119	858	Cloudy
1019		1800		58.87	22.61	3.12	0.17	6.69	-115	429	Cloudy
1022		2400		58.87	22.60	3.07	0.35	6.66	-115	265	Cloudy
1025		3000		58.87	22.56	3.07	0.42	6.67	-111	260	Cloudy
1028		3600		58.87	22.55	3.07	0.36	6.67	-109	207	Cloudy

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1010	1028	200	3.6	N/A	NA	58.87	1035	AW0064UB_WG20080924_01

Notes: (units) [stabilization criteria]
—

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/24/2008
Project No.:	1155.006	**Prepared by:**	GMC
Well Identification:	AW0065UB	**Weather:**	
Measurement Point Description:		**Pump Intake:**	**Screen:** 68.5 - 88.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.29	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow
Purge Method: Micropurge
Well Condition: O/C

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0835	CPM-4	0	200 ml	59.29	22.11	3.49	7.93	6.55	-75	647	cloudy
0838		600		59.39	22.38	3.49	3.41	6.33	-70	1205	cloudy
0841		1200		59.40	22.46	3.49	1.64	6.27	-78	1009	
0844		1800		59.39	22.61	3.49	0.71	6.25	-85	757	
0847		2400		59.39	22.68	3.49	0.59	6.25	-87	679	
0850		3000		59.39	22.71	3.49	0.60	6.25	-87	665	
0853		3600		59.40	22.71	3.49	0.56	6.25	-86	664	
0856		4200		59.40	22.71	3.49	0.59	6.25	-85	663	
GMC											

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0835	0856	200	4.2	N/A	NA	59.40	0908	AW0065UB_WG20080924_01

Notes: (units) [stabilization criteria]
no cap on well
tire dist on well

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/24 / 2008
Project No.:	1155.006	**Prepared by:**	[illegible]
Well Identification:	AW0066UB	**Weather:**	Sunny 76's
Measurement Point Description:	TOC	**Pump Intake:**	79.5
		Screen:	69.5 - 89.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.44	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow

Purge Method: Micropurge

Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0910	CPM-4	0	200	59.44	24.90	3.66	1.88	5.34	-24	11155	cloudy
0913	↓	600	↓	59.61	24.11	6.73	2.36	4.84	-44	800	cloudy
0916		1200		60.68	24.06	0.569	4.67	4.84	-50	866	cloudy
0919		1800		60.78	23.93	6.86	4.85	4.83	-50	786	cloudy
0922		2400		61.09	23.97	6.87	4.90	4.83	-50	793	cloudy
0925	↓	3000	↓	61.09	23.94	6.88	4.43	4.83	-51	779	cloudy

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0910	0913	200	3	N/A	NA	61.09	0930	AW0066UB_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.25	—	—

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/24/2008
Project No.:	1155.006	**Prepared by:**	TMC
Well Identification:	AW0067UB	**Weather:**	cloudy 60's
Measurement Point Description:	TOC	**Pump Intake:** 80	**Screen:** 70 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.86	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - Gallons per foot of casing	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow
Purge Method: Micropurge
Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0645	CPM-4	0	200	59.86	20.42	5.80	6.93	4.64	-12	2000	cloudy
0648		600		59.97	21.49	5.8	1.66	4.56	-22	2000	cloudy
0651		1200		60.03	22.90	5.79	0.44	4.56	-37	2000	cloudy
0654		1800		60.02	23.22	5.79	0.34	4.57	-54	2000	cloudy
0657		2400		60.03	23.18	5.77	0.31	4.58	-60	2000	cloudy
0700		3000		60.02	23.14	5.78	0.26	4.57	-64	2000	cloudy
0703		3600		60.02	23.20	5.80	0.31	4.58	-65	2000	cloudy

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0648	0703	200	3.6	N/A	NA	60.02	0720	AW0067UB_WG200809 24 _01

Notes: (units) [stabilization criteria]
Pull ect from sdu cur @ 0638

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.48	—	—

DUP: AW0067UB_WG200809 24 _02
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	AW0073C	**Weather:**	Overcast / Cool
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	96 - 116

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.05	116	55.95	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	(2)	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0822	10/5s @ 65psi	—	250	60.05	22.67	1.256	6.14	7.34	64	3.92	colorless
0825		750		60.15	22.88	0.871	3.43	7.17	-66	4.83	"
0828		1500		60.19	22.73	0.793	0.90	7.20	-81	20.7	"
0831		2250		60.17	22.60	0.761	0.30	7.27	-99	14.9	"
0834		3000		60.18	22.71	0.758	0.25	7.31	-115	8.18	"
0837		3750		60.19	22.95	0.759	0.21	7.36	-132	5.27	"
0840		4500		60.17	22.99	0.757	0.18	7.38	-138	4.72	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0822	0840	250	4.5	N/A	NA	60.	0840	AW0073C_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.74		

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	AW0075UB	**Weather:**	clear / Hotter than the dickens
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	69 - 89

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.82	89		—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	(2)	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1310	10/5s @ 65psi	—	~250	59.82	25.89	3.28	0.24	6.61	-163	11.7	colorless
1313				59.87	23.80	3.04	0.10	6.40	-159	7.57	"
1316				59.90	23.34	2.96	0.07	6.43	-156	3.93	"
1319				59.91	23.17	2.99	0.05	6.48	-163	3.71	"
1322				59.90	23.10	3.04	0.05	6.54	-165	3.36	"
1325				59.90	23.11	3.06	0.05	6.54	-165	3.10	"
1328				59.90							"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1310	1328	~250	4.5	N/A	NA	59.90	1328	AW0075UB_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.27		

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCA
Well Identification:	AW0076UB	**Weather:**	Clear / mucho color
Measurement Point Description:	TOC-N	**Pump Intake:**	**Screen:** 69 - 89

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	61.30	89	27.70	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition:

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1357	10/5/s @ 55psi	—	~250	61.30	23.79	3.81	0.22	6.82	-164	16.2	colorless
1400	↓	750	↓	61.35	23.58	3.72	0.15	6.84	-167	12.1	"
1403		1500		61.32	23.54	3.69	0.09	6.84	-170	5.50	"
1406		2250		61.34	23.23	3.80	0.04	6.81	-172	4.22	"
1409		3000		61.33	23.03	3.79	0.04	6.78	-170	3.40	"
1412		3750		61.34	23.00	3.79	0.03	6.76	-168	4.25	"
1415	⊥	4500	⊥	61.33	22.97	3.78	0.03	6.75	-166	3.94	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1357	1415	~250	4.5	N/A	NA	61.33	1415	AW0076UB_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.39		

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	AW0077UB	**Weather:**	Clear / Hot
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	70.5 - 85.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.63	85.50	24.87	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	(2)	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1127	10/5s @ 60psi	—	~250	60.63	25.83	3.17	0.50	6.70	-169	18.9	light yellow
1130	↓	750	↓	60.99	23.61	3.47	0.17	6.54	-172	15.8	"
1133		1500		61.05	23.21	3.49	0.09	6.50	-174	14.3	"
1136		2250		61.09	22.78	3.43	0.07	6.56	-182	11.7	"
1139		3000		61.15	22.75	3.42	0.05	6.61	-188	9.19	"
1142		3750		61.24	22.73	3.38	0.05	6.62	-191	5.32	"
1145		4500		61.33	22.72	3.37	0.05	6.61	-193	4.27	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1127	1145	~250	4.5	N/A	NA	61.33	1145	AW0077UB_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
2.27		

