



## Field & Technical Services

200 Third Avenue ♦ Carnegie, PA 15106 ♦ Phone: 412-429-2694 ♦ Fax: 412-279-4512

August 15, 2008

Mr. Scott Miller  
Remedial Project Manager  
U.S. Environmental Protection Agency, Region IV  
4WD-SRTMB  
61 Forsyth Street  
Atlanta, GA 30303-3415

**RE: 2008 First Semiannual Stage 2 Groundwater Monitoring Report  
Cabot Carbon/ Koppers Superfund Site  
Gainesville, Florida**

Dear Mr. Miller:

On behalf of Beazer East, Inc. (Beazer), enclosed are three copies of the 2008 First Semiannual Stage 2 Groundwater Monitoring Report, as required by the Gainesville Unilateral Administrative Order.

If you should have any questions regarding this correspondence, please do not hesitate to contact Mr. Mitchell Brouman, Beazer Environmental Manager, at (412) 208-8805 or Ms. Angie Gatchie of Field & Technical Services LLC (FTS) at 412-429-2694.

Sincerely,  
Field & Technical Services LLC

Angie Gatchie  
Project Scientist

### Attachments

cc: W. O'Steen – EPA  
K. Helton – FDEP  
J. Mousa - ACEPD  
R. Hergert - GRU  
M. Brouman - Beazer  
J. Fankulewski – Koppers Inc., Gainesville  
J. Erickson - GeoTrans, Inc.  
J. Mercer – GeoTrans, Inc.  
G. Council – GeoTrans, Inc.  
K. Fromme – FTS  
File 045007103

**2008 FIRST SEMI-ANNUAL  
STAGE 2 GROUNDWATER MONITORING  
REPORT**

**CABOT CARBON/KOPPERS SUPERFUND SITE  
GAINESVILLE, FLORIDA**

*Prepared for:*

**Beazer East, Inc.**

*Prepared by:*

**Field & Technical Services, LLC**

200 Third Avenue  
Carnegie, Pennsylvania 15106



**August 15, 2008**

---

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2.0</b>	<b>GROUNDWATER CONTAINMENT SYSTEM PERFORMANCE MONITORING .....</b>	<b>3</b>
2.1	NON-AQUEOUS PHASE LIQUIDS .....	4
2.2	GROUNDWATER ELEVATION.....	4
<b>3.0</b>	<b>CONCLUSIONS .....</b>	<b>6</b>
<b>4.0</b>	<b>REFERENCES.....</b>	<b>7</b>

## LIST OF TABLES

Table 1	First Quarter 2008 Water and DNAPL Levels,
Table 2	Second Quarter 2008 Water and DNAPL Levels
Table 3	Extraction Well Flow Rates: January 2008 through June 2008

## LIST OF FIGURES

Figure 1	Cabot Carbon/Koppers Superfund Site Location Map
Figure 2	Cabot Carbon/Koppers Superfund Site Map
Figure 3	Groundwater Elevation Contours – First Quarter 2008 - January 30, 2008
Figure 4	Groundwater Elevation Contours – Second Quarter 2008 - May 12, 2008

---

## 1.0 INTRODUCTION

On behalf of Beazer East, Inc. (Beazer), Field & Technical Services, L.L.C. (FTS) herein submits the 2008 First Semi-Annual Stage 2 Groundwater Monitoring Report for the Cabot Carbon/Koppers Superfund Site (Site) in Gainesville, Florida. FTS prepared this report in accordance with the Proposed Stage 2 Groundwater Monitoring Program, Initial Groundwater Remedial Action (Stage 2 Monitoring Program), published by TRC Environmental Solutions, Inc. (TRC) in August 1997 and approved by the United States Environmental Protection Agency (USEPA) on April 28, 1998. The basis for the Stage 2 Monitoring Program is outlined in the Ground Water Remedial Goal Verification Plan (RGVP), included as Appendix C.2 in the Groundwater Remedial Action Report (McLaren/Hart, 1994).

Fourteen (14) groundwater extraction wells currently operate continuously along the northern and eastern property boundary at the Site. The groundwater extraction system (containment system) was designed to prevent the offsite migration of dissolved Site-related constituents in shallow groundwater. Beazer initiated the Stage 2 Monitoring Program in January 1995 to verify that operation of the containment system creates a hydraulic barrier sufficient to contain shallow groundwater impacted by Site-related constituents. The Stage 2 Program consists of two parts:

- Groundwater Containment System Performance Monitoring evaluates the system's performance based primarily on the determination of extraction well capture zones by the analysis of Site water levels and well pumping rates on a monthly and quarterly basis; and
- Groundwater Quality Monitoring evaluates compliance of the remedial system by monitoring groundwater quality in the extraction wells and offsite, downgradient wells on an annual basis.

This report discusses the Groundwater Containment System Performance Monitoring conducted monthly during the first semi-annual period of 2008 (January through June). The Groundwater Containment System Performance Monitoring included:

- quarterly measuring and recording of groundwater levels in 14 onsite extraction wells, 47 onsite and offsite shallow monitoring wells, and 24 shallow piezometers;
- quarterly monitoring of the wells and piezometers for the presence of non-aqueous phase liquid (NAPL); and
- monthly recording of totalized and instantaneous flow rates for the 14 onsite extraction wells.

