AVOCET
ENVIRONMENTAL, INC.

April 27, 2010 Project No. 1155.012

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
March 2010 Groundwater Sampling
Site-Wide Annual Monitoring
Semiannual Monitoring at Building 2 Area
Waste Discharge Requirements Order No. R4-2007-0040
Boeing 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 March 2010 groundwater monitoring event at the Boeing Company's (Boeing's) Former C-6 Facility in Los Angeles, California. The March 2010 monitoring included sampling for the Building 2 Waste Discharge Requirements (WDR) and Site-Wide Annual groundwater monitoring programs. The monitoring was conducted pursuant to and in accordance with the following documents and subsequent electronic mail correspondence:

Avocet Environmental, Inc., February 8, 2010, Technical Memorandum, March 2010 Groundwater Sampling and Analysis Plan, Site-Wide Annual Monitoring 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 15, 2010, 2010 Groundwater Monitoring Work Plan, Boeing Former C-6 Facility, 19503 South Normandie Avenue, Los Angeles, California.

16 Technology Drive, Suite 154 ▪ Irvine, California 92618-2327
Phone 949.296.0977 ▪ Fax 949.296.0978
www.avocetenv.com

Electronic Mail:

Camp Dresser & McKee, Inc. (CDM), RE: Pre-Field Documents, March 2010 Sitewide Annual and B2 WDR Groundwater Monitoring, Former C-6 Facility; March 15, 2010, 11:24 am.

CDM, RE: Pre-Field Documents, March 2010 Sitewide Annual and B2 WDR Groundwater Monitoring, Former C-6 Facility; March 19, 2010, 11:10 am

Field activities performed during the March 2010 monitoring event are discussed in the following sections. Figures 1, and 2 (Attachment 1) present the locations of the groundwater monitoring wells included in the programs.

METHANE AND VOC MONITORING

The concentration of volatile organic compounds (VOCs) within the "headspace" of the monitoring wells is routinely measured as part of the fluid level gauging process at the Former C-6 Facility. The headspace concentration is measured immediately upon removal of the well cap by holding the intake of a photoionization detector (PID) one inch above the monitoring well casing and recording the maximum reading on the Groundwater Monitoring Well Gauging Sheet (Attachment 2). In response to past measurements of methane gas in several wells associated with the groundwater remediation programs, methane monitoring was added to the headspace monitoring program in March 2009. Monitoring of select wells across the site was performed as part of the March 2010 event. Similar to the VOCs measurements, methane was measured immediately upon removal of the well cap by holding the intake of a combustible gas meter approximately 1-inch above the center of the well casing and recording the maximum measurement in terms of the percent of the methane lower explosive limit (% LEL). For wells that displayed combustible gas concentrations greater than 2% of LEL, the "time to disperse" (i.e., the time required for concentrations to fall below 2% of LEL) was also recorded. The maximum combustible gas measurement and the "time to disperse" were recorded on the Groundwater Monitoring Well Gauging Sheet (Attachment 2). Wells that contained combustible gas concentrations of 1% LEL or greater were tagged with a yellow caution tag reading "THIS WELL MAY CONTAIN METHANE GAS". Sixty-three wells were monitored for the presence of combustible gas as part of the March 2010 annual groundwater monitoring event. Of the 63 wells, six exhibited combustible gas concentrations of 1% or greater. Of these six wells, all but one (IRZB0081) had previously been identified with a yellow caution tag. IRZB0081 (CGI 21% LEL) has since been identified with a yellow caution tag.

WATER LEVEL MEASUREMENTS

Fluid level gauging was conducted in 70 monitoring wells on March 22, 2010. Two wells originally scheduled for gauging, XMW-9 and XMW-19, also referred to as the "Montrose Wells", were not gauged since an access agreement had not been finalized. Water level measurements consisted of using a Solinst water level meter to measure the depth of water from a surveyed reference point on top of the casing. Care was taken to ensure that all down-hole

equipment was properly and thoroughly decontaminated prior to use in any well. Water level measurements were recorded on the Groundwater Monitoring Well Gauging Sheet (Attachment 2).

GROUNDWATER SAMPLING ACTIVITIES

Groundwater monitoring in March 2010 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 2 WDR and Site-Wide Semiannual groundwater monitoring programs called for fluid level measurements in 70 wells and sample collection from 69 wells, as follows:

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

Semiannual Site-Wide Groundwater Monitoring – Pursuant to the 2010 Work Plan and subsequent electronic mail correspondence with the Boeing C-6 Technical Team, 70 wells were gauged for fluid levels and 69 wells were sampled. Six of these sampled wells are also part of the 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.

Six Building 2 WDR wells and 63 Site-Wide wells were purged and sampled on March 22 through 26, 2010 using either dedicated or portable low-flow bladder pumps and flow-through cells. All WDR and site-wide wells were purged for sampling using low-flow (0.20-0.25 liters/minute) methods. Twenty-five monitoring wells across the site were targeted for ferrous iron testing, performed using a HACH DR/890 Colorimeter. The flow-through cell dissolved oxygen measurements were confirmed in ten percent of the wells using a CHEMetrics Inc. test kit. The field instruments were calibrated by the field technicians prior to each day of sampling and the calibration data sheets are included in Attachment 2.

All 70 wells scheduled for water level measurement were gauged for depth to water on March 22, 2010 using a Solinst-type electronic water level sounder. The wells were also inspected for any damage or missing materials. Aside from the addition of some new rim gaskets, all wells were in good condition.

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, a 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 hydrocarbon gases (DHGs: 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. In addition, to obtain additional groundwater geochemical information to assist in evaluation of remedial options, a number of supplemental analyses were added to the sampling program. The supplemental analyses and laboratory program are summarized in Tables 1 through 3 and included analyzing samples from select wells across the site for one or more of the following:

- DHGs
- Semivolatile organic compounds (SVOCs) - including 1,4-dioxane and NDMA
- CAM Title 22 Metals
- Flashpoint
- Cyanides (total)
- Sulfides (dissolved)
- Pesticides/PCBs
- Chemical Oxygen Demand (COD)
- Total Suspended Solids
- Hexavalent Chromium
- pCBSA
- Perchlorate
- Boron
- Anions (NO_3, NO_2, Cl, SO_4)
- Total Dissolved Solids

Purge water (approximately 90 gallons) was placed in appropriately labeled 55-gallon drums located within the treatment compound. An additional drum, containing a small accumulation of personal protective equipment (PPE) was also left onsite. The historical analytical results were used to profile the purge water for transport to an appropriate off-site facility for treatment and

disposal. Management, containerization, staging, profiling, and transportation were conducted in accordance with procedures established by Boeing.

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

Michael A. Rendina, C.Hg.
Principal

MAR:sh
Attachments:
Attachment 1: March 2010 Groundwater Sampling and Analysis Plan
Attachment 2: Field Data Forms

\\server2\SHARED\Projects\1155 Boeing Former C-6 Facility\Groundwater Monitoring\March 2010\FDR\FDR_March 2010 20100427.doc

Tables

AVOCET
ENVIRONMENTAL, INC.

Table 1
March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program							Comments
					Methane Wellhead Monitoring	Water Level Gauging	VOCs (8260B)	Field Parameters[1]	Ferrous Iron?	Dissolved Hydrocarbon Gases (DHGs) Methane, Ethane, Ethene RSK 175	WDR Analyses?	
B-Sand Monitoring Wells												
BL-03	B-Sand	533	38			x	x	x				
DAC-P1	B-Sand	10,116	70			x	x	x				
EWB001	B-Sand	143	28		x	x	x	x				
EWB002	B-Sand	82	23	Yes	x	x	x	x	Yes[3]	x		Analyses for continued bio eval
MW0005	B-Sand	1,871	56		x	x	x	x				
MWB003	B-Sand	5,615	69		x	x	x	x		x		Routine GWM +Extent of CH4 in GW
MWB006	B-Sand	17,000	75	Yes	x	x	x	x	Yes[3]	x		Analyses for continued bio eval
MWB007	B-Sand	2,858	64	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWB012	B-Sand	917	45		x	x	x	x		x		Routine GWM +Extent of CH4 in GW
MWB013	B-Sand	5	5	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWB014	B-Sand	107	27		x	x	x	x				
MWB019	B-Sand	350	35	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWB020	B-Sand	30	16	Yes	x	x	x	x		x		
MWB027	B-Sand	969	47	Yes	x	x	x	x		x		Routine GWM +Extent of CH4 in GW
MWB028	B-Sand	916	44		x	x	x	x				Added Methane Wellhead Monitoring
TMW_04	B-Sand	1,386	53		x	x						Water level measurement only +Methane WH Monitoring
TMW_06	B-Sand	79	22		x	x	x	x				
TMW_07	B-Sand	1,100	49	Yes	x	x	x	x				
TMW_08	B-Sand	1,161	52		x	x	x	x				
TMW_10	B-Sand	10	11	Yes	x	x	x	x				
TMW_11	B-Sand	6	9	Yes	x	x	x	x				
TMW_14	B-Sand	8	10	Yes	x	x	x	x				Added Methane Wellhead Monitoring
TMW_15	B-Sand	21	14	Yes	x	x	x	x		x		Routine GWM +Extent of CH4 in GW
WCC_03S	B-Sand	13,174	72	Yes	x	x	x	x		x		Routine GWM +Extent of CH4 in GW
WCC_04S	B-Sand	0	1	Yes	x	x	x	x		x		Routine GWM +Extent of CH4 in GW
WCC_05S	B-Sand	2	4	Yes	x	x	x	x				
WCC_06S	B-Sand	418	36	Yes	x	x	x	x	Yes[3]			
WCC_07S	B-Sand	182	31	Yes	x	x	x	x		x		Routine GWM +Extent of CH4 in GW
WCC_09S	B-Sand	51	21	Yes	x	x	x	x				
WCC_12S	B-Sand	27	15	Yes	x	x	x	x				
XMW-09	B-Sand	91	24		x	x	x	x				
XMW-19	B-Sand	6	8		x	x	x	x				
C-Sand Monitoring Wells												
CMW001	C-Sand	0	1	Yes	x	x	x	x				Added Methane Wellhead Monitoring
CMW002	C-Sand	1,100	49	Yes	x	x	x	x	Yes[3]	x	Yes[4]	Monitored under Building 2 WDR Program
CMW026	C-Sand	547	40	Yes	x	x	x	x	Yes[3]	x	Yes[4]	Monitored under Building 2 WDR Program
EWC001	C-Sand	4,432	67		x	x	x	x				Added Methane Wellhead Monitoring
EWC002	C-Sand											No Sampling or Gaging
IWC001	C-Sand	2,016	57		x	x	x	x				Added Methane Wellhead Monitoring
IWC002	C-Sand	1,694	55									No Sampling or Gaging
MWC004	C-Sand	101	25	Yes	x	x	x	x				
MWC006	C-Sand	15	12		x	x	x	x				Added Methane Wellhead Monitoring
MWC007	C-Sand	2	3	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWC009	C-Sand	164	30	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWC011	C-Sand	105	26		x	x	x	x				Added Methane Wellhead Monitoring
MWC015	C-Sand	757	42		x	x	x	x				Added Methane Wellhead Monitoring
MWC016	C-Sand	1,620	54		x	x	x	x				Added Methane Wellhead Monitoring
MWC017	C-Sand	921	46	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWC021	C-Sand	16	13	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWC022	C-Sand	38	18	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWC023	C-Sand	909	43	Yes	x	x	x	x				Added Methane Wellhead Monitoring
MWC024	C-Sand	2,315	62	Yes	x	x	x	x	Yes[3]	x	Yes[4]	Monitored under Building 2 WDR Program

AVOCET ENVIRONMENTAL, INC.

Table 1
March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program							Comments
					Methane Wellhead Monitoring	Water Level Gauging	VOCs (8260B)	Field Parameters[1]	Ferrous Iron?	Dissolved Hydrocarbon Gases (DHGs) Methane, Ethane, Ethene RSK 175	WDR Analyses?	
Gage Monitoring Wells												
MWG001	Gage	33	17	Yes		x	x	x				
MWG002	Gage	466	37	Yes		x	x	x				
MWG003	Gage	163	29	Yes		x	x	x				
MWG004	Gage	44	20	Yes		x	x	x				
Former and Current Bioremediation Monitoring Wells (B- and C-Sand Wells)												
AW0055UB	Upper B-Sand	19,470	77	Yes	x	x	x	x	Yes[3]	x		Added DHGs and Iron for continued bio eval
AW0064UB	Upper B-Sand	2,450	63	Yes	x	x	x	x	Yes[3]	x		Analyses for continued bio eval
AW0065UB	Upper B-Sand	251	33	Yes								No Sampling or Gaging
AW0066UB	Upper B-Sand	5	6	Yes								No Sampling or Gaging
AW0067UB	Upper B-Sand	6	7	Yes								No Sampling or Gaging
AW0074UB	Upper B-Sand	10,540	71	Yes	x	x	x	x	Yes[3]	x		Added DHGs and Iron for continued bio eval
AW0075UB	Upper B-Sand	2,259	60	Yes	x	x	x	x	Yes[3]	x		Analyses for continued bio eval
AW0076UB	Upper B-Sand	195	32	Yes								No Sampling or Gaging
AW0077UB	Upper B-Sand	39	19	Yes	x	x	x	x	Yes[3]	x		Added DHGs and Iron for continued bio eval
AW0073C	C-Sand	293	34	Yes	x	x	x	x	Yes[3]	x		Analyses for continued bio eval
IRZB0081	B-Sand	2,287	61		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZB0095	B-Sand	2,113	59		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW001A	B-Sand	15,690	74		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW001B	B-Sand	535	39		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW002A	B-Sand	15,302	73		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW002B	B-Sand	582	41		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW003A	B-Sand	17,853	76		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW003B	B-Sand	2,103	58		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW004	B-Sand	3,784	65		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZMW005	B-Sand	3,972	66		x	x	x	x	Yes[3]	x		Analyses for bio eval of past injections+CH4 WH Monitoring
IRZCMW001	C-Sand	1,027	48	Yes	x	x	x	x	Yes[3]	x	Yes[4]	Monitored under Building 2 WDR Program
IRZCMW002	C-Sand	1,126	51	Yes	x	x	x	x	Yes[3]	x	Yes[4]	Monitored under Building 2 WDR Program
IRZCMW003	C-Sand	5,090	68	Yes	x	x	x	x	Yes[3]	x	Yes[4]	Monitored under Building 2 WDR Program
Subtotals		Sitewide Program			66	72	71	71	25	32	-	
		WDR Program			6	6	6	6	-	6	6	
Quality Control Samples[2]												
Duplicates (1 per 20 wells)							x (4)					
Rinseate Blanks (1 per day)							x (4)					
Trip Blanks (1 per day)							x (6)					
Totals					66	72	85	71	25	32	6	

Notes:
VOCs = volatile organic compounds using EPA Method 8260B
TOC = Total Organic Carbon
DHGs = Dissolved hydrocarbon gases - MEE (Methane, Ethane, Ethene) using Method RSK 175
Field Parameters = pH, dissolved oxygen (DO), redox, turbidity, electrical conductivity, and temperature.
(1) 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).
(2) Quality control sample number based on number of wells and estimated number of sampling days.
(3) Test for ferrous iron using the Hach DR890 Colorimeter - not required by WDR after Year 1.
(4) Analyze samples in accordance with the Building 2 WDR Program summarized in Table 2.

AVOCET ENVIRONMENTAL, INC.

Table 2
March 2010 Building 2 WDR Groundwater Monitoring Program
Boeing Former C-6 Facility,
Los Angeles, California

Well Information			Field Program				Laboratory Program									Comments
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 310.1	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Chloride EPA 300.0	Total Dissolved Solids EPA 160.1	DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA; by qPCR analysis (North Wind)	
Group A Wells																
IRZC0001 & IRZC0003 through IRZC0020	A	C-Sand	-	-												Not accessible for sampling
Group B Wells																
CMW026	B	C-Sand	547	1	X	X	X	X	A	X		A			A	Sitewide & SA3 (FINAL) WDR Monitoring
IRZCMW003	B	C-Sand	5,090	6	X	X	X	X	A	X		A			A	Sitewide & SA3 (FINAL) WDR Monitoring
IRZCMW002	B	C-Sand	1,126	4	X	X	X	X	A	X		A			A	Sitewide & SA3 (FINAL) WDR Monitoring
MWC024	B	C-Sand	2,315	5	X	X	X	X		X						Sitewide & SA3 (FINAL) WDR Monitoring
Group C Wells																
CMW002	C	B-Sand	1,100	3	X	X	X	X	X	X			X	X	X	Sitewide & SA3 (FINAL) WDR Monitoring
Group D Well																
IRZCMW001	D	B-Sand	1,027	2	X	X	X	X	X	X			X	X	X	Sitewide & SA3 (FINAL) WDR Monitoring
Quality Control Samples																
Duplicates (1 per 20 wells)							X (est. 1)									
Rinsate Blanks (1 per day)							(est. 0)									dedicated pumps
Trip Blanks (1 per cooler)							X (est. 1)									
				Totals:	6	6	8	6	5	6	0	3	2	2	5	

Notes: Field Parameters = pH, DO, ORP, EC, temp, and turbidity.*
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
SA3 = Third (and final) semiannual sampling event.

A = Additional analysis added to event but not required by WDR

Select VOCs for Total VOC calculation include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and VC (September 2009).

* Per WDR, ferrous iron analysis by field kit is not required after year 1.

AVOCET ENVIRONMENTAL, INC.

Table 3
ADDITIONAL ANALYSES - March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program ADDITIONAL ANALYTES															
					CSDLA SS Permit +Data Gaps										Data Gaps			LARWQCB Reinjection		
					SVOCs (incl 1,4-dioxane and NDMA) (1)	CAM Title 22 Metals	Flashpoint	Cyanides (total)	Sulfides (dissolved)	pH	Temperature	Pesticides/PCBs	Chemical Oxygen Demand (COD)	Total Suspended Solids	Cr VI	pCBSA (2)	Perchlorate	Boron	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Total Dissolved Solids EPA 160.1
B-Sand Monitoring Wells																				
MW0005	B-Sand	1,871	34		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWB003	B-Sand	5,615	43		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWB013	B-Sand	5	3	Yes	X	X									X					
MWB014	B-Sand	107	18		X	X									X	X	X			
MWB019	B-Sand	350	23	Yes											X	X				
MWB027	B-Sand	969	30	Yes											X					
TMW_06	B-Sand	79	15		X	X									X	X	X	X	X	X
TMW_08	B-Sand	1,161	32		X	X									X	X	X	X	X	X
TMW_10	B-Sand	10	9	Yes	X	X										X				
TMW_11	B-Sand	6	7	Yes												X				
TMW_14	B-Sand	8	8	Yes											X	X				
TMW_15	B-Sand	21	10	Yes	X	X									X					
WCC_03S	B-Sand	13,174	46	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WCC_09S	B-Sand	51	14	Yes	X	X									X	X	X	X	X	X
XMW-09	B-Sand	91	17		X	X									X	X	X			
Former and Current Bioremediation Monitoring Wells (B-Sand Wells)																				
AW0074UB	Upper B-Sand	10,540	45	Yes	X	X									X	X	X	X	X	X
IRZMW002A	B-Sand	15,302	47		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IRZMW004	B-Sand	3,784	41		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Subtotals		Sitewide Program			14	14	5	5	5	5	5	5	5	5	16	15	11	9	9	9

AVOCET ENVIRONMENTAL, INC.

Table 3
ADDITIONAL ANALYSES - March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program ADDITIONAL ANALYTES															
					CSDLA SS Permit +Data Gaps										Data Gaps			LARWQCB Reinjection		
					SVOCs (incl 1,4-dioxane and NDMA) (1)	CAM Title 22 Metals	Flashpoint	Cyanides (total)	Sulfides (dissolved)	pH	Temperature	Pesticides/PCBs	Chemical Oxygen Demand (COD)	Total Suspended Solids	Cr VI	pCBSA (2)	Perchlorate	Boron	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Total Dissolved Solids EPA 160.1
C-Sand Monitoring Wells																				
CMW001	C-Sand	0	1	Yes												X				
CMW002	C-Sand	1,100	15	Yes	X	X									X	X	X			
EWC001	C-Sand	4,432	21		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IWC001	C-Sand	2,016	19												X	X				
MWC004	C-Sand	101	6	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWC009	C-Sand	164	8	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWC015	C-Sand	757	11		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWC016	C-Sand	1,620	17		X	X									X	X	X	X	X	X
MWC017	C-Sand	921	13	Yes											X	X				
MWC021	C-Sand	16	4	Yes	X	X									X	X	X			
MWC023	C-Sand	909	12	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Former and Current Bioremediation Monitoring Wells (C-Sand Wells)																				
IRZCMW002	C-Sand	1,126	16	Yes	X	X									X	X	X			
IRZCMW003	C-Sand	5,090	22	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Subtotals		Sitewide Program			10	10	6	6	6	6	6	6	6	6	12	13	10	7	7	7

AVOCET ENVIRONMENTAL, INC.