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/23 / 2008	
Project No.: 1155.006		**Prepared by:** Amc	
Well Identification: CMW001		**Weather:** Sunny 75	
Measurement Point Description: TOC		**Pump Intake:** 1140	**Screen:** 99 - 124

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	62.25	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1150	CPM-4	0	200	62.25	23.45	0.761	5.41	7.23	-32	47.1	Clear
1153		600		62.32	22.41	0.781	2.46	7.36	-178	4.2	Clear
1156		1200		62.32	22.50	0.797	1.02	7.12	-143	3.7	Clear
1159		1800		62.32	22.59	0.800	0.56	7.05	-119	7.6	Clear
1202		2400		62.31	22.60	0.801	0.55	7.04	-120	7.5	Clear
1205		3000		62.31	22.59	0.800	0.56	7.04	-117	6.2	Clear
		~~3600~~									

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1150	1205	200	3	N/A	NA	62.31	1210	CMW001_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/23/2008
Project No.:	1155.006	**Prepared by:**	TMC
Well Identification:	CMW002	**Weather:**	Sunny 70's
Measurement Point Description:	TOC	**Pump Intake:**	114' **Screen:** 99 - 124

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
–	60.69	–	–	–	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1055	Cpm-4	0	200	60.69	24.23	0.919	4.16	7.61	-7	8.9	clear
1058		600		60.72	22.63	0.980	0.96	7.17	-96	4.9	clear
1101		1200		60.73	23.07	0.980	0.36	7.02	-51	3.3	clear
1104		1800		60.72	23.08	0.981	0.34	7.00	-40	3.6	clear
1107		2400		60.72	23.09	0.980	0.35	7.01	-39	3.2	clear
1110		3000		60.72	23.10	0.981	0.34	7.00	-39	4.1	clear

TMC

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1055	1110	200	3	N/A	NA	60.72	1116	CMW002_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
0.01	–	–

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/23/2008
Project No.:	1155.006	**Prepared by:**	TMC
Well Identification:	CMW026	**Weather:**	Sunny 70s
Measurement Point Description:	TOC	**Pump Intake:**	106
		Screen:	92 - 117

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
NA	59.21	—	NA	NA	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0900	CPM=4	0	200	59.22	22.14	2.86	3.10	7.16	-125	24.1	clear
0903		600		59.20	22.96	2.61	0.37	6.73	-123	3.2	clear
0906		1200		59.21	21.94	2.60	0.28	6.69	-126	6.5	clear
0909		1800		59.20	21.94	2.61	0.24	6.67	-130	5.5	clear
0912		2400		59.21	21.94	2.63	0.20	6.67	-132	4.1	clear
0915		3600		59.21	21.93	2.62	0.19	6.67	-131	3.9	clear
0918		4200		59.21	21.94	2.63	0.20	6.67	-132	3.8	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0900	0918	200	4.2	N/A	NA	59.20	0924	CMW026_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.61	5.3	—

DUP: CMW026_WG200809 23 _02
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	EWB002	**Weather:**	Clear / Warm
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	60 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.39	90	29.61	—	N/A	N/A	N/A	N/A

	Gallons/Foot				
Well Diameter (inches) = 6	0.75	2	4	(6)	
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1013	10/5s @ 65psi	—	250	60.39	24.95	2.04	7.02	7.23	-29	8.33	colorless
1016	↓	750	↓	60.52	23.12	2.98	0.91	6.77	-120	5.51	"
1019		1500		60.60	23.09	2.98	0.72	6.79	-134	4.77	"
1022		2250		60.65	23.06	2.99	0.55	6.82	-142	4.12	"
1025		3000		60.70	23.03	2.99	0.23	6.83	-155	3.30	"
1028		3750		60.72	23.02	2.99	0.12	6.83	-159	2.42	"
1031		4500		60.73	23.03	2.99	0.10	6.	-161	2.02	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1013	1031	250	4.5	N/A	NA	60.73	1031	EWB002_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
3.02		

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/23/2008
Project No.:	1155.006	**Prepared by:**	[illegible]
Well Identification:	IRZCMW001	**Weather:**	Sunny 70s
Measurement Point Description:		**Pump Intake:**	106
		Screen:	92 - 117

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.17	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1023	CPM4	0	200	59.17	25.61	22.06	4.01	7.12	9	13.7	Clear
1026		600		59.31	21.49	1.220	2.28	6.98	-84	10.4	Clear
1029		1200		59.32	22.77	1.254	0.36	6.99	-53	5.4	Clear
1032		1800		59.31	22.75	1.260	0.35	6.99	-52	3.2	Clear
1035		2400		59.31	22.77	1.261	0.36	7.01	-50	3.6	Clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1023	1035	200	2.4	N/A	NA	59.32	1045	IRZCMW001_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
0.00	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 23 / 2008
Project No.:	1155.006	**Prepared by:**	Zrne,
Well Identification:	IRZCMW002	**Weather:**	Sunny 70's
Measurement Point Description:		**Pump Intake:**	108
		Screen:	96 - 121

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
NA	63.29	NA	NA	NA	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0750	CPM-4	0	200ml/min	63.35	20.95	1.75	9.88	6.48	-17	7.6	clear
0753		600		63.39	21.10	1.86	1.82	6.39	-68	6.7	clear
0756		1200		63.40	21.14	1.87	0.56	6.35	-74	3.3	clear
0759		1800		63.41	21.24	1.87	0.38	6.36	-68	3.9	clear
0802		2400		63.40	21.25	1.87	0.37	6.36	-69	2.6	clear
0805		3000		63.40	21.24	1.86	0.39	6.35	-70	2.9	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0750	0805	200mL	3000	N/A	NA	63.40	0815	IRZCMW002_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
1.65	0.0	—

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/23/2008
Project No.:	1155.006	**Prepared by:**	MMC
Well Identification:	IRZCMW003	**Weather:**	Sunny 70s
Measurement Point Description:	TOC	**Pump Intake:** 10'	**Screen:** 92 - 117

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
NA	59.22	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0939	CPM-4	0	200	59.22	22.11	1.278	7.90	7.25	78	17.9	clear
0942		600		59.36	21.79	0.953	0.67	7.17	-60	7.0	clear
0945		1200		59.39	21.73	0.951	0.27	7.20	-34	4.6	clear
0948		1800		59.38	21.74	0.950	0.26	7.21	-36	4.9	clear
0951		2400		59.39	21.73	0.950	0.24	7.21	-34	5.0	clear

MMC

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0939	0951	200	2.4	N/A	NA	59.40	1000	IRZCMW003_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
0.01	6.2	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9/24/2008
Project No.:	1155.006	**Prepared by:**	MMC
Well Identification:	MWB006	**Weather:**	Sunny 80S
Measurement Point Description:	TOC	**Pump Intake:** 77	**Screen:** 65 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.16	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - Gallons per foot of casing	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow
Purge Method: Micropurge
Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1050	CPM-4	0	200	60.42	25.65	4.64	4.17	6.49	-82	193	cloudy
1053		600		60.54	24.84	7.65	0.24	6.25	-90	59.8	cloudy
1056		1200		61.21	24.70	7.64	0.17	6.28	-93	58.8	clear
1059		1800		61.67	24.74	7.63	0.14	6.19	-96	56.5	clear
1102		2400		61.86	24.78	7.58	0.14	6.30	-94	54.8	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1050	1102	200	2400	N/A	NA	2400	1108	MWB006_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
2.63	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 25 / 2008
Project No.:	1155.006	**Prepared by:**	AMC
Well Identification:	MWB007	**Weather:**	Sunny 70s
Measurement Point Description:	TOC	**Pump Intake:**	80
		Screen:	60 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	57.60	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: ok