Section 2 of this report presents the data collection methods and the results of the Groundwater Containment System Performance Monitoring. Conclusions are presented in Section 3.

## **1.1 SITE LOCATION AND HYDROGEOLOGY**

The Site is located at the corner of Main Street and NW 23<sup>rd</sup> Avenue in Gainesville, Florida, as shown on Figure 1. The Site is approximately 90 acres in size with 14 groundwater extraction wells along the northern and eastern property boundary (Figure 2). The Site is currently owned and operated by Koppers Inc. (formerly Koppers Industries, Inc.)

The Surficial Aquifer consists of unconsolidated deposits of sand with trace amounts of silt and clay. The Surficial Aquifer extends to 20 to 28 feet below ground surface (bgs) and is underlain by the Hawthorn Group formation.

## **1.2 2008 SITE ACTIVITIES**

In addition to the activities performed as part of the Stage 2 Monitoring Program, Beazer performed the following activities in the first half of 2008:

- Rory Hanczar, Beazer's Operation and Maintenance Operator (Site Operator), performed routine operation and maintenance of the groundwater containment system; and
- Beazer continued quarterly Upper Floridan Aquifer sampling and presented the results in separate reports.

---

## 2.0 GROUNDWATER CONTAINMENT SYSTEM PERFORMANCE MONITORING

In the first and second quarters of 2008 (on January 30 and May 12), the Site Operator used an oil/water interface probe to measure and record the depth-to-groundwater and NAPL in the 14 extraction wells, 47 monitoring wells, and 24 piezometers present in the Surficial Aquifer at the Site. Tables 1 and 2 summarize the quarterly well gauging data.

In addition to the gauging activities, the Site operator recorded the instantaneous flow rates and totalizer meter readings for each groundwater extraction well on a monthly basis. The Site operator determined the instantaneous flow rates from the totalizing meter connected to each extraction well by measuring the volume of water pumped from a given well over a one-minute time period. FTS calculated the quarterly average flow rates based upon totalizer readings documented for each quarterly period. Table 3 summarizes the total gallons pumped, monthly instantaneous flow, and quarterly average flow rates for the first half of 2008.

Historically, the numerical model FLOWPATH II (Franz and Guiguer, 1994) was utilized as one tool in the evaluation of the hydraulic-containment system groundwater capture. The two-dimensional groundwater flow model was developed by McLaren/Hart with data generated during the Pre-Design Investigation. The model provided a technically valid numerical approach to evaluate the performance of the containment system.

More recently, additional hydrogeologic investigations and data collection were performed in the Hawthorn Group and Upper Floridan Aquifer that allowed for a more comprehensive evaluation of groundwater flow and constituent transport at the Site. In addition to the investigations, Beazer contracted GeoTrans, Inc. (GeoTrans) to perform a comprehensive evaluation of all groundwater and constituent transport data. Included in this evaluation was the development of a three-dimensional fate and transport model (the Site Model) that more accurately simulates groundwater flow and constituent transport at the Site (GeoTrans, Inc., 2004). Results from the Site Model simulations indicate that the hydraulic-containment system may not be 100-percent effective in capturing Surficial Aquifer groundwater flow from the Site. The Site Model also demonstrated that constituents that are potentially bypassing the containment system are either captured by the Cabot Carbon containment system or naturally attenuated within a short distance downgradient of the Site.

Beazer is in the process of developing a Feasibility Study (FS) for the entire groundwater system at the Site. As part of this FS, Beazer will address the approach to remediating the Surficial Aquifer impacts. A review of the effectiveness of the Surficial Aquifer groundwater containment system was performed in December 2006. A letter describing the results and recommendations was submitted to the EPA December 22, 2006.

---

## 2.1 NON-AQUEOUS PHASE LIQUIDS

A measurable level of DNAPL was not detected in any of the extraction wells or piezometers in the first half of 2008 (Tables 1 and 2). A trace amount of DNAPL was detected in monitoring well M-22B during both monitoring events; no DNAPL was detected in any of the other Surficial Aquifer monitoring wells. With the exception of PW-1, DNAPL has never been detected in measurable thickness in Surficial Aquifer wells at the Site since the Stage 2 Monitoring Program was initiated in January 1995. This includes the redevelopment and sampling of 60 Surficial Aquifer wells (14 extraction wells and 46 monitoring wells) completed in July and August 2007, at which time DNAPL was not detected in any of the wells (GeoTrans, Inc. 2007).

## 2.2 GROUNDWATER ELEVATION

Tables 1 and 2 summarize the groundwater elevation data. In July 2004, GeoTrans resurveyed the locations and top of inner casing elevations for most of the Site wells. The top of inner casing elevations were, on average, 0.62 feet lower than previously reported. This new survey data was used to calculate the groundwater elevations on Tables 1 and 2 and to generate the groundwater elevation contours for the Surficial Aquifer monitoring wells and piezometers shown in Figures 3 and 4. Because hydraulic head losses occur across the well annulus and casing, water levels measured in the extraction wells are typically lower than those measured in piezometers immediately adjacent to the extraction wells. Therefore, the extraction well data were not used to prepare Figures 3 and 4, but the piezometer data were used to provide a representative picture of conditions in the extraction well area.