Table 3
ADDITIONAL ANALYSES - March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program ADDITIONAL ANALYTES															
					CSDLA SS Permit +Data Gaps										Data Gaps			LARWQCB Reinjection		
					SVOCs (incl 1,4-dioxane and NDMA) (1)	CAM Title 22 Metals	Flashpoint	Cyanides (total)	Sulfides (dissolved)	pH	Temperature	Pesticides/PCBs	Chemical Oxygen Demand (COD)	Total Suspended Solids	Cr VI	pCBSA (2)	Perchlorate	Boron	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Total Dissolved Solids EPA 160.1
Gage Monitoring Wells																				
MWG001	Gage	33	1	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWG002	Gage	466	4	Yes	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MWG003	Gage	163	3	Yes	X	X									X	X	X			
MWG004	Gage	44	2	Yes	X	X									X	X	X			
Subtotals		Sitewide Program			4	4	2	2	2	2	2	2	2	2	4	4	4	2	2	2
Quality Control Samples(2)																				
Duplicates (1 per 20 wells)																				
Rinseate Blanks (1 per day)																				
Trip Blanks (1 per day)																				
Totals					14	15	5	5	5	5	5	5	5	5	16	15	11	9	9	9

Notes:
SVOCs = semi-volatile organic compounds using EPA Method 8270C
(1) Individual SVOCs shall have a RL of less than 0.01 milligrams per liter (mg/L or PPM)
RL for 1,4-dioxane - 3 ppb
RL for NDMA - as low as possible
RL for Perchlorate - 4 ppb
(2) pCBSA - parachlorobenzene sulfonic acid

AVOCET ENVIRONMENTAL, INC.

Attachment 1

March 2010 Groundwater Sampling and Analysis Plan

AVOCET
ENVIRONMENTAL, INC.

AVOCET
ENVIRONMENTAL, INC.

February 8, 2010 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
March 2010 Groundwater Sampling and Analysis Plan
Site-Wide Annual Monitoring
Semiannual Monitoring at Building 2 Area
Waste Discharge Requirements Order No. R4-2007-0040
Boeing 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 March 2010 groundwater monitoring event at the Boeing Former C-6 Facility in Los Angeles, California. Groundwater monitoring in March 2010 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) Monitoring and Reporting Program CI-9310 (MRP), which is conducted in accordance with Individual Waste Discharge Requires (WDR) Order No. R4-2007-0040 (August 22, 2008). The details of the Annual Site-Wide Groundwater Monitoring Program are provided in the *2010 Groundwater Monitoring Work Plan* (the Work Plan; Avocet, January 26, 2010). This Work Plan was submitted to the Regional Water Quality Control Board, Los Angeles Region (LARWQCB) for formal approval on January 26, 2010. Under the WDR Order, the March 2010 MRP includes sample collection in only the B2 area of the site in response to the latest bioremediation pilot test, the Former Building 2 Periodic Slug Injections.

Field Activities

Ground water monitoring will be conducted in March of 2010 and include the Annual Site-Wide Groundwater Monitoring Program and the Building 2 WDR groundwater monitoring program. Details of the Annual Site-Wide and Building 2 WDR groundwater monitoring programs are presented in Tables 1 and 2, respectively. Maps showing the well locations are provided in Figures 1 and 2. Collectively, the two programs call for fluid level measurements in 67 wells and sample collection from 62 wells, as follows:

16 Technology Drive, Suite 154 ▪ Irvine, California 92618-2327
Phone 949.296.0977 ▪ Fax 949.296.0978
www.avocetenv.com

Annual Site-Wide Groundwater Monitoring – Pursuant to the 2010 Work Plan, 67 wells will be gauged for fluid levels and 62 wells are scheduled for sampling. Six of these wells are also part of the Building 2 WDR program and will be gauged and sampled in accordance with MRP requirements. The details of the Annual sampling program are presented in Table 1 and a map showing the well locations is provided in Figure 1.

Semiannual Building 2 WDR Monitoring - Pursuant to the MRP, six wells (Groups B, C, and D) are to be monitored in 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.

The scope of work includes all tasks associated with collecting the field measurements and laboratory samples required to comply with the WDR Order and 2010 Work Plan. In brief, these activities will include water level measurements, groundwater well purging and sampling, and sample analyses. Specifically, the March 2010 groundwater monitoring activities will include the following:

- A targeted 25 wells will be subject to methane monitoring. Immediately upon removal of the well cap, methane concentrations in the monitoring well "headspace" will be measured by holding the intake of a combustible gas meter (RKI Eagle) approximately 1-inch above the center of the well casing and recording the maximum measurement in terms of the percent of the methane lower explosive limit (% LEL). For wells with combustible gas concentrations greater than 2% of LEL, the "time to disperse" (i.e., the time required for concentrations to fall below 2% of LEL) will also be recorded. The maximum combustible gas measurement and the "time to disperse" will be recorded on the Groundwater Monitoring Well Gauging Sheet. Wells that contain combustible gas concentrations of 1% LEL or greater, and that have not already been tagged, will be tagged with a yellow caution tag reading "THIS WELL MAY CONTAIN METHANE GAS". Tags will not be removed from wells that previously exceeded 1% LEL bright line, but that do not exceed the bright line during the March 2010 event.
- The concentration of volatile organic compounds (VOCs) within the "headspace" of the monitoring wells will be measured as part of the fluid level gauging process at the Former C-6 Facility. The headspace concentration will be measured immediately upon removal of the well cap by holding the intake of a photoionization detector (PID) just inside the monitoring well casing and recording the maximum reading on the Groundwater Monitoring Well Gauging Sheet.

- Depth to groundwater will be measured to the nearest one-hundredth of a foot in each of the 67 wells scheduled for fluid level gauging using a Solinst (or equivalent) well sounder. All water 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 56 non-WDR wells (Table 1) and from 6 WDR wells (Table 2) during the March 2010 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 100 and 500 milliliters (ml/min), dependent on site-specific and well-specific factors as drawdown is not to exceed 0.5 feet in any well. For wells purged at rates in excess of 100 ml/min, the flow rate will be reduced to 100 ml/min or less prior to collection of samples for volatile organic compounds (VOCs) analysis.
- 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 and approximately ten percent of the dissolved oxygen measurements will be confirmed using a CHEMetrics, Inc. test kit. Since the MRP no longer requires field monitoring for ferrous iron (Fe[II]), ferrous iron measurements will not be a part of the March 2010 event. Purging will continue until three consecutive measurements are within +/-0.2 for pH, +/-3% or 0.2 mS/cm for EC, +/-10% or 0.2 mg/L 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 coolers, identified on the chain-of-custody, and submitted to appropriately-certified environmental testing laboratories.

Samples collected from the Building 2 WDR wells will be analyzed for one or more of the following as detailed in Table 2:

- 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);
- 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).

All other 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 begin at the site on Monday, March 22, 2010. Avocet Environmental, Inc. appreciates the opportunity to be of service to The Boeing Company. 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

S:\Projects\1155 Boeing Former C-6 Facility\Groundwater Monitoring\SAP Mar 10 1155\Technical Memorandum_SAP Mar2010.doc

Tables

AVOCET
ENVIRONMENTAL, INC.

Table 1
March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program						Comments
					Methane Monitoring	Water Level Gauging	VOCs (8260B)	Field Parameters[1]	Ferrous Iron?	WDR Analyses?	
B-Sand Monitoring Wells											
BL-03	B-Sand	533	38			x	x	x			
DAC-P1	B-Sand	10,116	70			x	x	x			
EWB001	B-Sand	143	28			x	x	x			
EWB002	B-Sand	82	23	Yes	x	x	x	x			
MW0005	B-Sand	1,871	56			x	x	x			
MWB003	B-Sand	5,615	69		x	x	x	x			
MWB006	B-Sand	17,000	75	Yes	x	x	x	x			
MWB007	B-Sand	2,858	64	Yes		x	x	x			
MWB012	B-Sand	917	45			x	x	x			
MWB013	B-Sand	5	5	Yes		x	x	x			
MWB014	B-Sand	107	27			x	x	x			
MWB019	B-Sand	350	35	Yes		x	x	x			
MWB020	B-Sand	30	16	Yes		x	x	x			
MWB027	B-Sand	969	47	Yes		x	x	x			
MWB028	B-Sand	916	44			x	x	x			
TMW_04	B-Sand	1,386	53			x					Water level measurement only
TMW_06	B-Sand	79	22			x	x	x			
TMW_07	B-Sand	1,100	49	Yes		x	x	x			
TMW_08	B-Sand	1,161	52			x	x	x			
TMW_10	B-Sand	10	11	Yes		x	x	x			
TMW_11	B-Sand	6	9	Yes		x	x	x			
TMW_14	B-Sand	8	10	Yes		x	x	x			
TMW_15	B-Sand	21	14	Yes		x	x	x			
WCC_03S	B-Sand	13,174	72	Yes	x	x	x	x			
WCC_04S	B-Sand	0	1	Yes		x	x	x			
WCC_05S	B-Sand	2	4	Yes		x	x	x			
WCC_06S	B-Sand	418	36	Yes	x	x	x	x			
WCC_07S	B-Sand	182	31	Yes		x	x	x			
WCC_09S	B-Sand	51	21	Yes		x	x	x			
WCC_12S	B-Sand	27	15	Yes		x	x	x			
XMW-09	B-Sand	91	24			x	x	x			
XMW-19	B-Sand	6	8			x	x	x			
C-Sand Monitoring Wells											
CMW001	C-Sand	0	1	Yes		x	x	x			
CMW002	C-Sand	1,100	49	Yes	x	x	x	x	No[3]	Yes[4]	Monitored under Building 2 WDR Program
CMW026	C-Sand	547	40	Yes	x	x	x	x	No[3]	Yes[4]	Monitored under Building 2 WDR Program
EWC001	C-Sand	4,432	67			x	x	x			
EWC002	C-Sand										
IWC001	C-Sand	2,016	57			x	x	x			
IWC002	C-Sand	1,694	55		x						Methane Monitoring Only
MWC004	C-Sand	101	25	Yes	x	x	x	x			
MWC006	C-Sand	15	12			x	x	x			
MWC007	C-Sand	2	3	Yes		x	x	x			
MWC009	C-Sand	164	30	Yes		x	x	x			
MWC011	C-Sand	105	26			x	x	x			
MWC015	C-Sand	757	42			x	x	x			
MWC016	C-Sand	1,620	54			x	x	x			
MWC017	C-Sand	921	46	Yes		x	x	x			
MWC021	C-Sand	16	13	Yes		x	x	x			
MWC022	C-Sand	38	18	Yes		x	x	x			
MWC023	C-Sand	909	43	Yes		x	x	x			
MWC024	C-Sand	2,315	62	Yes	x	x	x	x	No[3]	Yes[4]	Monitored under Building 2 WDR Program

AVOCET ENVIRONMENTAL, INC.

Table 1
March 2010 Sitewide Groundwater Monitoring Program
Boeing Former C-6 Facility
Los Angeles, California

Well ID	Water-Bearing Unit	Total Select VOCs Concentration (µg/l)	Sampling Order	Dedicated Pump?	March 2010 Annual Event Analytical Program						Comments
					Methane Monitoring	Water Level Gauging	VOCs (8260B)	Field Parameters[1]	Ferrous Iron?	WDR Analyses?	
Gage Monitoring Wells											
MWG001	Gage	33	17	Yes		x	x	x			
MWG002	Gage	466	37	Yes		x	x	x			
MWG003	Gage	163	29	Yes		x	x	x			
MWG004	Gage	44	20	Yes		x	x	x			
Bioremediation Monitoring Wells											
AW0055UB	Upper B-Sand	19,470	77	Yes	x	x	x	x			
AW0064UB	Upper B-Sand	2,450	63	Yes	x						Methane Monitoring Only
AW0065UB	Upper B-Sand	251	33	Yes	x						Methane Monitoring Only
AW0066UB	Upper B-Sand	5	6	Yes	x						Methane Monitoring Only
AW0067UB	Upper B-Sand	6	7	Yes	x						Methane Monitoring Only
AW0074UB	Upper B-Sand	10,540	71	Yes	x	x	x	x			
AW0077UB	Upper B-Sand	39	19	Yes	x	x	x	x			
IRZMW001A	B-Sand	15,690	74		x	x	x	x			
IRZMW001B	B-Sand	535	39		x	x	x	x			
IRZMW002A	B-Sand	15,302	73			x					
IRZMW002B	B-Sand	582	41			x					
IRZMW003A	B-Sand	17,853	76			x					
IRZMW003B	B-Sand	2,103	58			x					
IRZMW004	B-Sand	3,784	65			x	x	x			
IRZMW005	B-Sand	3,972	66			x	x	x			
IRZCMW001	C-Sand	1,027	48	Yes	x	x	x	x	No[3]	Yes[4]	Monitored under Building 2 WDR Program
IRZCMW002	C-Sand	1,126	51	Yes	x	x	x	x	No[3]	Yes[4]	Monitored under Building 2 WDR Program
IRZCMW003	C-Sand	5,090	68	Yes	x	x	x	x	No[3]	Yes[4]	Monitored under Building 2 WDR Program
Subtotals		Sitewide Program			19	61	56	56			
		WDR Program			6	6	6	6	0	6	
Quality Control Samples[2]											
Duplicates (1 per 20 wells)							x (4)				
Rinseate Blanks (1 per day)							x (4)				
Trip Blanks (1 per day)							x (6)				
Totals					25	67	82	77	0	6	

Notes:
VOCs = volatile organic compounds using EPA Method 8260B
TOC = Total Organic Carbon
DHGs = Dissolved hydrocarbon gases - MEE (Methane, Ethane, Ethene) using Method RSK 175
Field Parameters = pH, dissolved oxygen (DO), redox, turbidity, electrical conductivity, and temperature.
(1) 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).
(2) Quality control sample number based on number of wells and estimated number of sampling days.
(3) Test for ferrous iron using the Hach DR890 Colorimeter - not required by WDR after Year 1.
(4) Analyze samples in accordance with the Building 2 WDR Program summarized in Table 2.

AVOCET ENVIRONMENTAL, INC.

Table 2
March 2010 Building 2 WDR Groundwater Monitoring Program
Boeing Former C-6 Facility,
Los Angeles, California

Well Information			Field Program				Laboratory Program									Comments
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 310.1	Anions (NO_3, NO_2, Cl, SO_4) EPA 300.0	Chloride EPA 300.0	Total Dissolved Solids EPA 160.1	DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA; by qPCR analysis (North Wind)	
Group A Wells																
IRZC0001 & IRZC0003 through IRZC0020	A	C-Sand	-	-												Not accessible for sampling
Group B Wells																
CMW026	B	C-Sand	547	1	x	x	x	x		x						Sitewide & SA3 WDR Monitoring
IRZCMW003	B	C-Sand	5,090	6	x	x	x	x		x						Sitewide & SA3 WDR Monitoring
IRZCMW002	B	C-Sand	1,126	4	x	x	x	x		x						Sitewide & SA3 WDR Monitoring
MWC024	B	C-Sand	2,315	5	x	x	x	x		x						Sitewide & SA3 WDR Monitoring
Group C Wells																
CMW002	C	B-Sand	1,100	3	x	x	x	x	x	x			x	x	x	Sitewide & SA3 WDR Monitoring
Group D Well																
IRZCMW001	D	B-Sand	1,027	2	x	x	x	x	x	x			x	x	x	Sitewide & SA3 WDR Monitoring
Quality Control Samples																
Duplicates (1 per 20 wells)							x (est. 1)									
Rinsate Blanks (1 per day)							(est. 0)									dedicated pumps
Trip Blanks (1 per cooler)							x (est. 1)									
				Totals:	6	6	9	6	2	6	0	0	2	2	2	

Notes: Field Parameters = pH, DO, ORP, EC, temp, and turbidity.*
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
SA3 = Third (and final) semiannual sampling event.

Select VOCs for Total VOC calculation include PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and VC (June 2007).

* Per WDR, ferrous iron analysis by field kit is not required after year 1.

AVOCET ENVIRONMENTAL, INC.

Figures

AVOCET
ENVIRONMENTAL, INC.

S:\GIS\1155 Boeing C6\1155.010 Groundwater Monitoring 2009\ArcMapDocuments\009_1155.010 Groundwater Monitoring Well Location Map.mxd\05/28/09

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

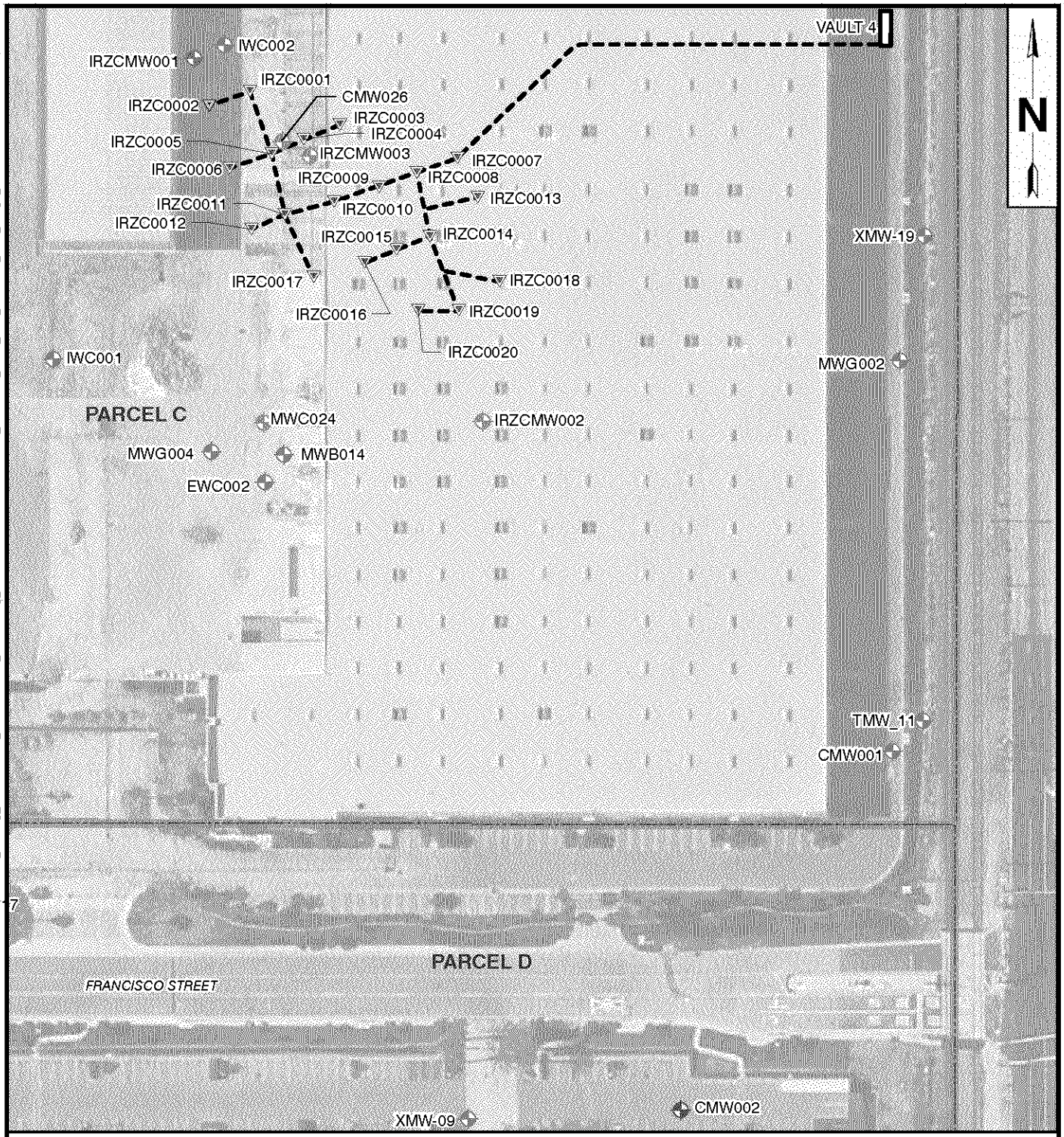
0 250 500
SCALE

FIGURE 1

GROUNDWATER MONITORING WELL LOCATION MAP

BOEING FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.