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0910	cpm-4	0	200	57.60	24.74	2.04	6.57	7.26	7	18.5	clear
0913		600		57.72	22.70	0.97	4.02	7.04	17	11.9	clear
0916		1200		57.73	22.61	1.91	4.06	7.00	19	11.0	clear
0919		1800		57.61	22.58	1.93	3.92	7.15	20	10.5	clear
0922		2400		57.62	22.57	1.95	3.97	7.16	21	10.0	clear
0925		3000		57.62	22.57	1.97	3.99	7.16	22	9.6	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0910	0925	200	3	N/A	NA	57.62	0930	MWB007_WG20080925_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 23 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: MWB013		**Weather:** Overcast / Cool	
Measurement Point Description: TOC-N		**Pump Intake:** COS	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	62.02	85	22.98	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0937	10/5 @ 65 psi	—	~250	62.02	23.21	1.67	5.55	7.56	57	2.13	colorless
0940	↓	750	↓	62.07	22.69	1.60	5.85	7.70	57	1.21	"
0943		1500		62.10	22.69	1.60	6.00	7.73	58	3.32	"
0946		2250		62.09	22.72	1.60	6.06	7.74	59	1.56	"
0949		3000		62.09	22.67	1.60	6.05	7.73	59	2.24	"
0952		3750		62.09	22.69	1.60	6.07	7.73	60	2.11	"
0955	↓	4500	↓	62.09	22.71	1.60	6.07	7.74	61	1.91	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0937	0955	~250	4.5	N/A	NA	62.09	0955	MWB013_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/25/2008	
Project No.:	1155.006	**Prepared by:** Emc	
Well Identification:	MWB019	**Weather:** Sunny 70's	
Measurement Point Description:	TOC	**Pump Intake:** 75	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	62.77	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0740	CPM-4	0	200	62.77	23.19	2.45	4.21	7.09	-54	16.3	clear
0743		600		62.82	22.44	3.60	3.62	5.45	-8	13.1	clear
0746		1200		62.82	22.43	3.64	2.68	6.51	11	7.5	clear
0749		1800		62.82	22.44	3.64	2.67	6.50	15	9.0	clear
0752		2400		62.82	22.43	3.64	2.69	6.49	13	8.9	clear
0755		3000		62.81	22.44	3.63	2.68	6.50	11	7.9	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0740	0755	200	3	N/A	NA	62.82	0800	MWB019_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 25 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: MWB020		**Weather:** Clear / Warm	
Measurement Point Description: TOC-N		**Pump Intake:** 60S	**Screen:** 59.5 - 89.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	56.77	89.50	32.73	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0751	10/5s @ 65psi	—	~250	56.77	24.01	1.398	3.99	7.63	-101	11.1	Colorless
0754		750		56.88	22.04	1.85	3.95	7.34	-52	5.25	"
0757		1500		56.88	21.96	1.86	3.87	7.31	-43	3.94	"
0800		2250		56.90	21.90	1.85	3.81	7.30	-27	2.75	"
0803		3000		56.89	21.90	1.85	3.84	7.30	-21	3.42	"
0806		3750		56.90	21.89	1.85	3.85	7.30	-15	3.11	"
0809		4500		56.90	21.89	1.85	3.80	7.30	-11	2.94	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0751	0809	~250	4.5	N/A	NA	56.90	0809	MWB020_WG200809 15 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/25 / 2008	
Project No.:	1155.006	**Prepared by:** Emc	
Well Identification:	MWB027	**Weather:** Sunny 70's	
Measurement Point Description:	TOC	**Pump Intake:** 71.5	**Screen:** 67.5 - 87.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	63.91	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: ok

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0945	CPM-4	0	200	63.91	24.46	2.06	2.95	6.93	-52	28.5	S cloudy
0948		600		63.91	22.58	2.11	3.01	7.10	-14	4.4	cloudy
0951		1200		63.93	22.45	2.11	4.02	7.17	2	12.5	cloudy
0954		1800		63.95	22.35	2.12	3.99	7.16	10	10.3	cloudy
0957		2400		64.00	22.58	2.14	4.05	7.14	16	10.4	cloudy
1000		3000		63.99	22.28	2.15	3.76	7.09	20	9.9	cloudy

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0945	1000	200	3	N/A	NA	63.99	1005	MWB027_WG20080925_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 25 / 2008	
Project No.:	1155.006	**Prepared by:**	
Well Identification:	MWC004	**Weather:**	
Measurement Point Description:		**Pump Intake:**	**Screen:** 96 - 116

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
–	58.67	116	57.33		N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0927	10/5s @70psi	–	~ 250	58.67	24.49	0.683	3.27	8.04	-93	2.81	colorless
0930	↓	750	↓	58.72	23.48	0.832	1.24	7.79	-149	2.77	"
0933		1500		58.71	23.47	0.846	0.56	7.59	-122	2.70	"
0936		2250		58.72	23.44	0.847	0.35	7.55	-105	2.62	"
0939		3000		58.	23.43	0.848	0.29	7.53	-97	2.55	"
0942		3750		58.	23.45	0.848	0.19	7.51	-81	2.49	"
0945	⊥	4500	⊥	58.	23.46	0.848	0.16	7.52	-75	2.41	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0927	0945	250	4.5	N/A	NA	58.	0945	MWC004_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 23 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	MWC007	**Weather:**	Overcast / Cool
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	97 - 117

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	57.93	117	59.07	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0755	10/5s @ 85psi	—	~250	57.93	23.62	0.957	4.37	7.64	42	1.62	colorless/odorless
0758		750		57.97	22.22	0.974	1.67	7.60	54	3.29	" "
0801		1500		57.97	22.14	0.976	1.42	7.59	56	2.94	" "
0804		2250		57.96	22.10	0.976	1.34	7.59	57	1.50	" "
0807		3000		57.97	22.09	0.976	1.31	7.58	57	1.37	" "
0810		3750		57.97	22.12	0.976	1.28	7.59	57	1.42	" "
0813		4500		57.97	22.14	0.976	1.27	7.58	57	1.29	" "

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0755	0813	250	4.5	N/A	NA	57.97	0813	MWC007_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 25 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	MWC009	**Weather:**	Clear / Warm
Measurement Point Description:	TOCN	**Pump Intake:**	COS
		Screen:	101 - 121 ?