Groundwater in the Surficial Aquifer flows toward the north-northeast, under an average hydraulic gradient (across the entire Site) of 0.0097 ft/ft. The gradient ranges from 0.005 ft/ft near the southern portion of the Site to 0.03 ft/ft in the northern portion of the Site. Groundwater flow direction is influenced by the shallow extraction well network which collectively extracts approximately 30 gpm from the Surficial Aquifer. Within the vicinity of each extraction well, the water table is depressed approximately three to six feet. Due to the scale of the facility-wide contour maps, the depression around most extraction wells cannot be depicted accurately although depressions are evident around all of the extraction wells. Due to strategic placement of the extraction well network and the prevailing flow direction, the shallow extraction system provides containment for much of the shallow groundwater migrating from the site. Groundwater flow directions and gradients occurring in the first semi-annual 2008 were consistent with historical site conditions.

Rainfall during the first quarter of 2008 was slightly above the historical average, whereas it was 54% below the historical average during the second quarter of 2008.

---

<b>Rainfall (inches)</b>	<b>Historical Average</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>1st Quarter</b>	11.16	5.99	7.07	6.98	13.92	9.11	7.83	8.96	8.87	11.30
<b>2nd Quarter</b>	12.87	7.21	13.20	10.68	10.67	8.63	17.69	8.92	6.89	6.97
<b>3rd Quarter</b>	17.10	19.03	19.18	24.34	16.09	34.75	13.52	11.39	19.08	NA
<b>4th Quarter</b>	7.23	3.11	1.80	12.80	5.77	5.87	10.99	6.29	9.89	NA
<b>Full Year</b>	48.36	35.34	41.25	54.80	46.45	58.36	50.03	35.56	44.73	NA

Monthly and annual variation in precipitation can be directly correlated to observed fluctuations in Surficial Aquifer groundwater elevations at the Site. During the first half of 2008, Surficial Aquifer groundwater elevations decreased an average of 1.41 feet from January 2007 to mid-May 2008.



### 3.0 CONCLUSIONS

The groundwater elevation contours for this Site show that groundwater flows towards the north-northeast. The hydraulic gradient ranges from 0.005 ft/ft at the southern end of the Site to 0.03 ft/ft at the northern end of the Site with an average hydraulic gradient across the Site of 0.0097 ft/ft. The groundwater gradients and flow direction for the first half of 2008 are similar to those reported in 2007.

Monthly and annual variation in precipitation can be directly correlated to observed fluctuations in Surficial Aquifer groundwater elevations at the Site. During the first half of 2008, Surficial Aquifer groundwater elevations decreased on average by 1.41 feet from the end of January to the middle of May.

The GeoTrans Site Model indicates that the hydraulic containment system may not be providing complete capture of Site groundwater. The combination of the hydraulic containment systems on the Koppers and Cabot Carbon sites in conjunction with natural attenuation, are providing effective containment of Site constituents.

#### **4.0 REFERENCES**

- Franz, Thomas, and Nilson Guiguer, 1994, FLOWPATH II, Steady-State Two-Dimensional Horizontal Aquifer Simulation Model, Waterloo Hydrogeologic Software, Version 5 for Windows.
- GeoTrans, Inc., 2004, Addendum 6: Groundwater Flow and Transport Model, Koppers Inc., Site, Gainesville, Florida, October 2004.
- GeoTrans, Inc., 2006, Five-Year Review Report – April, 2006 Recommendation #1 – Evaluation of Surficial Aquifer Hydraulic Containment System, Cabot Carbon/Koppers Superfund Site in Gainesville, Florida, December 22, 2006.
- McLaren/Hart Environmental Engineering Corporation, Inc., 1994. Groundwater Remedial Action Report, Initial Groundwater Remedial Action, Cabot Carbon/Koppers Superfund Site, Gainesville, Florida, December 1994.
- TRC Environmental Solutions, Inc., 1997. Proposed Stage 2 Ground Water Monitoring Program, Initial Ground Water Remedial Action, August 1997.
- The RETEC Group, Inc., GeoTrans, Inc., and Key Environmental, Inc., 2005, Surficial Aquifer DNAPL Removal Interim Measures/Remedy Pilot Test Report, May 2005.