LEGEND

- Gropu A 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
- Approximate Parcel Boundary

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\011_1155.006_WDR_Well_Location_Map_Bldg2_wAmendmentWells.mxd\01/26/10

Attachment 2

Field Data Forms

AVOCET
ENVIRONMENTAL, INC.

AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 March 2010 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.012

Location: Torrance, CA **Field Personnel:** DML,DAB, BS, DM **Date:** 3/22/2010

CGI Instrument ID: MuliRAE IR **PID Instrument ID:** MultiRAE IR **Solinst ID:** -

Field Conditions: Partly Cloudy, Warm

Sampling Methods: Initial CGI/PID collected approx. 1" above center of casing immediately after opening. Measure elapsed time when CGI ≤ 2%LEL

Well ID	Previous Measurement Date	Previous Depth to Water	Field Personnel	Time	PID (ppm)	Maximum Previous CGI (%LEL)	Initial CGI (%LEL)	Time to Disperse (mm:ss)	Measurement Point	Depth to Water	Depth to Water #2	Change in DTW	Comments/Well Conditon
EWB001	Mar-09	55.5	DM	8:16	0		NM	-	TOC-N	55.55	55.55	0.05	good
MWB028	Sep-09	63.72	DL		1.3	0%	0	-	TOC-N	63.56	63.56	-0.16	ok
TMW_07	Sep-09	60.78	DM	8:48	0	0%	0	-	TOC-N	60.6	60.6	-0.18	gross decon/replace rim seal
TMW_08	Mar-09	60.39	DM	9:00	0		0	-	TOC-N	60.55	60.55	0.16	replace rim seal
MWB003	Mar-09	63.44	DL	14:30	0	5%	0	-	TOC-N	63.62	63.62	0.18	
MWC006	Mar-09	60.03	DM	9:13	0		0	-	TOC-N	60.36	60.36	0.33	replace rim seal, bailed H2O
EWB002	Sep-09	60.4	DM	9:37	0	-	0	-	TOC-N	60.15	60.15	-0.25	retap, replace rim seal, replace bolt, gross
AW0077UB	Sep-09	60.61	DM	9:49	0	60%	0	-	TOC-N	60.5	60.5	-0.11	CH4 tag, no bolts, 18" lid
MWC011	Mar-09	60.29	DM	10:00	0		0	-	TOC-N	60.62	60.62	0.33	replace rim seal, bailed H2O
AW0073C	Sep-09	60.17	DM	10:06	0	0%	0	-	TOC-N	59.97	59.97	-0.2	no bolts, 18" lid
WCC_06S	Sep-09	59.17	DM	10:15	0	0%	0	-	TOC-N	59.04	59.04	-0.13	
MWB027	Sep-09	63.61	DM	10:25	0	0%	0	-	TOC-N	63.35	63.35	-0.26	
AW0064UB	Sep-09	58.84	DM	10:34	6.4	31%	8%	>1:00	TOC-N	58.74	58.74	-0.1	24" lid, no bolts, CH4 tag
AW0075UB	Sep-09	59.9	DM	10:43	15.6	30%	4%	>1:00	TOC-N	59.71	59.71	-0.19	18" lid, no bolts, CH4 tag
EWC001	Mar-09	58.95	DM	8:29	0		0	-	TOC-N	59.16	59.16	0.21	replace rim seal and bolts, bailed H@O
AW0074UB	Sep-09	58.35	DM	10:53	0	13%	0	-	TOC-N	59.2	59.2	0.85	18" lid, no bolts
WCC_03S	Sep-09	58.98	DM	11:05	0	0%	0	-	TOC-N	59.05	59.05	0.07	retap, replace rim seal, replace bolts
MWB006	Sep-09	62.94	DM	9:18	1.5	1%	0	0:20	TOC-N	60.14	60.14	-2.8	
AW0055UB	Sep-09	60.09	DM	11:13	17	>100%	0	>1:00	TOC-N	59.92	59.92	-0.17	CH4 tag, no bolts, 18" lid

AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 March 2010 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.012

Location: Torrance, CA **Field Personnel:** DML,DAB, BS, DM **Date:** 3/22/2010

CGI Instrument ID: MuliRAE IR **PID Instrument ID:** MultiRAE IR **Solinst ID:** -

Field Conditions: Partly Cloudy, Warm

Sampling Methods: Initial CGI/PID collected approx. 1" above center of casing immediately after opening. Measure elapsed time when CGI ≤ 2%LEL

Well ID	Previous Measurement Date	Previous Depth to Water	Field Personnel	Time	PID (ppm)	Maximum Previous CGI (%LEL)	Initial CGI (%LEL)	Time to Disperse (mm:ss)	Measurement Point	Depth to Water	Depth to Water #2	Change in DTW	Comments/Well Conditon
BL-03	Sep-09	65.61	BS	8:15	0	0%			TOC-N	65.75	65.75	0.14	Well seal replaced
DAC-P1	Sep-09	61.3	BS	8:34	0	0%			TOC-N	61.46	61.46	0.16	Well seal replaced
MWC007	Sep-09	57.98	BS	8:59	0	0%	0	-	TOC-N	57.99	57.99	0.01	
WCC_05S	Sep-09	59.31	BS	9:19	0	0%	0	-	TOC-N	59.33	59.33	0.02	
MWC004	Sep-09	58.65	BS	9:31	0	0%	0	-	TOC-N	58.63	58.63	-0.02	
WCC_12S	Sep-09	58.04	BS	9:35	0	0%	0	-	TOC-N	58.01	58.01	-0.03	
MWC022	Sep-09	58.11	BS	9:50	0	0%	0	-	TOC-N	58.02	58.02	-0.09	Well seal replaced
MWB020	Sep-09	56.91	BS	10:00	0	0%	0	-	TOC-N	56.99	56.99	0.08	Apron cracked
WCC_09S	Sep-09	61.66	BS	9:40	0	0%	0	-	TOC-N	61.64	61.64	-0.02	
WCC_07S	Sep-09	58.77	BS	10:10	0	0%	0	-	TOC-N	58.78	58.78	0.01	
MWC023	Sep-09	58.04	BS	10:15	0	0%	0	-	TOC-N	58.12	58.12	0.08	
WCC_04S	Sep-09	58.78	BS	10:24	0	0%	0	-	TOC-N	58.8	58.8	0.02	Well seal replaced
MWB007	Sep-09	57.76	BS	9:04	0	0%	0	-	TOC-N	57.81	57.81	0.05	Well seal replaced
TMW_14	Sep-09	66.21	BS	8:45	0	0%	0	-	TOC-N	66.32	66.32	0.11	Well seal replaced
TMW_15	Sep-09	64.42	BS	8:50	0	0%	0	-	TOC-N	64.48	64.48	0.06	
XMW-09	Mar-09	60.4	-	-	-	0%	-	-	TOC-N	-	-	-	Montrose wells not gauged or sampled
CMW002	Sep-09	60.76	BS	10:32	0	0%			TOC-N	60.72	60.72	-0.04	

AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 March 2010 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.012

Location: Torrance, CA **Field Personnel:** DML,DAB, BS, DM **Date:** 3/22/2010

CGI Instrument ID: MuliRAE IR **PID Instrument ID:** MultiRAE IR **Solinst ID:** -

Field Conditions: Partly Cloudy, Warm

Sampling Methods: Initial CGI/PID collected approx. 1" above center of casing immediately after opening. Measure elapsed time when CGI ≤ 2%LEL

Well ID	Previous Measurement Date	Previous Depth to Water	Field Personnel	Time	PID (ppm)	Maximum Previous CGI (%LEL)	Initial CGI (%LEL)	Time to Disperse (mm:ss)	Measurement Point	Depth to Water	Depth to Water #2	Change in DTW	Comments/Well Conditon
XMW-19	Mar-09	56.26	-	-	-	0%	-	-	TOC-N	-	-	-	Montrose wells not gauged or sampled
MWB013	Sep-09	61.97	DML	9:40	0	0%	0	-	TOC-N	61.84	61.84	-0.13	
TMW_11	Sep-09	57.21	DML	10:10	0	0%	0	-	TOC-N	56.98	56.98	-0.23	good condition
CMW001	Sep-09	62.43	DML	10:18	0	0%	0	-	TOC-N	62.18	62.18	-0.25	no gasket
TMW_10	Sep-09	56.95	DML	10:36	0	0%	0	-	TOC-N	56.79	56.79	-0.16	hill encroaches on well, partially overgrown
MWC021	Sep-09	62.96	DML	10:45	0	0%	0	-	TOC-N	61.66	61.66	-1.3	
MWG001	Sep-09	62.96	DML	11:34	0	0%			TOC-N	62.56	62.56	-0.4	gross decon/replace rim seal, Bailed H2O
MWC009	Sep-09	61.21	DML	11:45	0	0%	0	-	TOC-N	61	61	-0.21	Bailed H2O, replaced rim seal
MWB019	Sep-09	62.67	DML	11:58	0	0%	0	-	TOC-N	62.62	62.62	-0.05	
MWC017	Sep-09	63.22	DML	12:05	0	0%	0	-	TOC-N	63.04	63.04	-0.18	replaced rim seal
MWG002	Sep-09	63.89	DML	12:14	0	0%			TOC-N	63.62	63.62	-0.27	Bailed H2O, replaced rim seal
IRZCMW002	Sep-09	63.28	DML	8:43	0	11%	4%	20 sec	TOC-N	63.24	63.24	-0.04	
IRZMW001B	Mar-09	63.59	DML	9:05	0.1	1%	0	-	TOC-N	64.02	64.02	0.43	
IRZMW001A	Mar-09	63.63	DML	9:09	4.8	44%	>100%	>5min	TOC-N	64.03	64.03	0.4	
IRZMW002B	Mar-09	63.67	DML	9:12	0	0%	0	-	TOC-N	63.81	63.81	0.14	gasket replaced
IRZMW002A	Mar-09	63.56	DML	9:13	1	0%	0	-	TOC-N	63.72	63.72	0.16	
IRZMW003B	Mar-09	63.67	DML	8:58	0	0%	0	-	TOC-N	63.83	63.83	0.16	gasket replaced
IRZMW003A	Mar-09	63.64	DML	8:59	13.3	0%	6%	20 sec	TOC-N	63.78	63.78	0.14	

AVOCET ENVIRONMENTAL, INC.

Groundwater Monitoring Well Gauging Sheet

Project Name: Boeing C-6 March 2010 Gauging Event **Project Manager:** Michael Rendina **Project No.:** 1155.012

Location: Torrance, CA **Field Personnel:** DML,DAB, BS, DM **Date:** 3/22/2010

CGI Instrument ID: MuliRAE IR **PID Instrument ID:** MultiRAE IR **Solinst ID:** -

Field Conditions: Partly Cloudy, Warm

Sampling Methods: Initial CGI/PID collected approx. 1" above center of casing immediately after opening. Measure elapsed time when CGI ≤ 2%LEL

Well ID	Previous Measurement Date	Previous Depth to Water	Field Personnel	Time	PID (ppm)	Maximum Previous CGI (%LEL)	Initial CGI (%LEL)	Time to Disperse (mm:ss)	Measurement Point	Depth to Water	Depth to Water #2	Change in DTW	Comments/Well Conditon
MWG003	Sep-09	61.8	DAB	8:45	0.1	0%			TOC-N	61.44	61.44	-0.36	1/2 gasket, bailed H2O
MWG004	Sep-09	60.9	DAB	9:03	0.1	0%			TOC-N	60.62	60.62	-0.28	ok
TMW_06	Sep-09	59.01	DAB	9:21	0.2	0%	0	-	TOC-N	58.77	58.77	-0.24	ok
MWB014	Sep-09	59.1	DAB	9:43	0.5	0%	0	-	TOC-N	58.82	58.82	-0.28	3/4" bolt not tapped, but ok for now.
CMW026	Sep-09	59.18	DAB	14:51	0.1	11%	0	-	TOC-N	58.87	58.87	-0.31	ok
MWC015	Sep-09	59.92	DAB	10:00	0.4	0%	0	-	TOC-N	59.67	59.67	-0.25	well cap doesn't seal
MWB012	Mar-09	59.75	DAB	10:18	2.6		0	-	TOC-N	59.47	59.47	-0.28	tubing in well, 5' down, 3/4" bolt not tapped
IRZCMW001	Sep-09	59.32	DAB	10:31	1.2	0%	0	-	TOC-N	59.11	59.11	-0.21	no gasket
TMW_04	Mar-09	58.29	DAB	10:51	0		0	-	TOC-N	58.31	58.31	0.02	ok
MWC016	Mar-09	60.27	DAB	11:13	0.5		0	-	TOC-N	60.28	60.28	0.01	ok
MW0005	Sep-09	59.29	DAB	11:38	1.4	0%	0	-	TOC-N	59.07	59.07	-0.22	well cap doesn't seal, broken gasket
IWC001	Sep-09	61.96	DAB	11:43	0.1	0%	0	-	TOC-N	60.61	60.61	-1.35	broken gasket
MWC024	Sep-09	59.44	DAB	12:10	1.4	>100%	0	-	TOC-N	59.16	59.16	-0.28	
IRZCMW003	Sep-09	59.36	DAB	13:25	3.2	>100%	0	-	TOC-N	59.05	59.05	-0.31	High CO2 4200ppm, boring open, needs
IRZB0081	Mar-09	60.17	DAB	13:54	13.1		21	30 sec	TOC-N	60.09	60.09	-0.08	ok
IRZB0095	Mar-09	59.76	DAB	14:10	0.2		0	-	TOC-N	59.94	59.94	0.18	broken valve
IRZMW004	Mar-09	60.35	DAB	14:46	0.9		0	-	TOC-N	60.25	60.25	-0.1	needs paint, lid eyehole broken
IRZMW005	Mar-09	60.01	DAB	14:38	0.4		0	-	TOC-N	59.91	59.91	-0.1	ok

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	AW0055UB	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 79	**Screen:** 69 - 89

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.19	92	31.81	NM	1/4	0.0054	79	0.8	1.23

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					22.92	3.22	0.400	6.70	-234.00	6.20	
1457	50 PSI / 30 on / 100 off	1.25	250	60.19	21.50	~~0.5~~ 3.15	0.52	6.61	-113.6	9.45	
1459		1.75		60.19	21.57	3.15	0.49	6.61	-116.8	6.18	
1501		2.25		60.19	21.64	3.15	0.45	6.61	-119.4	6.04	
1503		2.75		60.19	21.67	3.16	0.40	6.61	-121.9	5.98	
1506		3.25		60.19	21.67	3.16	0.37	6.61	-123.2	5.65	

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
1452	1505	250	3.25	N/A	NA	60.19	1506	AW0055UB_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.15	17	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	AW0064UB	**Weather:**	Partly Cloudy
Measurement Point Description:	~~TOC~~ TOC	**Pump Intake:** 78.5	**Screen:** 68.5 - 88.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	58.08	92	~~32.92~~ 31.92	NM	1/4	0.0054	78.5	0.8	1.22

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					24.01	3.53	0.410	6.61	-202.00	148.00	
1317	50 PSI/50 c/100 ft	1.25	250	58.10	21.57	1.52	0.50	7.11	-157.7	51.0	
1319	↓	1.75	↓	58.11	21.76	1.14	0.32	7.09	-153.6	42.9	
1321		2.25		58.12	21.87	1.00	0.26	7.08	-151.3	21.7	
1323		2.75		58.12	21.95	0.92	0.23	7.07	-150.4	15.3	
1325		3.25		58.12	21.92	0.98	0.26	7.06	-149.8	12.0	
1327		3.75		58.12	21.94	1.01	0.26	7.04	-149.0	11.9	
1329	↓	4.25	↓	58.12	21.95	1.03	0.25	7.04	-149.0	11.7	

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
1312	1329	250	4.25	N/A	NA	~~1330~~ 58.12	1330	AW0064UB_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
0.67	6.4	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	AW0073C	**Weather:**	cloudy
Measurement Point Description:	TOC	**Pump Intake:** 106	**Screen:** 96 - 116

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.27	117	56.73	NM	1/4	0.0054	106	0.8	1.4

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	**Field Equipment:** YSI, 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
Previous Stabilized Parameters: 09-11-09					22.22	0.78	1.410	7.40	-26.00	7.00	
1028	65psi/30s/100ft	~~1.5~~ 1.5	250	60.31	21.74	0.78	1.18	7.41	-135.9	3.61	
1030		2.0		60.33	21.79	0.77	1.01	7.40	-140.6	8.36	
1032		2.5		60.33	21.81	~~0.77~~ 0.77	0.51	7.38	-151.8	7.19	
1034		3.0		60.33	21.82	0.77	0.42	7.37	-157.2	5.30	
1036		3.5		60.33	21.84	0.77	0.33	7.35	-159.5	6.20	
1038		4.0		60.33	21.85	0.77	0.30	7.33	-159.2	6.48	
1040		4.5		60.33	21.90	0.77	0.28	7.31	-158.4	6.18	

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
1022	1040	250	4.5	N/A	NA	60.33	1041	AW0073C_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		D.O. (mg/L)
Ferrous Iron (mg/L)	PID (ppm):	
0.95	0	0.3

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	AW0074UB	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 80'	**Screen:** 70 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.46	91	31.54	NM	1/4	0.0054	80	0.8	1.23

	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: YSI, 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
~~1356~~ 1351	Previous Stabilized Parameters: 09-11-09				23.02	2.53	0.530	6.60	-158.00	6.20	
1356	55PSI/50:1/10:H	1.25	250	59.48	21.85	2.40	0.99	6.55	-103.8	23.5	
1358	↓	1.75	↓	59.48	21.89	2.42	0.74	6.55	-106.8	19.7	
1400	↓	2.25	↓	59.48	21.92	2.40	0.52	6.56	-112.3	13.2	
1402	↓	2.75	↓	59.48	21.89	2.39	0.37	6.56	-113.9	9.91	
1404	↓	3.25	↓	59.48	21.91	2.36	0.31	6.57	-114.9	7.93	
1406	↓	3.75	↓	59.48	21.90	2.34	0.29	6.57	-115.1	7.27	
1407	↓	4.25	↓	59.48	21.90	2.33	0.32	6.57	-115.4	7.40	

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
~~1349~~ 1351	1407	250	4.25	N/A	NA	59.48	1408	AW0074UB_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.08	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	AW0075UB	**Weather:**	Partly cloudy
Measurement Point Description:	TOC	**Pump Intake:**	79 **Screen:** 69 - 89

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.95	93	33.05	NM	1/4	0.0054	79	0.8	1.23

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					22.76	2.32	0.500	7.62	-156.90	4.20	
1240	50psi/50.1/10 ft	1.25	250	59.95	22.08	2.57	0.67	6.89	-116.0	8.74	
1242	↓	1.75	↓	59.95	22.09	2.67	0.54	6.87	-122.5	8.54	
1244		2.25		59.95	22.16	2.70	0.45	6.87	-127.2	7.34	
1246		2.75		59.95	22.12	2.72	0.39	6.88	-129.8	5.58	
1248		3.25		59.95	22.09	2.74	0.33	6.89	-132.0	4.23	
1250		3.75		59.95	22.09	2.74	0.32	6.89	-133.0	3.93	
1252	↓	4.25	↓	59.95	22.16	2.74	0.30	6.89	-134.4	3.60	

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
1235	1252	250	4.25	N/A	NA	59.95	1253	AW0075UB_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
1.54	15.6	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	AW0077UB	**Weather:**	Cloudy
Measurement Point Description:	TOC	**Pump Intake:** 78	**Screen:** 70.5 - 85.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.78	86	25.22	NM	1/4	0.0054	78	0.8	1.22