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	61.07	121	59.93	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition:

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0840	10/5s @ 75%	—	~250	61.07	23.29	1.179	5.65	7.55	-8	4.44	colorless
0843		750		61.11	22.51	0.882	1.70	7.72	-132	3.13	"
0846		1500		61.11	22.46	0.860	0.54	7.72	-124	3.17	"
0849		2250		61.10	22.44	0.857	0.28	7.70	-107	3.26	"
0852		3000		61.11	22.46	0.856	0.17	7.68	-93	2.73	"
0855		3750		61.11	22.50	0.856	0.15	7.67	-85	2.59	"
0858		4500		61.10	22.51	0.857	0.14	7.67	-79	2.61	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0840	0858	~250	4.5	N/A	NA	61.	0858	MWC009_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/25/2008	
Project No.:	1155.006	**Prepared by:** Gm	
Well Identification:	MWC017	**Weather:** Sun 70s	
Measurement Point Description:	TOC	**Pump Intake:** 102	**Screen:** 100 - 125

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
NA	63.05	NA	NA	NA	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	(0.65)	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0715	CPM-4	0	200	63.05	22.39	0.890	7.90	5.58	-22	22.3	Clear
0718		600		63.05	22.16	0.875	0.64	6.77	-129	13.9	Clear
0721		1200		62.97	22.21	0.855	0.46	6.84	-127	13.7	clear
0724		1800		63.05	22.25	0.856	0.34	7.04	-129	10.20	Clear
0724		2400		63.13	22.26	0.856	0.35	6.94	-130	9.71	Clear
0730		3000		63.12	22.26	0.856	0.36	6.90	-132	9.68	Clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0715	0730	200	3	N/A	NA	63.08	0735	MWC017_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	0.21

DUP: MWC017_WG200809 25 _02

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/23 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: MWC021		**Weather:** Clear/Hot	
Measurement Point Description: Toc-N		**Pump Intake:** COS	**Screen:** 97 - 122

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
–	61.87	122	60.13	–	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1245	10/5s @ 80psi	–	~250	61.87	32.97	1.66	3.20	7.26	84	0.71	colorless
1248	↓		↓	61.93	27.38	0.925	2.67	7.27	-132	1.05	"
1251				61.92	24.70	0.890	1.26	7.43	-111	1.11	"
1254				61.92	24.33	0.887	0.68	7.52	-67	1.32	"
1257				61.92	24.32	0.890	0.50	7.57	-55	1.51	"
1300				61.92	24.31	0.889	0.45	7.56	-44	1.78	"
1303				61.93	24.30	0.890	0.42	7.56	-41	1.60	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1245	1303	~250	4.5	N/A	NA	61.93	1303	MWC021_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
–	–	–

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/23 / 2008	
Project No.: 1155.006		**Prepared by:** TMC	
Well Identification: MWC022		**Weather:** Sunny 70s	
Measurement Point Description: TOC		**Pump Intake:** 107	**Screen:** 97 - 117

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	57.90	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1250	CPM-4	0	200	57.90	23.21	1.466	5.21	7.32	-12	1.9	clear
1253	↓	600	↓	58.01	23.20	1.148	1.906	7.11	-158	1.2	clear
1256		1200		58.07	23.45	1.1159	0.32	6.96	-101	3.3	clear
1259		1800		58.07	23.45	1.160	0.22	6.93	-89	3.2	clear
1302		2400		58.06	23.46	1.163	0.21	6.93	-98	3.1	clear
1305	↓	3000	↓	58.07	23.45	1.160	0.20	6.92	-98	3.2	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1250	1305	200	3	N/A	NA	TMC ~~58.10~~ 58.07	1310	MWC022_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/25 / 2008	
Project No.:	1155.006	**Prepared by:** GMC	
Well Identification:	MWC023	**Weather:** Sunny 70's	
Measurement Point Description:	TOC	**Pump Intake:** 107	**Screen:** 97 - 117

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	58.89	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0810	CPM-4	0	200	58.89	24.29	1.490	0.55	7.20	-9	16.2	clear
0813	↓	600	↓	58.05	23.17	1.186	1.89	7.04	-75	11.1	clear
0816		1200		58.06	23.06	1.170	0.39	6.93	-52	6.5	clear
0819		1800		58.07	23.04	1.169	0.31	6.91	-50	7.2	clear
0822		2400		58.06	23.03	1.168	0.27	6.90	-48	6.5	clear
0825		3000		58.06	23.01	1.167	0.29	6.89	-47	7.1	clear
0828		3600		58.07	23.04	1.168	0.28	6.89	-47	6.1	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0810	0828	200	3.6	N/A	NA	58.07	0832	MWC023_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
		0.4

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 23 / 2008
Project No.:	1155.006	**Prepared by:**	TMC
Well Identification:	MWC024	**Weather:**	Sunny 70s
Measurement Point Description:	TOC	**Pump Intake:**	108
		Screen:	96 - 121

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
NA	59.25	NA	NA	NA	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: GOOD

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0830	epm-4	~~[illegible]~~ mL	200mL	59.27	23.88	1.57	5.32	7.18	-0	24.0	clear
0833		600		59.32	22.39	1.470	4.07	7.02	18	7.7	clear
0836		1200		59.31	22.19	1.403	0.37	6.99	28	6.7	clear
0839		1800		59.31	22.19	1.402	0.32	6.98	27	7.0	clear
0842		2400		59.32	22.20	1.402	0.35	6.99	27	7.1	clear
845		3000									

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0830	0845	200	3	N/A	NA	59.32	0835	MWC024_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
0.04	0.9	

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 25 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	MWG001	**Weather:**	Clear / Cool
Measurement Point Description:	TOC-N	**Pump Intake:**	CDS
		Screen:	156 - 186

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	62.52	186	123.48	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	(2)	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0657	10/5s @ 260psi	—	~200	62.52	24.01	0.495	2.72	8.74	-111	50	colorless
0700	↓	600	↓	62.55	24.10	0.487	1.99	7.81	-167	22.5	"
0703		1200		62.59	24.18	0.482	1.41	7.25	-213	17.4	"
0706		1800		62.58	24.11	0.559	0.96	7.44	-220	13.0	"
0709		2400		62.57	24.06	0.580	0.53	7.56	-229	10.9	"
0712		3000		62.57	24.05	0.619	0.42	7.70	-230	7.21	"
0715		3600		62.58	24.03	0.621	0.32	7.75	-234	5.44	"
0718		4200		62.57	24.04	0.620	0.31	7.76	-232	3.13	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0657	0718	~200	4.2	N/A	NA	62.57	0718	MWG001_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 25 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: MWG002		**Weather:** Sunny / Hot	
Measurement Point Description: TOC-N		**Pump Intake:** COS	**Screen:** 162 - 192

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	63.51	192		—	N/A	N/A	N/A	N/A

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	(2)	4	6	**Field Equipment:** QED, Dedicated Low-flow
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	**Purge Method:** Micropurge
					Well Condition:

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1252	10/5s @ 260psi	—	~200	63.51	29.57	0.939	5.07	7.40	-170	9.44	Colorless
1255	↓	600	↓	63.57	26.11	0.687	2.81	7.70	-249	6.01	"
1258		1200		63.55	24.87	0.665	1.28	7.68	-247	4.37	"
1301		1800		63.56	24.50	0.665	0.68	7.72	-250	3.75	"
1304		2400		63.55	24.47	0.665	0.57	7.74	-257	3.92	"
1307		3000		63.57	24.46	0.665	0.37	7.78	-265	3.09	"
1310		3600		63.56	24.47	0.665	0.29	7.81	-266	3.04	"
1313		4200		63.55	24.48	0.665	0.22	7.82	-267	3.11	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1252	1310	~200	4.2	N/A	NA	63.55	1313	MWG002_WG200809 25 _01

Notes: (units) [stabilization criteria]	Field Parameters			
	Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)	**DUP:**
				DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	TMW_07	**Weather:**	Clear / Warm
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	65 - 85

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.77	85	24.23	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	(2)	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0905	10/5s @ 65psi	—	~250	60.77	25.07	1.264	3.71	7.33	-81	3.26	colorless
0908		750		60.79	22.77	1.58	5.97	7.33	-37	3.54	"
0911		1500		60.82	22.65	1.58	6.17	7.33	-15	1.92	"
0914		2250		60.81	22.64	1.58	6.19	7.34	-9	1.75	"
0917		3000		60.80	22.64	1.58	6.20	7.34	-2	1.57	"
0920		3750		60.80	22.62	1.59	6.22	7.35	6	1.55	"
0923		4500		60.82	22.62	1.559	6.22	7.35	9	1.54	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0905	0923	250	4.5	N/A	NA	60.82	0923	TMW_07_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
0.0		