# Tables

**Table 1**  
**First Quarter 2008 Water Levels and DNAPL**  
**2008 First Semi-Annual Stage 2 Groundwater Monitoring Report**  
**Gainesville, Florida**



Well ID	Top of Casing Elevation <sup>[1]</sup> (feet msl)	Depth to Water (feet TOC)	Groundwater Elevation (feet msl)	DNAPL Thickness (feet)
<b>January 30, 2008</b>				
EW-01	180.45	14.42	166.03	ND
EW-02	178.89	12.22	166.67	ND
EW-03	175.82	13.31	162.51	ND
EW-05	171.33	10.92	160.41	ND
EW-06	173.02	16.70	156.32	ND
EW-08	174.10	7.93	166.17	ND
EW-09	176.17	8.38	167.79	ND
EW-10	177.33	8.61	168.72	ND
EW-11	178.30	15.09	163.21	ND
EW-13	179.99	10.03	169.96	ND
EW-14	181.84	11.93	169.91	ND
EW-15	182.94	18.48	164.46	ND
EW-16	184.24	20.22	164.02	ND
EW-17	184.76	15.64	169.12	ND
M-01	184.10	12.73	171.37	ND
M-03A	182.21	12.39	169.82	ND
M-03BR	179.60	9.88	169.72	ND
M-04	177.23	7.92	169.31	ND
M-05B	182.18	15.19	166.99	ND
M-06	180.50	13.23	167.27	ND
M-07A	177.09	9.93	167.16	ND
M-07B	176.92	9.79	167.13	ND
MW-08R	175.71	9.07	166.64	ND
M-09AR	173.80	9.98	163.82	ND
M-09BR	173.22	9.35	163.87	ND
M-10	173.93	5.86	168.07	ND
M-11B	187.99	15.47	172.52	ND
MW-12	181.06	9.68	171.38	ND
M-14	187.16	7.66	179.50	ND
M-15B	181.89	8.93	172.96	ND
M-16A	180.96	8.95	172.01	ND
M-16B	180.56	8.52	172.04	ND
M-17	182.86	9.61	173.25	ND
M-18	187.26	9.11	178.15	ND
M-20A	183.18	9.19	173.99	ND
M-20B	183.67	9.67	174.00	ND
MW-21A	185.88	7.23	178.65	ND
MW-21BR	185.80	7.15	178.65	ND
M-22A	184.33	8.85	175.48	ND
M-22B	184.61	10.25	174.36	Trace
M-23AR	185.15	10.35	174.80	ND
M-23BR	185.10	10.30	174.80	ND
M-24A	187.15	9.19	177.96	ND
M-24B	187.19	9.23	177.96	ND
M-25A	186.76	10.89	175.87	ND
M-25B	186.15	10.39	175.76	ND
M-26	187.31	8.37	178.94	ND
M-27A	186.44	7.49	178.95	ND
M-27B	187.06	8.10	178.96	ND
M-28R	186.62	7.73	178.89	ND
M-29	186.67	7.96	178.71	ND
M-30A	187.24	8.84	178.40	ND
M-30B	187.31	8.95	178.36	ND
M-31	187.50	10.18	177.32	ND
MW-32AR	186.12	7.90	178.22	ND
MW-32B	186.01	7.75	178.26	ND
M-33B	176.39	10.16	166.23	ND

**Table 1**  
**First Quarter 2008 Water Levels and DNAPL**  
**2008 First Semi-Annual Stage 2 Groundwater Monitoring Report**  
**Gainesville, Florida**



Well ID	Top of Casing Elevation <sup>[1]</sup> (feet msl)	Depth to Water (feet TOC)	Groundwater Elevation (feet msl)	DNAPL Thickness (feet)
<b>January 30, 2008</b>				
PZ-01A <sup>[2]</sup>	182.44	15.49	166.95	ND
PZ-01B	182.81	15.87	166.94	ND
PZ-02A	180.74	13.46	167.28	ND
PZ-02B	180.59	13.30	167.29	ND
PZ-03A	177.22	10.46	166.76	ND
PZ-05A	173.05	11.98	161.07	ND
PZ-05B	174.07	12.70	161.37	ND
PZ-06A	174.77	9.54	165.23	ND
PZ-06B	174.72	9.54	165.18	ND
PZ-08A	176.16	7.34	168.82	ND
PZ-08B	175.87	7.05	168.82	ND
PZ-09A	177.74	8.50	169.24	ND
PZ-09B	177.26	7.94	169.32	ND
PZ-10A	179.20	9.18	170.02	ND
PZ-10B	178.61	8.66	169.95	ND
PZ-11A	179.82	9.06	170.76	ND
PZ-11B	179.59	8.76	170.83	ND
PZ-13A	181.14	9.66	171.48	ND
PZ-13B	181.67	10.15	171.52	ND
PZ-14A	183.22	10.31	172.91	ND
PZ-14B	182.98	10.00	172.98	ND
PZ-15A	185.03	11.35	173.68	ND
PZ-15B	184.84	10.90	173.94	ND
PZ-17A	186.23	10.45	175.78	ND
ITW-23	173.06	11.65	161.41	ND
OW-01	187.35	9.66	177.69	ND
OW-02	187.40	10.45	176.95	ND
PW-01	186.84	9.05	177.79	Trace

**Notes:**

ND = Not Detected

NA = Not Applicable

gpm = gallons per minute

feet msl = feet above mean sea level

feet TOC = feet below top of casing

<sup>[1]</sup> Well top of casing elevations and locations were resurveyed in July 2004 by GeoTrans. Elevation datum is NGVD 1929 stated in U.S. Survey Feet.