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	**Field Equipment:** YSI, Dedicated Low-flow
					Purge Method: Micropurge
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	**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
Previous Stabilized Parameters: 09-11-09					22.74	3.05	0.250	6.80	-199.80	4.00	
0931	50psi/50ml/100ml	1.25	250	60.80	20.97	3.18	0.84	6.92	-132.3	15.3	
0933	↓	1.75	↓	60.80	21.32	3.06	0.63	6.88	-141.8	12.9	
0935	↓	2.25	↓	60.80	21.46	3.00	0.57	6.88	-146.1	10.2	
0937	↓	2.75	↓	60.80	21.50	2.95	0.52	6.86	-149.1	9.4	
0939	↓	3.25	↓	60.80	21.52	2.93	0.45	6.86	-152.0	8.8	
0941	↓	3.75	↓	60.80	21.50	2.90	0.44	6.85	-153.3	8.6	

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
0926	0941	250	3.75	N/A	NA	60.80	0942	AW0077UB_WG20100325_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.05	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 22 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	BL-03	**Weather:**	Partly Cloudy
Measurement Point Description:	TOC	**Pump Intake:** 69	**Screen:** 59 - 79

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	Tubing Diameter (in)	Tubing Volume (Liter/foot)	Tubing Length (feet)	Flow Cell Volume (Liters)	Initial Purge Volume (Liters)
—	65.75	79	13.25	—	1/4	0.0054	~~75~~ 69.75	0.800	1.2

	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, Parcel B

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
Previous Stabilized Parameters: 3/16/2009 8:05:00 AM					19.03	3.02	2.310	6.79	78.00	7.60	
1256	40PSI 50-100ft	1.2	200	65.75	21.79	2.93	4.32	6.69	-3.4	55	
1258	↓	1.7	↓	65.75	21.84	2.96	3.98	6.69	1.0	52	
1301		2.3		65.75	21.82	2.97	3.84	6.67	7.7	54	
1303		2.8		65.75	21.91	2.98	3.74	6.67	11.7	52	
1306		3.2		65.75	21.97	2.98	3.67	6.67	16.5	49	
1308	✓	3.7	✓	65.75	22.0	2.99	3.63	6.68	19.6	48	

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	1308	200	3.7	N/A	NA	65.75	1309	BL-03_WG201003 22 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

PID (ppm): 0.0

DUP:

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/26/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	CMW001	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 112	**Screen:** 99 - 124

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	62.21	124	50	NA	1/4	0.0054	120	0.75	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					24.63	0.74	0.230	9.24	-318.00	0.39	
0747	84 psi	1.5	300	62.29	21.79	0.854	0.90	7.41	-43.2	3	
0750	84 psi	2.4	300	62.29	21.92	0.850	0.67	7.38	-35.4	3	
0753	84 psi	3.3	300	62.30	21.96	0.849	0.66	7.48	-30.6	2	
0756	84 psi	4.2	300	62.30	21.92	0.848	0.65	7.47	-30.1	2	
0759	84 psi	5.1	300	62.30	21.90	0.847	0.59	7.47	-29.8	2	

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
0742	0803	300	5	N/A	NA	62.30	0800	CMW001_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, WDR Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	~~IBZ~~CMW002	**Weather:**	Sunny
Measurement Point Description:	TOC-N	**Pump Intake:** 112	**Screen:** ~~96-121~~ 99-124

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	60.60	124	52	NA	1/4	0.0054	120	0.75	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					21.40	1.87	0.200	6.56	-121.00	0.94	
1124	70 psi	1.5	250	60.63	21.36	1.042	0.77	7.40	63.1	5	
1127	70 psi	2.3	250	60.62	21.37	1.041	0.68	7.42	62.1	3	
1130	70 psi	3.0	250	60.62	21.40	1.041	0.60	7.43	60.4	3	
1133	70 psi	3.8	250	60.62	21.41	1.041	0.60	7.42	58.7	3	
1136	70 psi	4.5	250	60.62	21.41	1.041	0.60	7.43	56.3	3	

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
1118	1145	250	5	N/A	NA	60.62	1139	~~IBZ~~CMW002_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters	
Ferrous Iron (mg/L)	PID (ppm):
0.09	0

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, WDR Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	CMW026	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 105	**Screen:** 92 - 117

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.78	117	DM ~~105~~ 45	NA	1/4	0.0054	110	0.75	1.35

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					21.89	1.71	0.290	6.62	-137.00	0.49	
1030	70 psi	1.5	250	58.87	21.39	1.629	0.81	6.66	-44.3	59	
1033	70 psi	2.3	250	58.92	21.39	1.631	0.81	7.06	-56.2	8	
1036	70 psi	3.0	250	58.95	21.35	1.634	0.79	6.96	-68.8	5	
1039	70 psi	3.8	250	58.97	21.30	1.639	0.78	6.97	-77.5	4	
1042	70 psi	4.5	250	58.98	21.33	1.641	0.76	6.99	-82.8	4	
1045	70 psi	5.3	250	58.99	21.36	1.641	0.72	6.96	-86.1	4	

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
1024	1058	250	6	N/A	NA	58.99	1048	CMW026_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
0.29	0.1	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 22 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	DAC-P1	**Weather:**	Cloudy
Measurement Point Description:	TOC	**Pump Intake:** 75'	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	Tubing Diameter (in)	Tubing Volume (Liter/foot)	Tubing Length (feet)	Flow Cell Volume (Liters)	Initial Purge Volume (Liters)
—	61.46	90		—	1/4	0.0054	80'	.80	1.3

	Gallons/Foot				
Well Diameter (inches) = 4	0.75	2	4	6	**Field Equipment:** QED, Parcel B
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
Previous Stabilized Parameters: 3/16/2009 10:10:00 AM					20.57	1.89	2.690	7.13	41.00	32.60	
1345	48PSI sand/soft	1.3	200	61.47	21.43	~~3.67~~ 1.93	3.65	6.96	10.1	18.60	
1347	↓	1.8	↓	61.47	21.51	1.90	3.50	6.95	11.4	8.71	
1350		2.3		61.47	21.61	1.89	3.37	6.93	13.5	6.78	
1352		2.8		61.47	21.70	1.88	3.24	6.92	14.8	6.46	
1355		3.3		61.47	21.88	1.88	3.24	6.92	15.9	5.94	
1357		3.8		61.47	22.00	1.88	3.18	6.92	17.2	6.03	

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
1338	1357	200	3.8	N/A	NA	61.47	1358	DAC-P1_WG201003 22 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

PID (ppm): 0

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	EWB001	**Weather:**	Sunny
Measurement Point Description:	TOC, N	**Pump Intake:** 74'	**Screen:** 59.2 - 89.2

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	55.55	89.2	19	NA	1/4	0.0054	85	0.75	1.2

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-16-09					22.67	2.38	1.400	7.01	32.00	62.60	
0816	62 psi	1.2	300	55.58	21.12	3.437	5.42	6.55	220.3	96	
0819	62 psi	2.1	300	55.57	21.55	3.438	5.14	6.64	218.9	40	
0822	62 psi	3.0	300	55.58	21.58	3.442	5.13	6.67	218.9	29	
0825	62 psi	3.9	300	55.58	21.59	3.441	5.15	6.67	219.0	24	
0828	62 psi	4.8	300	55.58	21.60	3.442	5.06	6.70	219.2	24	
0831	62 psi	5.7	300	55.58	21.61	3.441	5.08	6.72	219.3	22	
0834	62 psi	6.6	300	55.58	21.64	3.441	5.03	6.74	219.4	23	

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
0812	0836	300	7	N/A	NA	55.58	0835	EWB001_WG20100323_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	EWB002	**Weather:**	Cloudy
Measurement Point Description:	TOC	**Pump Intake:** 75'	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.53	90	29.47	NM	1/4	0.0054	75'	0.8	1.2

	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: YSI, 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
	50 PSI/30:1/10 cfh	Previous Stabilized Parameters: 09-10-09			23.60	3.00	0.570	6.71	-93.60	31.60	
0958	~~0950~~	1.25	250	60.53	21.58	2.54	1.37	6.85	-95.0	5.42	
1000		1.75		60.53	21.71	2.64	0.79	6.81	-97.3	2.38	
1002		2.25		60.53	21.76	2.68	0.64	6.79	-99.2	2.45	
1004		2.75		60.53	21.79	2.70	0.49	6.79	-100.8	2.60	
1006		3.25		60.53	21.79	2.71	0.43	6.78	-102.0	2.52	
1008	✓	3.75	✓	60.53	21.77	2.71	0.45	6.78	-102.4	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
0953	1008	250	3.75	N/A	NA	60.53	1009	EWB002_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.66	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	EWC001	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	109.5
		Screen:	97 - 122

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.40	125	65.60	NM	1/4	0.0054	109.5	0.8	1.4

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-16-09					21.42	1.36	1.200	2.06	-73.00	2.80	
1359	65PSI/50:110off	1.5	250	65.65	22.40	1.15	0.91	6.85	-103.1	14.6	
1401	↓	2.0	↓	65.67	22.41	1.29	0.62	6.83	-112.0	12.3	
1403	↓	2.5	↓	65.68	22.40	1.38	0.41	6.82	-136.0	12.0	
1405	↓	3.0	↓	65.68	22.33	1.45	0.34	6.81	-142.6	11.6	
1407	↓	3.5	↓	65.68	22.33	1.49	0.36	6.80	-146.4	11.0	
1409	✓	4.0	✓	65.68	22.33	1.48	0.35	6.80	-149.7	11.2	

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
1353	1409	250	4.0	N/A	NA	65.68	1410	EWC001_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO: EB-AV-102403 @ 1345

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	03/ 25 /2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZB0081	**Weather:**	Cloudy
Measurement Point Description:	TOC	**Pump Intake:**	89'
		Screen:	64.5 – 89.5

A	B	C	D = C - B	E = B - A	G = D x F	H = screen length x F	I = 3G or G+2H
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)	**Minimum Purge Volume** (gal.)
NM	60.48	89.5	NM	NM	0.6	0.5	1.8

	Gallons/Foot				
Well Diameter (inches) =	0.75	2	4	6	8
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	2.61

Field Equipment: Waterra / YSI 556
Purge Method: Check valve + Tubing
Well Condition: Good

Time	Casing Volumes	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH [+/- 0.1 pH]	Conductivity (mS/cm²) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	Temperature (°C) [+/- 10%]	ORP (mV) [+/- 10%]	Observations
0832	0.5	0.3	NM	NM	6.81	1.76	>1000	~~>100~~ 0.56	20.51	-144.1	
0834	1.0	0.6	↓	↓	6.91	1.75	>1000	0.68	19.83	-169.3	
0836	1.5	0.9			6.86	1.76	>1000	0.42	20.38	-156.3	
0838	2.0	1.2			6.83	1.75	>1000	0.40	21.02	-149.3	
0840	2.5	1.5			6.77	1.73	>1000	0.42	21.09	-148.3	
0842	3.0	1.8			6.80	1.70	>1000	0.40	21.01	-143.6	

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
0829							0830	IRZB0081_WG20100325_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.40	13.1	NM

DUP:
DRUM NO:

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	03/25 /2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZB0095	**Weather:**	Cloudy
Measurement Point Description:	TOC	**Pump Intake:**	89'
		Screen:	65 - 90

A	B	C	D = C - B	E = B - A	G = D x F	H = screen length x F	I = 3G or G+2H
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)	**Minimum Purge Volume** (gal.)
NM	59.91	90	30.09	NM	0.6	0.5	1.8

	Gallons/Foot				
Well Diameter (inches) =	0.75	2	4	6	8
F - Gallons per foot of casing	0.02	0.16	0.65	1.47	2.61

Field Equipment: Waterra / YSI 556
Purge Method: check valve + tubing
Well Condition: Good

Time	Casing Volumes	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH [+/- 0.1 pH]	Conductivity (mS/cm²) [+/- 10%]	Turbidity (NTU) [+/- 10%]	Dissolved Oxygen (mg/L) [+/- 10%]	Temperature (°C) [+/- 10%]	ORP (mV) [+/- 10%]	Observations
0735	0.5	0.3	NM	NM	6.80	2.14	>1000	1.43	20.40	-67.5	
0736	1.0	0.6	↓	↓	6.84	1.92	>1000	1.15	21.28	-86.6	
0739	1.5	0.9	↓	↓	6.89	1.71	>1000	1.20	21.49	-92.2	
0741	2.0	1.2	↓	↓	6.89	1.66	>1000	1.25	21.80	-94.5	
0744	2.5	1.5	↓	↓	6.89	1.68	>1000	1.19	21.53	-97.3	
0746	3.0	1.8	↓	↓	6.88	1.63	>1000	1.22	21.47	-99.3	

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
0732	0746	NM	1.8	3.0	65.93	60.12	0749	IRZB0095-WG20100325-01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	NM
0.49	0.2	

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, WDR Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	BN
Well Identification:	IRZCMW001	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 104.5'	**Screen:** 92 - 117

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.14	117	57.86	NM	1/4	0.0054	104.5	0.8	1.4

	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: YSI, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good / Gasket replaced

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
Previous Stabilized Parameters: 09-09-09					22.47	1.25	0.280	7.00	-55.00	0.38	
0950	65psi/50ml/10lf	1.5	250	59.19	21.49	1.26	0.97	6.83	-110.9	3.52	
0952	↓	2.0	↓	59.21	21.61	1.26	0.57	6.83	-107.5	4.37	
0954	↓	2.5	↓	59.21	21.72	1.26	0.51	6.82	-105.3	2.46	
0956	↓	3.0	↓	59.21	21.77	1.26	0.44	6.82	-102.6	2.58	
0958	↓	3.5	↓	59.21	21.81	1.26	0.40	6.81	-100.3	2.59	

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
0944	0958	250	3.5	N/A	NA	59.21	0959	IRZCMW001_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
0.0	1.2	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, WDR Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IR2 CMW002	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	~~111.5~~ 108.5 **Screen:** ~~99-124~~ 96-121

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	63.19	124	60.18	NM.	1/4	0.0054	111.5	0.8	1.4

	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: YSI, Dedicated Low-flow

Purge Method: Micropurge

Well Condition: Good / Gasket replaced

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
~~0926~~	Previous Stabilized Parameters: 09-09-09				22.20	1.02	0.410	6.65	-35.00	0.11	
0821	65PSI 500/100 ft	~~200~~ 1.4	200	63.25	20.57	1.84	1.77	6.34	-82.5	6.65	
0822	↓	1.9	↓	63.27	20.91	~~0.87~~ 1.87	0.68	6.34	-101.5	5.17	
0825	↓	2.4	↓	63.27	20.96	1.89	0.67	6.33	-104.9	3.81	
0827	↓	2.9	↓	63.27	20.99	1.90	0.60	6.33	-109.3	3.69	
0830	↓	3.4	↓	63.27	21.02	1.90	0.58	6.33	-113.2	3.55	

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
0814	0830	200	3.4	N/A	NA	63.27	0831	IR2CMW002_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
0.46	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, WDR Sampling, Mar-10	**Date:**	3/23 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZCMW003	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 104.5	**Screen:** 92 - 117

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.22	117	57.78	NM	1/4	0.0054	104.5	0.3	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					22.27	1.16	1.070	7.01	-138.00	0.52	
1124	60PSI/50:1/100ml	1.5	250	57.92	21.33	1.23	1.28	6.68	-109.8	3.72	
1126	↓	2.0	↓	57.94	21.30	1.25	0.74	6.57	-104.1	3.67	
1128	↓	2.5	↓	57.95	21.26	1.26	0.55	6.59	-101.5	3.57	
1130	↓	3.0	↓	57.95	21.29	1.26	0.52	6.60	-99.2	3.46	
1132	↓	3.5	↓	57.95	21.26	1.26	0.55	6.60	-98.1	3.53	

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
1118	1132	250	3.5	N/A	NA	57.95	1133	IRZCMW003_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
0.20	3.2	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	Bens
Well Identification:	IRZMW001A	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 70	**Screen:** 65 - 75

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	64.40	75	10.60	NM	1/4	0.0054	70	0.8	1.2

	Gallons/Foot				
Well Diameter (inches) = 1.5	0.75	2	4	6	**Field Equipment:** YSI, Portable 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
~~1210~~	Previous Stabilized Parameters: 03-13-09				21.55	2.09	0.330	7.92	-98.00	13.20	
1211	45 PSI/500/100 ft	1.25	250	64.42	21.59	2.53	0.91	7.15	-45.2	29.3	
1213	↓	1.75	↓	64.42	21.73	2.54	0.61	7.14	-47.6	17.6	
1215		2.25		64.42	21.78	2.54	0.40	7.14	-49.7	10.8	
1217		2.75		64.42	21.80	2.54	0.35	7.14	-51.1	10.2	
1219	↓	3.25	↓	64.42	21.81	2.54	0.32	7.13	-52.6	11.1	

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
1206	1219	250	3.25	N/A	NA	64.42	1220	IRZMW001A_WG201003 24 _01

Notes: (units) [stabilization criteria] *Purging will continue until three consecutive measurements are within stabilization criterion.*	**Field Parameters**		**DUP:** **DRUM NO:**
	Ferrous Iron (mg/L): 0.38	PID (ppm): 4.8	NM

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZMW001B	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	85'
		Screen:	80 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	64.21	90	25.79	NM	1/4	0.0054	85	0.8	1.3

	Gallons/Foot			
Well Diameter (inches) = 1.5	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: YSI, Portable 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
Previous Stabilized Parameters: 03-13-09					21.59	1.71	0.260	7.81	-143.00	1.04	
0920	52PSI/Sa.10ohm	1.5	250	64.24	20.96	1.75	1.03	7.05	49.2	9.55	
0922	↓	2.0	↓	64.24	21.13	1.77	0.86	7.06	33.2	5.06	
0924	↓	2.5	↓	64.24	21.21	1.76	0.71	7.07	25.8	4.49	
0926	↓	3.0	↓	64.24	21.28	1.77	0.78	7.07	19.3	4.04	
0928	↓	3.5	↓	64.24	21.34	1.77	0.66	7.07	15.2	3.96	

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
0914	0928	250	3.5	N/A	NA	64.24	0929	IRZMW001B_WG20100324_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
0.26	0.1	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	BN
Well Identification:	IRZMW002A	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 73.5	**Screen:** 68 - 78

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	63.36	78		NM	1/4	0.0054	73.5'	0.8	1.2

	Gallons/Foot			
Well Diameter (inches) = 1.5	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: YSI, Portable Low-flow

Purge Method: Micropurge

Well Condition: Good / Gasket replaced

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
Previous Stabilized Parameters: 03-13-09					21.49	2.13	0.460	7.89	-102.00	126.00	
1107	45PSI/100 Sun/100 ft	1.25	250	63.36	21.25	2.45	1.51	7.10	-35.1	182	
1109	↓	2.75	↓	63.38	21.48	2.44	0.80	7.10	-37.9	222	
1111		3.25		63.38	21.62	2.45	0.67	7.10	-40.6	236	
1113		3.75		63.38	21.69	2.45	0.48	7.11	-43.1	238	
1115		4.25		63.38	21.72	2.45	0.43	7.11	-44.6	230	
1117	↓	4.75	↓	63.38	21.73	2.45	0.40	7.11	-45.6	227	

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
1102	1117	250	4.75	N/A	NA	63.38	1118	IRZMW002A_WG20100324_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
0.45	1	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZMW002B	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	85'
		Screen:	83 - 93

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	63.63	93	29.37	NM	1/4	0.0054	85'	0.8	1.3

	Gallons/Foot			
Well Diameter (inches) = 1.5	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: YSI, Portable 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
Previous Stabilized Parameters: 03-13-09					21.10	1.90	0.320	7.60	194.00	61.10	
0954	52PSI/30ml/100ml	1.5	250	63.63	21.10	1.69	0.80	7.16	-28.5	14.2	
0956		2.0	~~63.63~~	63.63	21.14	1.69	0.92	7.16	-36.5	10.2	
0958		2.5		63.63	21.31	1.69	0.71	7.15	-42.6	9.16	
1000		3.0		63.63	21.38	1.68	0.60	7.15	-48.0	7.54	
1002		3.5		63.63	21.44	1.68	0.51	7.14	-54.6	7.66	
1004		4.0		63.63	21.48	1.69	0.54	7.12	-57.0	7.18	