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 23 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	TMW_10	**Weather:**	Clear / Warm
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	60.5 - 80.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
–	56.95	80.5	23.55	–	N/A	N/A	N/A	N/A

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1134	10/5s @70psi	–	250	56.95	23.67	2.17	2.68	7.08	89	9.61	colorless
1137	↓	750	↓	56.99	23.55	2.18	2.66	7.05	90	8.24	"
1140		1500		57.01	23.47	2.17	2.67	7.06	91	6.95	"
1143		2250		57.04	23.41	2.17	2.64	7.07	91	4.30	"
1146		3000		57.02	23.33	2.17	2.57	7.07	91	3.32	"
1149		3750		57.02	23.30	2.18	2.53	7.08	91	2.15	"
1152		4500		57.02	23.31	2.18	2.52	7.08	92	1.85	"
[redacted]											

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1134	1152	250	4.5	N/A	NA	57.02	1152	TMW_10_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 25 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: TMW_11		**Weather:** Clear / Warm	
Measurement Point Description: TOC-N		**Pump Intake:** COS	**Screen:** 58 - 78

A	*B*	*C*	*D* = *C* - *B*	*E* = *B* - *A*	*G* = *D* x *F*	**H** = *Screen* x *F*	**I** = (top screen – B) x *F*	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	57.22	78	20.78	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	(2)	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1030	10/55 @ 75psi		~250	57.22	23.55	1.480	4.21	7.37	4	4.55	Colorless
1033	↓	750	↓	57.27	23.28	1.479	4.11	7.29	11	3.79	"
1036		1500		57.24	23.26	1.490	4.10	7.27	18	3.24	"
1039		2250		57.26	23.21	1.540	4.09	7.27	23	3.41	"
1042		3000		57.25	23.20	1.550	4.07	7.26	27	3.54	"
1045		3750		57.24	23.20	1.560	4.05	7.26	32	3.62	"
1048	↓	4500	↓	57.26	23.20	1.560	4.02	7.26	30	3.57	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1030	1048	~250	4.5	N/A	NA	57.26	1048	TMW_11_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 23 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: TMW_14		**Weather:** Clear / Warm	
Measurement Point Description: TOC-N		**Pump Intake:** 60s	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	66.59	85	18.41	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1029	10/5s @ 65psi	—	~250	66.59	23.23	2.83	5.21	7.03	68	2.67	colorless
1032		750		66.62	22.72	2.68	4.09	7.04	71	5.62	"
1035		1500		66.63	22.65	2.67	4.17	7.06	75	8.18	"
1038		2250		66.64	22.59	2.62	4.92	7.11	74	6.23	"
1041		3000		66.63	22.57	2.61	4.91	7.12	75	3.51	"
1044		3750		66.63	22.60	2.61	4.92	7.12	76	2.28	"
1047		4500		66.64	22.59	2.63	4.92	7.12	77	2.11	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1029	1047	~250	4.5	N/A	NA	66.64	1047	TMW_14_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 23 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	TMW_15	**Weather:**	Clear / Hot
Measurement Point Description:	TOC-N	**Pump Intake:**	COS
		Screen:	62 - 87

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
–	64.70	87	22.30	–	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 2	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1357	10/5s @ 75psi	–	~250	64.70	22.83	1.53	4.59	7.14	80	5.13	colorless
1400				64.92	22.48	1.54	4.87	7.14	80	4.21	"
1403				64.95	22.41	1.53	4.85	7.17	78	3.18	"
1406				64.96	22.39	1.52	4.83	7.19	77	2.75	"
1409				64.97	22.37	1.53	4.79	7.21	76	2.39	"
1412				64.95	22.35	1.54	4.77	7.23	76	2.02	"
1415				64.96	22.32	1.54	4.74	7.26	76	1.99	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1357	1415	250	4.5	N/A	NA	64.96	1415	TMW_15_WG200809 23 _01

Notes: (units) [stabilization criteria]	Field Parameters			DUP:
	Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)	DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/25/2008	
Project No.: 1155.006		**Prepared by:** EMC	
Well Identification: WCC_03S		**Weather:** Sunny 70's	
Measurement Point Description: TOC		**Pump Intake:** 79	**Screen:** 69 - 89

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.03	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot				
Well Diameter (inches) = 4	0.75	~~2~~ EMC	4	6	**Field Equipment:** QED, Dedicated Low-flow
F - **Gallons per foot of casing**	0.02	~~0.16~~	0.65	1.47	**Purge Method:** Micropurge
					Well Condition: good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1019	CPM-4	0	200	59.03	25.24	2.60	8.13	7.01	-74	72.4	Clear
1022	↓	600	↓	59.29	23.93	3.75	0.38	6.46	-113	21.6	clear
1025		1200		59.30	23.87	3.77	0.24	6.48	-124	10.0	clear
1028		1800		59.28	23.80	3.77	0.22	6.49	-130	10.1	clear
1031		2400		59.28	23.81	3.71	0.24	6.50	-134	9.6	Clear

EMC

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1019	1031	200	2.4	N/A	NA	59.28	1036	WCC_03S_WG200809 25 _01

Notes: (units) [stabilization criteria]	Field Parameters			DUP:
	Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)	DRUM NO:
	—	—	—	

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:**	9 / 25 / 2008
Project No.:	1155.006	**Prepared by:**	MC
Well Identification:	WCC_04S	**Weather:**	Sunny 70's
Measurement Point Description:	TOC	**Pump Intake:**	80.5
		Screen:	70.5 - 90.5

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	58.45	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: OK

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0845	CPM-4	0	200	58.65	23.35	2.19	4.15	6.92	1	14.6	clear
0848		600		58.69	23.02	1.20	3.47	6.88	13	11.3	clear
0851		1200		58.70	23.01	2.36	3.41	6.87	19	11.8	clear
0854		1800		58.69	23.02	2.34	3.43	6.88	23	11.6	clear
0857		2400		58.71	23.30	2.34	3.42	6.88	25	9.8	clear
0900		3000		58.69	23.29	2.33	3.43	6.89	23	9.6	clear
0903		3600		58.70	23.28	2.33	3.43	6.87	23	9.5	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0845	0903	200	3.6	N/A	NA		0908	WCC_04S_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 23 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: WCC_05S		**Weather:** Overcast / Cool	
Measurement Point Description: TOC-N		**Pump Intake:** COS	**Screen:** 61 - 91

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	59.31	91		—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: chased threads & wire brush bolts / Good

Time	Flow Controller Settings	Volume Purged m/(Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0847	10/5s @ 80psi	—	250	59.31	22.78	1.045	3.13	7.49	54	2.04	colorless
0850		750		59.40	22.57	1.51	3.57	7.24	58	2.31	"
0853		1500		59.39	22.59	1.52	3.65	7.25	60	1.11	"
0856		2250		59.41	22.58	1.51	3.70	7.22	61	1.04	"
0859		3000		59.40	22.59	1.52	3.73	7.21	63	1.15	"
0902		3750		59.40	22.59	1.51	3.76	7.21	64	1.21	"
0905		4500		59.39	22.60	1.51	3.74	7.20	65	1.19	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0847	0905	~250	4.5	N/A	NA	59.39	0905	WCC_05S_WG200809 23 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9 / 25 / 2008	
Project No.: 1155.006		**Prepared by:** BCB	
Well Identification: WCC_07S		**Weather:** Clear / Hot	
Measurement Point Description: TOC-N		**Pump Intake:** COS	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	58.82	90	31.18	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	(4)	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow
Purge Method: Micropurge
Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1144	10/5s@70psi	—	~250	58.82	25.75	2.05	5.42	7.29	64	3.61	colorless
1147	↓		↓	58.84	24.76	2.14	4.97	7.21	73	3.74	"
1150				58.83	24.41	2.15	4.95	7.19	77	3.80	"
1153				58.84	24.39	2.15	4.98	7.24	76	3.39	"
1156				58.	24.31	2.15	4.99	7.24	77	3.44	"
1159				58.	24.29	2.15	4.99	7.25	78	3.30	"
1202				58.	24.32	2.15	5.01	7.25	79	3.04	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1144	1202	250	4.5	N/A	NA	58.	1202	WCC_07S_WG200809 25 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/23/2008	
Project No.:	1155.006	**Prepared by:** YMC	
Well Identification:	WCC_09S	**Weather:** Sunny 70's	
Measurement Point Description:	TOC	**Pump Intake:** 75	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	61.55	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition:

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1220	CPM-4	0	200	61.55	23.25	2.08	3.26	7.22	8	7.9	clear
1223		600		61.77	22.92	2.25	3.01	7.06	16	3.6	clear
1226		1200		61.78	22.61	2.26	2.42	6.92	28	4.2	clear
1229		1800		61.79	22.56	2.25	2.47	6.90	32	4.01	clear
1232		2400		61.79	22.54	2.25	2.30	6.89	36	4.0	clear
1235		3000		61.78	22.55	2.24	2.23	6.89	41	3.6	clear
1238		3600		61.79	22.54	2.24	2.23	6.89	42	4.2	clear

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1220	1238	200	3.6	N/A	NA	61.79	1245	WCC_09S_WG20080923_01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing Former C-6 Facility, WDR Sampling, September 2008	**Date:**	9 / 24 / 2008
Project No.:	1155.006	**Prepared by:**	BCB
Well Identification:	WCC_12S	**Weather:**	Overcast / Foggy & Cool
Measurement Point Description:	ToC-N	**Pump Intake:**	COS
		Screen:	60 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	58.00	90	32.00	—	N/A	N/A	N/A	N/A

	Gallons/Foot				
Well Diameter (inches) = 4	0.75	2	(4)	6	
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	

Field Equipment: QED, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
0716	10/5s @ 70psi	—	~250	58.00	21.67	1.75	6.72	6.85	111	2.71	colorless
0719	↓		↓	58.08	21.74	1.72	6.43	7.16	107	1.35	"
0722				58.07	21.78	1.73	6.45	7.29	104	1.47	"
0725				58.08	21.77	1.73	6.44	7.31	104	1.41	"
0728				58.09	21.78	1.73	6.43	7.33	103	1.36	"
0731				58.09	21.77	1.73	6.42	7.35	102	1.34	"
0734				58.08	21.79	1.73	6.42	7.36	104	1.32	"

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0716	0734	250	4.5	N/A	NA	58.08	0734	WCC_12S_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
0.09		

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/24/2008	
Project No.:	1155.006	**Prepared by:** EMC	
Well Identification:	XMW-09	**Weather:** Sunny 80s	
Measurement Point Description:	TOC	**Pump Intake:** 74'	**Screen:** 66 - 81

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	60.61	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow
Purge Method: Micropurge
Well Condition: missing bolt

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1300	CPM-4	0	200	60.73	25.42	2.74	2.92	6.81	13	13.12	clear
1303		600		60.77	23.75	3.09	0.87	6.58	21	303	clear
1306		1200		60.72	23.27	3.09	0.72	6.51	27	15	clear
1309		1800		60.68	23.22	3.09	0.72	6.51	28	9	clear
1312		2400		60.70	23.21	3.07	0.70	6.51	28	7	clear
1315		3000		60.65	23.22	3.09	0.70	6.51	28	5	clear

EMC

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1300	1315	200	3	N/A	NA	60.65	1320	XMW-09_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)
—	—	—

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008		**Date:** 9/24/2008	
Project No.:	1155.006	**Prepared by:** TMC	
Well Identification:	XMW-19	**Weather:** Sunny 80's	
Measurement Point Description:	TOC	**Pump Intake:** 69	**Screen:** 63 - 79

A	B	C	D = C - B	E = B - A	G = D x F	H = Screen x F	I = (top screen – B) x F	
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Total Purge Volume** (gal.)
—	56.28	—	—	—	N/A	N/A	N/A	N/A

	Gallons/Foot			
Well Diameter (inches) = 4	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: QED, Portable Low-flow

Purge Method: Micropurge

Well Condition: OK / missing screwed

Time	Flow Controller Settings	Volume Purged (Liters)	Flow Rate (mL/min)	Water Level (ft-bmp)	Temperature (°C) [+/- 10%]	Conductivity (mS/cm) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	pH [+/- 0.1 pH]	ORP (mV) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Observations
1210	CPM-4	0	200	56.14	31.37	2.71	5.78	6.93	-69	1928	Cloudy
1213		600		56.33	24.77	2.61	4.07	7.00	-26	2000	Cloudy
1216		1200		56.59	24.15	2.57	4.57	6.98	-15	2000	Cloudy
1219		1800		56.13	24.12	2.51	5.52	6.98	-6	1915	Cloudy
1222		2400		56.17	24.19	2.47	5.98	6.99	-3	1588	Cloudy

Purge Start Time	Purge End Time	Average Flow (mL/min)	Total Volume Purged (Liters)	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
1210		200		N/A	NA	56.14	1230	XMW-19_WG200809 24 _01

Notes: (units) [stabilization criteria]

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	Chemetrics D.O.(mg/L)

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

Page _____ of _____

GROUNDWATER SAMPLING DATA SHEET

Project Name: Boeing Former C-6 Facility, Sitewide Semiannual		**Date:** 10/24/08	
Project No.: 1146.053		**Prepared by:** MIC	
Well Identification: XMW-19		**Weather:** Sunny 80s	
Measurement Point Description: TOC		**Pump Intake:** 76'	**Screen:** 63 - 79

A	*B*	*C*	*D* = *C - B*	*E* = *B - A*	*G* = *D x F*	**H** = screen length *x F*	**I** = *(top screen-B) x F*	**J** = 3 x (G or H)
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 Casing Volume** (gallons)	**Screen Volume** (gallons)	**Above Screen Volume** (gal.)	**Minimum Purge Volume** (gal.)
—	56.23	79	22.77	—	15.02	—	—	—

	Gallons/Foot			
Well Diameter (inches)	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment:

Purge Method: 3-Volume purge (3x Screen volume, 1x volume above screen)

Well Condition:

Time	Casing Volumes	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH [+/- 0.1 pH]	Conductivity (S/m) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	Temperature (°C) [+/- 10%]	ORP (mV) [+/- 10%]	Observations
0941	0	0	1gpm	56.23	5.73	0.278	2.94	4.77	24.03	176	S. Cloudy
0951	1	15		56.84	7.02	0.275	44.6	2.82	23.99	135	Cloudy
1001	2	30		56.84	7.11	0.268	124.0	2.81	24.02	75	Cloudy
1027	3	45		56.84	7.21	0.262	45.9	2.93	24.09	42	Cloudy
1037	3.3	50		56.84	7.20	0.262	28.1	2.92	24.10	36	Clear

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth (Dx0.20) + B	Water Level at Sampling Time (ft bmp)	Sample Collection Time	Sample Identification
0941	1037	1gpm	50	3.3	—	56.84	1045	XMW-19_WG20081024_01

Notes: (units) [stabilization criteria]

DUP:
DRUM NO:

QED MP20 / LAMOTTE 2020*e*

CALIBRATION CERTIFICATE

Service Technician: C.J.

Date: 09/21/08

INSTRUMENT INFORMATION

EQUIPMENT I.D.: MP-20

SERIAL NUMBER: MP20-1585

CALIBRATION INFORMATION

PARAMETERS:	STANDARDS:	VALUE	PASS (✔)	LOT#
1. Conductivity	1000 µMhos	1019	✓	6016
2. pH Zero	7.00	7.00	✓	2803537
3. pH Slope	4.00	4.00	✓	Q48101
pH Slope	10.00	10.05	✓	2707084
4. Dissolved Oxygen	Air Calibration			
	7.2 @ 28°C Barometric pressure = 760mmHg	7.8	✓	N/A
5. Redox (ORP)	≈ 227 mV @ 28°C (Zobell solution)	222	✓	051107

EQUIPMENT I.D.: 2020*e*

SERIAL NUMBER: ME 13119

CALIBRATION INFORMATION DY

PARAMETERS:	STANDARDS:	VALUE	PASS (✔)	LOT#
6. Turbidity Zero	0.0 NTU's	0.0	✓	—
7. Turbidity Span	— NTU's	—	—	—

Certificate Number: 56222
Calibration Date: 18 September 2008

ASHTEAD Technology RENTALS

Calibration Certificate

Asset No:	**R6101**
Description:	**QED MP20-DT MICROPURGE FLOW CE**
Manufacturer:	**QED**
Serial No:	**MP20DT-1486**
Calibration Date:	**18 September 2008**
Next Calibration:	**Refer to Manufacturers Instructions**
Accuracy of Unit Under Test:	**Manufacturers Specifications**
Adjustments made:	**None**
Calibration Technician:	**Julio Rios**

Details of any limitations to the use of the equipment
None

The following measurement equipment used during the calibration procedure is traceable to National Standards.

Measurement Equipment/Standards	**Reference**
PH 4.00 Auto Cal - 4720	
PH 7.00 solution - ph7	

Calibrated By: _____

Julio Rios

AVOCET ENVIRONMENTAL, INC.
16 Technology Drive, Suite 154
Irvine, California 92618-2327
TEL (949) 296-0977
FAX (949) 296-0978

Boeing CoC No. AV20080923A

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, WDR Sampling, September 2008
Site Address	Los Angeles, CA
Project No.	1155.006
Project Manager	Michael Rendina
Sampled By	Eric Costales
Turn-Around-Time	Standard TAT

Analyses

48HR HT for NO_3

24HR HT FOR qPCR

Please forward VFA & qPCR analyses to identified laboratories ASAP.

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs EPA 8260B	TOC EPA 9060 Modified	Volatile Fatty Acids IC Method 8M23G (Microseeps)	Dissolved Hydrocarbon Gases (DHGs) Methane, Ethane, Ethene - RSK 175	Alkalinity SM2320B	Anions (NO3, NO2, Cl, SO4) EPA 300.0	DHC PCR (NorthWind) 24 HR HT!!	Total Dissolved Solids (TDS) SM2540C	Comments
CMW002_WG20080923_01	09/23/08	11:16	Water	10		X	X	X	X	X	X		X	
IRZCMW001_WG20080923_01	09/23/08	10:45	Water	10		X	X	X	X	X	X		X	
CMW026_WG20080923_01	09/23/08	9:24	Water	12		X	X	X	X	X	X	X		
CMW026_WG20080923_02	09/23/08	9:24	Water	3		X								
IRZCMW002_WG20080923_01	09/23/08	8:15	Water	12		X	X	X	X	X	X	X		
MWC024_WG20080923_01	09/23/08	8:55	Water	12		X	X	X	X	X	X	X		
IRZCMW003_WG20080923_01	09/23/08	10:00	Water	12		X	X	X	X	X	X	X		
TB_AV20080923_01	09/23/08	-	Water	3		X								

Relinquished by		Company	Received by		Company
Printed Name: D. Lieberman	Date: 9-23-08	Avocet Environmental, Inc.	Printed Name: Gary Schlegel	Date: 9-23-08	
Signature: [signature]	Time: 12:53		Signature: [signature]	Time: 1257	
Printed Name: Gary Schlegel	Date: 9-23-08		Printed Name: Angel Rivera	Date: 9/23/08	
Signature: [signature]	Time: 1337		Signature: [signature]	Time: 1337	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	

Sample Receipt	Billing Information	Special Instructions
Total Containers	Bill To: Michael Rendina, P.G. AVOCET ENVIRONMENTAL, INC. 16 Technology Dive, Suite 154 Irvine, CA 92618-2327	DHC PCR Analyses require overnight delivery to NorthWind in Pittsburgh, PA Primary DHG analyses will continue to be analyzed by ATL. Please bill to Avocet. Please report electronically in accordance with Boeing standards. If any questions, please call Mike Rendina @ (949) 296 0977 Ext.103
Temperature °C 3-1/3-0 °F		
COC Seal (Y/N/NA)		

#126

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AVOCET ENVIRONMENTAL, INC.
16 Technology Drive, Suite 154
Irvine, California 92618-2327
TEL (949) 296-0977
FAX (949) 296-0978

Boeing CoC No. AV20080923B

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008
Site Address	Los Angeles, CA
Project No.	1155.006
Project Manager	Michael Rendina
Sampled By	Brian Barsumian/Eric Costales
Turn-Around-Time	Standard TAT

Analyses

~~48HR HT for NO_3~~

~~Please forward VFA & qPCR analyses to identified laboratories ASAP.~~

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs EPA 8260B	Comments
MWC007_WG20080923_01	09/23/08	8:13	Water	3		X	
WCC_05S_WG20080923_01	09/23/08	9:05	Water	3		X	
MWB013_WG20080923_01	09/23/08	9:55	Water	3		X	
TMW_14_WG20080923_01	09/23/08	10:47	Water	3		X	
TMW_10_WG20080923_01	09/23/08	11:52	Water	3		X	
MWC021_WG20080923_01	09/23/08	13:03	Water	3		X	
TMW_15_WG20080923_01	09/23/08	14:15	Water	3		X	
CMW001_WG20080923_01	09/23/08	12:10	Water	3		X	
WCC_09S_WG20080923_01	09/23/08	12:45	Water	3		X	
MWC022_WG20080923_01	09/23/08	13:10	Water	3		X	

Relinquished by		Company	Received by		Company
Printed Name: David Lieberman	Date: 9/23/2008	Avocet Environmental, Inc.	Printed Name: Hanafee El	Date: 9-23-08	
Signature:	Time: 15:50		Signature:	Time: 1550	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	

Sample Receipt	Billing Information	Special Instructions
Total Containers	Bill To: Michael Rendina, P.G. AVOCET ENVIRONMENTAL, INC. 16 Technology Dive, Suite 154 Irvine, CA 92618-2327	Please bill to Avocet. Please report electronically in accordance with Boeing standards. If any questions, please call Mike Rendina @ (949) 296 0977 Ext.103
Temperature °C °F		
COC Seal (Y/N/NA)		

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3.5°C

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16 Technology Drive, Suite 154
Irvine, California 92618-2327
TEL (949) 296-0977
FAX (949) 296-0978

Boeing CoC No. AV20080924A

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, WDR Sampling, September 2008
Site Address	Los Angeles, CA
Project No.	1155.006
Project Manager	Michael Rendina
Sampled By	Eric Costales/Brian Barsumian
Turn-Around-Time	Standard TAT

Analyses

48HR HT for NO_3

24HR HT FOR qPCR

Please forward VFA & qPCR analyses to identified laboratories ASAP.

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs EPA 8260B	TOC EPA 9060 Modified	Volatile Fatty Acids IC Method 8M23G (Microseeps)	Dissolved Hydrocarbon Gases (DHGs) Methane, Ethane, Ethene - RSK 175	Alkalinity SM2320B	Anions (NO3, NO2, Cl, SO4) EPA 300.0	DHC PCR (NorthWind) 24 HR HT!!	Total Dissolved Solids (TDS) SM2540C	Comments
AW0067UB_WG20080924_01	09/24/08	7:20	Water	10		X	X	X	X	X	X			
AW0067UB_WG20080924_02	09/24/08	7:20	Water	3		X								
AW0066UB_WG20080924_01	09/24/08	9:30	Water	10		X	X	X	X	X	X			
AW0064UB_WG20080924_01	09/24/08	10:35	Water	10		X	X	X	X	X	X			
MWB006_WG20080924_01	09/24/08	11:08	Water	10		X	X	X	X	X	X		X	
AW0065UB_WG20080924_01	09/24/08	9:08	Water	10		X	X	X	X	X	X			
WCC_12S_WG20080924_01	09/24/08	7:34	Water	10		X	X	X	X	X	X		X	
AW0073C_WG20080924_01	09/24/08	8:40	Water	10		X	X	X	X	X	X			
TMW_07_WG20080924_01	09/24/08	9:23	Water	10		X	X	X	X	X	X		X	
EWB002_WG20080924_01	09/24/08	10:31	Water	10		X	X	X	X	X	X			
AW0077UB_WG20080924_01	09/24/08	11:45	Water	10		X	X	X	X	X	X			
AW0075UB_WG20080924_01	09/24/08	13:28	Water	10		X	X	X	X	X	X			
AW0076UB_WG20080924_01	09/24/08	14:15	Water	10		X	X	X	X	X	X			
AW0055UB_WG20080924_01	09/24/08	13:57	Water	10		X	X	X	X	X	X			
TB_AV20080924_01	09/24/08	-	Water	3		X								
EB_AV20080924_01	09/24/08	13:45	Water	3		X								

Relinquished by	Company	Received by	Company
Printed Name: David Lieberman Date: 9-24-08	Avocet Environmental, Inc.	Printed Name: Henafer El Date: 9-24-08	
Signature: Time: 16:45		Signature: Time: 1645	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	

Sample Receipt	Billing Information	Special Instructions
Total Containers	Bill To: Michael Rendina, P.G. AVOCET ENVIRONMENTAL, INC. 16 Technology Dive, Suite 154 Irvine, CA 92618-2327	DHC PCR Analyses require **overnight** delivery to NorthWind in Pittsburgh, PA Primary DHG analyses will continue to be analyzed by ATL. Please bill to Avocet. Please report electronically in accordance with Boeing standards. If any questions, please call Mike Rendina @ (949) 296 0977 Ext.103
Temperature °C ____ °F		
COC Seal (Y/N/NA)		

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3.1C

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16 Technology Drive, Suite 154
Irvine, California 92618-2327
TEL (949) 296-0977
FAX (949) 296-0978

Boeing CoC No. AV20080925A

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008
Site Address	Los Angeles, CA
Project No.	1155.006
Project Manager	Michael Rendina
Sampled By	Brian Barsumian/Eric Costales
Turn-Around-Time	Standard TAT

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	Analyses: VOCs EPA 8260B	Comments
MWG001_WG20080925_01	09/25/08	0718	Water	3		X	
MWB020_WG20080925_01	09/25/08	0809	Water	3		X	
MWC009_WG20080925_01	09/25/08	0858	Water	3		X	
MWC004_WG20080925_01	09/25/08	0945	Water	3		X	
TMW_11_WG20080925_01	09/25/08	1048	Water	3		X	
WCC_07S_WG20080925_01	09/25/08	1202	Water	3		X	
MWG002_WG20080925_01	09/25/08	1313	Water	3		X	
MWC017_WG20080925_01	09/25/08	0730	Water	3		X	
MWC017_WG20080925_02	09/25/08	0730	Water	3		X	
MWB027_WG20080925_01	09/25/08	1000	Water	3		X	
MWC023_WG20080925_01	09/25/08	0828	Water	3		X	Target this sample for Tier I data validation
MWB007_WG20080925_01	09/25/08	0925	Water	3		X	" " Tier II " "
WCC_04S_WG20080925_01	09/25/08	0903	Water	3		X	" " Tier III " "
MWB019_WG20080925_01	09/25/08	0755	Water	3		X	" " Tier I " "
WCC_03S_WG20080925_01	09/25/08	1031	Water	3		X	
XMW-19_WG20080924_01	09/24/08	12:30	Water	3		X	
XMW-09_WG20080924_01	09/24/08	13:20	Water	3		X	
TB_AV20080925_01	09/25/08	-	Water	3		X	

Relinquished by		Company	Received by		Company
Printed Name: Brian Barsumian	Date: 9/25/08	Avocet Environmental, Inc.	Printed Name:	Date:	
Signature:	Time: 1455		Signature:	Time:	
Printed Name:	Date: 9/25		Printed Name:	Date:	
Signature:	Time: 1455		Signature:	Time:	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	

Sample Receipt

Total Containers

Temperature °C 3.9/3.5 i °F

COC Seal (Y/N/NA)

Billing Information

Bill To:

Michael Rendina, P.G.
AVOCET ENVIRONMENTAL, INC.
16 Technology Dive, Suite 154
Irvine, CA 92618-2327

Special Instructions

Please bill to Avocet. Please report electronically in accordance with Boeing standards. If any questions, please call Mike Rendina @ (949) 296 0977 Ext.103

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AVOCET ENVIRONMENTAL, INC.
16 Technology Drive, Suite 154
Irvine, California 92618-2327
TEL (949) 296-0977
FAX (949) 296-0978

Boeing CoC No. AVO20081024B

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Semiannual Sampling, September 2008
Site Address	Los Angeles, CA
Project No.	1155.006
Project Manager	Michael Rendina
Sampled By	EMC
Turn-Around-Time	RUSH 72 hr TAT

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs EPA 8260B	Comments
XMW-19_WG20081024_01	10/24/08	1045	Water	3		X	

Relinquished by	Company	Received by	Company
Printed Name: [signature] Date: 10/24/08	EMC	Printed Name: Dy Nguyen Date: 10/24/08	
Signature: [signature] Time: 1500		Signature: [signature] Time: 1500	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	

Sample Receipt

Total Containers

Temperature °C 12.1/12.0°C °F

COC Seal (Y/N/NA)

Billing Information

Bill To:

Michael Rendina, P.G.
AVOCET ENVIRONMENTAL, INC.
16 Technology Dive, Suite 154
Irvine, CA 92618-2327

Special Instructions

Please bill to Avocet. Please report electronically in accordance with Boeing standards. If any questions, please call Mike Rendina @ (949) 296 0977 Ext.103

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