<sup>[2]</sup> These wells were previously designated P-#. The well identifications were updated as shown.



**Table 2**  
**Second Quarter 2008 Water Levels and DNAPL**  
**2008 First Semi-Annual Stage 2 Groundwater Monitoring Report**  
**Gainesville, Florida**

Well ID	Top of Casing Elevation <sup>[1]</sup> (feet msl)	Depth to Water (feet TOC)	Groundwater Elevation (feet msl)	DNAPL Thickness (feet)
<b>May 12, 2008</b>				
EW-01	180.45	15.00	165.45	ND
EW-02	178.89	12.80	166.09	ND
EW-03	175.82	13.60	162.22	ND
EW-05	171.33	14.28	157.05	ND
EW-06	173.02	21.17	151.85	ND
EW-08	174.10	9.19	164.91	ND
EW-09	176.17	9.37	166.80	ND
EW-10	177.33	11.14	166.19	ND
EW-11	178.30	23.70	154.60	ND
EW-13	179.99	11.90	168.09	ND
EW-14	181.84	15.93	165.91	ND
EW-15	182.94	19.57	163.37	ND
EW-16	184.24	15.00	169.24	ND
EW-17	184.76	17.77	166.99	ND
M-01	184.10	13.03	171.07	ND
M-03A	182.21	13.82	168.39	ND
M-03BR	179.60	11.30	168.30	ND
M-04	177.23	9.75	167.48	ND
M-05B	182.18	14.92	167.26	ND
M-06	180.50	13.87	166.63	ND
M-07A	177.09	11.65	165.44	ND
M-07B	176.92	11.54	165.38	ND
MW-08R	175.71	11.47	164.24	ND
M-09AR	173.80	12.87	160.93	ND
M-09BR	173.22	12.23	160.99	ND
M-10	173.93	8.24	165.69	ND
M-11B	187.99	14.89	173.10	ND
MW-12	181.06	10.91	170.15	ND
M-14	187.16	12.34	174.82	ND
M-15B	181.89	9.51	172.38	ND
M-16A	180.96	10.20	170.76	ND
M-16B	180.56	9.77	170.79	ND
M-17	182.86	10.44	172.42	ND
M-18	187.26	10.63	176.63	ND
M-20A	183.18	9.77	173.41	ND
M-20B	183.67	10.25	173.42	ND
MW-21A	185.88	8.90	176.98	ND
MW-21BR	185.80	8.81	176.99	ND
M-22A	184.33	9.08	175.25	ND
M-22B	184.61	10.49	174.12	Trace
M-23AR	185.15	10.60	174.55	ND
M-23BR	185.10	10.55	174.55	ND
M-24A	187.15	10.02	177.13	ND
M-24B	187.19	10.08	177.11	ND
M-25A	186.76	11.59	175.17	ND
M-25B	186.15	11.05	175.10	ND
M-26	187.31	10.03	177.28	ND
M-27A	186.44	9.05	177.39	ND
M-27B	187.06	9.65	177.41	ND
M-28R	186.62	9.00	177.62	ND
M-29	186.67	9.11	177.56	ND
M-30A	187.24	9.98	177.26	ND
M-30B	187.31	10.09	177.22	ND
M-31	187.50	11.16	176.34	ND
MW-32AR	186.12	9.13	176.99	ND
MW-32B	186.01	9.01	177.00	ND
M-33B	176.39	12.26	164.13	ND



**Table 2**  
**Second Quarter 2008 Water Levels and DNAPL**  
**2008 First Semi-Annual Stage 2 Groundwater Monitoring Report**  
**Gainesville, Florida**

Well ID	Top of Casing Elevation <sup>[1]</sup> (feet msl)	Depth to Water (feet TOC)	Groundwater Elevation (feet msl)	DNAPL Thickness (feet)
<b>May 12, 2008</b>				
PZ-01A <sup>[2]</sup>	182.44	15.76	166.68	ND
PZ-01B	182.81	16.04	166.77	ND
PZ-02A	180.74	14.54	166.20	ND
PZ-02B	180.59	14.32	166.27	ND
PZ-03A	177.22	12.31	164.91	ND
PZ-05A	173.05	14.73	158.32	ND
PZ-05B	174.07	15.49	158.58	ND
PZ-06A	174.77	12.32	162.45	ND
PZ-06B	174.72	12.36	162.36	ND
PZ-08A	176.16	9.32	166.84	ND
PZ-08B	175.87	9.09	166.78	ND
PZ-09A	177.74	10.20	167.54	ND
PZ-09B	177.26	9.72	167.54	ND
PZ-10A	179.20	10.90	168.30	ND
PZ-10B	178.61	10.35	168.26	ND
PZ-11A	179.82	10.18	169.64	ND
PZ-11B	179.59	10.51	169.08	ND
PZ-13A	181.14	10.91	170.23	ND
PZ-13B	181.67	11.39	170.28	ND
PZ-14A	183.22	11.27	171.95	ND
PZ-14B	182.98	10.90	172.08	ND
PZ-15A	185.03	11.75	173.28	ND
PZ-15B	184.84	11.35	173.49	ND
PZ-17A	186.23	11.05	175.18	ND
ITW-23	173.06	14.45	158.61	ND
OW-01	187.35	9.66	177.69	ND
OW-02	187.40	11.30	176.10	ND
PW-01	186.84	9.92	176.92	Trace