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
0948	1004	250	4.0	N/A	NA	63.63	1005	IRZMW002B_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
0.49	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S
Well Identification:	IRZMW003A	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 66'	**Screen:** 61 - 71

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	64.45	71	5.55	NM	1/4	0.0054	66'	0.8	1.1

	Gallons/Foot			
Well Diameter (inches) = 1.5	0.75	2	4	6
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47

Field Equipment: YSI, Portable Low-flow

Purge Method: Micropurge

Well Condition: Good/Gasket replaced

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
Previous Stabilized Parameters: 03-13-09					21.69	1.60	0.230	7.85	-82.00	104.00	
1234	43PSI/50ml/100ml	1.25	250	64.47	21.49	2.51	1.01	7.11	-49.4	108.3	
1236	↓	1.75	↓	64.47	21.56	2.33	0.87	7.08	-50.2	96.6	
1238	↓	2.25	↓	64.47	21.59	2.31	0.79	7.07	-50.4	89.3	
1240	↓	2.75	↓	64.47	21.64	2.29	0.73	7.05	-51.9	87.6	
1242	↓	3.25	↓	64.47	21.64	2.28	0.68	7.05	-52.1	85.3	

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
1229	1242	250	3.25	N/A	NA	64.47	1243	IRZMW003A_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
0.11	13.3	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZMW003B	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 85'	**Screen:** 80 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	64.09	90	25.91	NM	1/4	0.0054	85'	0.8	1.3

	Gallons/Foot				
Well Diameter (inches) = 1.5	0.75	2	4	6	**Field Equipment:** YSI, Portable 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
Previous Stabilized Parameters: 03-13-09					21.40	1.84	0.390	7.78	-176.00	24.00	
1027	52 PSI/50.1/100 hL	1.5	250	64.11	20.87	1.62	1.18	7.12	-98.6	22.0	
1029	↓	2.0	↓	64.11	21.07	1.61	0.88	7.10	-96.9	24.1	
1032	↓	2.5	↓	64.11	21.25	1.60	0.64	7.07	-94.2	25.0	
1034	↓	3.0	↓	64.11	21.36	1.60	0.54	7.07	-92.5	15.9	
1036	↓	3.5	↓	64.11	21.42	1.60	0.46	7.07	-92.2	15.5	
1038	↓	4.0	↓	64.11	21.48	1.60	0.41	7.07	-92.6	15.0	

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
1022	1038	250	4.0	N/A	NA	64.11	1039	IRZMW003B_WG201003 24_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.65	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	IRZMW004	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 77.5'	**Screen:** 65 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.40	90	29.60	NM	1/4	0.0054	77.5	0.8	1.25

	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: YSI, Portable Low-flow

Purge Method: Micropurge

Well Condition: Good / Replaced Gasket

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
Previous Stabilized Parameters: 03-16-09					20.31	2.19	0.670	6.79	-75.00	7.60	
1302	50 PSI 500/100 ml	1.25	250	60.43	22.01	2.05	0.95	6.62	-25.6	5.33	
1304	↓	1.75	↓	60.44	22.01	2.07	0.87	6.68	-29.6	3.18	
1306		2.25		60.44	22.04	2.09	0.82	6.70	-34.8	2.96	
1308		2.75		60.44	22.05	2.09	0.74	6.70	-35.8	3.27	
~~1310~~		~~3.25~~ B.W.									

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
1257	1308	250	2.75	N/A	NA	60.44	1309	IRZMW004_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
0.01	0.9	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/23 / 2010
Project No.:	1155.010	**Prepared by:**	Bens
Well Identification:	IRZMW005	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 77.5	**Screen:** 65 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.05	90	29.95	NM	1/4	0.0054	77.5	0.8	1.25

	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: YSI, Portable Low-flow

Purge Method: Micropurge

Well Condition: Good / Gasket replaced

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
Previous Stabilized Parameters: 03-16-09					19.15	1.79	0.460	6.83	-82.30	8.40	
1427	50PSI/50ml/10 off	1.25	250	60.09	22.55	1.82	1.00	6.76	-83.2	43.2	
1429		1.75		60.09	22.52	1.82	0.66	6.73	-79.9	34.1	
1431		2.25		60.09	22.57	1.82	0.54	6.71	-78.7	26.5	
1433		2.75		60.09	22.52	1.82	0.51	6.71	-77.9	18.1	
~~1435~~ 1435		3.25		60.09	22.52	1.81	0.40	6.73	-78.0	10.5	
~~1437~~ 1437		3.75		60.09	22.52	1.81	0.37	6.74	-78.6	7.75	
~~1439~~ 1439		4.25		60.09	22.52	1.81	0.37	6.76	-79.1	7.39	
1441		4.75		60.09	22.47	1.81	0.35	6.78	-80.4	7.22	

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
1422	1441	250	4.75	N/A	NA	60.09	1442	IRZMW005_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		D.O. (mg/L)
Ferrous Iron (mg/L)	PID (ppm):	
0.22	0.4	0.4

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	IWC001	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 105	**Screen:** 95 - 115

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	60.67	115	44	NA	1/4	0.0054	110	0.75	1.4

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-12-09					22.56	1.34	4.410	8.13	-1.00	53.00	
1517	82 psi	1.5	300	60.80	22.03	1.329	2.47	7.29	160.4	42	
1520	82 psi	2.4	300	60.81	21.98	1.370	2.37	7.45	160.1	51	
1523	82 psi	3.3	300	60.81	21.97	1.366	2.28	7.46	159.9	59	
1526	82 psi	4.2	300	60.81	21.94	1.363	2.34	7.46	159.9	51	
1529	82 psi	5.1	300	60.81	21.93	1.364	2.30	7.46	159.7	55	
1532	82 psi	6.0	300	60.81	21.93	1.364	2.41	7.46	159.8	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
1512	1539	300	6	N/A	NA	60.81	1534	IWC001_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.1	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MW0005	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	59.06	85	16	NA	1/4	0.0054	80	0.75	1.2

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-12-09					22.77	1.63	3.300	7.91	-23.00	15.40	
1401	57 psi	1.2	300	59.06	22.81	1.379	3.47	7.36	142.7	36	
1404	57 psi	2.1	300	59.06	22.65	1.327	4.46	7.43	139.9	50	
1407	57 psi	3.0	300	59.06	22.60	1.249	4.80	7.47	139.1	58	
1410	57 psi	3.9	300	59.06	22.64	1.177	5.30	7.51	139.4	66	
1413	57 psi	4.8	300	59.06	22.64	1.149	5.24	7.53	139.8	62	
1416	57 psi	5.7	300	59.06	22.62	1.150	5.30	7.55	140.3	65	
1419	57 psi	6.6	300	59.06	22.65	1.152	5.27	7.56	141.0	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
1357	1435	300	7	N/A	NA	~~AMS~~ 59.06	1421	MW0005_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	1.4	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/23/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWB003	**Weather:**	SUNNY
Measurement Point Description:	TOC,N	**Pump Intake:** 77	**Screen:** 65 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	63.62	90	13	NA	1/4	0.0054	85	0.75	1.2

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-16-09					22.91	1.99	4.800	7.04	36.00	20.60	
1430	66 psi	1.40	350	63.62	22.05	2.155	3.93	7.18	132.9	>1000	
1433	66 psi	2.40	350	63.62	22.02	2.150	3.84	7.18	133.9	>1000	
1436	66 psi	3.50	350	63.62	22.04	2.144	3.73	7.18	135.5	>1000	
1439	66 psi	4.55	350	63.62	22.09	2.131	3.77	7.18	136.4	>1000	
1442	66 psi	5.60	350	63.62	22.07	2.107	3.48	7.18	137.7	729	
1445	66 psi	6.65	350	63.62	22.06	2.100	3.44	7.18	138.1	615	
1448	66 psi	~~6~~ 7.75	350	63.62	22.06	2.082	3.42	7.17	139.6	542	
1451	66 psi	8.80	350	63.62	22.05	2.076	3.29	7.16	140.4	509	
1454	66 psi	9.90	350	63.62	22.06	2.071	3.24	7.17	141.0	497	

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
1426		350		N/A	NA		1457	MWB003_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	CHEMets D.O.=
NM	0	3 mg/L

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25 / 2010
Project No.:	1155.010	**Prepared by:**	DMZ
Well Identification:	MWB006	**Weather:**	Partly/Mostly Cloudy, warm
Measurement Point Description:	TOC-N	**Pump Intake:** 77.5	**Screen:** 65 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.32	90	17.2	NA	1/4	0.0054	80'	.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					23.81	7.83	0.450	5.65	-161.00	4.96	
12:05	45psi 11/9	1.2	200	60.45	22.76	8.03	0.17	5.92	-111	2.18	
12:08		1.8	200	60.52	22.85	8.03	0.15	5.91	-114	0.97	
12:11		2.4	200	60.71	22.87	8.02	0.13	5.91	-116	0.76	
12:14		3.0	200	60.85	22.94	8.02	0.13	5.90	-118	0.60	
12:17		3.6	200	61.02	22.94	8.01	0.12	5.91	-119	0.74	

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
12:05	12:17	200	3.6	N/A	NA	61.02	12:18	MWB006_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
1.87	1.5	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWB007	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	57.70	90	17	NA	1/4	0.0054	85	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					23.76	1.82	3.620	7.03	46.00	5.70	
1532	63 psi	1.4	350	57.70	21.93	2.007	3.26	7.36	99.5	3	
1535	63 psi	2.5	350	57.70	21.87	2.009	3.15	7.37	101.4	3	
1538	63 psi	3.5	350	57.70	21.89	2.006	3.12	7.37	104.0	2	
1541	63 psi	4.6	350	57.70	21.85	2.007	3.10	7.37	104.7	2	
1544	63 psi	5.6	350	57.70	21.86	2.006	3.12	7.37	104.9	3	

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
1528		350	6	N/A	NA	57.70	1545	MWB007_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWB012	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 64.5 - 84.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	59.52	84.5	15	NA	1/4	0.0054	80	0.75	1.2

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-10-09					22.73	1.35	8.010	7.37	22.00	48.40	
1149	60 psi	1.3	325	59.57	22.48	1.749	4.51	7.78	112.5	7	
1152	60 psi	2.3	325	59.58	22.47	1.747	4.62	7.72	113.0	4	
1155	60 psi	3.3	325	59.56	22.44	1.747	4.62	7.76	113.3	6	
1158	60 psi	4.2	325	59.56	22.44	1.747	4.61	7.80	113.9	5	
1201	60 psi	5.2	325	59.57	22.43	1.748	4.60	7.85	114.1	4	
1204	60 psi	6.2	325	59.56	22.41	1.749	4.66	7.87	115.3	4	

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
1145	1207	325	6.5	N/A	NA	59.56	1205	MWB012_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	2.6	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWB013	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	61.87	85	13	NA	1/4	0.0054	80	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					23.15	1.51	6.040	8.75	13.00	1.14	
0818	65 psi	1.2	400	61.96	21.27	1.729	5.29	6.69	41.8	4	
0821	65 psi	2.4	400	61.98	21.49	1.737	5.51	6.87	48.6	3	
0824	65 psi	3.6	400	61.98	21.54	1.738	5.44	6.84	52.7	2	
0827	65 psi	4.8	400	61.98	21.54	1.738	5.37	6.87	58.9	3	
0830	65 psi	6.0	400	61.98	21.53	1.736	5.42	6.89	64.9	2	
0833	65 psi	7.2	400	61.98	21.52	1.736	5.40	6.90	66.7	2	

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
0815	0848	400	7.5	N/A	NA	61.98	0835	MWB013_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWB014	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	DM ~~0.5~~ 58.95	85	16	NA	1/4	0.0054	85	0.75	1.2

	Gallons/Foot				
Well Diameter (inches) = 4	0.75	2	4	6	**Field Equipment:** YSI, Portable 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
Previous Stabilized Parameters: 03-10-09					21.59	1.28	3.940	7.12		54.00	
0908	53 psi	1.2	300	59.03	20.99	1.250	3.71	7.58	202.1	35	
0911	53 psi	2.1	300	59.02	21.06	1.261	3.82	7.57	202.0	15	
0914	53 psi	3.0	300	59.02	21.08	1.278	3.69	7.62	202.1	9	
0917	53 psi	3.9	300	59.02	21.11	1.294	3.77	7.58	202.4	8	
0920	53 psi	4.8	300	59.03	21.18	1.315	3.75	7.55	202.9	6	
0923	53 psi	5.7	300	59.03	21.17	1.319	3.80	7.52	202.8	5	

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
0904	0935	300	6	N/A	NA	59.03	0925	MWB014_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.5	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	Bens
Well Identification:	MWB019	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 75'	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	62.72	90.5	NM	27.78	1/4	0.0054	75'	0.8	1.21

	Gallons/Foot				
Well Diameter (inches) = 4	0.75	2	4	6	**Field Equipment:** YSI, Dedicated Low-flow
					Purge Method: Micropurge
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	**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
Previous Stabilized Parameters: 09-11-09					22.20	3.00	4.360	6.75	120.00	1.07	
1028	50 PSI/50:1/100 PL	1.25	250	62.75	21.69	2.77	5.52	6.54	-53.3	0.97	
1030	↓	1.75	↓	62.78	21.98	2.87	5.02	6.56	-50.0	0.84	
1032	↓	2.25	↓	62.79	22.29	2.94	4.77	6.58	-47.1	0.55	
1034	↓	2.75	↓	62.79	22.44	2.97	4.77	6.59	-45.9	0.63	
1036	↓	3.25	↓	62.79	22.45	2.98	4.81	6.63	-45.3	0.52	

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	1036	250	3.25	N/A	NA	62.79	1037	MWB019_WG201003 26 _01

Notes: (units) [stabilization criteria] *Purging will continue until three consecutive measurements are within stabilization criterion.*	**Field Parameters**			**DUP:** **DRUM NO:**
	Ferrous Iron (mg/L) NM	PID (ppm): 0	NM	

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWB020	**Weather:**	~~DM~~ SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 59.5 - 89.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	56.96	89.5	18	NA	1/4	0.0054	80	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					21.86	2.05	3.880	6.78	121.00	0.63	
1002	50 psi	1.3	250	57.03	21.08	1.919	3.64	7.15	209.4	5	
1005	50 psi	2.0	250	57.06	21.14	1.893	3.36	7.15	209.2	4	
1008	50 psi	2.8	250	57.07	21.13	1.885	3.31	7.14	209.4	4	
1011	50 psi	3.5	250	57.07	21.20	1.882	3.25	7.16	209.2	3	
1014	50 psi	4.3	250	57.07	21.23	1.883	3.31	7.15	209.2	3	

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
0957	1016	250	5	N/A	NA	57.07	1015	MWB020_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Bens
Well Identification:	MWB027	**Weather:**	Cloudy
Measurement Point Description:	TOC	**Pump Intake:** 77.5	**Screen:** 67.5 - 87.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	63.65	91.5	27.85	NM	1/4	0.0054	77.5	0.8	1.22

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	**Field Equipment:** YSI, Dedicated Low-flow
					Purge Method: Micropurge
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	**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
Previous Stabilized Parameters: 09-11-09					22.24	2.11	3.720	7.03	8.00	6.01	
1132	50PSI/50ml/100ft	1.25	250	63.68	21.44	2.04	5.56	6.85	-20.5	7.84	
1134		1.75		63.70	21.41	2.07	4.65	6.78	-15.9	7.67	
1136		2.25		63.72	21.48	2.07	3.96	6.76	-13.1	7.58	
1138		2.75		63.72	21.55	2.07	3.87	6.75	-12.0	5.73	
1140		3.25		63.72	21.68	2.07	3.81	6.74	-10.1	4.22	
1142		3.75		63.72	21.67	2.08	3.79	6.73	-9.3	4.00	
1144		4.25		63.72	21.68	2.08	3.78	6.73	-9.2	3.86	

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	1144	250	4.25	N/A	NA	63.72	1145	MWB027_WG201003 25 _01

	Field Parameters			
Notes: (units) [stabilization criteria] *Purging will continue until three consecutive measurements are within stabilization criterion.*	Ferrous Iron (mg/L) NM	PID (ppm): 0	NM	**DUP:** **DRUM NO:**

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	Pm
Well Identification:	MWB028	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 78	**Screen:** 65 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	63.56	90	14	NA	1/4	0.0054	90	0.75	1.23

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	**Field Equipment:** YSI, Portable 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
Previous Stabilized Parameters: 03-12-09					23.07	1.53	6.690	7.92	-68.00	2.59	
0914	56 psi	1.375	275	63.58	21.61	1.555	4.45	7.15	210.0	679	
0917	56 psi	2.2	275	63.59	21.71	1.466	4.52	7.31	209.3	636	
0920	56 psi	3.1	300	63.59	21.68	1.461	4.48	7.24	209.3	535	
0923	56 psi	4.1	325	63.59	21.76	1.451	4.51	7.23	209.3	511	
0926	56 psi	5.0	300	63.59	21.74	1.450	4.56	7.24	209.6	506	
0929	56 psi	5.9	300	63.58	21.77	1.444	4.57	7.24	209.6	490	

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
0909	0930	300	6	N/A	NA	63.58	0930	MWB028_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	1.3	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC004	**Weather:**	SUNNY
Measurement Point Description:	TOC,N	**Pump Intake:** 106	**Screen:** 96 - 116

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.53	116	47	NA	1/4	0.0054	115	0.75	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					22.64	0.79	0.440	9.60	-247.00	0.36	
1238	78 psi	1.5	300	58.80	22.04	0.851	0.93	7.70	183.6	4	
1241	78 psi	2.4	300	58.78	22.16	0.884	0.61	7.67	182.9	3	
1244	78 psi	3.3	300	58.78	22.24	0.885	0.60	7.67	182.3	3	
1247	78 psi	4.2	300	58.79	22.30	0.884	0.61	7.66	180.6	3	
1250	78 psi	5.1	300	58.78	22.25	0.884	0.60	7.67	179.6	3	
1253	78 psi	6.0	300	58.79	22.28	0.883	0.58	7.67	179.2	3	

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
1233	1315	300	6	N/A	NA	58.79	1255	MWC004_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 22 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC006	**Weather:**	partly cloudy
Measurement Point Description:	TOC, N	**Pump Intake:** 105'	**Screen:** 95 - 115

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	Tubing Diameter (in)	Tubing Volume (Liter/foot)	Tubing Length (feet)	Flow Cell Volume (Liters)	Initial Purge Volume (Liters)
NA	60.36	115'	55	NA	1/4	0.0054	110	0.75	1.4

	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, CTSI lot
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
Previous Stabilized Parameters: 3/10/2009 9:55:00 AM					23.20	0.78	0.530	7.28	-182.00	756.00	
1329	65 psi	1.5	200	60.37	23.14	0.851	1.74	7.41	28.1	320	
1332	65 psi	2.1	200	60.39	23.08	0.850	1.41	7.42	31.3	372	
1335	65 psi	2.7	200	60.39	23.06	0.847	1.36	7.42	32.0	379	
1338	65 psi	3.3	200	60.38	23.10	0.845	1.08	7.43	32.1	368	
1341	65 psi	3.9	200	60.38	23.10	0.844	1.13	7.40	32.1	349	
1344	65 psi	4.5	200	60.38	23.12	0.844	1.09	7.39	31.7	355	

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
1321	1345	200	4.5	N/A	NA	60.38	1345	MWC006_WG20100322_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters
PID (ppm): 0

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 22 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S
Well Identification:	MWC007	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	107'
		Screen:	97 - 117

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	Tubing Diameter (in)	Tubing Volume (Liter/foot)	Tubing Length (feet)	Flow Cell Volume (Liters)	Initial Purge Volume (Liters)
–	57.99	119	61.01	–	1/4	0.0054	107	~~8.00~~ 0.8	1.4