**Notes:**

ND = Not Detected  
 NA = Not Applicable  
 NM = Not Measured  
 gpm = gallons per minute  
 feet msl = feet above mean sea level  
 feet TOC = feet below top of casing

<sup>[1]</sup> Well top of casing elevations and locations were resurveyed in July 2004 by GeoTrans. Elevation datum is NGVD 1929 stated in U.S. Survey Feet.

<sup>[2]</sup> These wells were previously designated P-#. The well identifications were updated as shown



**Table 3**  
**Extraction Well Flow Rates: January through June 2008**  
**2008 First Semi-Annual Stage 2 Groundwater Monitoring Report**  
**Gainesville, Florida**

Well ID	January-08		February-08		March-08		First Quarter Average Flow Rate (gpm)
	Total (gallons)	Instantaneous Flow Rate (gpm)	Total (gallons)	Instantaneous Flow Rate (gpm)	Total (gallons)	Instantaneous Flow Rate (gpm)	
EW-01	88,095	2.0	83,701	2.4	102,308	3.0	2.1
EW-02	72,270	1.1	86,981	2.8	70,304	1.6	1.8
EW-03	103,828	2.1	97,942	3.0	108,431	2.6	2.4
EW-05	89,290	3.0	98,139	1.9	109,404	2.3	2.3
EW-06	58,465	1.9	68,473	1.4	71,177	2.0	1.5
EW-08	63,870	2.4	47,967	1.4	37,346	0.9	1.1
EW-09	88,914	2.3	79,886	1.4	60,382	1.8	1.7
EW-10	67,975	1.9	51,729	1.4	54,851	1.5	1.3
EW-11	44,172	1.8	42,996	1.5	46,015	1.8	1.0
EW-13	79,917	1.8	70,726	1.6	89,411	2.7	1.8
EW-14	83,868	2.0	82,242	1.9	100,553	2.4	2.0
EW-15	56,186	1.7	60,291	1.3	65,631	1.7	1.4
EW-16	67,405	1.8	64,174	1.8	78,797	1.9	1.6
EW-17	33,795	1.1	45,051	1.2	47,618	1.1	1.0

Well ID	April 30, 2008		May 31, 2008		June 30, 2008		Second Quarter Average Flow Rate (gpm)
	Total (gallons)	Instantaneous Flow Rate (gpm)	Total (gallons)	Instantaneous Flow Rate (gpm)	Total (gallons)	Instantaneous Flow Rate (gpm)	
EW-01	90,278	2.0	94,414	2.1	96,342	2.0	2.1
EW-02	53,754	1.3	36,844	1.0	24,953	1.1	0.9
EW-03	92,520	2.4	91,633	3.0	117,538	2.0	2.3
EW-05	85,961	2.2	107,561	3.0	128,206	2.2	2.5
EW-06	47,777	1.4	40,839	1.4	25,997	1.1	0.9
EW-08	50,774	1.4	43,145	1.5	42,399	1.2	1.0
EW-09	45,757	1.4	47,177	1.5	49,901	1.5	1.1
EW-10	52,606	1.7	40,878	1.5	42,470	1.5	1.0
EW-11	37,465	1.8	38,572	1.5	29,514	1.0	0.8
EW-13	80,937	2.5	62,205	2.0	68,858	1.2	1.6
EW-14	86,136	2.6	81,935	2.1	69,296	1.1	1.8
EW-15	55,040	1.4	56,281	1.9	52,057	1.3	1.2
EW-16	54,861	1.6	44,264	1.5	41,769	1.2	1.1
EW-17	38,291	1.1	38,753	1.2	32,530	1.1	0.8