	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, Public Parking Lot

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
Previous Stabilized Parameters: 9/9/2009 9:21:00 AM					23.01	0.92	1.720	8.92	-122.00	1.22	
D- ~~1041~~ 1141	60PSI 30/10 off	1.5	200	58.02	22.45	1.032	4.70	7.31	-26.1	22	
D- ~~1043~~ 1143		2.0		58.03	22.32	1.044	3.25	7.28	-44.6	6.30	
D- ~~1046~~ 1146		2.5		58.03	22.23	1.049	2.67	7.27	-43.5	2.60	
D- ~~1048~~ 1148		3.0		58.03	22.17	1.052	2.44	7.27	-41.3	1.96	
1151		3.5		58.03	22.15	1.055	2.26	7.27	-38.9	2.15	
1153		4.0		58.03	22.14	1.056	2.20	7.27	-37.5	2.32	
1156		4.5		58.03	22.09	1.058	2.10	7.26	-36.3	2.28	

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
1133	1156	200	4.5	N/A	NA	58.03	1157	MWC007_WG201003 22 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

PID (ppm): 0.0

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	MWC009	**Weather:**	Sunny.
Measurement Point Description:	TOC	**Pump Intake:** 111'	**Screen:** 101 - 121

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	61.19	125	63.81	NM	1/4	0.0054	111	0.8	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					21.97	0.86	0.300	7.39	17.00	2.20	
0929	65PSI/50:1100	1.5	250	63.81	21.14	0.82	1.02	7.22	-103.6	3.99	
0931		2.0		63.81	21.25	0.86	0.67	7.19	-101.2	1.18	
0933		2.5		63.81	21.34	0.83	0.53	7.17	-99.2	1.25	
0935		3.0		63.81	21.35	0.84	0.46	7.15	-97.2	0.80	
0937		3.5		63.81	21.35	0.84	0.45	7.14	-96.2	0.64	

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
0923	0937	250	3.5	N/A	NA	63.81	0938	MWC009_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		DO (mg/L)
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	0.8

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 22 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC011	**Weather:**	PARTLY CLOUDY
Measurement Point Description:	TOC, N	**Pump Intake:** 104	**Screen:** 94 - 114

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	Tubing Diameter (in)	Tubing Volume (Liter/foot)	Tubing Length (feet)	Flow Cell Volume (Liters)	Initial Purge Volume (Liters)
NA	60.62	114	53	NA	1/4	0.0054	110	0.75	1.4

	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, CTSI lot
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
Previous Stabilized Parameters: 3/10/2009 10:27:00 AM					21.60	1.07	0.470	7.22	-161.00	126.00	
1430	68 psi	1700	240	60.63	22.33	1.627	1.44	6.95	21.1	318	
1433	68 psi	2425	240	60.63	22.29	1.631	1.35	6.97	16.0	286	
1436	68 psi	3125	240	60.63	22.21	1.635	1.35	6.95	9.2	282	
1439	68 psi	3850	240	60.63	22.23	1.635	1.27	6.94	3.8	250	
1442	68 psi	4550	240	60.63	22.17	1.631	1.11	6.95	0.9	193	
1445	68 psi	5275	240	60.63	22.17	1.603	1.13	6.93	-1.3	158	
1448	68 psi	6000	240	60.63	22.17	1.590	1.06	6.92	-4.4	149	
1451	68 psi	6725	240	60.63	22.17	1.585	1.09	6.91	-5.1	156	

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
1423	1453	240	7.0	N/A	NA	60.63	1453	MWC011_WG201003 22 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters
PID (ppm): 0

DUP:
DRUM NO:
EB-AV20100322-01 @ 1404

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC015	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 112	**Screen:** 100 - 125

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	59.73	125	52	NA	1/4	0.0054	125	~~1.4~~ 0.75	1.4

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-10-09					20.01	0.86	1.640	7.24	-171.00	30.80	
1023	78 psi	1.5	250	59.76	20.14	0.842	1.62	8.21	-22.8	8	
1026	78 psi	2.3	250	59.77	20.41	0.884	1.39	8.26	-10.3	8	
1029	78 psi	3.0	250	59.77	20.54	0.892	1.41	7.40	-1.1	7	
1032	78 psi	3.8	250	59.77	20.56	0.894	1.34	7.31	2.9	8	
1035	78 psi	4.5	250	59.77	20.53	0.894	1.29	7.16	5.9	7	
1038	78 psi	5.3	250	59.77	20.53	0.895	1.32	7.22	8.2	7	
1041	78 psi	6.0	250	59.77	20.50	0.896	1.35	7.21	9.0	8	

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
1017	1045	250	6	N/A	NA	59.77	1043	MWC015_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.4	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC016	**Weather:**	Sunny
Measurement Point Description:	TOC, N	**Pump Intake:** 115	**Screen:** 102.5 - 127.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	60.35	127.5	55	NA	1/4	0.0054	120	0.75	1.4

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-12-09					23.34	1.26	5.410	8.32	-39.00	49.10	
1248	83 psi	1.5	250	60.41	22.38	1.273	2.82	7.53	136.9	10	
1251	83 psi	2.3	250	60.43	22.34	1.265	2.58	7.55	133.1	15	
1254	83 psi	3.0	250	60.44	22.29	1.273	2.55	7.55	132.1	21	
1257	83 psi	3.8	250	60.42	22.32	1.273	2.51	7.57	131.5	22	
1300	83 psi	4.5	250	60.41	22.34	1.276	2.50	7.59	130.6	12	
1303	83 psi	5.3	250	60.40	22.36	1.276	2.52	7.59	130.2	8	
1306	83 psi	6.0	250	60.41	22.33	1.278	2.46	7.60	130.7	7	
1309	83 psi	6.8	250	60.41	22.35	1.279	2.51	7.59	131.0	7	

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
1242	1325	250	7	N/A	NA	60.41	1312	MWC016_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.5	NM

DUP: MWC016_WG201003 24 _02
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	MWC017	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	112.5
		Screen:	100 - 125

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	63.20	128	64.80	NM	1/4	0.0054	112.5	0.8	1.49

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					22.98	0.87	0.220	7.00	-151.00	2.32	
1158	65PSI/50,1100ft	1.5	250	64.80	22.53	0.82	2.52	6.97	-193.5	8.46	
1200		2.0		64.80	22.74	0.84	1.00	6.95	-194.1	3.08	
1202		2.5		64.80	22.80	0.86	0.45	6.95	-190.8	2.71	
1204		3.0		64.80	22.67	0.86	0.52	6.93	-188.4	2.16	
1206		3.5		64.80	22.67	0.87	0.49	6.93	-188.3	1.89	
1208		4.0		64.80	22.65	0.88	0.44	6.97	-188.1	1.97	

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
1152	1208	250	4.0	N/A	NA	64.80	1209	MWC017_WG20100326_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/26/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC021	**Weather:**	Sunny
Measurement Point Description:	TOC, N	**Pump Intake:** 110	**Screen:** 97 - 122

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	61.71	122	48	NA	1/4	0.0054	120	0.75	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					23.78	0.83	0.300	9.62	-286.00	0.34	
1037	95 psi	1.4	350	61.80	22.57	0.964	0.82	7.72	-62.5	4	
1040	95 psi	2.5	350	61.81	22.45	0.959	0.55	7.72	-50.3	3	
1043	95 psi	3.5	350	61.81	22.46	0.958	0.52	7.73	-43.8	3	
1046	95 psi	4.6	350	61.82	22.48	0.958	0.53	7.72	-39.4	3	
1049	95 psi	5.6	350	61.82	22.45	0.958	0.52	7.73	-35.5	2	

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
1033	1111	350	6	N/A	NA	61.82	1050	MWC021_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC022	**Weather:**	Cloudy
Measurement Point Description:	TOC, N	**Pump Intake:** 107	**Screen:** 97 - 117

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.09	117	49	NA	1/4	0.0054	120	0.75	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					24.55	0.80	0.190	9.67	-261.00	0.15	
1047	70 psi	1.5	250	58.20	22.25	0.839	1.42	7.87	179.6	5	
1050	70 psi	2.3	250	58.20	22.45	0.877	0.71	7.84	180.1	4	
1053	70 psi	3.0	250	58.20	22.58	0.881	0.64	7.84	180.2	4	
1056	70 psi	3.8	250	58.20	22.68	0.885	0.67	7.84	180.3	3	
1059	70 psi	4.5	250	58.20	22.75	0.887	0.62	7.81	180.4	3	
1102	70 psi	5.3	250	58.20	22.80	0.888	0.61	7.84	180.3	2	

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
1041	1105	250	5.5	N/A	NA	58.20	1103	MWC022_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	CHEMets D.O.: 0.5 mg/L
NM	0	

DUP: MWC022_WG201003 25 _02
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWC023	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 107	**Screen:** 97 - 117

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.00	117	49	NA	1/4	0.0054	120	0.75	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					23.73	0.93	0.380	7.40	-218.00	3.80	
1425	76 psi	1.5	300	58.15	22.58	1.191	0.81	7.40	-18.9	3	
1428	76 psi	2.4	300	58.14	22.52	1.252	0.49	7.38	-3.9	3	
1431	76 psi	3.3	300	58.15	22.53	1.253	0.49	7.38	2.7	3	
1434	76 psi	4.2	300	58.15	22.49	1.252	0.49	7.38	6.5	3	
1437	76 psi	5.1	300	58.15	22.56	1.251	0.49	7.38	8.6	3	

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
1420	1510	300	5	N/A	NA	58.15	1440	MWC023_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, WDR Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	Bens.
Well Identification:	MWC024	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 108.5	**Screen:** 96 - 121

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.30	125	65.7	NM	1/4	0.0054	108.5	0.8	1.4

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					22.70	1.45	0.280	7.20	-31.00	0.65	
1042	65PSI/5on/10off	~~1.5~~ 1.5	250	59.30	22.56	1.49	1.05	6.99	-80.4	2.21	
1044	↓	2.0	↓	59.30	22.62	1.39	0.65	6.95	-80.0	5.03	
1046		2.5		59.30	22.62	1.39	0.52	6.93	-80.2	2.72	
1048		3.0		59.30	22.62	1.39	0.42	6.91	-80.5	3.22	
1050		3.5		59.30	22.64	1.39	0.38	6.90	-81.0	2.32	

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
1036	1051	250	3.5	N/A	NA	59.30	1051	MWC024_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
0.09	1.4	NM

DUP: MWC024_WG201003 23 _02

DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	MWG001	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 171	**Screen:** 156 - 186

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	62.63	186	108	NA	1/4	0.0054	180	0.75	1.7

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					25.82	0.59	0.230	9.93	-338.00	0.42	
1129	110 psi	1.8	200	62.77	22.53	0.674	0.53	7.99	-70.0	3	
1132	110 psi	2.4	200	62.75	22.52	0.675	0.48	7.99	-64.6	3	
1135	110 psi	3.0	200	62.74	22.53	0.675	0.43	7.99	-59.9	4	
1138	110 psi	3.6	200	62.75	22.41	0.676	0.44	7.99	-57.2	3	
1141	110 psi	4.2	200	62.75	22.30	0.676	0.43	7.99	-54.9	3	

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
1120	1230	200	4.5	N/A	NA	62.75	1143	MWG001_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	MWG002	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 175'	**Screen:** 162 - 192

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	63.74	195	131.26	NM	1/4	0.0054	175'	0.8	1.75

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	**Field Equipment:** YSI, Dedicated Low-flow
					Purge Method: Micropurge
F - **Gallons per foot of casing**	0.02	0.16	0.65	1.47	**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
Previous Stabilized Parameters: 09-11-09					24.09	0.71	0.140	8.02	-2.00	2.09	
1057	100PSF / 50 / 100ft	1.75	250	63.77	23.22	0.79	1.04	7.39	-196.9	6.70	
1059	↓	2.25	↓	63.80	23.29	0.75	0.66	7.40	-205.4	5.84	
n ~~1101~~ 1101	↓	2.75	↓	63.82	23.25	0.74	0.47	7.35	-211.4	3.83	
n ~~1104~~ 1103	↓	3.25	↓	63.82	23.37	0.73	0.43	7.29	-214.5	4.01	
1105	↓	3.75	↓	63.82	23.17	0.73	0.42	7.27	-215.0	3.72	

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
1050	1105	250	3.75	N/A	NA	63.82	1106	MWG002_WG201003 26 _01

Notes: (units) [stabilization criteria] *Purging will continue until three consecutive measurements are within stabilization criterion.*	**Field Parameters**		**DUP:** **DRUM NO:**
	Ferrous Iron (mg/L) NM	PID (ppm): 0	NM

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/26/2010
Project No.:	1155.010	**Prepared by:**	Ben S
Well Identification:	MWG003	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	169.5
		Screen:	154.5 - 184.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	61.63	185	123.37	NM	1/4	0.0054	169.5	0.8	1.72

	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: YSI, 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
~~08~~	Previous Stabilized Parameters: 09-10-09				24.88	0.81	0.160	9.75	-366.00	0.77	
0835	95 PSI/50-110 hz	1.75	250	61.63	21.58	0.71	1.07	8.64	-177.6	12.7	
0837	↓	2.25	↓	61.63	21.60	0.86	0.86	8.22	-166.8	9.54	
0839		2.75		61.63	21.59	0.88	0.73	7.94	-158.4	9.37	
0841		3.25		61.63	21.63	0.81	0.75	7.67	-147.9	8.00	
0843		3.75		61.63	21.67	0.99	0.49	7.56	-141.0	3.18	
0845		4.25		61.63	21.73	~~0.034~~ 0.84	0.46	7.51	-137.1	3.02	
0847	↓	4.75	↓	61.63	21.73	0.86	0.46	7.50	-136.9	2.98	

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
0828	0847	250	4.75	N/A	NA	61.63	0848	MWG003_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.1	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 26 / 2010
Project No.:	1155.010	**Prepared by:**	Beas
Well Identification:	MWG004	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:** 170'	**Screen:** 155 - 185

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.79	186	~~186~~ 125.21	NM	1/4	0.0054	170'	0.8	1.71

	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: YSI, 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
	Previous Stabilized Parameters: 09-10-09				23.80	0.57	0.370	9.84	-359.00	2.03	
0740	95PSI/500/100ft	1.75	250	60.83	17.12	0.83	1.25	7.45	-23.0	23.5	
0742		2.25		60.85	18.16	0.63	1.04	7.28	-81.3	12.4	
0744		2.75		60.85	19.29	0.62	1.00	7.39	-89.8	4.21	
0746		3.25		60.85	20.04	0.62	0.96	7.57	-98.6	3.18	
0748		3.75		60.85	20.28	0.63	0.90	7.67	-104.5	2.30	
0750		4.25		60.85	20.40	0.63	0.65	7.74	-112.9	2.37	
0752		4.75		60.85	20.43	0.59	0.56	7.78	-118.1	2.40	
0754		5.25		60.85	20.44	0.67	0.55	7.80	-120.0	2.24	
0756		5.75		60.85	20.45	0.64	0.53	7.81	-120.6	2.18	

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
0733	0756	250	5.75	N/A	NA	60.85	0757	MWG004_WG20100326_01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.1	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	TMW_06	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 77	**Screen:** 67 - 87

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.81	87	18	NA	1/4	0.0054	90	0.75	1.25

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-10-09					20.45	1.68	4.850	7.10	-20.00	198.00	
0753	50 psi	1250	250	58.84	19.99	1.763	4.41	8.37	197.8	107	
0756	50 psi	2000	250	58.85	20.08	1.768	4.37	7.87	199.2	80	
0759	50 psi	2750	250	58.87	20.23	1.751	4.15	7.76	201.7	93	
0802	50 psi	3500	250	58.87	20.24	1.745	4.12	7.81	202.7	85	
0805	50 psi	4250	250	58.87	20.30	1.732	4.08	7.81	204.1	84	
0808	50 psi	5000	250	58.87	20.36	1.728	4.11	7.74	204.5	79	
0811	50 psi	5750	250	58.87	20.40	1.726	4.05	7.76	204.6	81	

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
0748	0820	250	6	N/A	NA	58.87	0813	TMW_06_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0.2	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/24/2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	TMW_07	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	75
		Screen:	65 - 85

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	60.84	91	30.16	NM	1/4	0.0054	75	0.8	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					22.82	1.66	6.110	7.10	39.00	53.00	
0731	40PSI/50ml/10ml	1.25	250	60.86	20.59	1.59	5.00	7.02	143.6	15.3	
0733	↓	1.75	↓	60.86	20.84	1.61	5.00	7.02	139.0	14.7	
0734	↓	2.25	↓	60.86	20.90	1.62	5.06	7.03	135.3	14.2	
0736	↓	2.75	↓	60.86	20.95	1.62	5.04	7.04	131.6	13.1	
0738	↓	3.25	↓	60.86	21.01	1.62	4.99	7.04	126.2	12.8	
0740	↓	3.75	↓	60.86	21.04	1.62	5.06	7.04	123.8	12.2	

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
0726	0740	250	3.75	N/A	NA	60.86	0741	TMW_07_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 23 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	TMW_08	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 71	**Screen:** 61 - 81

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	60.57	81	10	NA	1/4	0.0054	80	0.75	1.2

	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: YSI, Portable 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
Previous Stabilized Parameters: 03-16-09					22.40	2.01	3.950	7.10	-89.00	69.90	
1316	60 psi	1.2	400	60.59	22.66	2.336	0.95	7.22	113.6	44	
1319	60 psi	2.4	400	60.58	22.52	2.301	0.76	7.22	106.6	32	
1322	60 psi	3.6	400	60.59	22.48	2.275	0.72	7.22	103.4	30	
1325	60 psi	4.8	400	60.59	22.45	2.239	0.68	7.21	98.4	25	
1328	60 psi	6.0	400	60.59	22.39	2.216	0.63	7.20	95.6	9	
1331	60 psi	7.2	400	60.58	22.41	2.205	0.65	7.21	94.6	7	
1334	60 psi	8.4	400	60.59	22.42	2.203	0.63	7.20	92.7	6	

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
1313	1340	400	9	N/A	NA	60.59	1335	TMW_08_WG201003 23 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/26/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	TMW_10	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 70.5	**Screen:** 60.5 - 80.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	56.82	80.5	14	NA	1/4	0.0054	90	0.75	1.2

	Gallons/Foot				
Well Diameter (inches) = 2	0.75	2	4	6	**Field Equipment:** YSI, 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
Previous Stabilized Parameters: 09-09-09					23.60	2.03	2.790	8.95	-51.00	2.42	
0951	65 psi	1.2	300	56.90	22.29	2.410	2.40	7.17	100.6	17	
0954	65 psi	2.1	300	56.90	22.19	2.413	2.18	7.19	101.6	11	
0957	65 psi	3.0	300	56.91	22.20	2.413	2.11	7.20	102.8	6	
1000	65 psi	3.9	300	56.91	22.23	2.414	2.16	7.22	103.4	5	
1003	65 psi	4.8	300	56.91	22.42	2.417	2.17	7.22	103.9	8	

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
0947	1023	300	5	N/A	NA	56.91	1005	TMW_10_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/26/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	TMW_11	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:** 68	**Screen:** 58 - 78

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	57.08	78	11	NA	1/4	0.0054	90	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-09-09					23.24	1.51	4.240	8.82	26.00	0.98	
0907	60 psi	1.4	350	57.12	21.47	1.839	3.92	6.15	96.7	25	
0910	60 psi	2.5	350	57.13	21.77	1.852	3.71	6.37	98.6	11	
0913	60 psi	3.5	350	57.13	21.86	1.853	3.74	6.52	100.9	5	
0916	60 psi	4.6	350	57.13	21.99	1.852	3.67	6.65	101.8	5	
0919	60 psi	5.6	350	57.12	21.93	1.854	3.71	6.64	103.0	4	
0922	60 psi	6.7	350	57.12	21.91	1.858	3.73	6.70	103.8	4	

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
0903	0926	350	7	N/A	NA	57.12	0923	TMW_11_WG201003 26 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Dm
Well Identification:	TMW_14	**Weather:**	cloudy
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 65 - 85

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	66.30	85	9		1/4	0.0054	80	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					22.24	2.61	5.550	8.97	58.00	2.22	
0742	66 psi	1.2	400	66.32	21.66	3.030	5.27	6.60	215.1	18	
0745	66 psi	2.4	400	66.32	21.68	3.015	5.42	6.58	215.4	7	
0748	66 psi	3.6	400	66.32	21.70	3.009	5.37	6.68	215.9	6	
0751	66 psi	4.8	400	66.32	21.71	3.002	5.35	6.70	216.4	5	
0754	66 psi	6.0	400	66.32	21.70	2.997	5.30	6.72	216.6	5	

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
0739	0757	400	6	N/A	NA	66.32	0756	TMW_14_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	TMW_15	**Weather:**	Cloudy
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 62 - 87

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	64.54	87	10	NA	1/4	0.0054	90	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					22.18	1.44	5.480	9.44	-35.00	0.51	
0831	60 psi	1.2	400	64.80	20.37	1.627	4.84	7.33	215.2	47	
0834	50 psi	2.1	300	64.76	20.68	1.618	4.70	7.32	214.5	20	
0837	50 psi	3.0	300	64.75	20.69	1.617	4.72	7.25	213.8	13	
0840	50 psi	3.9	300	64.76	20.65	1.618	4.70	7.20	213.7	11	
0843	50 psi	4.8	300	64.76	20.54	1.616	4.68	7.19	213.6	9	
0846	50 psi	5.7	300	64.76	20.59	1.615	4.68	7.19	213.4	6	
0849	50 psi	6.6	300	64.76	20.58	1.615	4.72	7.19	213.7	5	

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
0828	0905	300	7	N/A	NA	64.76	0852	TMW_15_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	DML
Well Identification:	WCC_03S	**Weather:**	Cloudy, cool
Measurement Point Description:	TOC-N	**Pump Intake:** 79	**Screen:** 69 - 89

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.35	89	20'	NM	1/4	0.0054	82	0.75	1.19

	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: ~~YSI~~, Dedicated Low-flow QED MP20

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
Previous Stabilized Parameters: 09-11-09					23.53	3.62	0.590	6.68	-159.00	5.00	
10:20	Sogs: 10/5	1.2	200	59.35	22.30	4.11	0.37	6.33	-140	3.84	Clear
10:23	"	1.8	200	59.42	22.32	4.10	0.24	6.33	-145	2.88	↓
10:26	"	2.4	200	59.45	22.36	4.10	0.18	6.34	-152	2.56	
10:29	"	3.0	200	59.49	22.37	4.09	0.16	6.36	-152	2.10	
10:32	"	3.6	200	59.49	22.39	4.09	0.16	6.36	-155	2.03	

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
10:20	10:32	200	3.6	N/A	NA	59.49	10:35	WCC_03S_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 24 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	WCC_04S	**Weather:**	Sunny
Measurement Point Description:	TOC	**Pump Intake:**	80.5'
		Screen:	70.5 - 90.5

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	58.88	92	33.12	NM	1/4	0.0054	~~80.58~~ 80.5'	0.8	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					23.86	2.13	3.250	6.94	81.00	3.20	
1508	50 psi/50%/100%	1.25	250	58.90	23.01	2.12	3.99	6.86	-71.9	2.28	
1510		1.75		58.92	23.01	2.19	3.08	6.81	-71.8	1.88	
1512		2.25		58.92	22.98	2.25	2.58	6.78	-72.4	2.03	
1514		2.75		58.92	23.02	2.28	2.39	6.77	-72.4	2.04	
1516		3.25		58.92	23.04	2.30	2.33	6.76	-72.5	2.05	
1518		3.75		58.92	23.05	2.28	2.29	6.70	-72.3	1.98	

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
1503	1518	250	3.75	N/A	NA	58.92	1519	WCC_04S_WG201003 24 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 22 / 2010
Project No.:	1155.010	**Prepared by:**	BN
Well Identification:	WCC_05S	**Weather:**	Partly cloudy
Measurement Point Description:	TOC	**Pump Intake:** 76	**Screen:** 61 - 91

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft)	LNAPL Thickness (ft)	Tubing Diameter (in)	Tubing Volume (Liter/foot)	Tubing Length (feet)	Flow Cell Volume (Liters)	Initial Purge Volume (Liters)
—	59.33	91	31.67	—	1/4	0.0054	76	0.80	1.2

	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, Public Parking Lot

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
Previous Stabilized Parameters: 9/9/2009 10:02:00 AM					22.88	1.43	4.460	8.77	9.00	0.81	
1439	45PSI/50:1/100ml	1.2	200	59.35	22.04	~~2.40~~ 1.44	5.31	7.01	-2.7	4.68	
1442		1.7		59.37	22.31	1.49	4.77	6.93	0.2	3.09	
1444		2.2		59.37	22.43	1.51	4.46	6.90	1.0	2.18	
1447		2.7		59.37	22.52	1.52	4.29	6.89	1.6	1.83	
1449		3.2		59.37	22.61	1.53	4.25	6.88	1.6	1.75	
1452		3.7		59.37	22.70	1.53	4.20	6.88	1.1	1.52	

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
1433	1452	200	3.7	N/A	NA	59.37	1453	WCC_05S_WG201003 22 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters

PID (ppm): 0.0

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	Ben S.
Well Identification:	WCC_06S	**Weather:**	Partly cloudy
Measurement Point Description:	TOC	**Pump Intake:** 75'	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NM	59.22	91	31.78	NM	1/4	0.0054	75	0.8	1.21

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					23.39	3.66	6.930	7.20	12.60	17.20	
1102	50PSI/50-1100 ml	1.25	250	59.22	22.41	3.51	5.91	7.00	-30.3	1.73	
1104	↓	1.75	↓	59.22	22.28	3.58	6.15	7.00	-25.7	2.31	
1106		2.25		59.22	22.25	3.60	6.09	7.01	-22.3	1.11	
1108		2.75		59.22	22.23	3.62	6.14	7.00	-17.5	0.97	
1110		3.25		59.22	22.14	3.63	6.08	7.00	-15.4	0.37	

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
1057	1110	250	3.25	N/A	NA	59.22	1111	WCC_06S_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
0.0	0	NM

DUP: WCC_06S_WG201003 25 _02
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	WCC_07S	**Weather:**	SUNNY
Measurement Point Description:	TOC, N	**Pump Intake:**	75
		Screen:	60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.81	90	16	NA	1/4	0.0054	85	0.75	1.2

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					23.92	2.19	5.340	7.84	-6.00	1.50	
1351	60 psi	1.4	350	58.82	23.02	2.500	4.40	7.39	182.1	6	
1354	60 psi	2.5	350	58.82	22.86	2.511	4.27	7.40	180.4	5	
1357	60 psi	3.5	350	58.82	22.78	2.510	4.33	7.41	179.8	4	
1400	60 psi	4.6	350	58.82	22.73	2.505	4.34	7.41	179.8	4	
1403	60 psi	5.6	350	58.82	22.64	2.497	4.38	7.42	179.9	3	

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
1347	1407	350	6	N/A	NA	58.82	1405	WCC_07S_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3 / 25 / 2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	WCC_09S	**Weather:**	cloudy
Measurement Point Description:	TOC, N	**Pump Intake:**	75
		Screen:	60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	61.68	90	13	NA	1/4	0.0054	95	0.75	1.3

	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: YSI, 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
Previous Stabilized Parameters: 09-11-09					22.11	2.13	5.570	6.80	103.00	3.01	
1135	62 psi	1.5	300	61.84	20.78	2.005	4.90	7.37	191.3	3	
1138	62 psi	2.4	300	61.86	20.93	2.011	4.88	7.38	190.1	5	
1141	62 psi	3.3	300	61.85	20.99	2.008	4.77	7.38	190.0	4	
1144	62 psi	4.2	300	61.85	21.16	2.006	4.97	7.37	189.9	5	
1147	62 psi	5.1	300	61.86	21.22	2.005	4.89	7.38	190.0	4	
1150	62 psi	6.0	300	61.85	21.28	2.003	4.85	7.37	190.2	4	

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
1130	1210	300	6	N/A	NA	61.85	1153	WCC_09S_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	CHEMets D.O. =
NM	0	5 mg/L

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

GROUNDWATER SAMPLING DATA SHEET

Project Name:	Boeing C-6 Facility, Sitewide Annual Sampling, Mar-10	**Date:**	3/25/2010
Project No.:	1155.010	**Prepared by:**	DM
Well Identification:	WCC_12S	**Weather:**	cloudy
Measurement Point Description:	TOC, N	**Pump Intake:** 75	**Screen:** 60 - 90

A	B	C	D = C - B	E = B - A	G	H	I	J	K = H x I + J
Depth to LNAPL (ft-bmp)	**Depth to Static Water Level** (ft-bmp)	**Well Total Depth** (ft-bmp)	**Water Column Above Pump Intake**(ft)	**LNAPL Thickness** (ft)	**Tubing Diameter** (in)	**Tubing Volume** (Liter/foot)	**Tubing Length** (feet)	**Flow Cell Volume** (Liters)	**Initial Purge Volume** (Liters)
NA	58.07	90	17	NA	1/4	0.0054	95	0.75	1.3

	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: YSI, 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
Previous Stabilized Parameters: 09-10-09					21.77	1.69	6.420	7.15	31.00	2.65	
0930	58 psi	1.5	300	58.16	19.99	1.679	5.33	7.39	214.9	7	
0933	58 psi	2.4	300	58.17	20.24	1.680	5.27	7.37	214.2	6	
0936	58 psi	3.3	300	58.15	20.30	1.677	5.19	7.36	214.0	5	
0939	58 psi	4.2	300	58.16	20.49	1.667	5.24	7.35	214.0	5	
0942	58 psi	5.1	300	58.16	20.41	1.660	5.25	7.35	214.1	6	

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
0925	0944	300	5	N/A	NA	58.16	0943	WCC_12S_WG201003 25 _01

Notes: (units) [stabilization criteria]
Purging will continue until three consecutive measurements are within stabilization criterion.

Field Parameters		
Ferrous Iron (mg/L)	PID (ppm):	
NM	0	NM

DUP:
DRUM NO:

AVOCET ENVIRONMENTAL, INC.

QA/QC SAMPLE IDENTIFICATION FORM

Project Name:	Boeing Former C-6 Facility, WDR/Semi-annual Sitewide Sampling, March 2010	Project No.:	1155.010

Date	Time	QA/QC Sample Type (Duplicate, Field Blank, Equipment Blank, Split)	Sample ID	Sample Location	Primary Sample Reference	Analytical Methods	Organic-Free Water Source	Field Personnel	Comments
03/22/10	14:04	Equip. Blank	EB_AV20100322_01	-		8260B	TA-I	BS	
03/22/10	-	Trip Blank	TB_AV20100322_01	-		8260B	TA-I	-	
03/23/10	15:26	Equip. Blank	EB_AV20100323_01	-		8260B	TA-I	DM	
03/23/10	10:51	Duplicate	MWC024_WG20100323_02	MWC024	MWC024_WG20100323_01	8260B	-	BS	
03/24/10	13:45	Equip. Blank	EB_AV20100324_01	-		8260B	TA-I	BS	
03/24/10	-	Trip Blank	TB_AV20100324_01	-		8260B	TA-I	-	
03/24/10	13:12	Duplicate	MWC016_WG20100324_02	MWC016	MWC016_WG20100324_01	8260B	-	DM	
03/25/10	-	Trip Blank	TB_AV20100325_01	-		8260B	TA-I	-	
03/25/10	11:11	Duplicate	WCC_06S_WG20100325_02	WCC_06S	WCC_06S_WG20100325_01	8260B	-	BS	
03/25/10	11:03	Duplicate	MWC022_WG20100325_02	MWC022	MWC022_WG20100325_01	8260B	-	DM	
03/26/10	-	Trip Blank	TB_AV20100326_01	-		8260B	TA-I	-	

S:\Projects\1155 Boeing Former C-6 Facility\Groundwater Monitoring\March 2010\Completed Field Forms\[qaqc sample id form_20100326.xlsx]Sheet1

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

Boeing CoC No. AV20100323C

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, WDR Sampling, March 2010
Site Address	Los Angeles, CA
Project No.	1155.010
Project Manager	Michael Rendina
Sampled By	Blaine Tech
Turn-Around-Time	Standard TAT

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	TOC (EPA 9060)	Volatile Fatty Acids	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Chloride EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)
										H	H	H	H	H	H	H	H		H	H	H			H	
CMW026_WG20100323_01	03/23/10	10:58	WATER	12		X	X	X	X													X			X
IRZCMW001_WG20100323_01	03/23/10	9:59	WATER	12		X	X	X	X										Hold Date				X	X	X
CMW002_WG20100323_01	03/23/10	11:39	WATER	19		X	X	X	X	X	X							X	X	X			X	X	X
IRZCMW002_WG20100323_01	03/23/10	8:31	WATER	19		X	X	X	X	X	X							X	X	X		X			X
MWC024_WG20100323_01	03/23/10	10:51	WATER	7		X	X		X																
MWC024_WG20100323_02	03/23/10	10:51	WATER	3		X								Hold Date											
IRZCMW003_WG20100323_01	03/23/10	11:33	WATER	23		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
TB_AV20100323_01	03/23/10	-	WATER	3		X																		Hold	

Analyze all "X" - formerly on hold 3/26

Relinquished by	Company	Received by	Company
Printed Name: David Lieberman Date: 3-23-10	Avocet Environmental, Inc.	Printed Name: Tony Power Date: 3/23/10	TA-I
Signature: Time: 13:50		Signature: Time: 13:50	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	

Sample Receipt	Billing Information
Total Containers	Bill To: Michael Rendina, P.G. AVOCET ENVIRONMENTAL, INC. 16 Technology Dive, Suite 154 Irvine, CA 92618-2327
Temperature °C ____ °F	
COC Seal (Y/N/NA)	

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

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

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

Boeing CoC No. AV20100323B

CHAIN OF CUSTODY RECORD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Sampling, March 2010
Site Address	Los Angeles, CA
Project No.	1155.010
Project Manager	Michael Rendina
Sampled By	Blaine Tech
Turn-Around-Time	Standard TAT

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	TOC (EPA 9060)	Volatile Fatty Acids	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)
EWB001_WG20100323_01	03/23/10	8:35	WATER	3		X																		
MWB028_WG20100323_01	03/23/10	9:30	WATER	3		X																		
TMW_08_WG20100323_01	03/23/10	13:35	WATER	11		X				X	X							X	X	X	X	X	X	
MWB003_WG20100323_01	03/23/10	14:57	WATER	18		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IRZMW004_WG20100323_01	03/23/10	13:09	WATER	18		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IRZMW005_WG20100323_01	03/23/10	14:42	WATER	6		X			X															
WCC_05S_WG20100322_01	03/22/10	14:53	WATER	3		X																		
DAC-P1_WG20100322_01	03/22/10	13:58	WATER	3		X																		
BL-03_WG20100322_01	03/22/10	13:09	WATER	3		X																		
MWC007_WG20100322_01	03/22/10	11:57	WATER	3		X																		
MWC011_WG20100322_01	03/22/10	14:53	WATER	3		X																		
MWC006_WG20100322_01	03/22/10	13:45	WATER	3		X																		
TB_AV20100322_01	03/22/10	-	WATER	3		X																		
EB_AV20100322_01	03/22/10	14:04	WATER	3		X																		
EB_AV20100323_01	03/23/10	15:26	WATER	3		X																		

Analyze all "X" - Formally on hold 3/26

H = HOLD

Relinquished by		Company	Received by		Company
Printed Name: Darren Brandner	Date: 3-23-10	Avocet Environmental, Inc.	Printed Name:	Date:	
Signature:	Time: 17:50		Signature:	Time:	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	
Printed Name:	Date:		Printed Name: WILL KIM	Date: 3/23/10	
Signature:	Time:		Signature:	Time: 17:50	1.0

Sample Receipt	Billing Information
Total Containers	
Temperature °C °F	Bill To: Michael Rendina, P.G. AVOCET ENVIRONMENTAL, INC. 16 Technology Dive, Suite 154 Irvine, CA 92618-2327
COC Seal (Y/N/NA)	

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

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

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

Boeing CoC No. AV20100324A

CHAIN OF CUSTODY RECORD

H = HOLD

Project Information:

Site Name	**Boeing Former C-6 Facility, Sitewide Sampling, March 2010**
Site Address	**Los Angeles, CA**
Project No.	**1155.010**
Project Manager	**Michael Rendina**
Sampled By	**Blaine Tech**
Turn-Around-Time	**Standard TAT**

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	TOC (EPA 9060)	Volatile Fatty Acids	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)
EWC001_WG20100324_01	03/24/10	14:10	WATER	15		X(1)				H	H	H	H	H	H	H	H	X	H	H	H	X	H	
TMW_06_WG20100324_01	03/24/10	8:13	WATER	11		X				H	H							X	H	H	H	X	H	
MWB014_WG20100324_01	03/24/10	9:25	WATER	10		X				H	H							X	H	H				
MWC015_WG20100324_01	03/24/10	10:43	WATER	15		X				H	H	H	H	H	H	H	H	X	H	H	H	X	H	
MWB012_WG20100324_01	03/24/10	12:05	WATER	6		X			X															
MWC016_WG20100324_01	03/24/10	13:12	WATER	11		X				H	H							X	H	H	H	X	H	
MWC016_WG20100324_02	03/24/10	13:12	WATER	3		X																		
MW0005_WG20100324_01	03/24/10	14:21	WATER	15		X				H	H	H	H	H	H	H	H	X	H	H	H	X	H	
IWC001_WG20100324_01	03/24/10	15:34	WATER	5		X												X	H					
IRZMW001B_WG20100324_01	03/24/10	9:29	WATER	6		X			X															

Analyze all "X" - formerly on Hold

Relinquished by		Company	Received by		Company
Printed Name: D. Lieberman	Date: 3-24-10	Avocet Environmental, Inc.	Printed Name:	Date:	
Signature: [signature]	Time: 17:45		Signature:	Time:	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	
Printed Name:	Date:		Printed Name: WILL KIM	Date: 3/24/10	
Signature:	Time:		Signature: [signature]	Time: 17:45	

Sample Receipt	Billing Information	
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 (1) Run dilutions on the VOC sample from EWC001
Temperature °C ____ °F		
COC Seal (Y/N/NA)		

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

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

Boeing CoC No. AV20100324A

CHAIN OF CUSTODY RECORD

H = HOLD

Project Information:

Site Name	**Boeing Former C-6 Facility, Sitewide Sampling, March 2010**
Site Address	**Los Angeles, CA**
Project No.	**1155.010**
Project Manager	**Michael Rendina**
Sampled By	**Blaine Tech**
Turn-Around-Time	**Standard TAT**

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	TOC (EPA 9060)	Volatile Fatty Acids	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)
IRZMW002B_WG20100324_01	03/24/10	10:05	WATER	6		X			X															
IRZMW003B_WG20100324_01	03/24/10	10:39	WATER	6		X			X															
IRZMW002A_WG20100324_01	03/24/10	11:18	WATER	18		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IRZMW001A_WG20100324_01	03/24/10	12:20	WATER	6		X			X															
IRZMW003A_WG20100324_01	03/24/10	12:43	WATER	6		X			X															
WCC_04S_WG20100324_01	03/24/10	15:19	WATER	6		X			X															
TMW_07_WG20100324_01	03/24/10	7:41	WATER	3		X																		
TB_AV20100324_01	03/24/10	-	WATER	2		X																		
EB_AV20100324_01	03/24/10	13:45	WATER	3		X																		

Analyze all "X" - formerly on hold
3/26

Relinquished by	Company	Received by	Company
Printed Name: D. Lieberman Date: 3-24-10	Avocet Environmental, Inc.	Printed Name: Date:	
Signature: Time: 17:45		Signature: Time:	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	
Printed Name: Date:		Printed Name: INTL KTM Date: 3/24/10	
Signature: Time:		Signature: Time: 17:45	

Sample Receipt	Billing Information	
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 (1) Run dilutions on the VOC sample from EWC001
Temperature °C ____ °F		
COC Seal (Y/N/NA)		

0.8

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

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

Boeing CoC No. AV20100325B

CHAIN OF CUSTODY RECORD

H = HOLD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Sampling, March 2010
Site Address	Los Angeles, CA
Project No.	1155.010
Project Manager	Michael Rendina
Sampled By	Blaine Tech
Turn-Around-Time	Standard TAT