**Notes:**

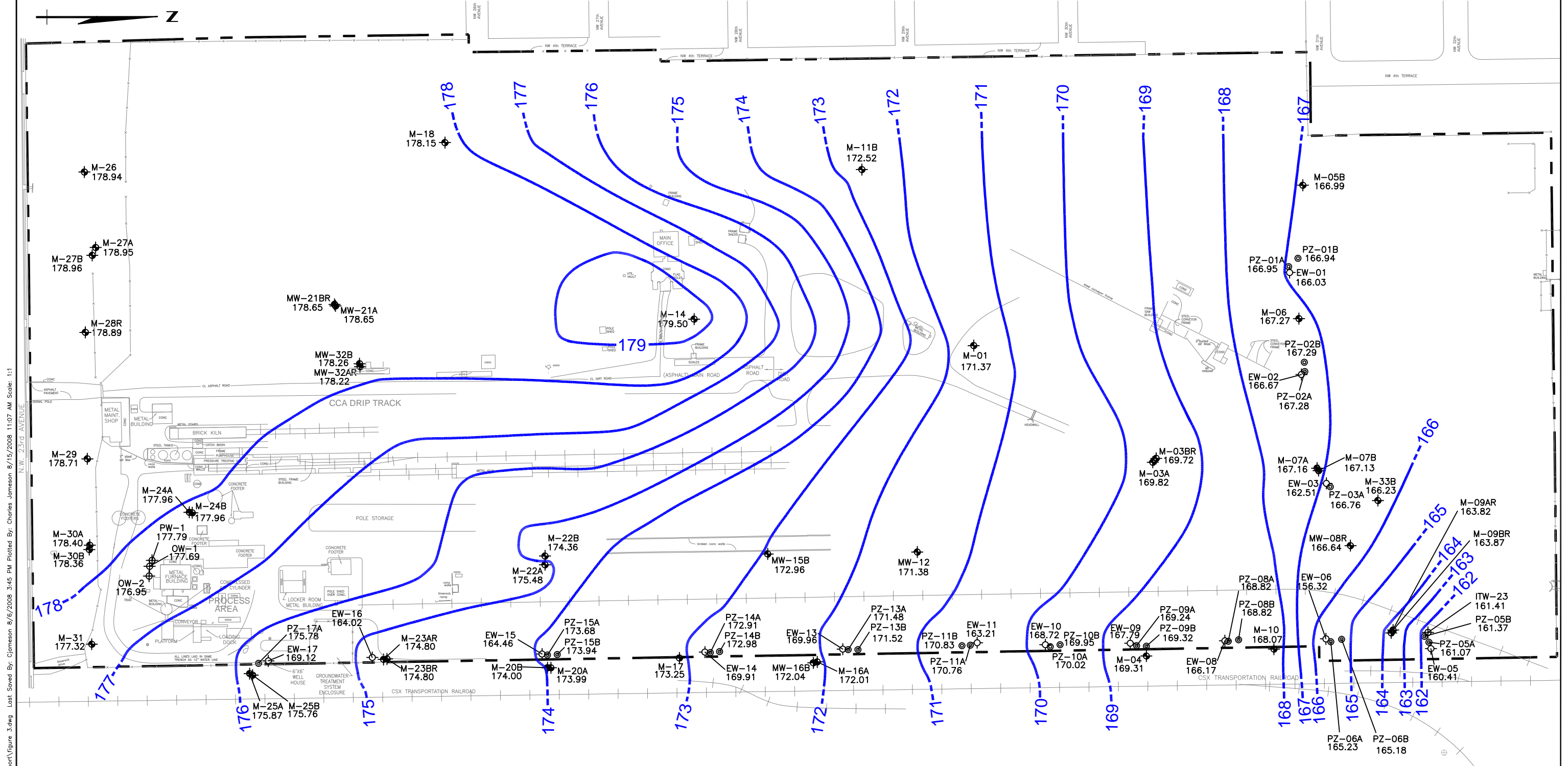
gpm = gallons per minute



# Figures



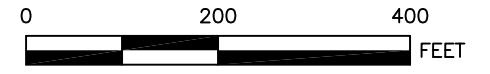




c:\projects\beazer\_projects\gainesville\cadd\2008\_1st\_semi-annual\_stage\_2\_report\figure\_3.dwg Last Saved By: Jameson, 8/15/2008 3:45 PM Plotted By: Charles Jameson, 8/15/2008 11:07 AM Scale: 1:1

### LEGEND

- PROPERTY LINE (APPROX.)
- ROAD
- FENCE
- RR TRACK
- ID GW-ELEV. MONITORING WELL WITH GROUNDWATER ELEVATION
- ID GW-ELEV. PIEZOMETER
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)



BEAZER EAST, INC.  
PITTSBURGH, PENNSYLVANIA

DRWN: WAA	DATE: 07/08/08
CHKD: RMB	DATE: 07/08/08
APPD: AMG	DATE: 07/08/08
SCALE: AS SHOWN	
ISSUE DATE:	



FIELD & TECHNICAL SERVICES, LLC.  
200 THIRD AVENUE  
CARNEGIE, PA 15106

2008 FIRST SEMIANNUAL STAGE 2  
GROUNDWATER MONITORING REPORT  
CABOT CARBON/KOPPERS SUPERFUND SITE  
GAINESVILLE, FLORIDA