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)	Target for Tier 1 Data Validation	Target for Tier 2 Data Validation	Target for Tier 3 Data Validation
AW0077UB_WG20100325_01	03/25/10	9:42	WATER	6		X	X																		
EWB002_WG20100325_01	03/25/10	10:09	WATER	6		X	X																X		
AW0073C_WG20100325_01	03/25/10	10:41	WATER	6		X	X																		
WCC_06S_WG20100325_01	03/25/10	11:11	WATER	3		X																	X		
WCC_06S_WG20100325_02	03/25/10	11:11	WATER	3		X																			
MWB027_WG20100325_01	03/25/10	11:45	WATER	7		X	X									X							X		
AW0075UB_WG20100325_01	03/25/10	12:53	WATER	6		X	X																		
AW0064UB_WG20100325_01	03/25/10	13:30	WATER	6		X	X																		
AW0074UB_WG20100325_01	03/25/10	14:08	WATER	14		X	X	H	H							X	H	H	H	X	H		X		
WCC_03S_WG20100325_01	03/25/10	10:35	WATER	18		X(1)	X	H	H	H	H	H	H	H	H	X	H	H	H	X	H				
MWB006_WG20100325_01	03/25/10	12:18	WATER	6		X(1)	X																		
AW0055UB_WG20100325_01	03/25/10	15:06	WATER	6		X	X																		
IRZB0095_WG20100325_01	03/25/10	7:49	WATER	6		X	X																X		

Analyze all "X" - formerly on hold
3/16

Relinquished by		Company	Received by		Company
Printed Name: D.L. Coleman	Date: 3-25-	Avocet Environmental, Inc.	Printed Name: Angel Mez	Date: 3/25/10	TAI
Signature:	Time: 1745		Signature:	Time: 1745	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	

Sample Receipt	Billing Information	
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 (1) Run dilutions on the VOC samples from WCC_03S and MWB006
Temperature °C 1.1 °F		
COC Seal (Y/N/NA)		

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

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

Boeing CoC No. AV20100325B

CHAIN OF CUSTODY RECORD

H = HOLD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Sampling, March 2010
Site Address	Los Angeles, CA
Project No.	1155.010
Project Manager	Michael Rendina
Sampled By	Blaine Tech
Turn-Around-Time	Standard TAT

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)	Target for Tier 1 Data Validation	Target for Tier 2 Data Validation	Target for Tier 3 Data Validation
IRZB0081_WG20100325_01	03/25/10	8:30	WATER	6		X	X																		
MWB020_WG20100325_01	03/25/10	10:15	WATER	6		X	X																		
MWC022_WG20100325_01	03/25/10	11:03	WATER	3		X																		X	
MWC022_WG20100325_02	03/25/10	11:03	WATER	3		X																			
WCC_07S_WG20100325_01	03/25/10	14:05	WATER	6		X	X																		X
MWC023_WG20100325_01	03/25/10	14:40	WATER	15		X		~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	X	~~H~~	~~H~~	~~H~~	X	~~H~~				
MWB007_WG20100325_01	03/25/10	15:45	WATER	3		X																			
TMW_14_WG20100325_01	03/25/10	7:56	WATER	5		X										X	~~H~~								
TMW_15_WG20100325_01	03/25/10	8:52	WATER	12		X	X	~~H~~	~~H~~							X									
WCC_12S_WG20100325_01	03/25/10	9:43	WATER	3		X																			
WCC_09S_WG20100325_01	03/25/10	11:53	WATER	11		X		~~H~~	~~H~~							X	~~H~~	~~H~~	~~H~~	X	~~H~~				
MWC004_WG20100325_01	03/25/10	12:55	WATER	15		X		~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	~~H~~	X	~~H~~	~~H~~	~~H~~	X	~~H~~				
TB_AV20100325_01	03/25/10	-	WATER	2		X																			

Analyze all "X" - formerly on hold [illegible] 3/26

Relinquished by		Company	Received by		Company
Printed Name: D. Lieberman	Date: 3-25-10	Avocet Environmental, Inc.	Printed Name: Angel Perez	Date: 3/25/10	TAI
Signature: [signature]	Time: 1745		Signature: [signature]	Time: 1745	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	
Printed Name:	Date:		Printed Name:	Date:	
Signature:	Time:		Signature:	Time:	

Sample Receipt	Billing Information	
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 (1) Run dilutions on the VOC samples from WCC_03S and MWB006
Temperature °C 1.1 °F		
COC Seal (Y/N/NA)		

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

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

Boeing CoC No. AV20100326A

CHAIN OF CUSTODY RECORD

H = HOLD

Project Information:

Site Name	Boeing Former C-6 Facility, Sitewide Sampling, March 2010
Site Address	Los Angeles, CA
Project No.	1155.010
Project Manager	Michael Rendina
Sampled By	Blaine Tech
Turn-Around-Time	Standard TAT

Analyses

Sample Identification	Sample Date	Sample Time	Matrix	No. of Cntnrs.	Lab I.D. Number	VOCs (8260B)	Diss. Hydrocarbon Gases (ethane, ethene, methane)	SVOCs incl 1,4-dioxane (8270) and NDMA (1625) - (see note 1)	CAM Title 22 Metals (200.7)	Flashpoint	Cyanides (total)	Sulfides (dissolved)	Pesticides/PCBs (608)	Chemical Oxygen Demand (COD)	Total Suspended Solids	Hexavalent Chromium (7199)	pCBSA - 314.0 MOD	Perchlorate 314.0	Boron-200.7	Anions (NO3, NO2, Cl, SO4) EPA 300.0	Total Dissolved Solids EPA 160.1	Dehalococcoides spp. Strains (qPCR test)	Target for Tier 1 Data Validation	Target for Tier 2 Data Validation	Target for Tier 3 Data Validation
MWG004_WG20100326_01	03/26/10	7:57	WATER	10		X		X	X							X	X	X							
MWG003_WG20100326_01	03/26/10	8:48	WATER	10		X		X	X							X	X	X							
CMW001_WG20100326_01	03/26/10	8:00	WATER	4		X											X								
MWB013_WG20100326_01	03/26/10	8:35	WATER	9		X		X	X							X									
TMW_11_WG20100326_01	03/26/10	9:23	WATER	4		X											X								
TMW_10_WG20100326_01	03/26/10	10:05	WATER	9		X		X	X								X								
MWC021_WG20100326_01	03/26/10	10:50	WATER	10		X		X	X							X	X	X							
MWG001_WG20100326_01	03/26/10	11:43	WATER	15		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X				
MWC009_WG20100326_01	03/26/10	9:38	WATER	15		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X				
MWB019_WG20100326_01	03/26/10	10:37	WATER	5		X										X	X								
MWG002_WG20100326_01	03/26/10	11:00	WATER	15		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X				
MWC017_WG20100326_01	03/26/10	12:09	WATER	5		X										X	X								
TB_AV20100326_01	03/26/10	-	WATER	2		X																			

Relinquished by	Company	Received by	Company
Printed Name: D. Lieberman Date: 3-26-10	Avocet Environmental, Inc.	Printed Name: Angel Perez Date: 3/26/10	TAI
Signature: Time: 1515		Signature: Time: 1515	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	
Printed Name: Date:		Printed Name: Date:	
Signature: Time:		Signature: Time:	

Sample Receipt	Billing Information	
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 (1) For all SVOC analyses, run dilutions if MDL is elevated over 20 ug/L.
Temperature °C 17.6 °F		
COC Seal (Y/N/NA)		

C:\Documents and Settings\David\My Documents\Avocet\1155\FieldForms\master coc_av201003

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Boeing C-6 **PROJECT NUMBER** 100822-BW1

EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI 556	10A100055	3-22-10 1116	pH7 pH4 pH10	7.20 4.10 9.98	7.00 4.00 10.00	18.64°C	BW
↓	↓	↓	3900 µS 237.5 mV 100% DO	3899 µS 212.6 mV 102.5%	3900 µS 237.4 mV 100.4%	18.81°C	BW
YSI 556	10A100055	3-23-10 0650	pH7 pH4 pH10	7.12 4.15 9.87	7.00 4.00 10.00	17.67°C	BW
↓	↓	↓	3900 µS 237.5 mV 100% DO	3919 µS 243.3 mV 99.7%	3900 µS 237.5 mV 100.1%	17.76°C	BW
YSI 556	10A100055	3-24-10 0650	pH7 pH4 pH10	7.18 4.09 9.88	7.00 4.00 10.00	18.81°C	BW
↓	↓	↓	3900 µS 237.5 mV 100% DO	3964 µS 237.1 mV 115.4%	3900 µS 237.5 mV 100.4%	18.67°C	BW
YSI 556	10A100055	3-25-10 0650	pH7 pH4 pH10	6.90 4.77 9.93	7.00 4.00 10.00	18.52°C	BW
↓	↓	↓	3900 µS 237.5 mV 100% DO	3877 µS 230.8 mV 87.8%	3900 µS 237.5 mV 100.6%	18.76°C	BW
YSI 556	10A100055	3-26-10 0650	pH7 pH4 pH10	7.11 4.1 9.96	7.00 4.00 10.00	17.83°C	BW
↓	↓	↓	3900 µS 237.5 mV 100% DO	3873 µS 240.8 mV 87.0%	3900 µS 237.5 mV 100.5%	17.96°C	BW

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Avocet @ Boeing C-6				PROJECT NUMBER 100322-BW1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. °C	INITIALS
YSI 556 MPS	06F2009 AD	3/22/10 1255	pH 7.00 4.00 10.00	7.54 4.03 9.69	7.00 4.00 10.00	20.32 21.45 21.87	DM DM DM
			SPEC. COND. 3900 uS/cm	3722 uS/cm	3900 uS/cm	21.17	DM
			O.R.P. 233.5 mV @ 23°C	248.0 mV	233.5 mV	22.96	DM
			D.O. % SAT (ambient)	96.4 %	100.3 %	26.37	DM
		3/23/10 0655	pH 7.00 10.00 4.00	6.85 10.11 4.08	7.00 10.00 4.00	19.39 19.20 19.41	DM DM DM
			SPEC. COND. 3900 uS/cm	3881 uS/cm	3900 uS/cm	19.47	DM
			O.R.P. 239.5 mV @ 18.5°C	240.9 mV	239.5 mV	18.62	DM
			D.O. % SAT (ambient)	110.7 %	99.8 %	16.55	DM
		3/24/10 0700	pH 7.00 4.00 10.00	6.79 3.91 9.86	7.00 4.00 9.98	18.23 18.34 17.60	DM DM DM
			SPEC. COND. 3900 uS/cm	3882 uS/cm	3900 uS/cm	18.61	DM
			O.R.P. 241 mV @ 17.5°C	241.9 mV	241.0 mV	17.43	DM
			D.O. % SAT (ambient)	103.6 %	100.3 %	15.90	DM

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Avocet @ Boeing C-6				PROJECT NUMBER 100322-BN1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. °C	INITIALS
YSI 550 MPS	06F2009AD	3/25/10 0700	pH 7.00 10.00 4.00	7.10 9.59 3.95	7.00 10.00 4.00	17.65 17.94 17.86	DM DM DM
↓	↓	↓	SPEC. COND. 3900 µS/cm	3970 µS/cm	3900 µS/cm	17.81	DM
↓	↓	↓	O.R.P. 240 mV @ 16°C	239.6 mV	240.0 mV	18.15	DM
↓	↓	↓	D.O. % SAT (ambient)	91.7 %	100.2 %	16.20	DM
↓	↓	3/26/10 0705	pH 7.00 4.00 10.00	6.93 3.93 10.16	7.00 4.00 10.00	17.67 16.38 17.62	DM DM DM
↓	↓	↓	SPEC. COND. 3900 µS/cm	3726 µS/cm	3900 µS/cm	16.97	DM
↓	↓	↓	O.R.P. 244 mV @ 15°C	246.0 mV	244.0 mV	15.17	DM
↓	↓	↓	D.O. % SAT (ambient)	102.7 %	100.4 %	15.06	DM

AVOCET ENVIRONMENTAL, INC.

DAILY FIELD ACTIVITY REPORT

Project Name:	Boeing C-6	**Project No.:**	1155.
Location:	Los Angeles, CA	**Date:**	3/22/10
Project Manager:	Mike Reading	**Field Personnel:**	DB/DL
Contractor:	Blaine	Arrival Time:	6:50
Weather:	Sunny - warm	Departure Time:	15:30

Time		Activity Summary and General Remarks
6	50	on-site DAB
7	00	D.L. & Blaine Dave & Ben on site
7	10	- Tailgate ~30 mins
		- prep for water levels, etc.
		- Each person (4) assigned to his own 'area'
		-- See water level gauging sheets --
~12	00	Blaine begins gw sampling - David gives them 6 wells to do.
~15	00	Finish sampling - transfer H_2O & PPE to T.S. compound.
		- Clean up
15	30	off-site
16	15	Return sounder / PID-methane meter to Enviro supply

Time Breakdown:	Travel: 1.75	Miles Driven: 86	
	Work: 8.0	Equipment: ☑ Yes	
	Standby:		
	Total: 9.75	Near-miss or Injury Incident: ☐ Yes ☐ No	

X:\Forms\Field Forms\[DailyFldAct.xls]Sheet1

AVOCET ENVIRONMENTAL, INC.

DAILY FIELD ACTIVITY REPORT

Project Name:	Boeing Former C-6 GW Monitoring	**Project No.:**	1155.010
Location:	Torrance, CA	**Date:**	3-23-10
Project Manager:	M. Rendina	**Field Personnel:**	DML, DAD
Contractor:	Blaine Tech (Ben S. + David M)	Arrival Time:	6:50
Weather:		Departure Time:	16:30

Time		Activity Summary and General Remarks
6	50	Meet onsite outside CTSI Bldg
7	00	H+S Tailgate; discuss sampling plan + data expectations, Distributing sample bottles
≈8	00	heading out to sample. DM is continuing portable low flow wells w/o ferrous iron analysis.
		Ben is using ferrous iron kit + sampling B2-WDR wells.
≈	9:30	Given the large sample volumes, WDR may not be complete in time to ship off samples. DM called off of other samples to help complete the WDR in time
		Ferrous Iron kit easily shared with no complications.
10	16	Receive email that additional analyses should be put on hold.
11	40	Last WDR samples collected. Ben + Dave progress to respective sampling orders. Large Sample volumes are slowing expected progress.
		- Preparing COC + communicating w/ M. Rendina + J. Weidmann regarding sample holding times
		- Lunch Break
13	45	TA-I courier arrives, Handing off WDR samples.
15	00	Last samples of the day collected, collecting samples. Finalizing C.O.C.
		Demob + securing site
15	40	Blaine Tech leaves site
16	30	Avocet leaves site, Darren delivering samples to lab

Time Breakdown:	Travel: 2.0	Miles Driven: 86	
	Work: 9.0	Equipment: ☑ Yes	
	Standby:		
	Total: 11.0	Near-miss or Injury Incident: ☐ Yes ☑ No	

X:\Forms\Field Forms\[DailyFldAct.xls]Sheet1

AVOCET ENVIRONMENTAL, INC.

DAILY FIELD ACTIVITY REPORT

Project Name:	Boeing Former C-6 - GW Monitoring	**Project No.:**	1155.010
Location:	Torrance, CA	**Date:**	3-24-10
Project Manager:	M. Rendina	**Field Personnel:**	DML
Contractor:	Blaine Tech (Ben S + David M)	Arrival Time:	6:30
Weather:	Overcast, mild.	Departure Time:	16:30

Time		Activity Summary and General Remarks
6	00	Leave Irvine
6	50	Onsite
6	55	Blaine Onsite, calibrating equipment.
7	00	H. + S. Tailgate
7	15	Blaine mobilize to first locations.
		Avocet waiting for access to CTS1 + staging area bottles
7	25	Loading up bottles in CTS1 area treatment compound.
7	45	Called John Sorrel + Guard shack for access to Building B @ Sunrider.
		Ben finished w/ 1st well, arrives to wait for access to Building B (Western Sunrider Building)
9	00	Gain access to building, mobilizing in to 6 locations.
9	30	Calling Bart Gebbie @ Blaine to inform that we may run into Monday.
10	00	Collecting Samples from DM, preparing chain.
11	30	Lunch break, 30 min
12	50	Ben finishing up inside Building B. Moving out.
		Ben moves on to outside sampling locations.
		Collecting more samples + ~~inventory~~ taking inventory of samples collected + bottles remaining.
14	40	Called in supplemental bottle request; COC/inventory cont.
16	00	Received email from Ravi; asked for dilutions on VOCs for WCC005, MWB006 and EWC001
16	30	All packed up; leaving site
		Ben left ≈ 15:45 ; Dave left ≈ 16:15
		Traveling
17	45	Sign off samples to Lab (TA-1)
18	20	@ office miles driven: 86 mi

Time Breakdown:	Travel: 1.75 + 0.75	Miles Driven:	86
	Work: 9.0	Equipment:	☑ Yes
	Standby:		
	Total: 11.5	Near-miss or Injury Incident:	☐ Yes ☑ No

X:\Forms\Field Forms\[DailyFldAct.xls]Sheet1

AVOCET ENVIRONMENTAL, INC.

DAILY FIELD ACTIVITY REPORT

Project Name:	Boeing C-6 GW Monitoring	Project No.:	1155.010
Location:	Torrance, CA	Date:	3-25-10
Project Manager:	M. Rendina	Field Personnel:	DML
Contractor:	Blaine Tech (Ben S + David M)	Arrival Time:	7:00
Weather:	Overcast	Departure Time:	16:30

Time		Activity Summary and General Remarks
6	00	Leave Office
6	55	@ Site; BTS calibrating equipment
7	00	H+S Tailgate
		- Ben sampling Waterra Wells
		IRZB0095 is very turbid; allowing sample to settle
		before decanting sample for ferrous iron analysis
8	20	- Dave moving on to second location after restocking bottles
		- Preparing 1st draft of COC for day
9	55	Calibrating QED MP20
10	10	Set up @ WCC035, collecting sample; approx. 1DL sample volume
11	40	Set up @ MWB006, collecting sample, only 360mL sample volume
13	00	Lunch Break ≈ 1hr
14	00	Collecting samples from field crews, bottle count +
		COC preparation.
15	45	Ben S leaves site, 11 wells sampled.
16	15	Dave M leaves site, 10 wells sampled.
16	30	Leaving Site
17	45	Submitting samples to the Lab.
18	25	Arrive @ office

Time Breakdown:	Travel: 3.0	Miles Driven:	86
	Work: 8.5	Equipment:	☒ Yes
	Standby:		
	Total: 11.5	Near-miss or Injury Incident:	☐ Yes ☒ No

X:\Forms\Field Forms\[DailyFldAct.xls]Sheet1

AVOCET ENVIRONMENTAL, INC.

DAILY FIELD ACTIVITY REPORT

Project Name:	Boeing Former C-6 GWM, March-10	**Project No.:**	1155.010
Location:	Torrance, CA	**Date:**	3-26-10
Project Manager:	M. Rendina	**Field Personnel:**	DML
Contractor:	Blaine Tech Services (Ben S + Dave M)	Arrival Time:	7:00
Weather:	Hazy, Breezy, mild	Departure Time:	14:30

Time		Activity Summary and General Remarks
6	00	Leave Office
6	40	arrive on-site;
6	50	BTS onsite, calibrating
7	00	H+S Tailgate
		- Accessing Staging area, loading up w\ bottles.
		- Crews Head out to sample.
		Attaching weight to MWG004; deeper pumps have
		treaded to float up w\ no added weight.
		(Weights were added to MWG001-003 in Dec-09)
		Collecting Field Materials,
8	47	Called Joe Weidmann, to check on status of held samples
		- Given the go-ahead to run all samples, verbally, soon followed
		by confirmation email
9	09	Forwarded confirmation to Lab, CDM
9	35	Received request from Ravi (CDM) to proceed w\
		dilution if MDL gets elevated over 20 ug/L
		Collecting bottles + preparing COC
11	30	Break for lunch ~ 45min
12	09	Last samples collected, finalizing COC
		Darren arrives onsite
		Cleanup; securing treatment compound.
		2 Full GW drums, 1 PPE Drum, dedicated tubing
		stored in a rubbermaid container
14	30	Leaving Site
15	15	Deliver Samples to Lab.
15	50	@ office.

Time Breakdown:	Travel: 2	Miles Driven: 86	
	Work: 6.75	Equipment: ☑ Yes	
	Standby:		
	Total: 8.75	Near-miss or Injury Incident: ☐ Yes ☑ No	

X:\Forms\Field Forms\[DailyFldAct.xls]Sheet1