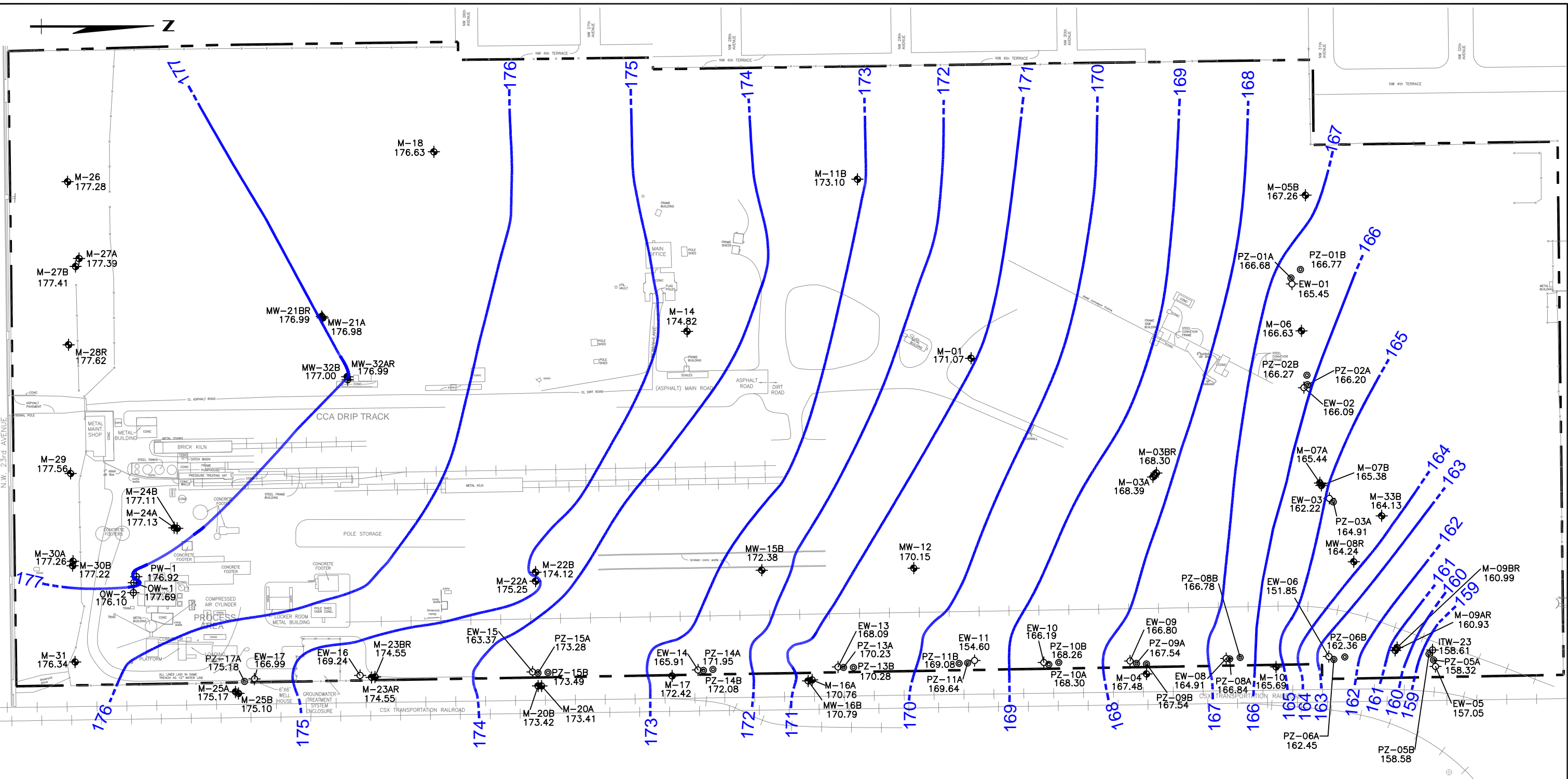
GROUNDWATER ELEVATION CONTOURS  
FIRST QUARTER - JANUARY 30, 2008

PROJECT NO: OMO45007  
DRAWING NUMBER  
FIGURE 3

REV #	DATE	DESCRIPTION	APPD

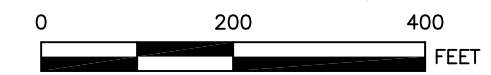
REFERENCE:

c:\projects\beazer\_projects\gainesville\cadd\2008\_1st\_semi-annual\_stage\_2\_report\figure\_4.dwg Last Saved By: Gjonneson 8/15/2008 11:07 AM Scale: 1:1



### LEGEND

- PROPERTY LINE (APPROX.)
- ROAD
- FENCE
- RR TRACK
- ID GW-ELEV. MONITORING WELL WITH GROUNDWATER ELEVATION
- ID GW-ELEV. PIEZOMETER
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)



**BEAZER EAST, INC.**  
PITTSBURGH, PENNSYLVANIA

DRWN: WAA	DATE: 07/08/08		FIELD & TECHNICAL SERVICES, LLC. 200 THIRD AVENUE CARNEGIE, PA 15106
CHKD: RMB	DATE: 07/08/08		
APPD: AMG	DATE: 07/08/08		
SCALE: AS SHOWN			
ISSUE DATE:			

2008 FIRST SEMIANNUAL STAGE 2  
GROUNDWATER MONITORING REPORT  
CABOT CARBON/KOPPERS SUPERFUND SITE  
GAINESVILLE, FLORIDA

GROUNDWATER ELEVATION CONTOURS  
SECOND QUARTER - MAY 12, 2008

PROJECT NO: OMO45008  
DRAWING NUMBER  
**FIGURE 4**

REV #	DATE	DESCRIPTION	APPD

REFERENCE: