



HAND DELIVERED

October 4, 2012

Mr. Christopher Ralston  
Maryland Department of the Environment  
1800 Washington Boulevard  
Baltimore, MD 21230

**SUBJECT:** **Evaluation Report – MW-139 & MW-181B**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike, Phoenix, Maryland  
MDE Case No. 2006-0303-BA2  
MDE Facility I.D. No. 12342

Dear Mr. Ralston:

In a letter dated May 8, 2012<sup>1</sup>, approving the *Recovery Activation of MW-139 and MW-181B Work Plan*<sup>2</sup> ("Work Plan"), the Maryland Department of the Environment (MDE) requested an Evaluation Report 45 days after completion of field activities. Kleinfelder, on behalf of ExxonMobil Environmental Services Company (ExxonMobil), is submitting herein the requested Evaluation Report. This report includes the weekly gauging data and bi-weekly sampling analytical results of twelve monitoring wells, as well as construction details for all wells sampled.

### **Background Information**

As discussed in the Work Plan, MW-139 was installed in April 2006 in the location of the former station property tank field on 14258 Jarrettsville Pike. Potentiometric surface data indicate MW-139 is hydraulically connected to other nearby active recovery wells, as noted following pumping initiation at SVE-3 in 2009 (see full hydrograph at **Attachment 1**). Methyl Tertiary Butyl Ether (MTBE) and dissolved benzene, toluene, ethylbenzene & xylene (BTEX) levels have remained

<sup>1</sup> MDE, May 8, 2012, Approval of Work Plan for Recovery Activity from MW-139 and MW-181B. Case No. 2006-0303-BA2, Former Exxon R/S No. 2-8077, 14258 Jarrettsville Pike, Phoenix, Baltimore County, Maryland, Facility I.D. No. 12342.

<sup>2</sup> Kleinfelder, February 28, 2012, Recovery Activation of MW-139 and MW-181B Work Plan. Inactive Exxon Facility #28077, 14258 Jarrettsville Pike, Phoenix, Maryland, Case Number 2006-0303-BA2, Facility I.D. No. 12342.



relatively constant in this well for close to two years. Therefore, pumping from MW-139 was proposed in order to accelerate hydrocarbon recovery in the area of the former UST field. MW-181B was installed in November 2010 and the corresponding analytical data illustrate a general decreasing trend in MTBE since installation; however, MTBE levels remain above 800 micrograms per liter ( $\mu\text{g}/\text{L}$ ). Dissolved BTEX concentrations in MW-181B have fluctuated since installation. Pumping from MW-181B was proposed in order to accelerate recovery of dissolved phase hydrocarbons in the vicinity of 14301 Jarrettsville Pike.

### **Groundwater Recovery**

MDE approved the installation of pneumatic pumps at 75 feet below grade (fbg) in MW-139 and MW-181B. Groundwater recovery was initiated from MW-139 on June 20, 2012, followed by initiation of recovery from MW-181B one month later on July 20, 2012. The Work Plan previously provided to MDE included the boring logs for MW-139 and MW-181B. MDE was informed via email on June 12, 2012 of the planned pump start dates. The locations of the pumping wells and surrounding wells can be found on **Figure 1**.

### **Sampling and Gauging**

To evaluate the effect of groundwater recovery from MW-139 and MW-181B on groundwater conditions, MDE requested weekly gauging and biweekly sampling of the following twelve wells:

- MW-2
- MW-14
- MW-25 [R]<sup>3</sup>
- MW-32 [R]
- MW-139 [R]
- MW-144 [R]
- MW-151 [R]
- MW-152 [R]
- MW-181A
- MW-181B [R]
- MW-181C
- SVE-2

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<sup>3</sup> The “[R]” designation indicates a recovery well



The bi-weekly samples were analyzed for BTEX and five gasoline oxygenates including MTBE. In addition, MDE required weekly gauging of monitoring wells MW-85P and MW-86P. A summary of analytical results can be found in **Table 1**, and gauging information is provided as **Table 2**. **Table 3** provides well construction information, including screened intervals, and indicates whether a given well is a recovery well or a monitoring well. Charts showing groundwater levels, as well as concentrations of MTBE and BTEX from June 2011 (one year prior to the start of pumping) through August 2012 are included as **Charts 1-14** (Note: **Charts 5 & 6** are for MW-85P and MW-86P, respectively, and show only groundwater level). Complete historical charts for all wells discussed herein were previously submitted to the MDE as part of the Annual Update on September 27, 2012 and are also provided here as **Attachment 1**.

### Pumping Effect on Groundwater Levels and Concentrations

#### MW-139

As illustrated in **Figure 2** and **Table 2**, following the initiation of pumping, groundwater elevation in MW-139 dropped and remained approximately 17 feet lower, from 535 feet above mean sea level (ft-msl) to 518 ft-msl. Based on groundwater recovery rates measured September 21, 2012, MW-139 is pumping at approximately 0.3 gallons per minute (gpm). The concentration of MTBE has been decreasing in MW-139 since the initiation of recovery, while BTEX concentrations have continued to fluctuate, initially dropping around the time pumping was started, and increasing again starting in August.

Pumping from MW-139 has limited discernible effect on groundwater elevations in most of the surrounding wells. As shown on **Figure 2**, groundwater levels in SVE-2, MW-14 and MW-151 are generally consistent with prior elevations. At the start of pumping, groundwater elevation in MW-25 dropped from 544 ft-msl to 540 ft-msl, but had recovered to former levels by the following week. Groundwater in MW-2 dropped two feet, from 549 ft-msl to 547 ft-msl at the start of pumping from MW-139 and remained at this level. Groundwater elevation fluctuations in MW-144 during initiation of pumping are consistent with historical variations in groundwater elevation in this well.



Since initiation of recovery at MW-139, MTBE and BTEX concentrations have fluctuated in most of the surrounding wells, with the exception of MW-25, in which BTEX has remained at non-detect levels and MTBE concentrations have gone from 2.6 µg/L to non-detect. Concentrations of MTBE and BTEX in MW-32 (located to the East on 14301 Jarrettsville Pike in the area of MW-181B) have increased since the start of pumping in MW-139. MTBE increased from 0.87 µg/L on June 21<sup>st</sup> to 42.8 µg/L on July 10<sup>th</sup>, while BTEX concentrations went up from 0.29 µg/L on June 21<sup>st</sup> to 9.4 µg/L on July 10<sup>th</sup>.

#### MW-181B

Groundwater elevation in MW-181B had been approximately 535 feet ft-msl prior to the initiation of groundwater recovery at MW-139 on June 20, 2012. Prior to purging and sampling MW-181B on June 20, 2012 the groundwater elevation decreased approximately five feet to 530 ft-msl. Approximately 270 gallons were purged from MW-181B during groundwater sampling completed on June 20, 2012. When MW-181B was sampled again on June 25, 2012 as part of the Work Plan-required monitoring, the starting groundwater elevation was approximately 507 ft-msl, roughly a 23-foot decrease in elevation from June 20, 2012 (530 ft-msl). Since initiation of groundwater recovery on July 20, 2012, the groundwater elevation has remained at approximately 518 ft-msl, which is where the pneumatic pump intake is set.

During 20 minutes of monitoring on September 21, 2012, the pneumatic pump in MW-181B did not complete one cycle. Based on pump cycle counter readings from August 30, 2012 (526 cycles) and September 21, 2012 (690 cycles), combined with an estimated purge volume of 0.5 gallons for the type of pump used, MW-181B is pumping at approximately 0.003 gpm. Downhole geophysics for MW-181B (**Attachment 2**) show one fracture with a Paillet rank of more than 1 (a fracture measuring 1.7 inches at 76 feet below ground surface).

Concentrations of MTBE in MW-181B have been declining since the well was purged for sampling on June 20<sup>th</sup>, from 545 µg/L on 6/20/2012 to 62.1 µg/L on 7/23/2012 (three days after pumping was initiated at MW-181B). Since the start of pumping, MTBE concentrations in MW-181B have decreased to 1.2 µg/L and BTEX concentrations have continued to fluctuate.



Groundwater elevations in the wells immediately surrounding MW-181B (MW-181A, MW-181C and MW-32) have been minimally affected by the initiation of recovery. MTBE and BTEX concentrations in MW-181A and MW-181C were unaffected by the start of pumping from MW-181B; as discussed above, increases in concentrations of both MTBE and BTEX in MW-32 occurred around the time pumping was initiated at MW-139, but may also be related to the sampling-related drawdown in MW-181B at around the same time. Groundwater levels in MW-32 also appear to be affected by the pumping of MW-139, but not by pumping at MW-181B, indicating along-strike hydraulic influence due to pumping at MW-139.

### **Conclusions**

1. MTBE concentrations and groundwater elevations associated with MW-139 have declined;
2. MTBE concentrations associated with MW-181B have declined, while BTEX concentrations have continued to fluctuate;
3. Groundwater elevation in wells immediately surrounding MW-139 appear to be minimally affected by pumping;
4. Pumping of MW-139 appears to have induced a lower groundwater elevation at MW-32 to the East;
5. MW-139 appears to be having some effect on concentration levels in nearby wells and possibly in MW-32; and
6. Pumping at MW-181B has likely had little effect on groundwater elevation or concentrations in surrounding wells.

### **Recommendations**

1. Continue groundwater recovery at both MW-139 and MW-181B; and,
2. Continue monthly sampling and gauging to monitor any changes in surrounding wells.

Please contact the undersigned with any questions or requests for additional information at 410-850-0404.



Sincerely,

**KLEINFELDER EAST, INC.**

A handwritten signature in black ink, appearing to read "Sean Rochford".

Sean Rochford  
Environmental Scientist

A handwritten signature in blue ink, appearing to read "Leslie D. Schultheis, P.E.". Below the signature, the title "Senior Engineer" is printed in a smaller font.

A handwritten signature in blue ink, appearing to read "Mark J. Schaaf, C.P.G."/&gt;

Mark J. Schaaf, C.P.G.  
Project Director

**Enclosure**

Table 1: MW-139 / MW-181B Work Plan – Analytical Data Summary

Table 2: MW-139 / MW-181B Work Plan – Gauging Data Summary

Table 3: Well Construction and Well Status Summary

Figure 1: Location Map

Figure 2: Well Location Map with Data Charts

Charts 1-14: Groundwater Elevation and MTBE, Benzene, BTEX Concentration Over Time

Attachment 1: Historical Charts for MW-139 & MW-181B Work Plan

Attachment 2: Televiewer, Geophysical and Flowmeter Logs – MW-181B

cc: Mr. John Hoban – ExxonMobil Environmental Services Company (Kleinfelder File)  
Ms. Ellen Jackson – Maryland Department of the Environment  
Mr. Andrew Miller – Maryland Department of the Environment  
Mr. Greg Martin – Roux Associates, Inc.  
Mr. Carlos Bollar, Esquire – Archer & Greiner, P.C.  
Ms. Sasha McNeely, Esquire – Snyder, Weltchek & Snyder  
Mr. Theodore M. Flerlage, Esquire – Law Offices of Peter Angelos

## **TABLES**

**Table 1**  
**MW-139 / MW-181B Work Plan - Analytical Data Summary**  
 Inactive Exxon Facility #28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

Well ID	Sample Date	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	Total BTEX ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Comments
MW-2	6/8/2011	30.5	0.28 J	ND(1.0)	1.6	32.4	268	2.1 J	6.9	50.7	ND(25)	
MW-2	9/8/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	19.9	0.35 J	1.0 J	2.4 J	ND(25)	
MW-2	12/7/2011	6.5	ND(1.0)	ND(1.0)	ND(1.0)	6.5	117	0.78 J	3.2 J	15.8	ND(25)	
MW-2	3/13/2012	2.5	ND(1.0)	ND(1.0)	ND(1.0)	2.5	70.8	1.1 J	2.4 J	9.6	ND(25)	
MW-2	6/11/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	4.5	ND(5.0)	ND(5.0)	0.67 J	ND(25)	
MW-2	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.1	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-2	7/10/2012	4.9	0.27 J	ND(1.0)	1.7	6.9	83.9	0.74 J	2.4 J	14.2	ND(25)	
MW-2	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	29.1	1.4 J	4.0 J	0.59 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-2	8/7/2012	38.1	ND(1.0)	ND(1.0)	2.7	40.8	369	2.8 J	9	51.6	7.4 J	
MW-2	8/20/2012	1.1	ND(1.0)	ND(1.0)	ND(1.0)	1.1	260	2.8 J	8.4	28.0	20.1 J	
MW-14	6/8/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	2.3	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-14	9/8/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-14	12/7/2011	0.91 J	ND(1.0)	ND(1.0)	ND(1.0)	0.91	461	1.1 J	4.1 J	14.9	ND(25)	
MW-14	3/13/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	174	0.69 J	1.9 J	6.3	ND(25)	
MW-14	6/11/2012	132	ND(100)	ND(100)	ND(100)	132	16600	ND(500)	125 J	1030	ND(2500)	
MW-14	6/25/2012	14.8 J	ND(25)	ND(25)	ND(25)	14.8	4250	12.5 J	41.0 J	264	ND(630)	GW Recovery initiated at MW-139 on 6/20/12
MW-14	7/10/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-14	7/23/2012	0.92 J	ND(1.0)	ND(1.0)	ND(1.0)	0.92	183	0.65 J	1.9 J	10.7	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-14	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	91.1	0.20 J	0.79 J	4.4 J	ND(25)	
MW-14	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	6/27/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	9/28/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	12/15/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.40 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	3/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	2.6	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	6/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.43 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.30 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-25 [R]	7/10/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-25 [R]	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-25 [R]	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	

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Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	Comments
MW-32 [R]	6/28/2011	ND(1.0)	0.25 J	ND(1.0)	ND(1.0)	0.25	1.5	ND(5.0)	0.25 J	ND(5.0)	ND(25)	
MW-32 [R]	9/29/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	2.8	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-32 [R]	12/20/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.5	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-32 [R]	3/27/2012	0.43 J	1.2	0.39 J	5.6	7.6	9	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-32 [R]	6/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	0.29 J	0.29	0.87 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-32 [R]	6/25/2012	0.69 J	1.5	0.46 J	6.1	8.8	29.3	ND(5.0)	0.29 J	1.3 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-32 [R]	7/10/2012	0.96 J	0.46 J	0.32 J	7.7	9.4	42.8	ND(5.0)	0.41 J	2.2 J	ND(25)	
MW-32 [R]	7/23/2012	0.75 J	2.3	0.96 J	10.1	14.1	54.3	ND(5.0)	0.50 J	2.7 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-32 [R]	8/7/2012	1.1	3.3	1.4	10.2	16	56.1	ND(5.0)	ND(5.0)	2.6 J	ND(25)	
MW-32 [R]	8/20/2012	1.0	2.5	1.0	7.8	12.3	63.0	ND(5.0)	ND(5.0)	2.8 J	ND(25)	
MW-139 [R]	6/8/2011	239	18.4 J	ND(20)	34.3	292	6380	16.9 J	49.6 J	658	ND(500)	
MW-139 [R]	9/8/2011	315	21.9	2.6 J	32.1	372	6100	18.1 J	52.5	724	205 J	
MW-139 [R]	12/7/2011	325	23.7	7.9 J	27.3	384	6490	18.8 J	61.8	737	225 J	
MW-139 [R]	3/13/2012	352	22.4 J	ND(50)	29.1 J	404	5020	23.6 J	54.6 J	519	ND(1300)	
MW-139 [R]	6/11/2012	323	9.9 J	ND(25)	25.7	359	4850	15.2 J	52.3 J	569	525 J	
MW-139 [R]	6/25/2012	ND(10)	ND(10)	ND(10)	14.4	14.4	1160	6.8 J	17.1 J	151	98.1 J	GW Recovery initiated at MW-139 on 6/20/12
MW-139 [R]	7/10/2012	0.41 J	ND(1.0)	ND(1.0)	0.68 J	1.09	816	3.6 J	10.9	104	71	
MW-139 [R]	7/23/2012	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	BRL	828	4.1 J	11.4 J	97.5	48.7 J	GW Recovery initiated at MW-181B on 7/20/12
MW-139 [R]	8/7/2012	1.6 J	ND(5.0)	ND(5.0)	ND(5.0)	1.6	708	3.1 J	9.2 J	78.3	55.2 J	
MW-139 [R]	8/20/2012	5.6	ND(5.0)	ND(5.0)	1.7 J	7.3	748	3.6 J	10.1 J	75.3	57.0 J	
MW-144 [R]	6/24/2011	40.8	1820	893	1550	4304	165	ND(25)	ND(25)	32.9	80.6 J	
MW-144 [R]	9/28/2011	12	1180	2300	3770	7262	141	ND(50)	ND(50)	20.3 J	ND(250)	
MW-144 [R]	12/15/2011	37.5	8940	2540	8010	19528	243	ND(50)	2.9 J	42.0 J	48.9 J	
MW-144 [R]	3/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.64 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-144 [R]	6/14/2012	7.3 J	1880	630	1430	3947	43.5	ND(50)	ND(50)	7.0 J	ND(250)	
MW-144 [R]	6/25/2012	2.2	379	282	673	1336	21	ND(5.0)	ND(5.0)	3.6 J	11.0 J	GW Recovery initiated at MW-139 on 6/20/12
MW-144 [R]	7/10/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.55 J	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-144 [R]	7/23/2012	1.1	337	218	723	1279	15	ND(5.0)	ND(5.0)	3.0 J	17.5 J	GW Recovery initiated at MW-181B on 7/20/12
MW-144 [R]	8/7/2012	0.58 J	167	109	329	606	8.2	ND(5.0)	ND(5.0)	1.7 J	ND(25)	
MW-144 [R]	8/20/2012	ND(1.0)	38.7	10.4	22.1	71.2	8.1	ND(5.0)	ND(5.0)	1.3 J	ND(25)	

**Table 1**  
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 14258 Jarrettsville Pike  
 Phoenix, MD

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	Comments
MW-151 [R]	6/24/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.1	0.45 J	0.83 J	ND(5.0)	ND(25)	
MW-151 [R]	9/28/2011	ND(1.0)	0.36 J	ND(1.0)	0.28 J	0.64	17.9	ND(5.0)	0.34 J	2.3 J	ND(25)	
MW-151 [R]	12/15/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.7	ND(5.0)	0.30 J	0.91 J	ND(25)	
MW-151 [R]	3/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	6.4	ND(5.0)	0.26 J	ND(5.0)	ND(25)	
MW-151 [R]	6/20/2012	ND(1.0)	0.25 J	ND(1.0)	ND(1.0)	0.25	5.4	ND(5.0)	ND(5.0)	0.30 J	ND(25)	
MW-151 [R]	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	7	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-151 [R]	7/10/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	6	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-151 [R]	7/23/2012	ND(1.0)	0.25 J	0.53 J	0.24 J	1.02	14.7	ND(5.0)	ND(5.0)	1.6 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-151 [R]	8/7/2012	ND(1.0)	0.43 J	0.95 J	0.65 J	2.03	22.2	ND(5.0)	0.31 J	2.4 J	ND(25)	
MW-151 [R]	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.8	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-152 [R]	6/24/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.2	0.49 J	0.84 J	ND(5.0)	ND(25)	
MW-152 [R]	9/28/2011	ND(1.0)	0.32 J	ND(1.0)	0.28 J	0.6	18.1	ND(5.0)	ND(5.0)	2.3 J	ND(25)	
MW-152 [R]	12/15/2011	ND(1.0)	0.30 J	ND(1.0)	0.67 J	0.97	4.5	ND(5.0)	0.41 J	0.42 J	61.4	
MW-152 [R]	3/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	2.5	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-152 [R]	6/20/2012	ND(1.0)	0.30 J	ND(1.0)	ND(1.0)	0.3	5.5	ND(5.0)	ND(5.0)	0.31 J	ND(25)	
MW-152 [R]	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.5	ND(5.0)	ND(5.0)	ND(5.0)	34.2	GW Recovery initiated at MW-139 on 6/20/12
MW-152 [R]	7/10/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	6.8	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-152 [R]	7/23/2012	ND(1.0)	0.24 J	0.55 J	0.27 J	1.06	14.6	ND(5.0)	ND(5.0)	1.6 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-152 [R]	8/7/2012	ND(1.0)	0.45 J	0.88 J	0.60 J	1.93	22.4	ND(5.0)	0.30 J	2.6 J	ND(25)	
MW-152 [R]	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.7	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-181A	6/23/2011	85.4	198	31.7	660	975	758	2.8 J	6.3 J	73.5	77.5	
MW-181A	7/28/2011	84.7	460	10.6	1090	1645	684	2.0 J	5.2 J	66.2	ND(50)	
MW-181A	8/26/2011	3.9	3.6	ND(1.0)	17.9	25.4	950	3.0 J	12.7	81.4	17.7 J	
MW-181A	9/23/2011	35.8	140	7.2	567	750	344	0.97 J	2.5 J	29.4	ND(25)	
MW-181A	10/26/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	28.8	ND(5.0)	ND(5.0)	0.59 J	ND(25)	
MW-181A	11/29/2011	50.7	84.7	5.7	571	712	344	0.93 J	3.0 J	36.6	ND(25)	
MW-181A	12/22/2011	87	127	10.7	1090	1315	570	ND(5.0)	4.3 J	52.2	ND(25)	
MW-181A	1/31/2012	84.5	48	5.7	770	908	640	2.0 J	5.4	61.3	ND(25)	
MW-181A	2/20/2012	70.2	62.2	5.2	816	954	567	1.6 J	4.2 J	49.7	ND(130)	
MW-181A	3/27/2012	67	37.1	2.9 J	705	812	522	ND(25)	3.7 J	45.1	ND(130)	
MW-181A	4/24/2012	63.8	13.6	1.6 J	351	430	608	1.5 J	4.4 J	51.1	ND(130)	
MW-181A	5/30/2012	94	30.9	2.7	777	905	873	2.5 J	6.2	71.7	20.4 J	
MW-181A	6/20/2012	68	35.6	2.7	681	787	769	2.2 J	5.9	67.5	23.5 J	
MW-181A	6/25/2012	65.7	86.5	6.1	960	1118	903	2.7 J	7.5	83.7	30.7	GW Recovery initiated at MW-139 on 6/20/12
MW-181A	7/10/2012	79.6	55.2	3.7	800	939	668	1.9 J	5.2	62.7	21.9 J	
MW-181A	7/23/2012	60.2	34.2	2.5 J	622	719	650	1.7 J	4.4 J	51.7	ND(130)	GW Recovery initiated at MW-181B on 7/20/12
MW-181A	8/7/2012	32.2	16	1.2 J	329	378	660	1.4 J	4.0 J	48.7	ND(130)	
MW-181A	8/20/2012	40.4	18.8	1.5 J	360	421	537	ND(5.0)	ND(5.0)	37.3	ND(25)	

**Table 1**  
**MW-139 / MW-181B Work Plan - Analytical Data Summary**  
 Inactive Exxon Facility #28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	Comments
MW-181B [R]	6/23/2011	5	ND(5.0)	ND(5.0)	3.5 J	8.5	2120	7.0 J	26.4	150	150	
MW-181B [R]	7/28/2011	ND(5.0)	7.2	ND(5.0)	18.6	25.8	1290	4.6 J	18.7 J	132	ND(130)	
MW-181B [R]	8/26/2011	140	571	22.9	2500	3234	1110	3.3 J	9.3 J	118	ND(250)	
MW-181B [R]	9/23/2011	3.7	0.88 J	ND(1.0)	7.2	11.8	918	2.8 J	12.5	79.3	ND(25)	
MW-181B [R]	10/26/2011	0.85 J	ND(1.0)	ND(1.0)	1.2	2.1	686	1.9 J	7.6	50.3	ND(25)	
MW-181B [R]	11/29/2011	1.6	ND(1.0)	ND(1.0)	1.4	3	620	1.4 J	7.4	47	ND(25)	
MW-181B [R]	12/22/2011	13	1.2	ND(1.0)	12.1	26.3	606	2.0 J	7.8	49	ND(25)	
MW-181B [R]	1/31/2012	0.89 J	0.56 J	ND(1.0)	1.6	3.1	734	2.3 J	10.1	51.6	ND(25)	
MW-181B [R]	2/20/2012	59.2	186	33.1	110	388	2010	9.6	38.6	211	ND(25)	
MW-181B [R]	3/27/2012	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	BRL	600	2.5 J	10.5 J	74.7	ND(130)	
MW-181B [R]	4/24/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	459	2.0 J	10.1	56.7	ND(25)	
MW-181B [R]	5/30/2012	14.1	ND(1.0)	ND(1.0)	4.3	18.4	565	2.8 J	12	86.7	ND(25)	
MW-181B [R]	6/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	545	3.2 J	12.3	92.1		
MW-181B [R]	6/25/2012	ND(1.0)	0.91 J	ND(1.0)	0.34 J	1.25	377	2.0 J	8.6	67.3	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181B [R]	7/10/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	115	0.52 J	2.5 J	20.7	ND(25)	
MW-181B [R]	7/23/2012	3.5	1.5	ND(1.0)	0.33 J	5.3	62.1	ND(5.0)	1.3 J	6.4	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181B [R]	8/7/2012	2.6	0.92 J	ND(1.0)	ND(1.0)	3.5	1.2	ND(5.0)	0.72 J	ND(5.0)	ND(25)	
MW-181B [R]	8/20/2012	ND(1.0)	0.85 J	ND(1.0)	ND(1.0)	0.85	1.2	ND(5.0)	0.44 J	ND(5.0)	ND(25)	
MW-181C(HS-S)	6/27/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	8.1	0.33 J	1.1 J	0.36 J	ND(25)	
MW-181C(HS-S)	7/28/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	8.4	ND(5.0)	0.92 J	ND(5.0)	ND(25)	
MW-181C(HS-S)	8/29/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	7.8	ND(5.0)	0.92 J	0.40 J	ND(25)	
MW-181C(HS-S)	9/21/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	9	ND(5.0)	0.90 J	0.49 J	ND(25)	
MW-181C(HS-S)	10/25/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.2	ND(5.0)	0.89 J	0.61 J	ND(25)	
MW-181C(HS-S)	11/29/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	9.4	0.26 J	0.92 J	0.48 J	ND(25)	
MW-181C(HS-S)	12/28/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.1	ND(5.0)	1.0 J	0.35 J	ND(25)	
MW-181C(HS-S)	1/26/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.6	0.28 J	0.84 J	0.64 J	ND(25)	
MW-181C(HS-S)	2/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.5	ND(5.0)	0.95 J	0.60 J	ND(25)	
MW-181C(HS-S)	3/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.6	0.25 J	0.79 J	0.63 J	ND(25)	
MW-181C(HS-S)	4/26/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.1	0.27 J	0.90 J	0.61 J	ND(25)	
MW-181C(HS-S)	5/29/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.8	0.24 J	0.83 J	0.65 J	ND(25)	

**Table 1**  
**MW-139 / MW-181B Work Plan - Analytical Data Summary**  
 Inactive Exxon Facility #28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	Comments
MW-181C(HS-D)	6/27/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	6.3	0.36 J	1.1 J	ND(5.0)	ND(25)	
MW-181C(HS-D)	7/28/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	8.5	ND(5.0)	0.87 J	ND(5.0)	ND(25)	
MW-181C(HS-D)	8/29/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	7.7	ND(5.0)	0.95 J	0.43 J	ND(25)	
MW-181C(HS-D)	9/21/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	7.3	ND(5.0)	0.87 J	0.40 J	ND(25)	
MW-181C(HS-D)	10/25/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.2	0.31 J	1.0 J	0.53 J	ND(25)	
MW-181C(HS-D)	11/29/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	9.3	0.26 J	0.94 J	0.52 J	ND(25)	
MW-181C(HS-D)	12/28/2011	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.9	ND(5.0)	0.91 J	ND(5.0)	ND(25)	
MW-181C(HS-D)	1/26/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.7	ND(5.0)	0.91 J	0.56 J	ND(25)	
MW-181C(HS-D)	2/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.6	0.31 J	0.94 J	0.50 J	ND(25)	
MW-181C(HS-D)	3/21/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.5	ND(5.0)	0.69 J	0.52 J	ND(25)	
MW-181C(HS-D)	4/26/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.2	0.29 J	0.96 J	0.71 J	ND(25)	
MW-181C(HS-D)	5/29/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.1	ND(5.0)	0.71 J	0.47 J	ND(25)	
MW-181C(126)	6/13/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.6	0.24 J	0.71 J	0.48 J	ND(25)	
MW-181C(126)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.7	0.30 J	0.92 J	0.64 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(126)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.5	0.30 J	0.87 J	0.67 J	ND(25)	
MW-181C(126)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12	ND(5.0)	0.81 J	0.56 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(126)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13	ND(5.0)	0.80 J	0.53 J	ND(25)	
MW-181C(126)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.2	0.27 J	0.89 J	0.64 J	ND(25)	
MW-181C(179)	6/13/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.6	0.32 J	0.95 J	0.64 J	ND(25)	
MW-181C(179)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.5	0.32 J	0.99 J	0.84 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(179)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.8	0.27 J	0.75 J	0.66 J	ND(25)	
MW-181C(179)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.1	ND(5.0)	0.79 J	0.83 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(179)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	15.2	0.27 J	0.87 J	0.85 J	ND(25)	
MW-181C(179)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	16.1	0.31 J	0.98 J	0.91 J	ND(25)	
MW-181C(187)	6/13/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12	0.34 J	0.87 J	0.56 J	ND(25)	
MW-181C(187)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.7	0.32 J	0.97 J	0.88 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(187)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.3	0.27 J	0.80 J	0.75 J	ND(25)	
MW-181C(187)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.6	0.24 J	0.85 J	0.74 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(187)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.7	0.26 J	0.80 J	0.67 J	ND(25)	
MW-181C(187)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	15.0	0.25 J	0.83 J	0.76 J	ND(25)	

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 Inactive Exxon Facility #28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	Comments
MW-181C(215)	6/13/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.3	0.41 J	1.0 J	0.82 J	ND(25)	
MW-181C(215)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.2	0.34 J	1.0 J	0.83 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(215)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.8	0.30 J	0.86 J	0.79 J	ND(25)	
MW-181C(215)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.1	0.25 J	0.86 J	0.72 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(215)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.7	0.26 J	0.83 J	0.64 J	ND(25)	
MW-181C(215)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.4	0.29 J	0.91 J	0.77 J	ND(25)	
MW-181C(221)	6/13/2012	0.26 J	ND(1.0)	ND(1.0)	ND(1.0)	0.26	13.7	0.39 J	1.0 J	0.82 J	ND(25)	
MW-181C(221)	6/25/2012	0.24 J	ND(1.0)	ND(1.0)	ND(1.0)	0.24	14.1	0.32 J	1.1 J	0.83 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(221)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.6	0.28 J	0.88 J	0.73 J	ND(25)	
MW-181C(221)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13	0.26 J	0.89 J	0.71 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(221)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.8	0.25 J	0.79 J	ND(5.0)	ND(25)	
MW-181C(221)	8/16/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.1	0.29 J	0.87 J	0.74 J	ND(25)	
MW-181C(259.5)	6/13/2012	0.25 J	ND(1.0)	ND(1.0)	ND(1.0)	0.25	12.9	0.35 J	0.94 J	0.70 J	ND(25)	
MW-181C(259.5)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.6	0.30 J	0.98 J	0.71 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(259.5)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.6	0.21 J	0.66 J	0.49 J	ND(25)	
MW-181C(259.5)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13	0.21 J	0.74 J	0.58 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(259.5)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.5	0.24 J	0.76 J	0.49 J	ND(25)	
MW-181C(259.5)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.9	0.28 J	0.91 J	0.76 J	ND(25)	
MW-181C(284.5)	6/13/2012	0.26 J	ND(1.0)	ND(1.0)	ND(1.0)	0.26	12.8	0.37 J	0.98 J	0.76 J	ND(25)	
MW-181C(284.5)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.6	0.30 J	0.96 J	0.75 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(284.5)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)	
MW-181C(284.5)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.7	0.20 J	0.71 J	0.61 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(284.5)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.7	0.22 J	0.78 J	0.61 J	ND(25)	
MW-181C(284.5)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.7	0.30 J	0.95 J	0.79 J	ND(25)	
MW-181C(291)	6/13/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.6	0.31 J	0.91 J	0.56 J	ND(25)	
MW-181C(291)	6/25/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.7	ND(5.0)	0.71 J	0.47 J	ND(25)	GW Recovery initiated at MW-139 on 6/20/12
MW-181C(291)	7/9/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	11.7	0.24 J	0.69 J	0.57 J	ND(25)	
MW-181C(291)	7/23/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	12.5	0.21 J	0.78 J	0.65 J	ND(25)	GW Recovery initiated at MW-181B on 7/20/12
MW-181C(291)	8/7/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13	0.26 J	0.79 J	0.60 J	ND(25)	
MW-181C(291)	8/20/2012	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	14.1	0.26 J	0.88 J	0.73 J	ND(25)	

**Table 1**  
**MW-139 / MW-181B Work Plan - Analytical Data Summary**  
 Inactive Exxon Facility #28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

Well ID	Sample Date	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	Total BTEX ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Comments
SVE-2	1/28/2009	191	3410	71	1120	4792	282	ND(100)	ND(100)	94.6 J	ND(500)	
SVE-2	2/26/2009	3.3	1.8	0.45 J	6	11.6	292	0.94 J	2.5 J	33.3	ND(25)	
SVE-2	6/25/2012	229	28700	3430	9750	42109	346	1.3 J	3.1 J	48.9	23.2 J	GW Recovery initiated at MW-139 on 6/20/12
SVE-2	7/10/2012	72.7 J	37100	5520	19700	62393	272	ND(1000)	ND(1000)	ND(1000)	ND(5000)	
SVE-2	7/23/2012	138	19400	2040	7190	28768	334	ND(250)	ND(250)	39.0 J	ND(1300)	GW Recovery initiated at MW-181B on 7/20/12
SVE-2	8/7/2012	79.3 J	31600	3130	14600	49409	256	ND(1000)	ND(1000)	ND(1000)	ND(5000)	
SVE-2	8/20/2012	109	40500	4030	22900	67539	1840	ND(1000)	ND(1000)	259 J	ND(5000)	

Notes:

$\mu\text{g/L}$  - micrograms per liter (parts per billion)

ND(1.0) - not detected at or above the laboratory reporting limit, laboratory reporting limit included

J - Laboratory estimated value

GW - Groundwater

BTEX - benzene, toluene, ethylbenzene, and total xylenes

MTBE - methyl tertiary butyl ether

DIPE - di-isopropyl ether

ETBE - Ethyl tert butyl ether

TAME - tert-amyl methyl ether

TBA - tert-butyl alcohol

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-2	6/1/2011	588.28	38.92	ND	ND	549.36	
	7/5/2011	588.28	40.95	ND	ND	547.33	
	8/1/2011	588.28	40.41	ND	ND	547.87	
	9/1/2011	588.28	38.87	ND	ND	549.41	
	10/3/2011	588.28	38.65	ND	ND	549.63	
	11/1/2011	588.28	39.14	ND	ND	549.14	
	12/2/2011	588.28	38.90	ND	ND	549.38	
	1/4/2012	588.28	38.69	ND	ND	549.59	
	2/6/2012	588.28	39.58	ND	ND	548.70	
	3/5/2012	588.28	39.69	ND	ND	548.59	
	4/2/2012	588.28	39.83	ND	ND	548.45	
	5/7/2012	588.28	39.66	ND	ND	548.62	
	6/4/2012	588.28	39.10	ND	ND	549.18	
	6/25/2012	588.28	39.41	ND	ND	548.87	
	7/3/2012	588.28	41.42	ND	ND	546.86	
	7/10/2012	588.28	41.46	ND	ND	546.82	
	7/17/2012	588.28	41.50	ND	ND	546.78	
	7/23/2012	588.28	41.02	ND	ND	547.26	
	7/31/2012	588.28	40.73	ND	ND	547.55	
	8/7/2012	588.28	41.17	ND	ND	547.11	
	8/14/2012	588.28	41.42	ND	ND	546.86	
	8/20/2012	588.28	41.49	ND	ND	546.79	
MW-14	6/1/2011	593.61	37.32	ND	ND	556.29	
	7/5/2011	593.61	38.22	ND	ND	555.39	
	8/1/2011	593.61	38.53	ND	ND	555.08	
	9/1/2011	593.61	37.82	ND	ND	555.79	
	10/3/2011	593.61	35.27	ND	ND	558.34	
	11/1/2011	593.61	37.27	ND	ND	556.34	
	12/2/2011	593.61	36.35	ND	ND	557.26	
	1/4/2012	593.61	37.14	ND	ND	556.47	
	2/6/2012	593.61	37.65	ND	ND	555.96	
	3/5/2012	593.61	38.30	ND	ND	555.31	
	4/2/2012	593.61	38.37	ND	ND	555.24	
	5/7/2012	593.61	38.80	ND	ND	554.81	
	6/4/2012	593.61	38.43	ND	ND	555.18	
	6/25/2012	593.61	38.56	ND	ND	555.05	
	7/3/2012	593.61	38.33	ND	ND	555.28	
	7/10/2012	593.61	38.42	ND	ND	555.19	
	7/17/2012	593.61	37.93	ND	ND	555.68	
	7/23/2012	593.61	37.40	ND	ND	556.21	
	7/31/2012	593.61	37.23	ND	ND	556.38	
	8/7/2012	593.61	37.15	ND	ND	556.46	
	8/14/2012	593.61	37.33	ND	ND	556.28	
	8/20/2012	593.61	37.75	ND	ND	555.86	

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-25 [R]	6/3/2011	592.34	48.42	ND	ND	543.92	
	7/1/2011	592.34	48.51	ND	ND	543.83	
	8/4/2011	592.34	48.40	ND	ND	543.94	
	9/6/2011	592.34	48.57	ND	ND	543.77	
	10/5/2011	592.34	48.54	ND	ND	543.80	
	11/2/2011	592.34	48.63	ND	ND	543.71	
	12/5/2011	592.34	48.69	ND	ND	543.65	
	1/5/2012	592.34	48.74	ND	ND	543.60	
	3/6/2012	592.34	51.69	ND	ND	540.65	
	6/6/2012	592.34	48.24	ND	ND	544.10	
	6/25/2012	592.34	51.82	ND	ND	540.52	
	7/3/2012	592.34	48.93	ND	ND	543.41	
	7/10/2012	592.34	49.04	ND	ND	543.30	
	7/17/2012	592.34	48.96	ND	ND	543.38	
	7/23/2012	592.34	49.52	ND	ND	542.82	
MW-32 [R]	7/31/2012	592.34	48.98	ND	ND	543.36	
	8/7/2012	592.34	49.18	ND	ND	543.16	
	8/14/2012	592.34	49.17	ND	ND	543.17	
	8/20/2012	592.34	49.86	ND	ND	542.48	
	6/2/2011	593.09	45.82	ND	ND	547.27	
	7/6/2011	593.09	45.68	ND	ND	547.41	
	8/3/2011	593.09	45.94	ND	ND	547.15	
	9/1/2011	593.09	45.95	ND	ND	547.14	
	10/6/2011	593.09	45.93	ND	ND	547.16	
	11/2/2011	593.09	45.93	ND	ND	547.16	
	12/5/2011	593.09	45.98	ND	ND	547.11	
	1/5/2012	593.09	45.91	ND	ND	547.18	
	3/6/2012	593.09	45.82	ND	ND	547.27	
	6/5/2012	593.09	44.73	ND	ND	548.36	
	6/25/2012	593.09	46.11	ND	ND	546.98	
	7/3/2012	593.09	46.47	ND	ND	546.62	
	7/10/2012	593.09	46.78	ND	ND	546.31	
	7/17/2012	593.09	46.88	ND	ND	546.21	
	7/23/2012	593.09	46.93	ND	ND	546.16	
	7/31/2012	593.09	46.82	ND	ND	546.27	
	8/7/2012	593.09	46.80	ND	ND	546.29	
	8/14/2012	593.09	46.85	ND	ND	546.24	
	8/20/2012	593.09	46.90	ND	ND	546.19	

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-85P	6/2/2011	591.17	40.64	ND	ND	550.53	
	7/6/2011	591.17	46.97	ND	ND	544.20	
	8/3/2011	591.17	40.05	ND	ND	551.12	
	9/1/2011	591.17	40.42	ND	ND	550.75	
	10/6/2011	591.17	38.34	ND	ND	552.83	
	11/2/2011	591.17	39.89	ND	ND	551.28	
	12/2/2011	591.17	40.59	ND	ND	550.58	
	1/5/2012	591.17	40.13	ND	ND	551.04	
	2/6/2012	591.17	39.95	ND	ND	551.22	
	3/6/2012	591.17	40.51	ND	ND	550.66	
	4/2/2012	591.17	40.70	ND	ND	550.47	
	5/9/2012	591.17	40.31	ND	ND	550.86	
	6/5/2012	591.17	40.47	ND	ND	550.70	
	6/25/2012	591.17	41.22	ND	ND	549.95	
	7/3/2012	591.17	41.34	ND	ND	549.83	
	7/10/2012	591.17	41.38	ND	ND	549.79	
	7/17/2012	591.17	41.59	ND	ND	549.58	
	7/23/2012	591.17	41.36	ND	ND	549.81	
	7/31/2012	591.17	40.86	ND	ND	550.31	
MW-86P	8/7/2012	591.17	41.31	ND	ND	549.86	
	8/14/2012	591.17	41.12	ND	ND	550.05	
	8/20/2012	591.17	41.45	ND	ND	549.72	
	6/2/2011	590.86	40.17	ND	ND	550.69	
	7/6/2011	590.86	40.31	ND	ND	550.55	
	8/3/2011	590.86	40.84	ND	ND	550.02	
	9/1/2011	590.86	40.67	ND	ND	550.19	
	10/6/2011	590.86	38.41	ND	ND	552.45	
	11/2/2011	590.86	39.52	ND	ND	551.34	
	12/2/2011	590.86	40.77	ND	ND	550.09	
	1/5/2012	590.86	39.30	ND	ND	551.56	
	2/6/2012	590.86	39.53	ND	ND	551.33	
	3/5/2012	590.86	40.00	ND	ND	550.86	
	4/2/2012	590.86	40.53	ND	ND	550.33	
	5/9/2012	590.86	40.34	ND	ND	550.52	
	6/5/2012	590.86	40.06	ND	ND	550.80	
	6/25/2012	590.86	40.88	ND	ND	549.98	
	7/3/2012	590.86	40.95	ND	ND	549.91	
	7/10/2012	590.86	41.02	ND	ND	549.84	
	7/17/2012	590.86	41.18	ND	ND	549.68	
	7/23/2012	590.86	40.97	ND	ND	549.89	
	7/31/2012	590.86	41.25	ND	ND	549.61	
	8/7/2012	590.86	40.91	ND	ND	549.95	
	8/14/2012	590.86	40.81	ND	ND	550.05	
	8/20/2012	590.86	41.14	ND	ND	549.72	

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-139 [R]	6/1/2011	592.43	56.41	ND	ND	536.02	
	7/5/2011	592.43	58.04	ND	ND	534.39	
	8/1/2011	592.43	57.92	ND	ND	534.51	
	9/1/2011	592.43	57.89	ND	ND	534.54	
	10/3/2011	592.43	57.54	ND	ND	534.89	
	11/1/2011	592.43	57.77	ND	ND	534.66	
	12/2/2011	592.43	57.83	ND	ND	534.60	
	1/4/2012	592.43	57.45	ND	ND	534.98	
	2/6/2012	592.43	57.41	ND	ND	535.02	
	3/5/2012	592.43	58.49	ND	ND	533.94	
	4/2/2012	592.43	58.89	ND	ND	533.54	
	5/7/2012	592.43	57.41	ND	ND	535.02	
	6/4/2012	592.43	57.54	ND	ND	534.89	
	6/25/2012	592.43	74.45	ND	ND	517.98	GW Recovery initiated on 6/20/2012
	7/3/2012	592.43	74.35	ND	ND	518.08	
	7/10/2012	592.43	74.40	ND	ND	518.03	
	7/17/2012	592.43	74.39	ND	ND	518.04	
	7/23/2012	592.43	74.31	ND	ND	518.12	
	7/31/2012	592.43	74.50	ND	ND	517.93	
	8/7/2012	592.43	74.42	ND	ND	518.01	
	8/14/2012	592.43	74.42	ND	ND	518.01	
	8/20/2012	592.43	74.51	ND	ND	517.92	
MW-144 [R]	6/3/2011	593.11	43.07	ND	ND	550.04	
	7/5/2011	593.11	40.90	ND	ND	552.21	
	8/3/2011	593.11	40.41	ND	ND	552.70	
	9/6/2011	593.11	40.59	ND	ND	552.52	
	10/5/2011	593.11	38.25	ND	ND	554.86	
	11/2/2011	593.11	36.92	ND	ND	556.19	
	12/5/2011	593.11	40.30	ND	ND	552.81	
	1/5/2012	593.11	36.25	ND	ND	556.86	
	3/6/2012	593.11	35.99	ND	ND	557.12	
	5/7/2012	593.11	37.90	ND	ND	555.21	
	6/5/2012	593.11	37.90	ND	ND	555.21	
	6/25/2012	593.11	41.20	ND	ND	551.91	
	7/3/2012	593.11	36.80	ND	ND	556.31	
	7/10/2012	593.11	36.93	ND	ND	556.18	
	7/17/2012	593.11	37.77	ND	ND	555.34	
	7/23/2012	593.11	39.73	ND	ND	553.38	
	7/31/2012	593.11	41.50	ND	ND	551.61	
	8/7/2012	593.11	41.21	ND	ND	551.90	
	8/14/2012	593.11	39.95	ND	ND	553.16	
	8/20/2012	593.11	39.92	ND	ND	553.19	

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-151 [R]	6/1/2011	594.74	58.95	ND	ND	535.79	
	7/1/2011	594.74	59.10	ND	ND	535.64	
	8/3/2011	594.74	59.12	ND	ND	535.62	
	9/6/2011	594.74	58.71	ND	ND	536.03	
	10/5/2011	594.74	58.20	ND	ND	536.54	
	11/2/2011	594.74	58.16	ND	ND	536.58	
	12/6/2011	594.74	58.33	ND	ND	536.41	
	1/5/2012	594.74	58.27	ND	ND	536.47	
	3/6/2012	594.74	59.22	ND	ND	535.52	
	6/5/2012	594.74	59.03	ND	ND	535.71	
	6/25/2012	594.74	58.43	ND	ND	536.31	
	7/3/2012	594.74	59.00	ND	ND	535.74	
	7/10/2012	594.74	58.83	ND	ND	535.91	
	7/17/2012	594.74	59.96	ND	ND	534.78	
	7/23/2012	594.74	58.90	ND	ND	535.84	
MW-152 [R]	7/31/2012	594.74	58.90	ND	ND	535.84	
	8/7/2012	594.74	58.98	ND	ND	535.76	
	8/14/2012	594.74	58.99	ND	ND	535.75	
	8/20/2012	594.74	58.96	ND	ND	535.78	
	6/1/2011	591.94	58.63	ND	ND	533.31	
	7/1/2011	591.94	58.43	ND	ND	533.51	
	8/3/2011	591.94	58.37	ND	ND	533.57	
	9/6/2011	591.94	57.84	ND	ND	534.10	
	10/5/2011	591.94	57.31	ND	ND	534.63	
	11/2/2011	591.94	54.29	ND	ND	537.65	
	12/6/2011	591.94	59.26	ND	ND	532.68	
	1/5/2012	591.94	59.21	ND	ND	532.73	
	3/6/2012	591.94	58.06	ND	ND	533.88	
	6/5/2012	591.94	58.15	ND	ND	533.79	
	6/25/2012	591.94	59.35	ND	ND	532.59	
	7/3/2012	591.94	58.49	ND	ND	533.45	
	7/10/2012	591.94	59.05	ND	ND	532.89	
	7/17/2012	591.94	58.55	ND	ND	533.39	
	7/23/2012	591.94	58.61	ND	ND	533.33	
	7/31/2012	591.94	58.63	ND	ND	533.31	
	8/7/2012	591.94	58.59	ND	ND	533.35	
	8/14/2012	591.94	58.80	ND	ND	533.14	
	8/20/2012	591.94	58.77	ND	ND	533.17	

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-181A	6/2/2011	594.37	38.06	ND	ND	556.31	
	7/6/2011	594.45	38.01	ND	ND	556.44	
	8/3/2011	594.45	38.18	ND	ND	556.27	
	9/1/2011	594.45	38.72	ND	ND	555.73	
	10/6/2011	594.45	37.00	ND	ND	557.45	
	11/2/2011	594.45	38.20	ND	ND	556.25	
	12/2/2011	594.45	38.13	ND	ND	556.32	
	1/4/2012	594.45	38.03	ND	ND	556.42	
	2/6/2012	594.45	37.95	ND	ND	556.50	
	3/6/2012	594.45	38.12	ND	ND	556.33	
	4/2/2012	594.45	38.15	ND	ND	556.30	
	5/9/2012	594.45	38.21	ND	ND	556.24	
	6/5/2012	594.45	38.28	ND	ND	556.17	
	6/25/2012	594.45	38.45	ND	ND	556.00	
	7/3/2012	594.45	38.42	ND	ND	556.03	
	7/10/2012	594.45	38.43	ND	ND	556.02	
	7/17/2012	594.45	38.44	ND	ND	556.01	
	7/23/2012	594.45	38.47	ND	ND	555.98	
	7/31/2012	594.45	38.59	ND	ND	555.86	
	8/7/2012	594.45	38.47	ND	ND	555.98	
	8/14/2012	594.45	38.16	ND	ND	556.29	
	8/20/2012	594.45	38.59	ND	ND	555.86	
MW-181B	6/2/2011	594.28	59.78	ND	ND	534.50	
	7/6/2011	594.31	60.30	ND	ND	534.01	
	8/3/2011	594.31	74.52	ND	ND	519.79	
	9/1/2011	594.31	59.83	ND	ND	534.48	
	10/6/2011	594.31	58.27	ND	ND	536.04	
	11/2/2011	594.31	59.74	ND	ND	534.57	
	12/2/2011	594.31	59.69	ND	ND	534.62	
	1/4/2012	594.31	59.21	ND	ND	535.10	
	3/6/2012	594.31	59.75	ND	ND	534.56	
	6/5/2012	594.31	59.70	ND	ND	534.61	
	6/20/2012	594.31	65.34	ND	ND	528.97	
	6/25/2012	594.31	87.57	ND	ND	506.74	
	7/3/2012	594.31	87.18	ND	ND	507.13	
	7/10/2012	594.31	72.24	ND	ND	522.07	
	7/17/2012	594.31	79.30	ND	ND	515.01	
	7/23/2012	594.31	73.50	ND	ND	520.81	GW Recovery initiated on 7/20/2012
	7/31/2012	594.31	73.53	ND	ND	520.78	
	8/7/2012	594.31	76.30	ND	ND	518.01	
	8/14/2012	594.31	76.22	ND	ND	518.09	
	8/20/2012	594.31	76.04	ND	ND	518.27	

**Table 2**  
**MW-139 / MW-181B Work Plan - Gauging Data Summary**  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Comments
MW-181C	6/2/2011	594.49	53.80	ND	ND	540.69	
	7/6/2011	594.48	51.33	ND	ND	543.15	
	8/3/2011	594.48	50.72	ND	ND	543.76	
	9/1/2011	594.48	51.04	ND	ND	543.44	
	10/6/2011	594.48	49.84	ND	ND	544.64	
	11/2/2011	594.48	47.95	ND	ND	546.53	
	12/2/2011	594.48	48.38	ND	ND	546.10	
	1/4/2012	594.48	49.96	ND	ND	544.52	
	3/6/2012	594.48	48.08	ND	ND	546.40	
	6/5/2012	594.48	48.75	ND	ND	545.73	
	6/25/2012	594.48	48.80	ND	ND	545.68	
	7/3/2012	594.48	48.68	ND	ND	545.80	
	7/9/2012	594.48	48.59	ND	ND	545.89	
	7/17/2012	594.48	48.84	ND	ND	545.64	
SVE-2	7/23/2012	594.48	49.01	ND	ND	545.47	
	7/31/2012	594.48	49.06	ND	ND	545.42	
	8/7/2012	594.48	49.23	ND	ND	545.25	
	8/14/2012	594.48	49.59	ND	ND	544.89	
	8/20/2012	594.48	49.91	ND	ND	544.57	
	1/26/2009	589.37	43.54	ND	ND	545.83	
	6/25/2012	589.37	39.87	ND	ND	549.50	
	7/3/2012	589.37	40.14	ND	ND	549.23	
	7/10/2012	589.37	40.14	ND	ND	549.23	
	7/17/2012	589.37	40.46	ND	ND	548.91	

**Notes:**

[R] - Indicates the well was used for remediation at the time of reporting.

GW - Groundwater

LPH - Liquid-phase hydrocarbon

N/A - Not applicable

ND - Not detected

NM - Not monitored

NSVD - Not surveyed to vertical datum

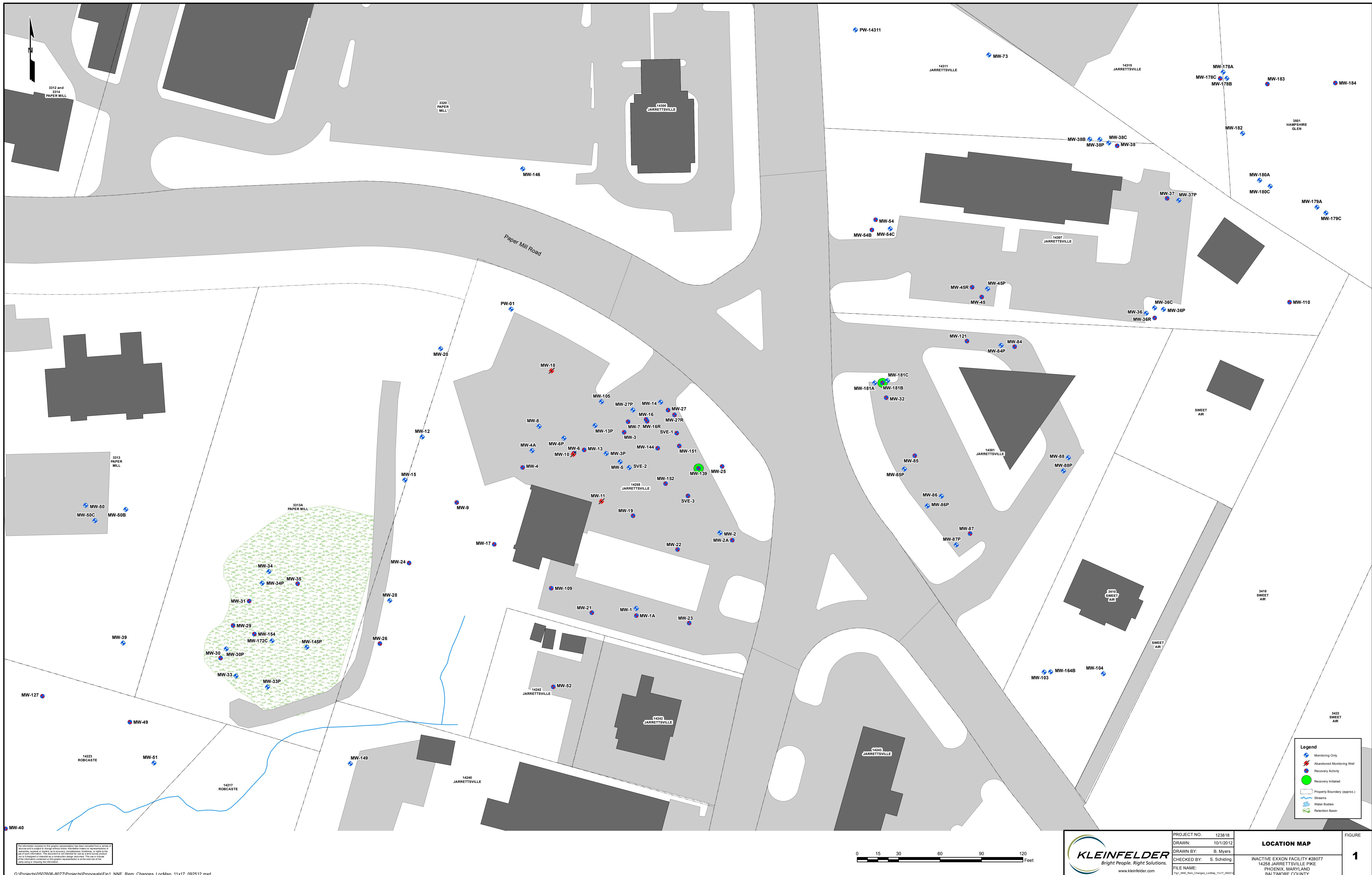
**Table 3**  
**Well Construction and Well Status Summary**  
Inactive Exxon Facility # 28077  
14258 Jarrettsville Pike  
Phoenix, MD

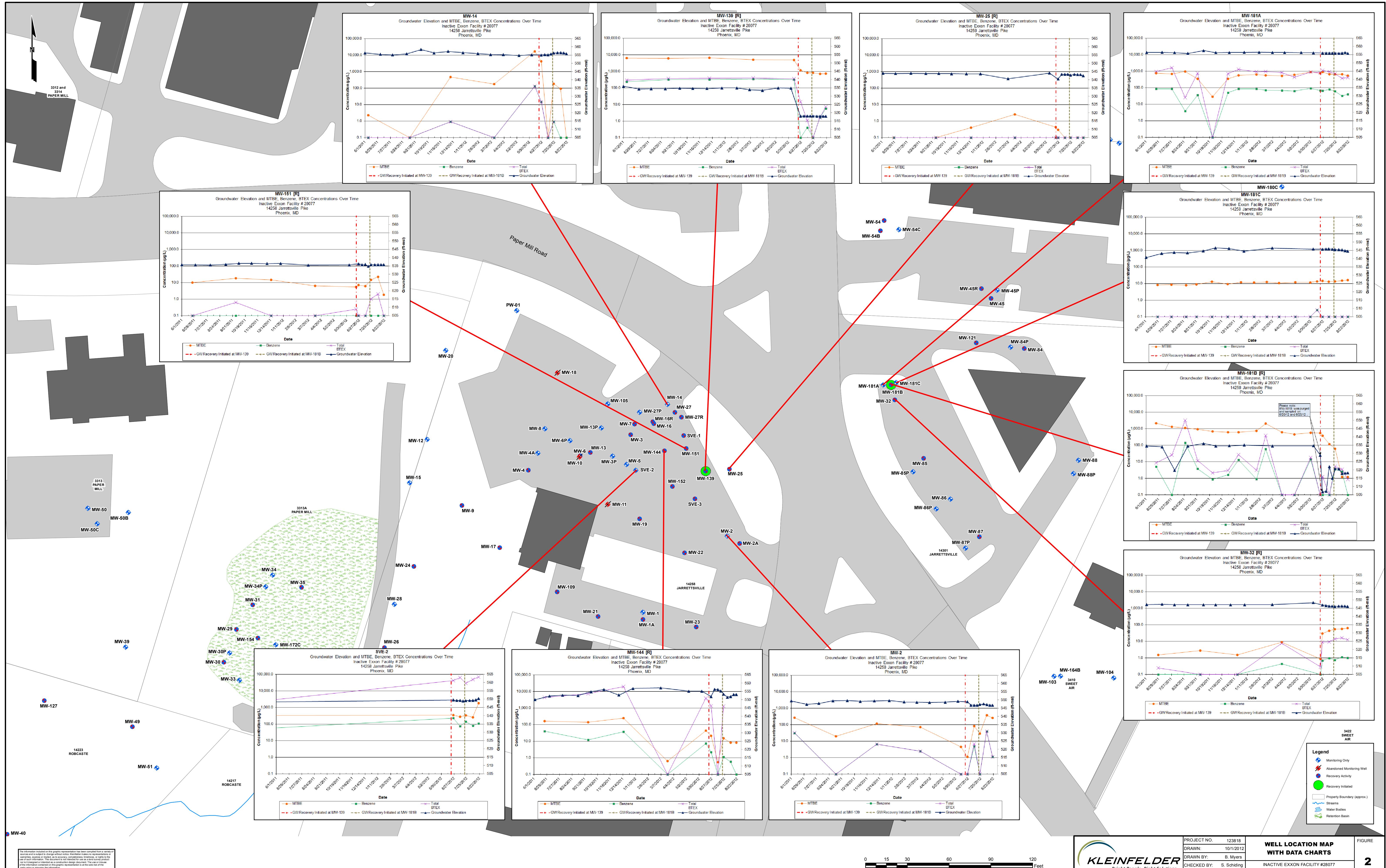
Page 1 of 1

Well ID	Borehole Diameter (inches)	Well Diameter (inches)	Riser/ Casing Length (feet)	Screen Length/ Open Interval (feet)	Total Borehole Depth (feet)	Screen Interval (feet below TOC)	TOC Elevation (feet)	Well Type
MW-2	6	2	20	30	50	20-50	588.28	Monitoring
MW-14	8	4	20	25	45	20-45	593.61	Monitoring
MW-25	10	6	25	30	55	25-55	592.34	Recovery
MW-32	10	6	30	20	50	30-50	593.09	Recovery
MW-85P	6	2	35	25	60	35-60	591.17	Monitoring
MW-86P	6	2	35	25	60	35-60	590.86	Monitoring
MW-139	10	6	60	20	80	60-80	592.43	Recovery
MW-144	8	6	25	35	62.5	25-60	593.11	SVE Only
MW-151	8	4	35	25	60	35-60	594.74	Recovery
MW-152	8	4	35	25	60	35-60	591.94	Recovery
MW-181A	10	6	30	30	60	30-60	594.45	Monitoring
MW-181B	10	6	60	65	125	60-125	594.31	Recovery
MW-181C	15	10	125	175	300	125-300	594.48	Monitoring
SVE-2	10	6	25	45	70.75	25-70.75	589.37	Monitoring

TOC = Top of Casing

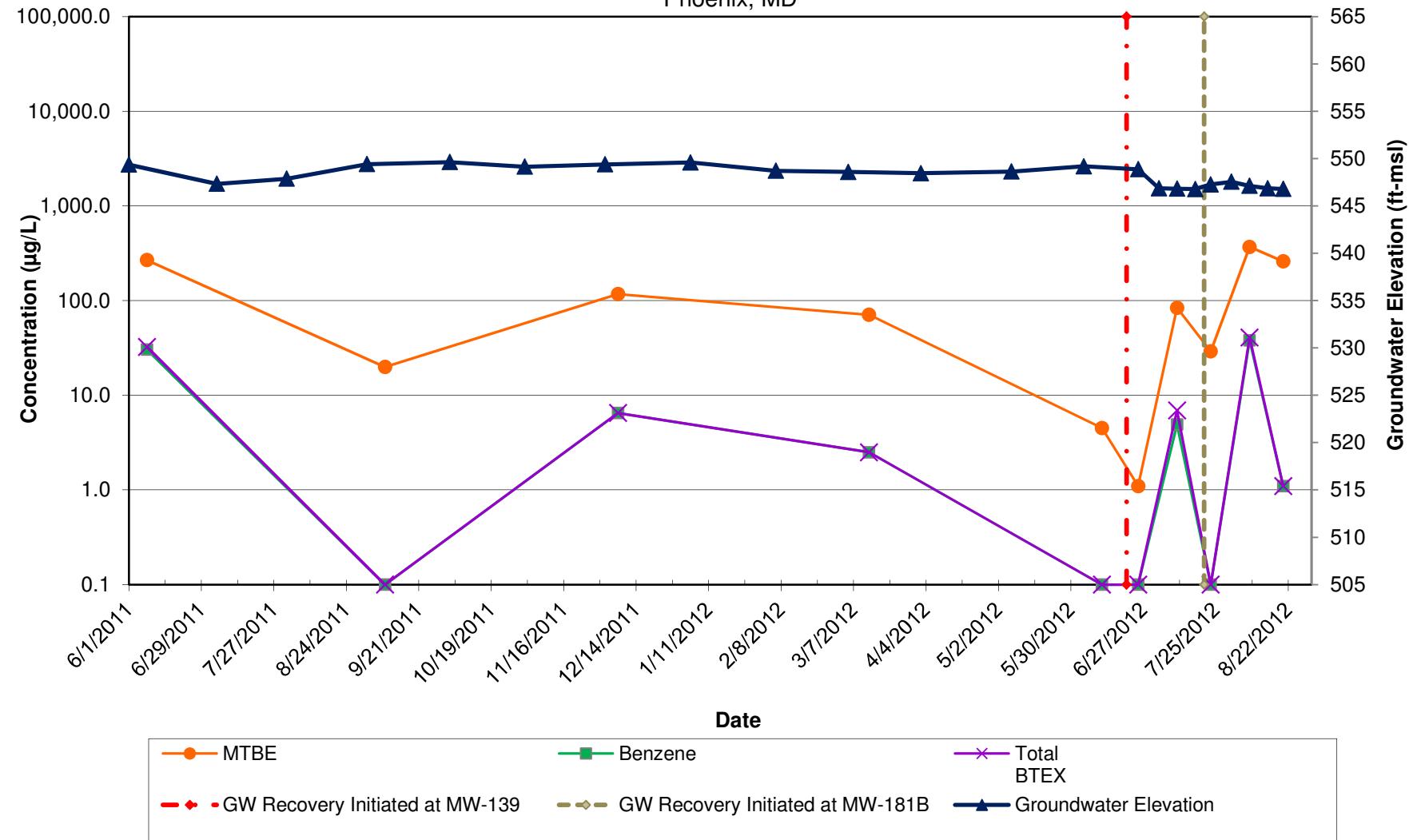
## **FIGURES**





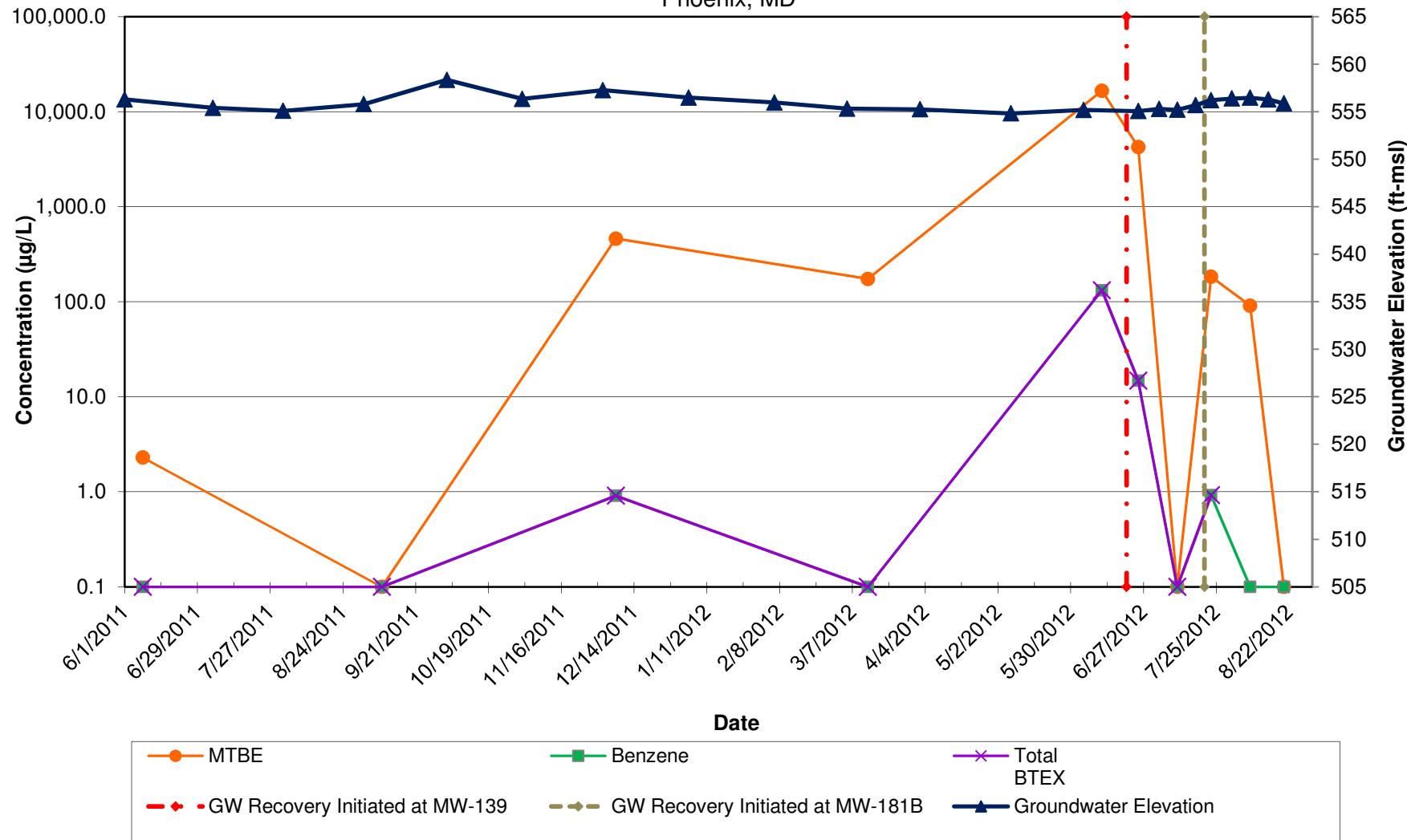
## **CHARTS**

**Chart 1: MW-2**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



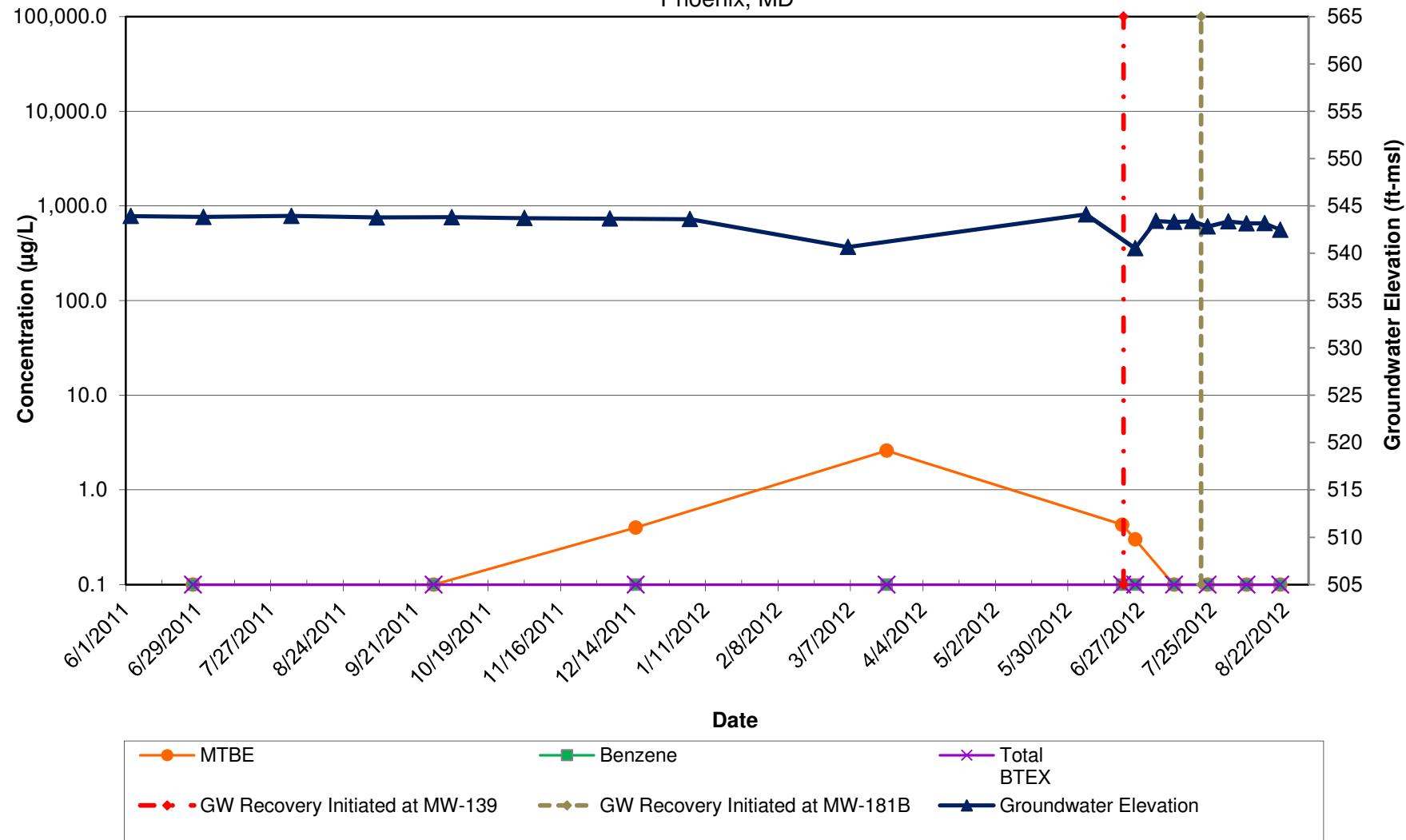
Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.

**Chart 2: MW-14**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.

**Chart 3: MW-25 [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Notes:

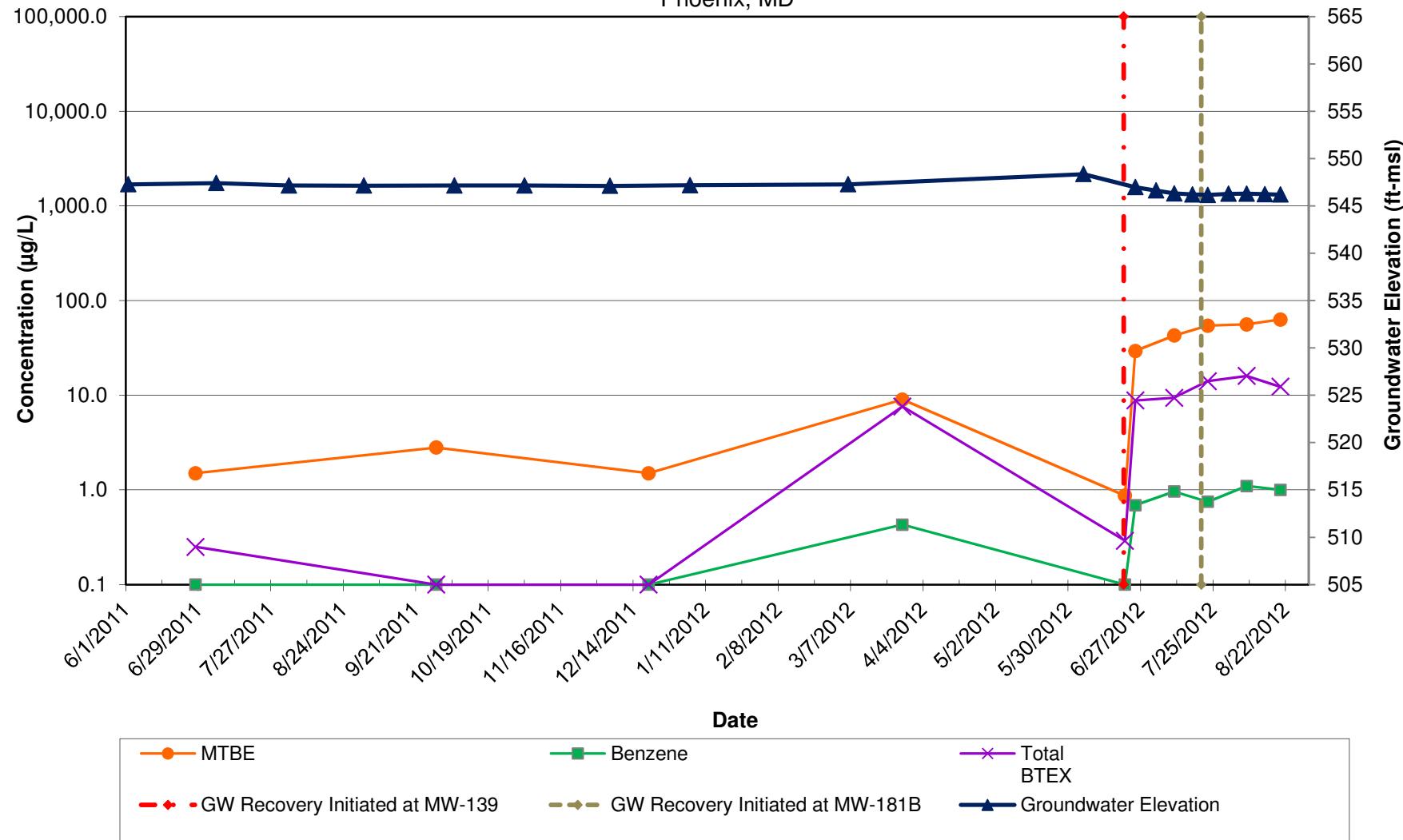
ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

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**Chart 4: MW-32 [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



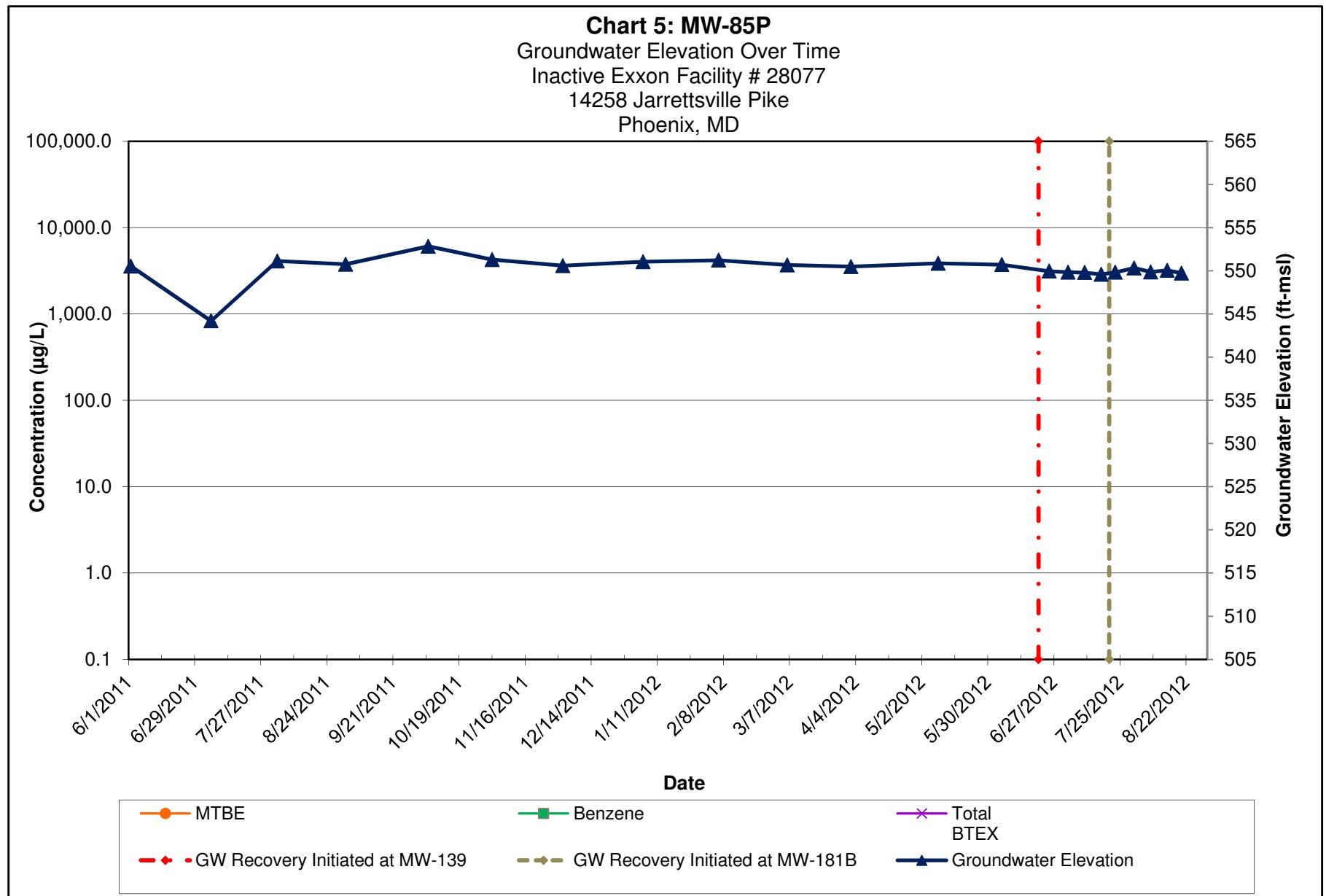
Notes:

ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

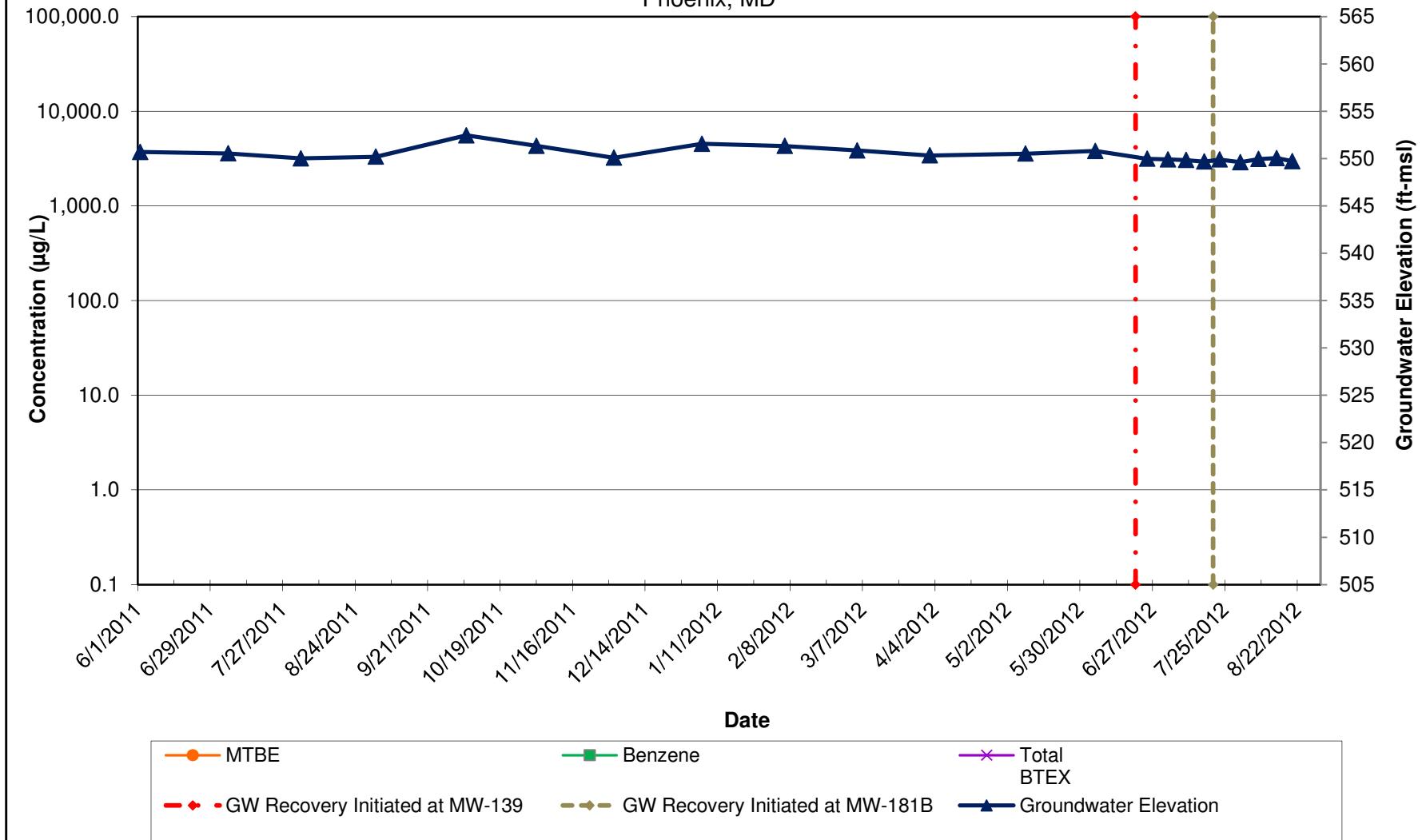
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Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.

**Chart 6: MW-86P**  
 Groundwater Elevation Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

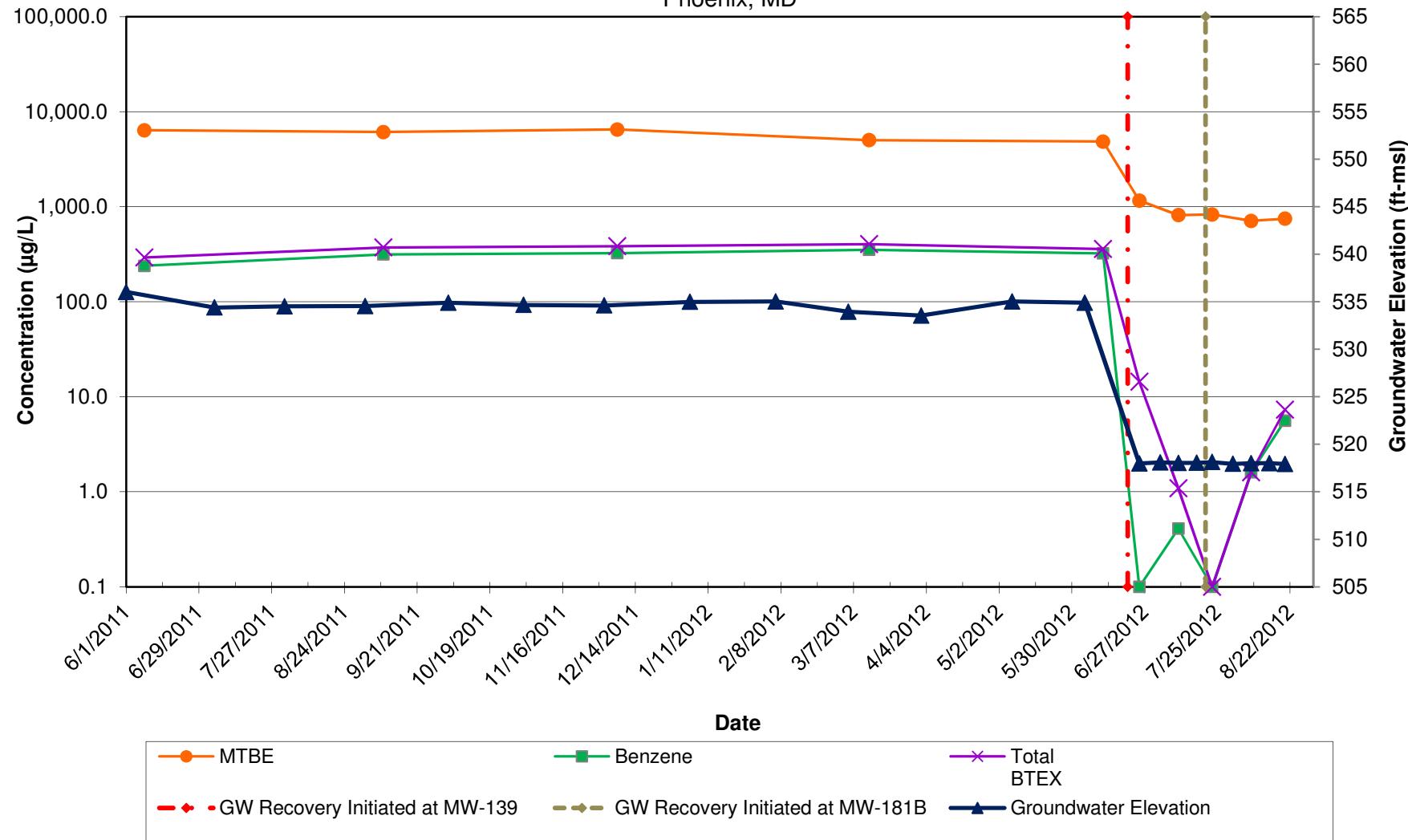


Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.

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**Chart 7: MW-139 [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Notes:

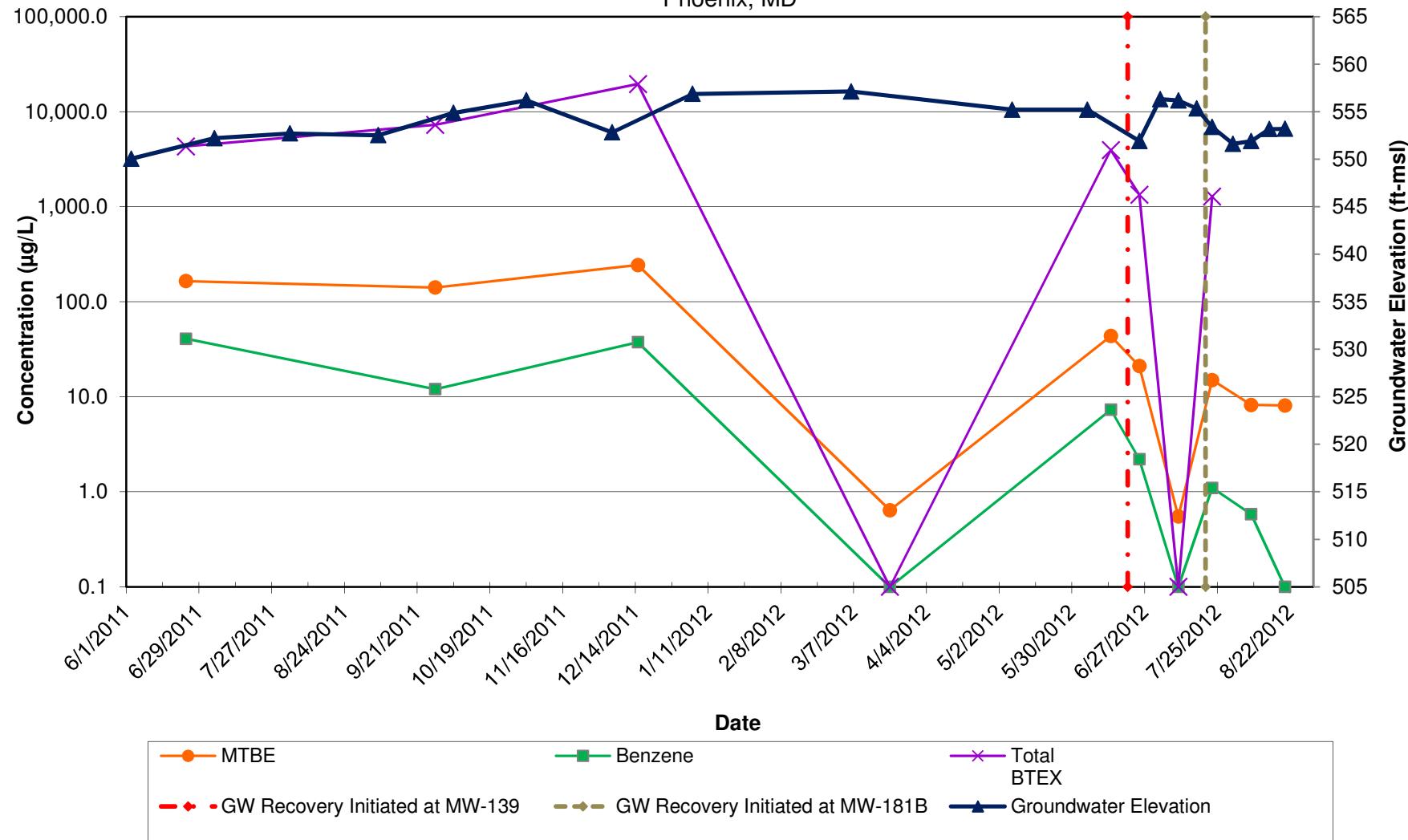
ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

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**Chart 8: MW-144 [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Notes:

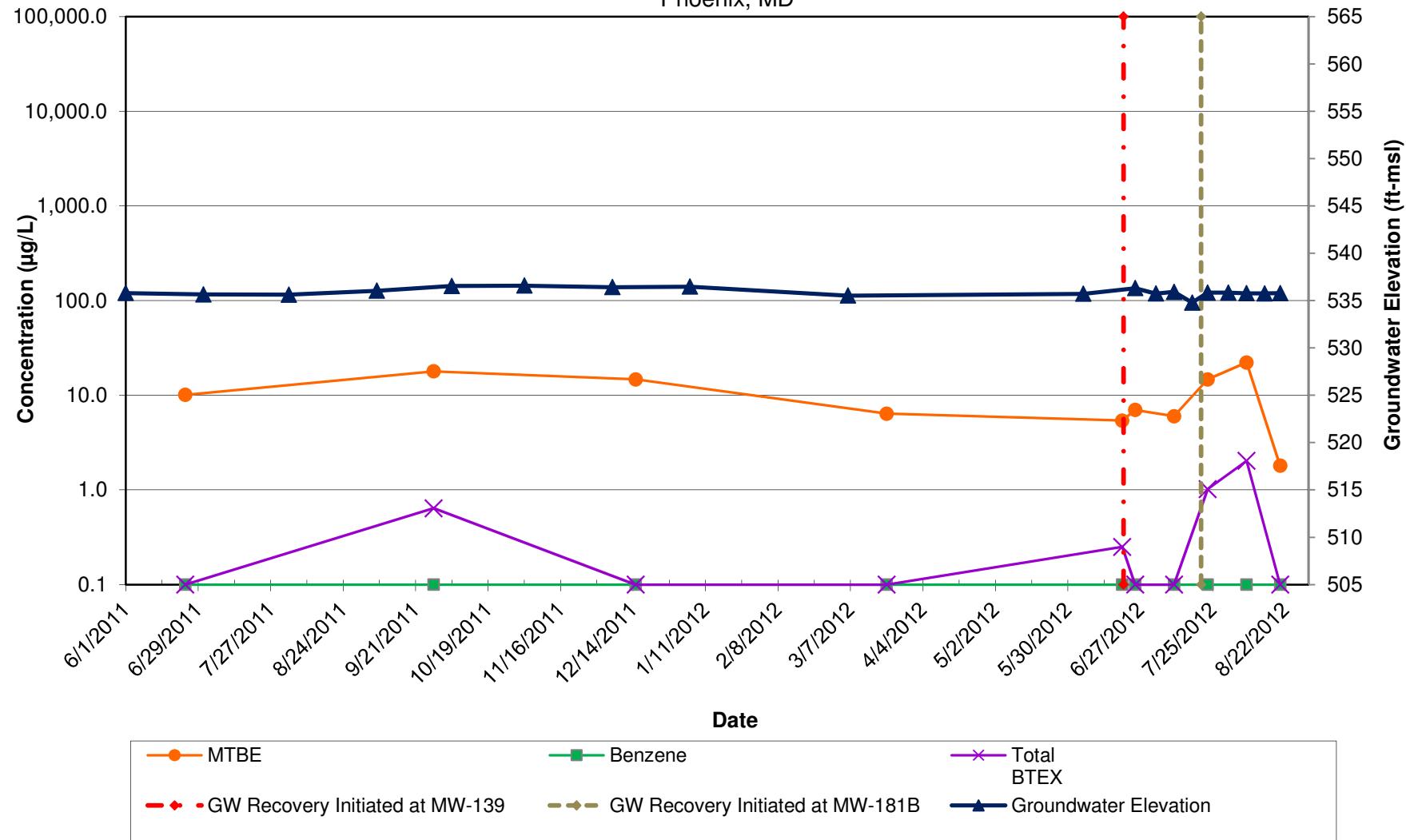
ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

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**Chart 9: MW-151 [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Notes:

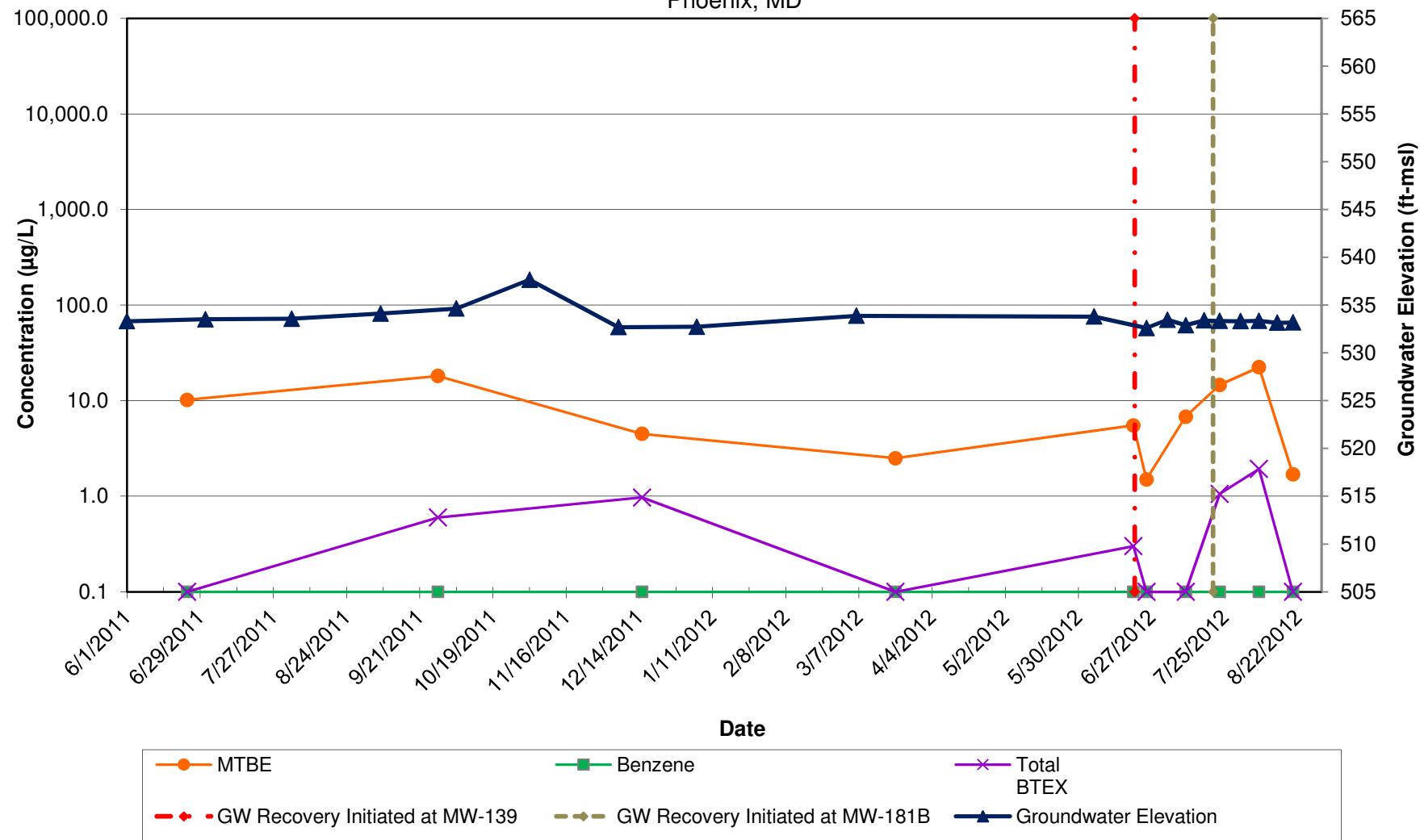
ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

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**Chart 10: MW-152 [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Notes:

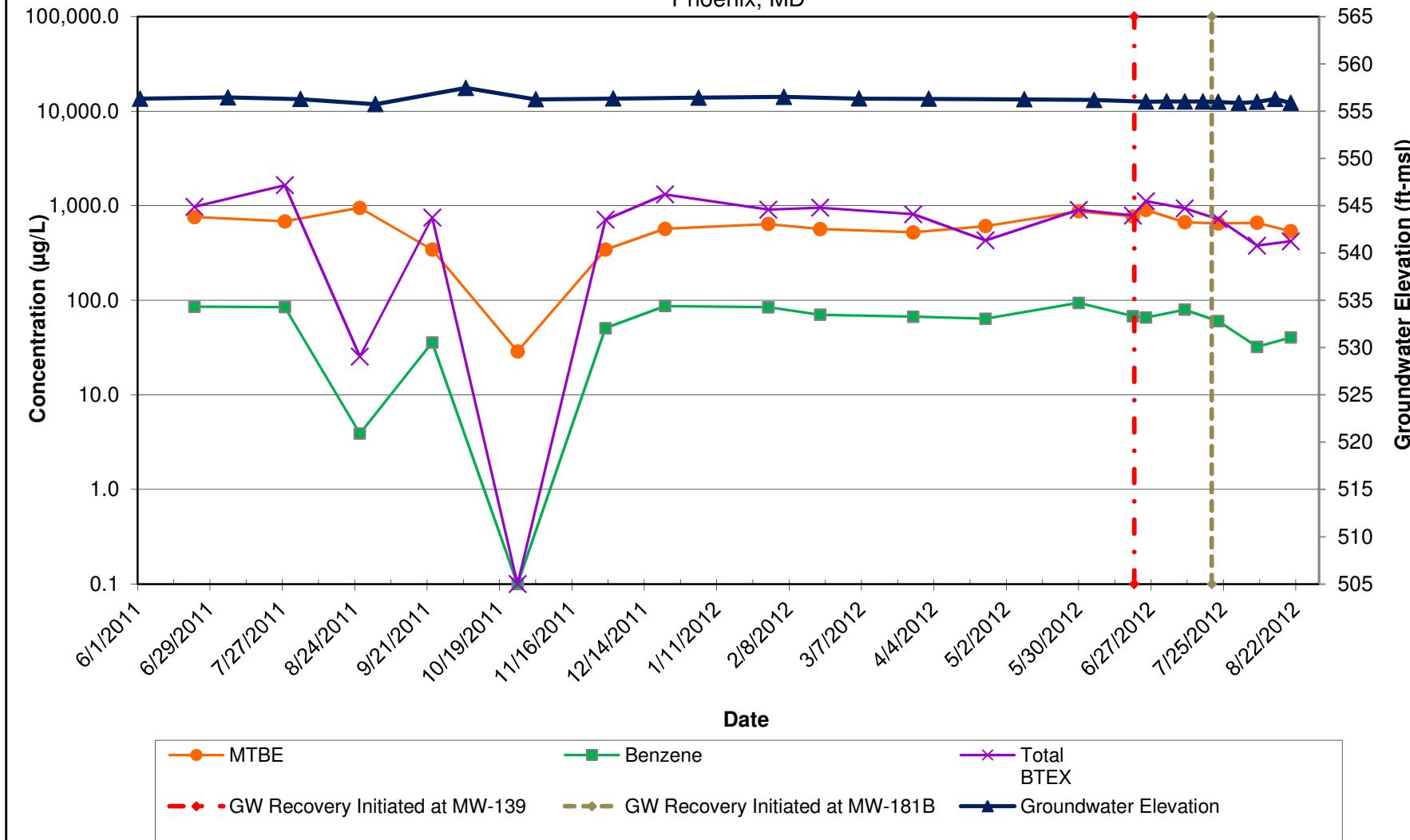
ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

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**Chart 11: MW-181A**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

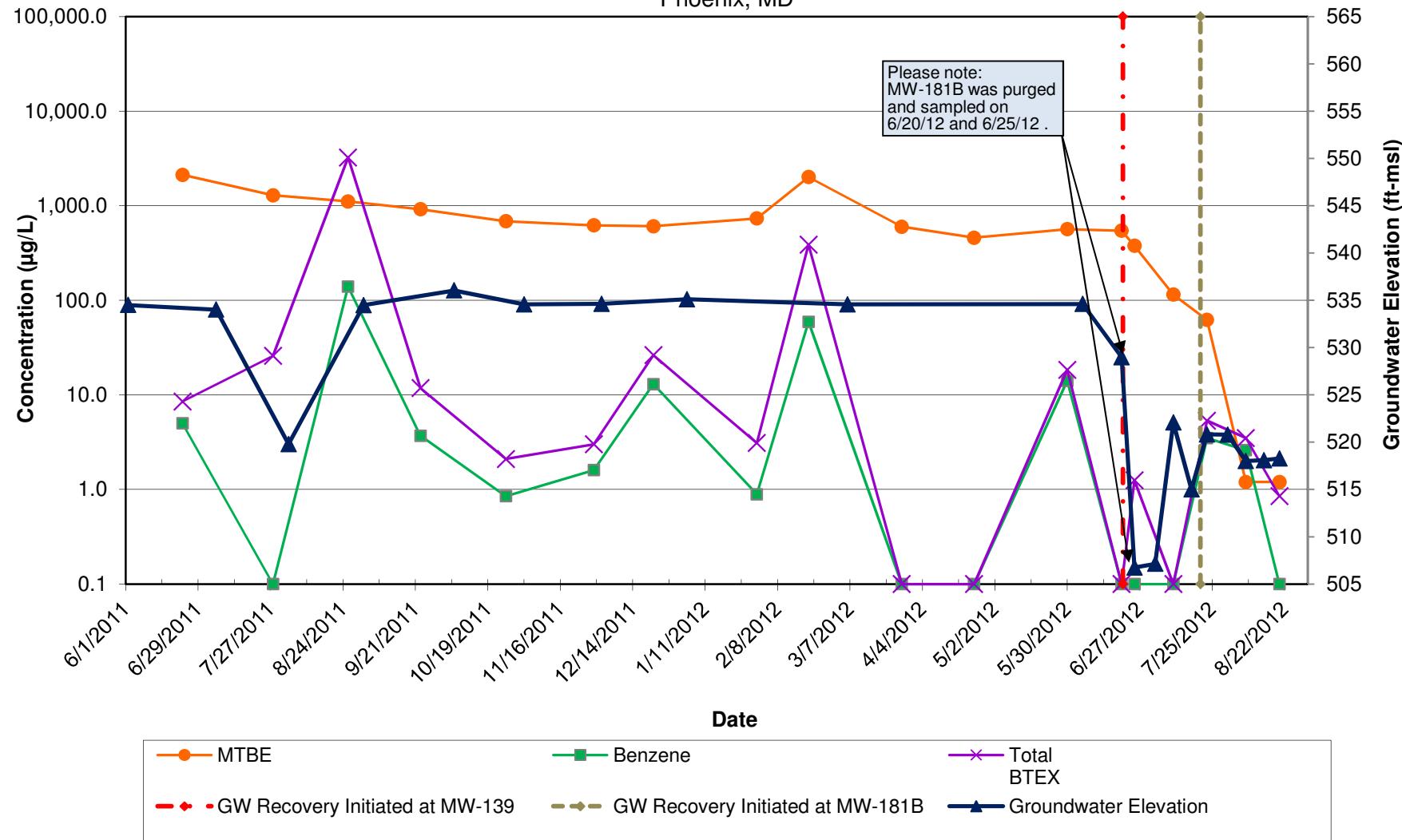


Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.

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**Chart 12: MW-181B [R]**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD



Notes:

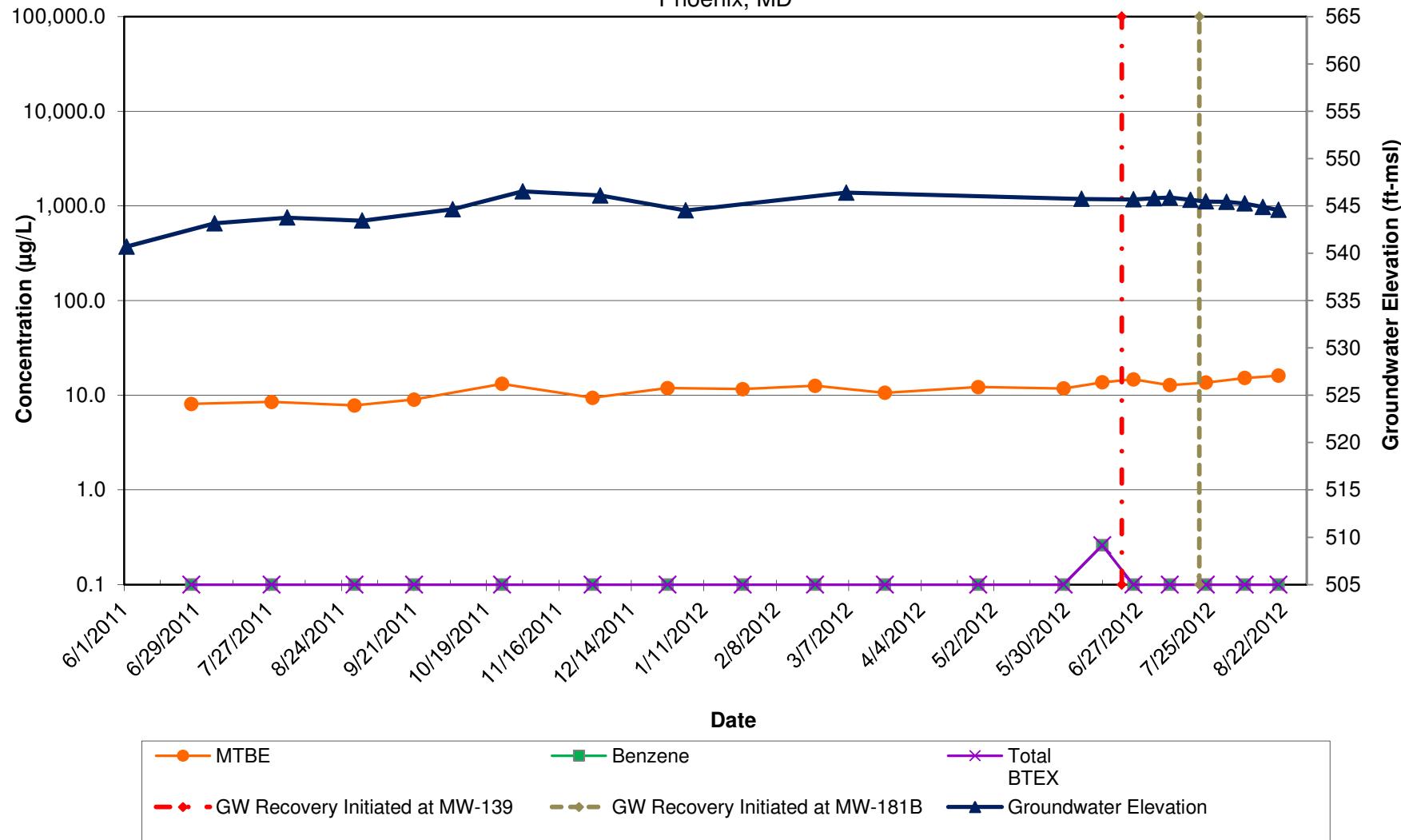
ND results are charted as "0.1" to avoid confusion with estimated "J" values.

[R] - indicates well was used for remediation at time of reporting.

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**Chart 13: MW-181C**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

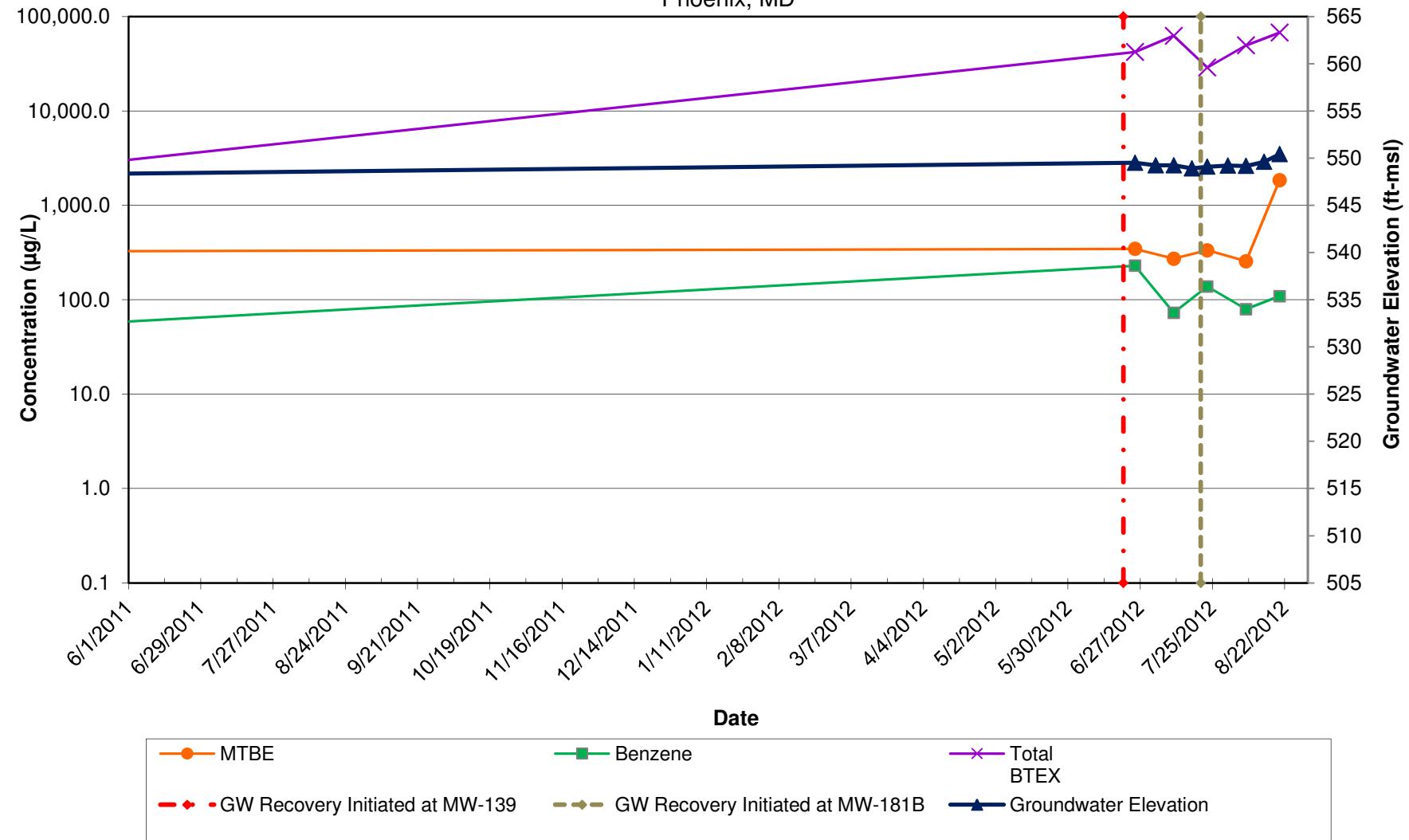


Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.  
 Discrete interval max values plotted on chart.

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**Chart 14: SVE-2**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

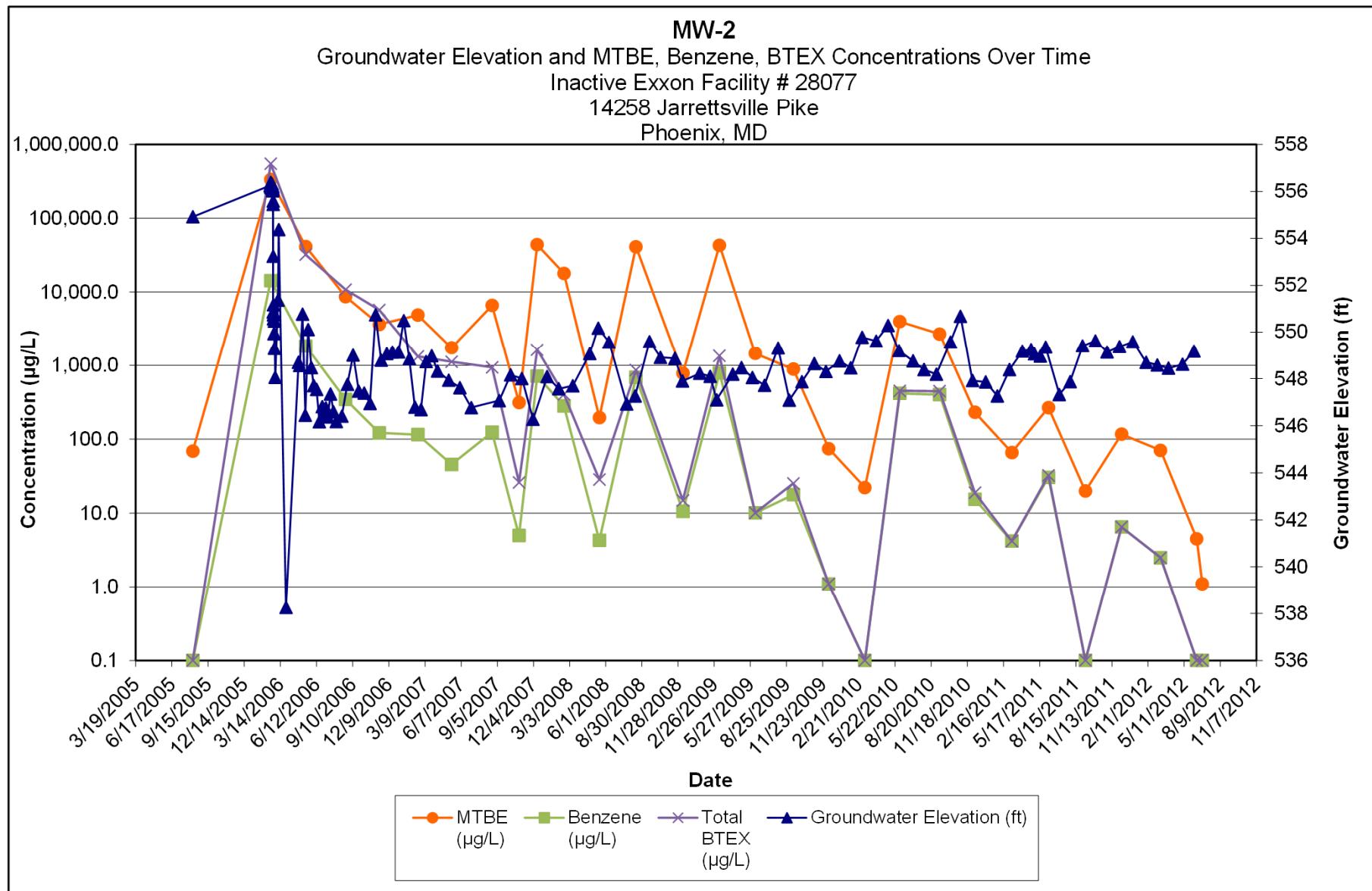


Note: ND results are charted as "0.1" to avoid confusion with estimated "J" values.

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## **ATTACHMENTS**

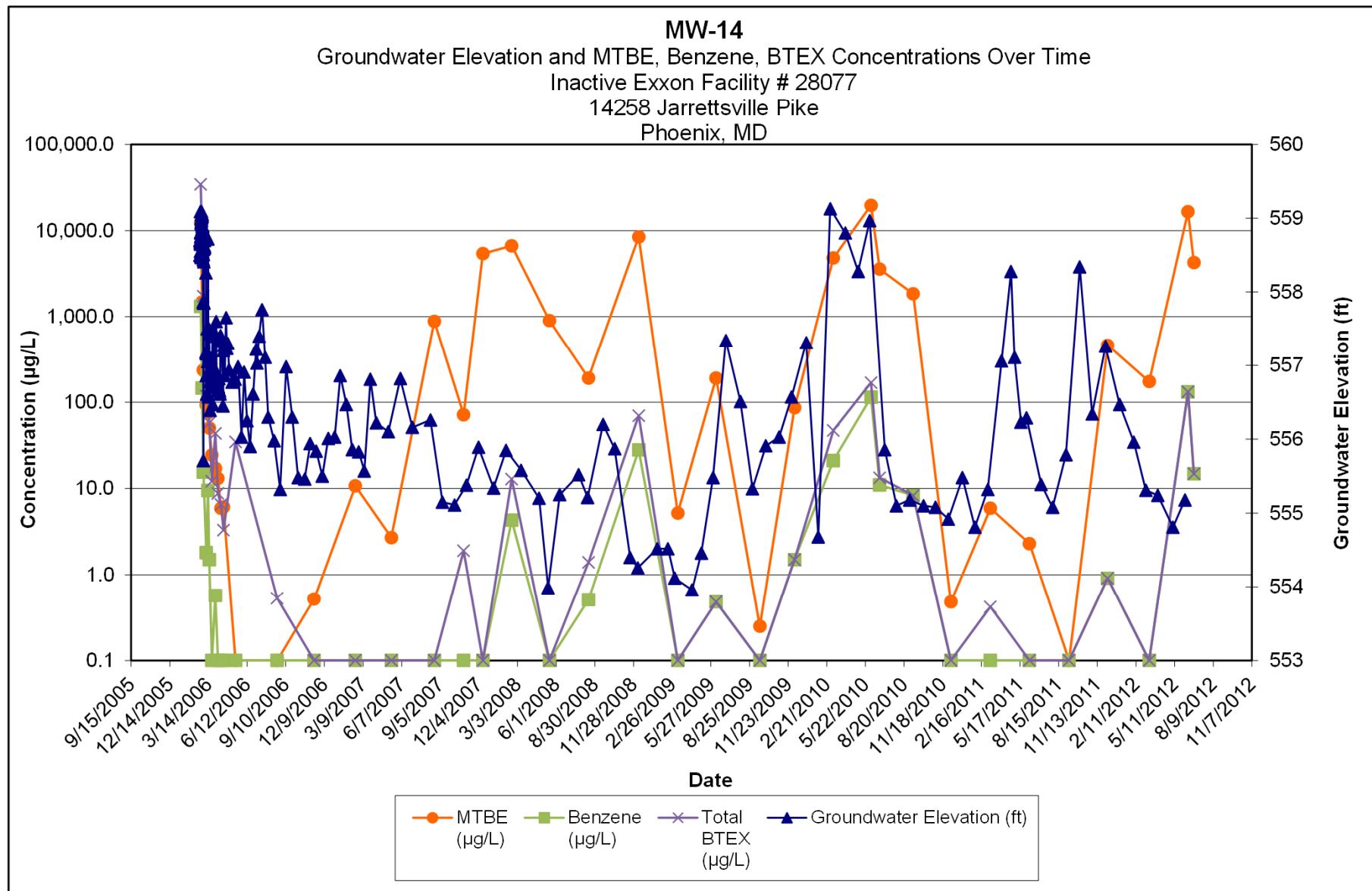


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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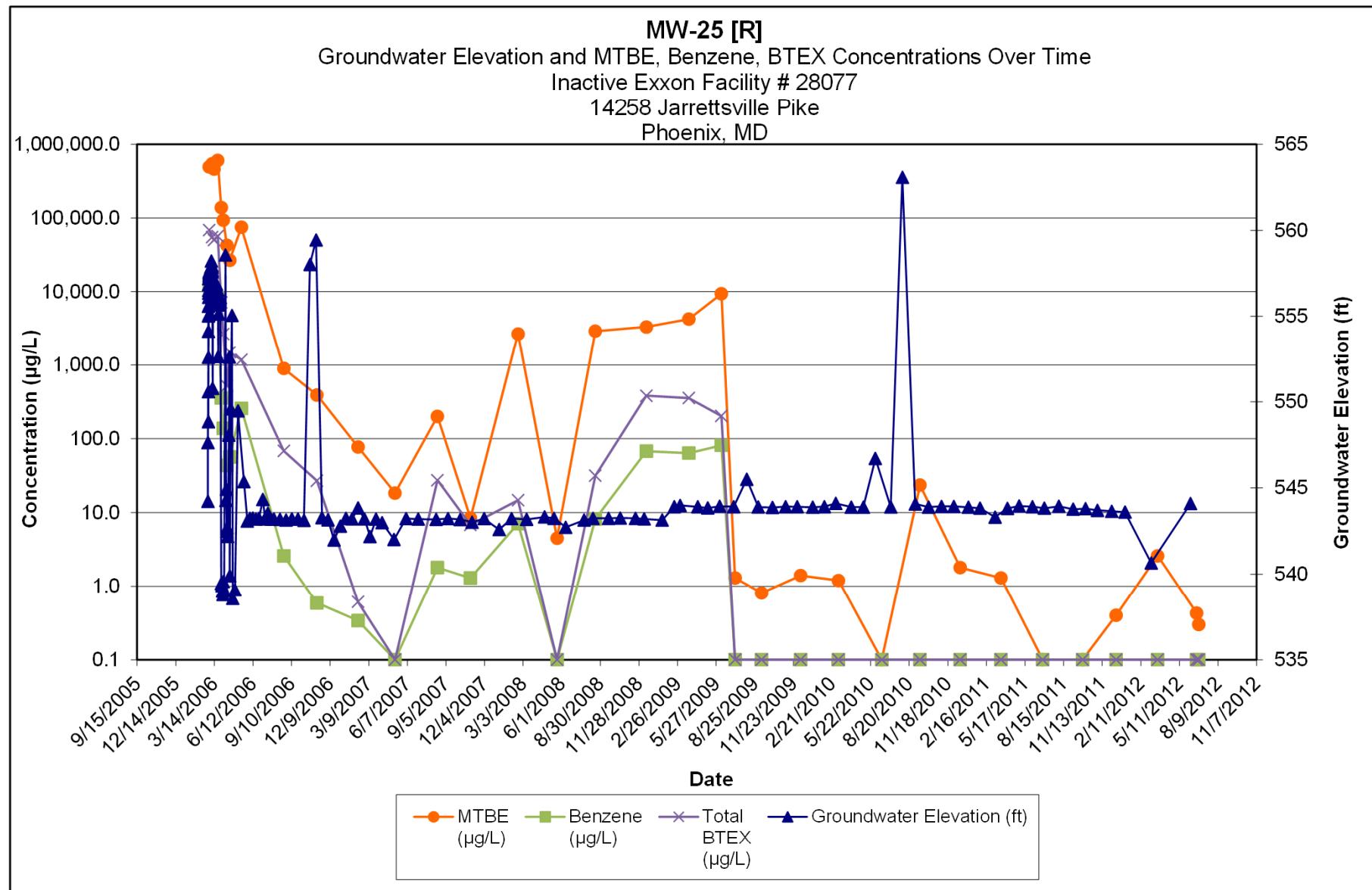


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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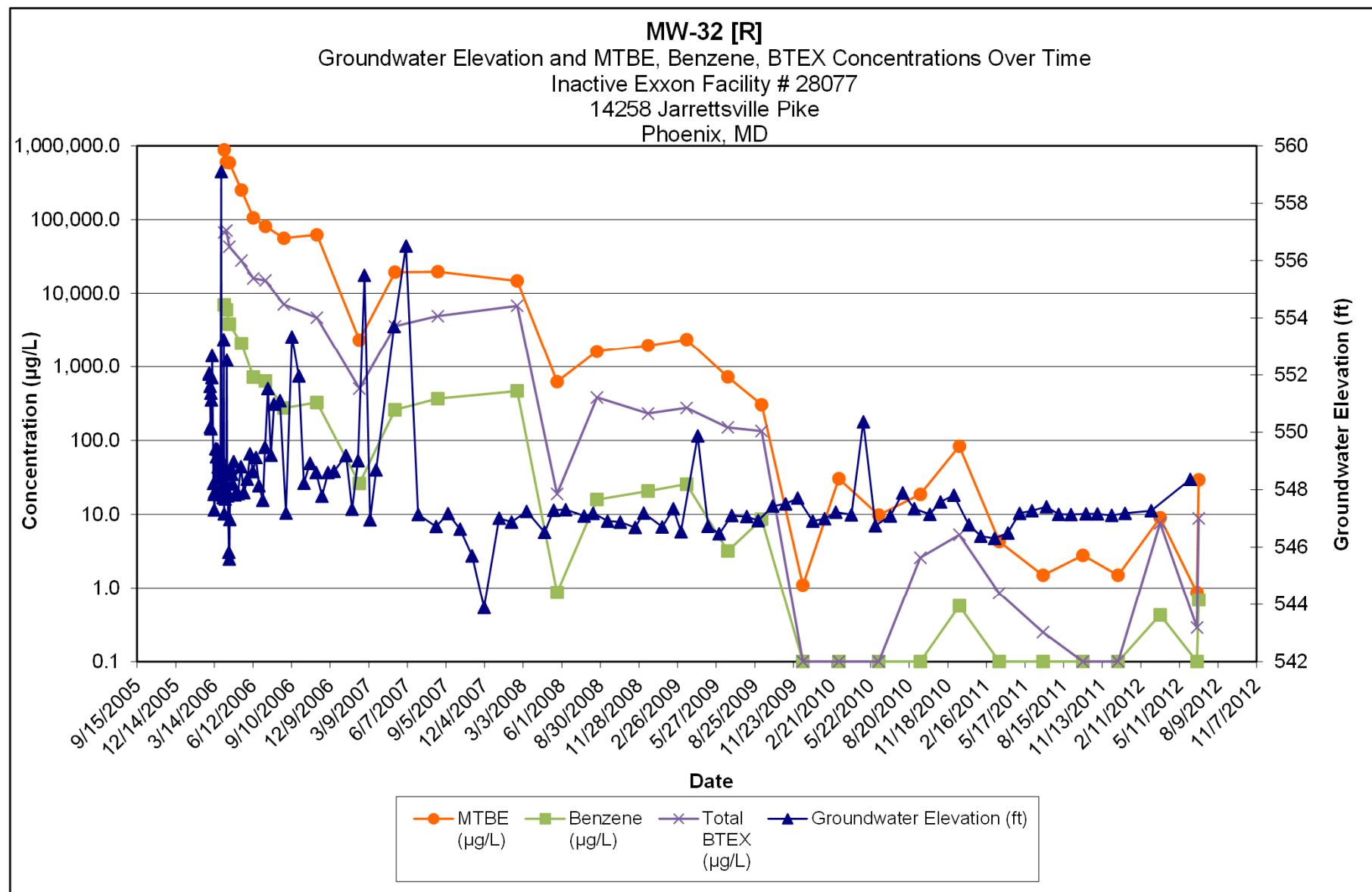
1340 Charwood Road  
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Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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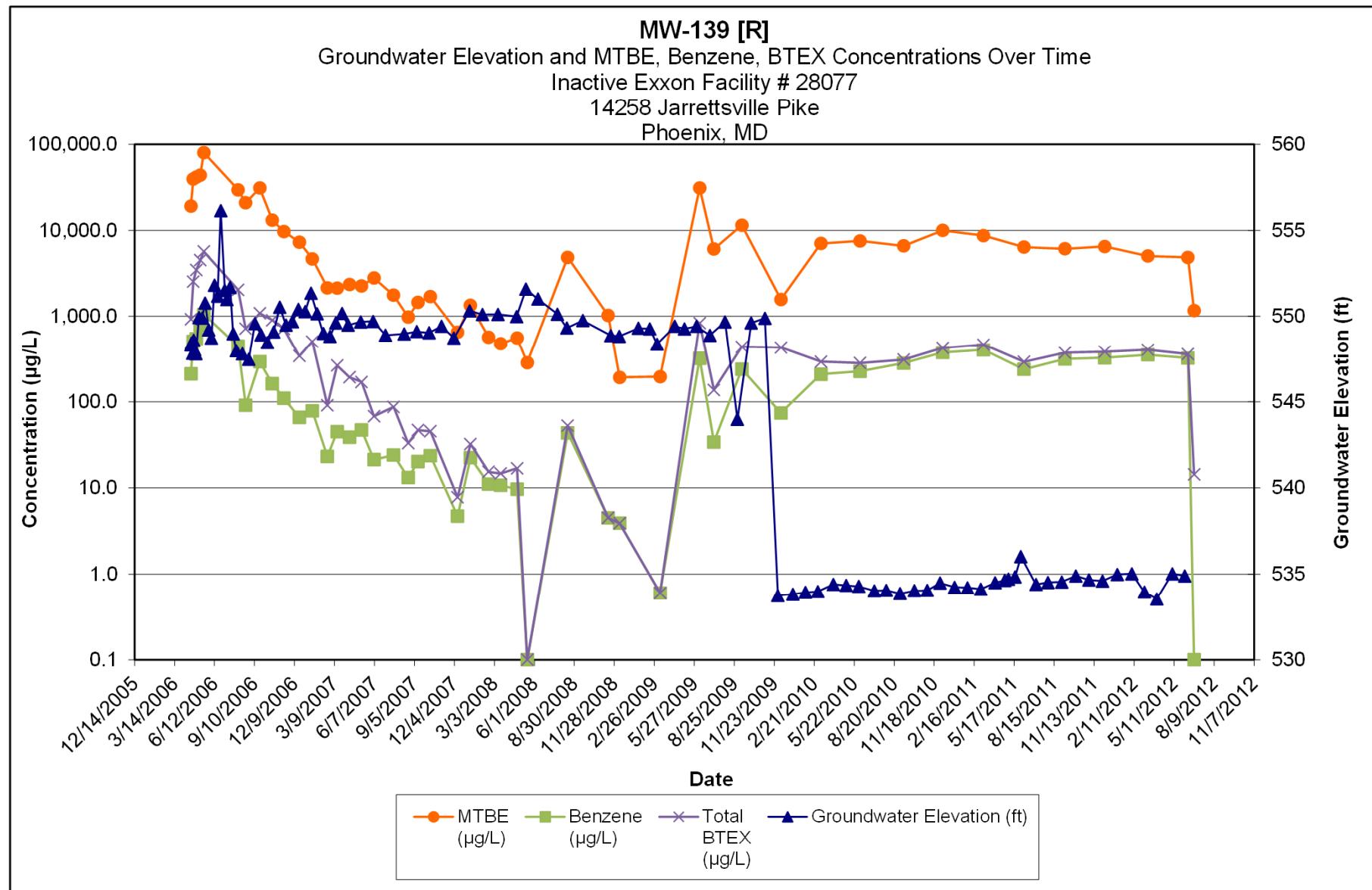


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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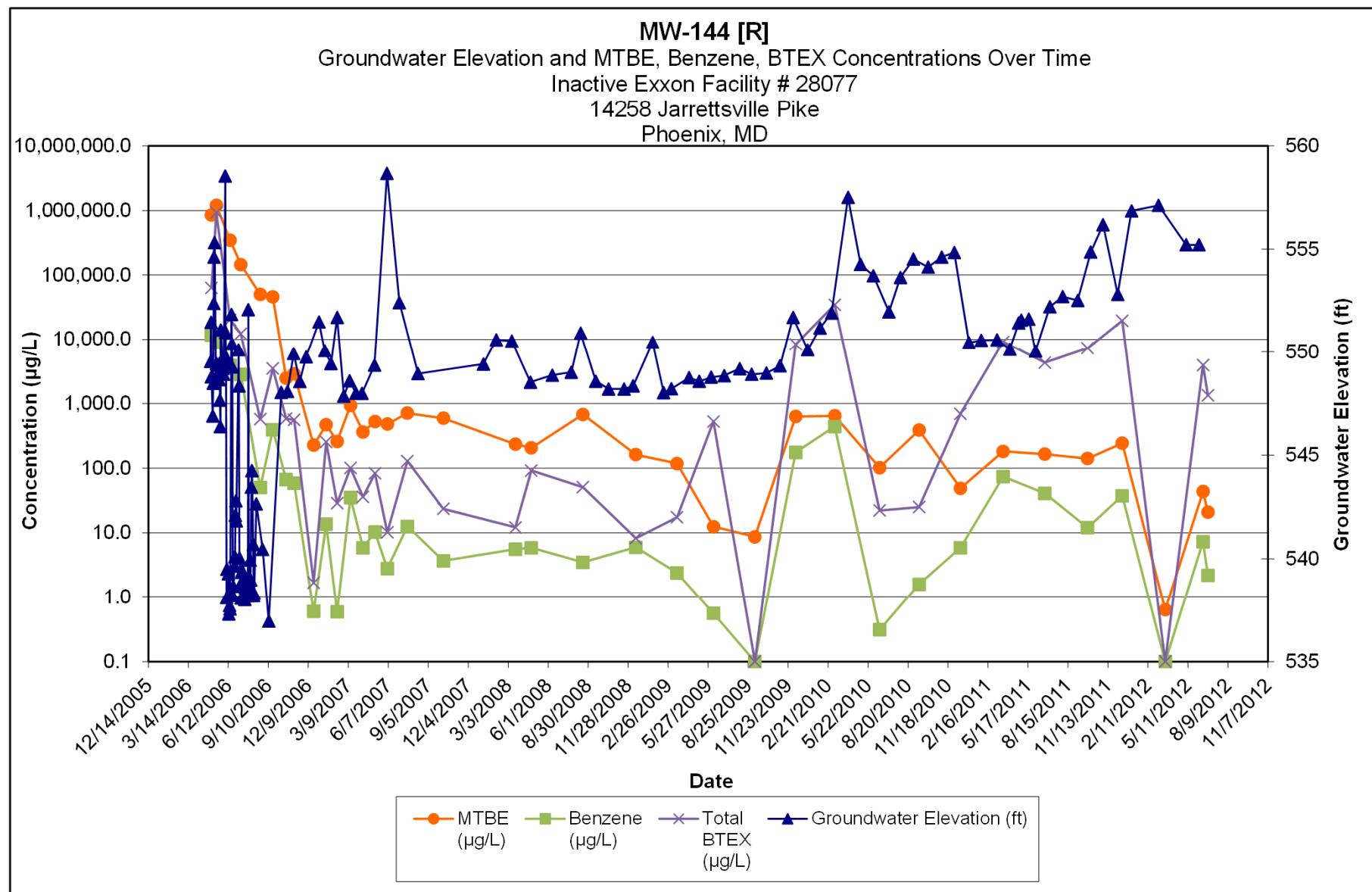


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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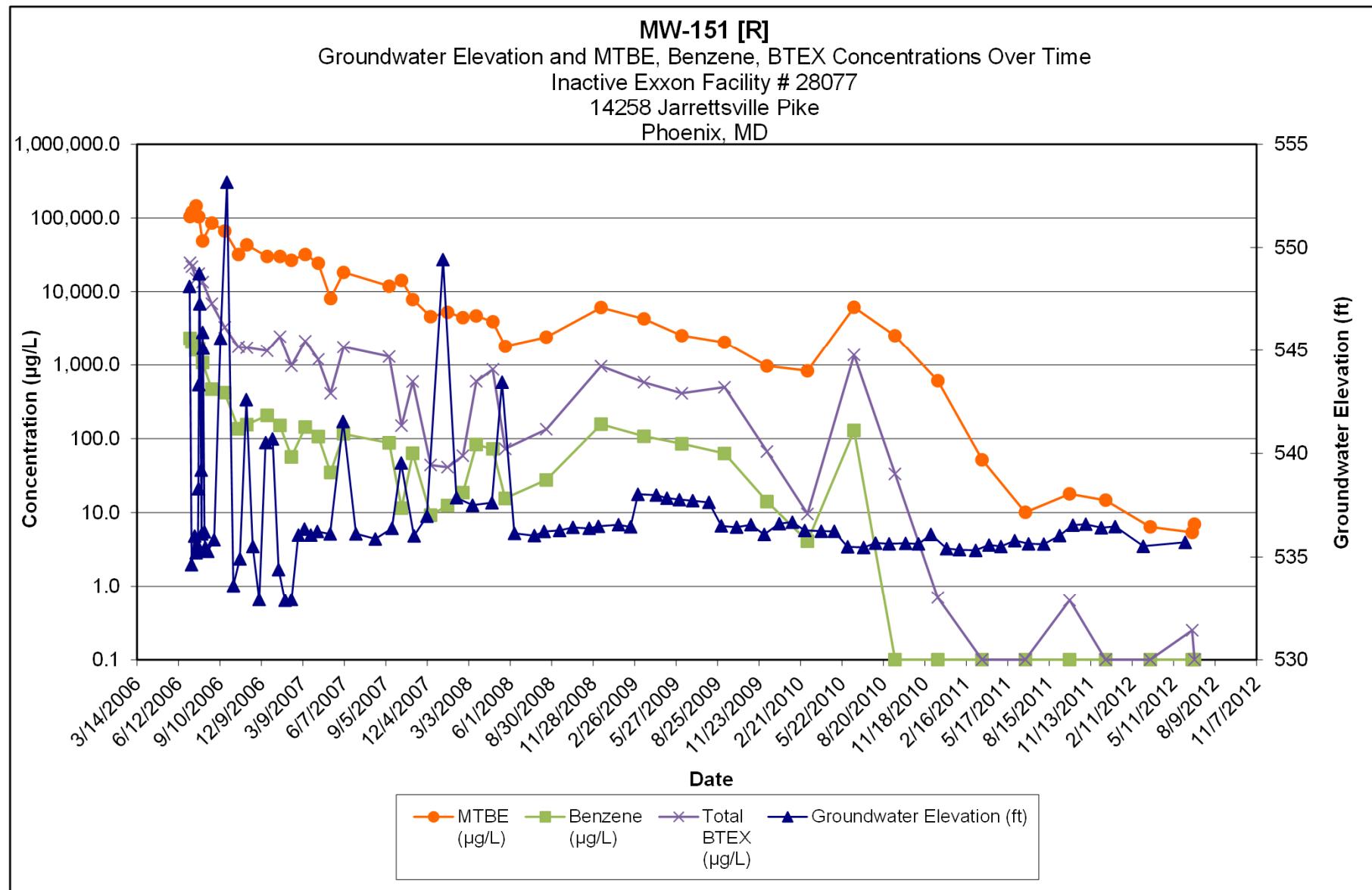


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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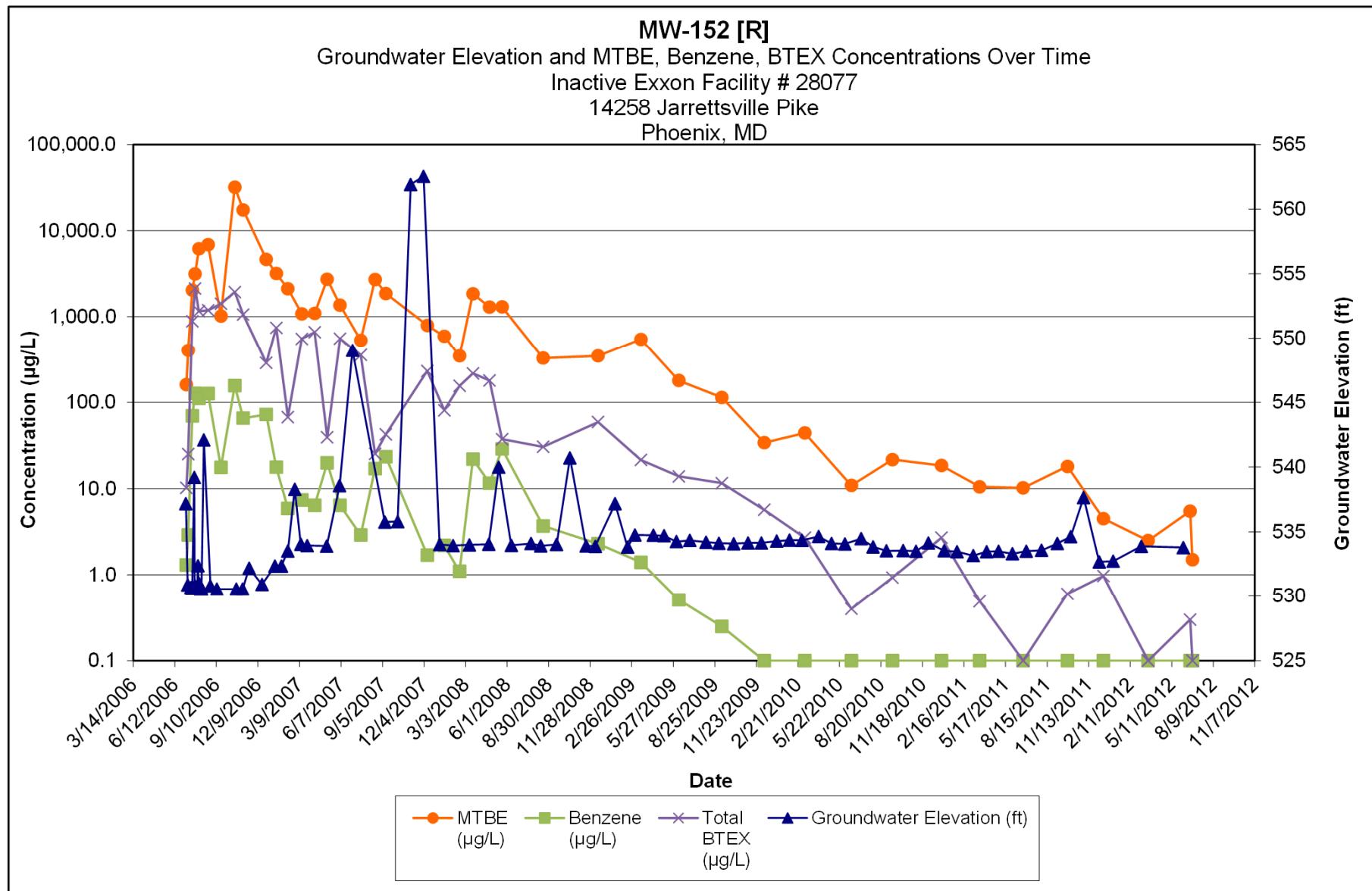


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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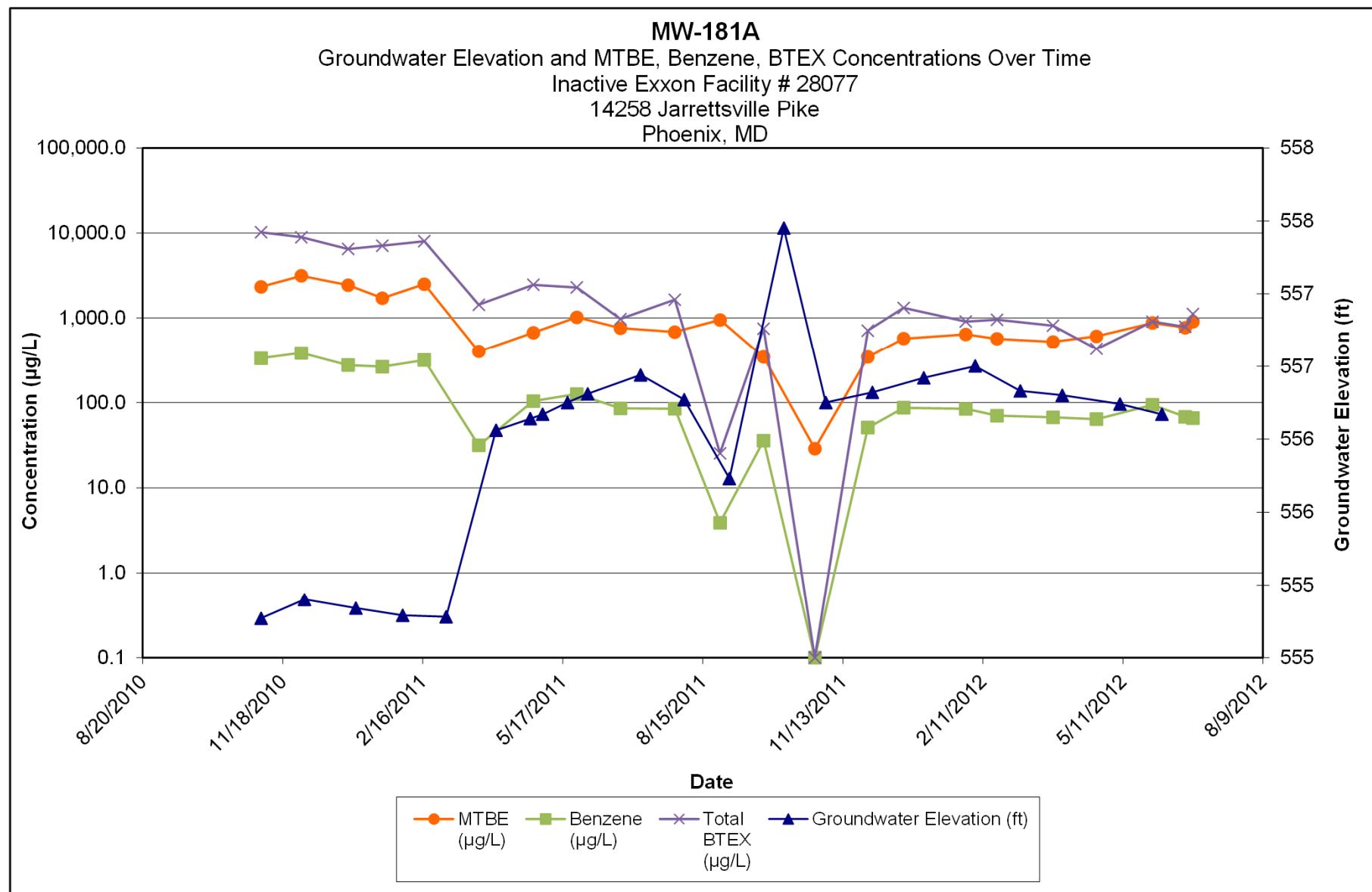


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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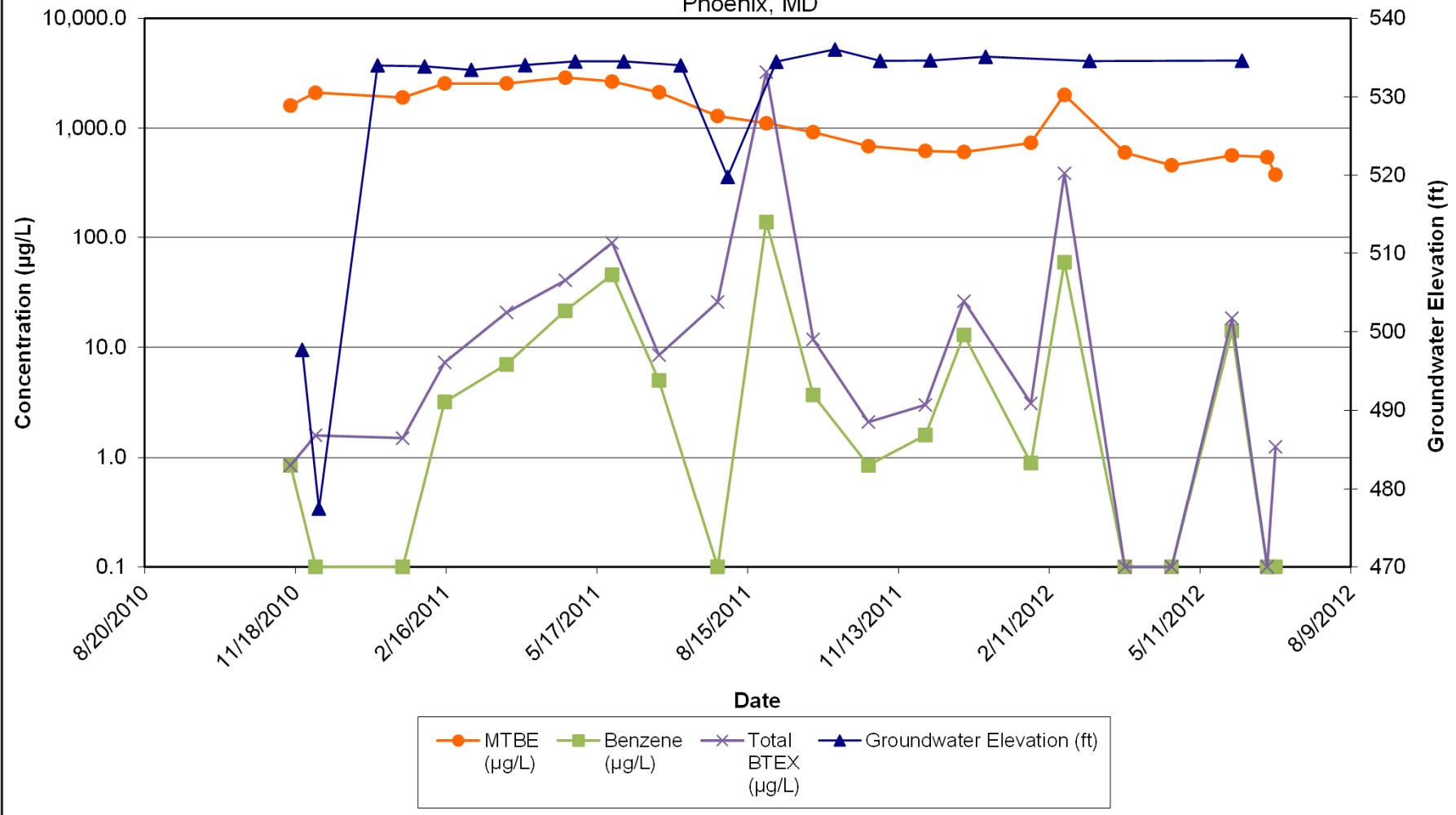
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**MW-181B**  
 Groundwater Elevation and MTBE, Benzene, BTEX Concentrations Over Time  
 Inactive Exxon Facility # 28077  
 14258 Jarrettsville Pike  
 Phoenix, MD

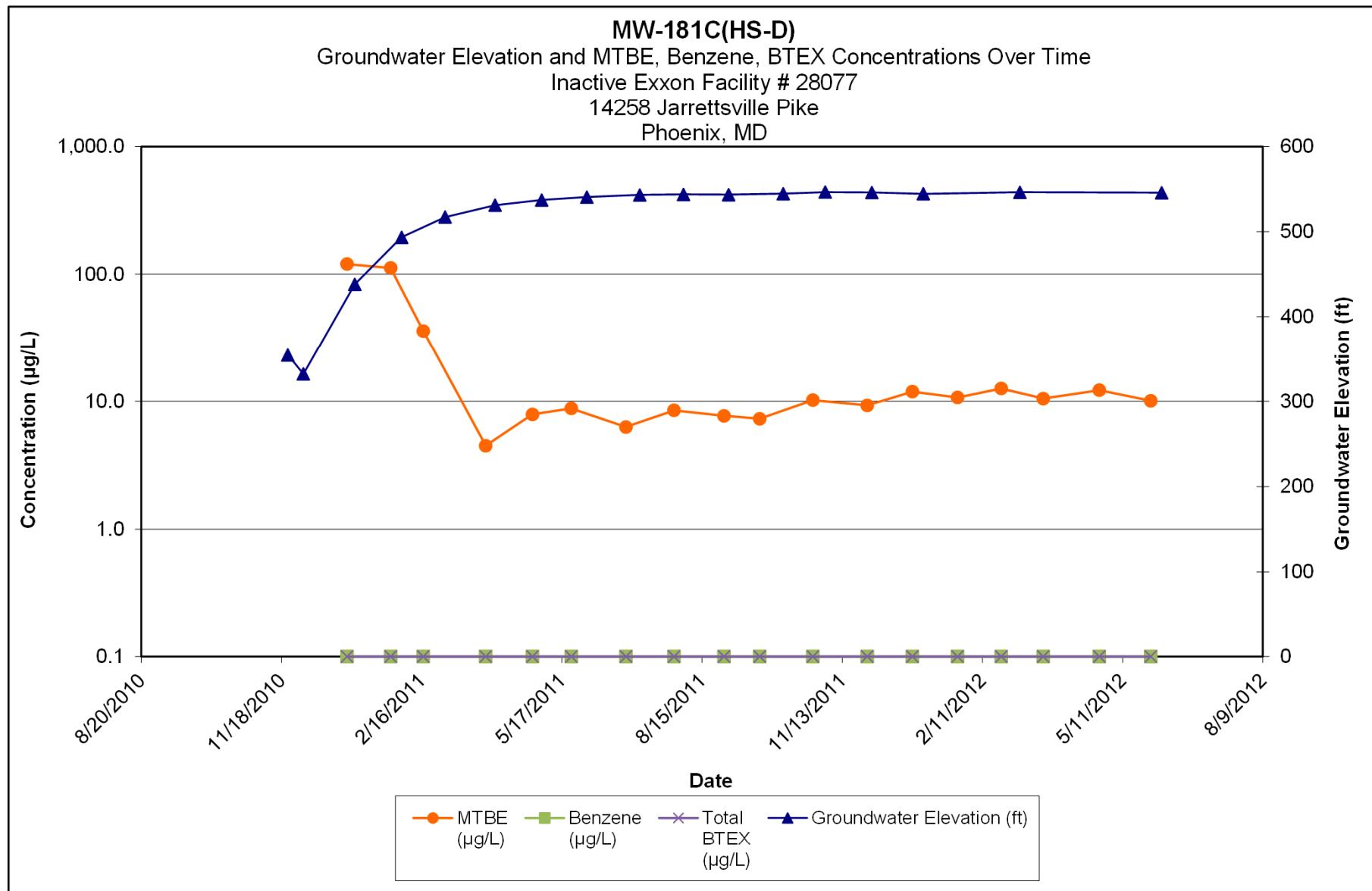


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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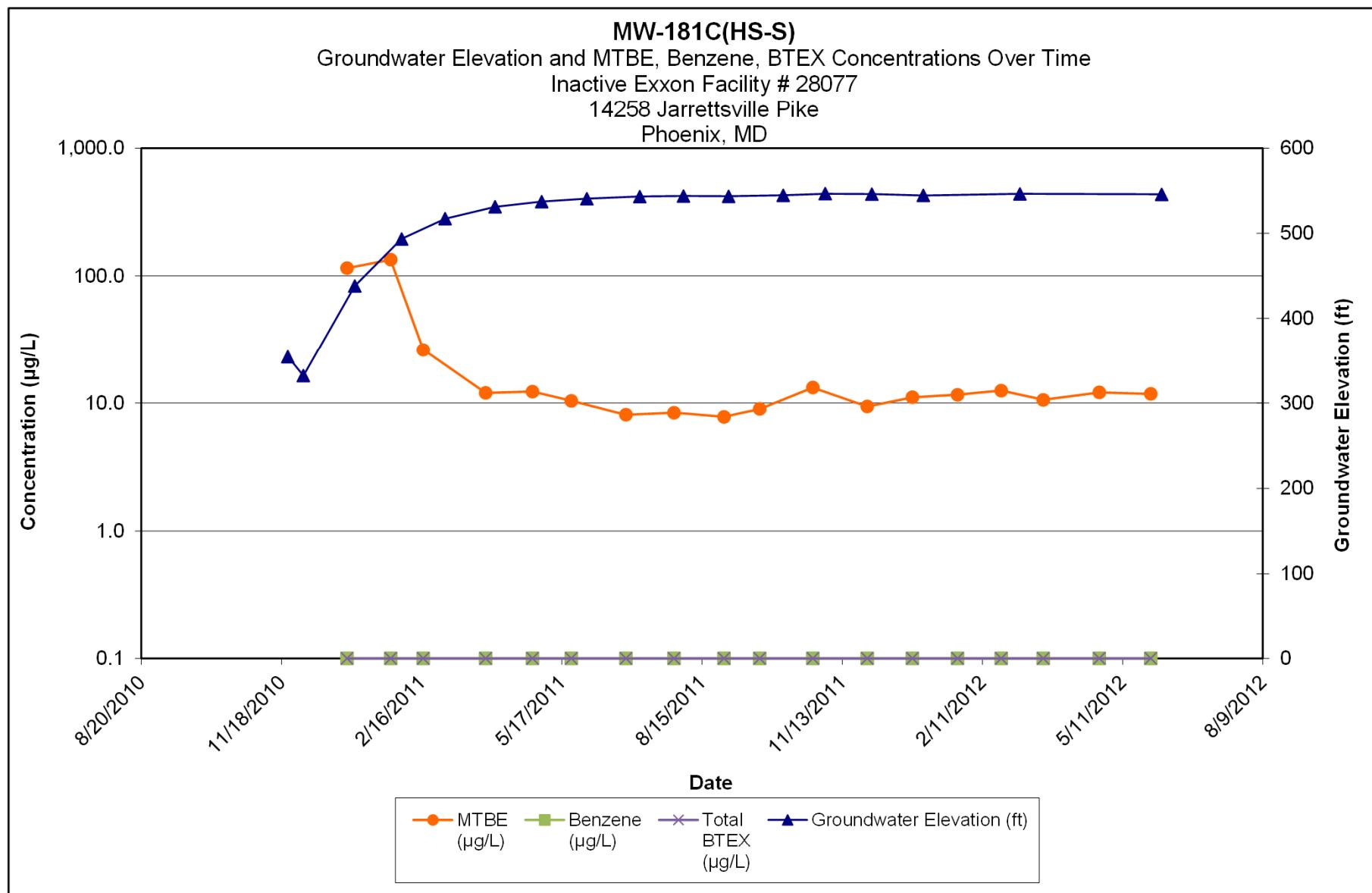


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) HS-D = Deep composite HydraSleeve sampler set at bottom of open borehole.

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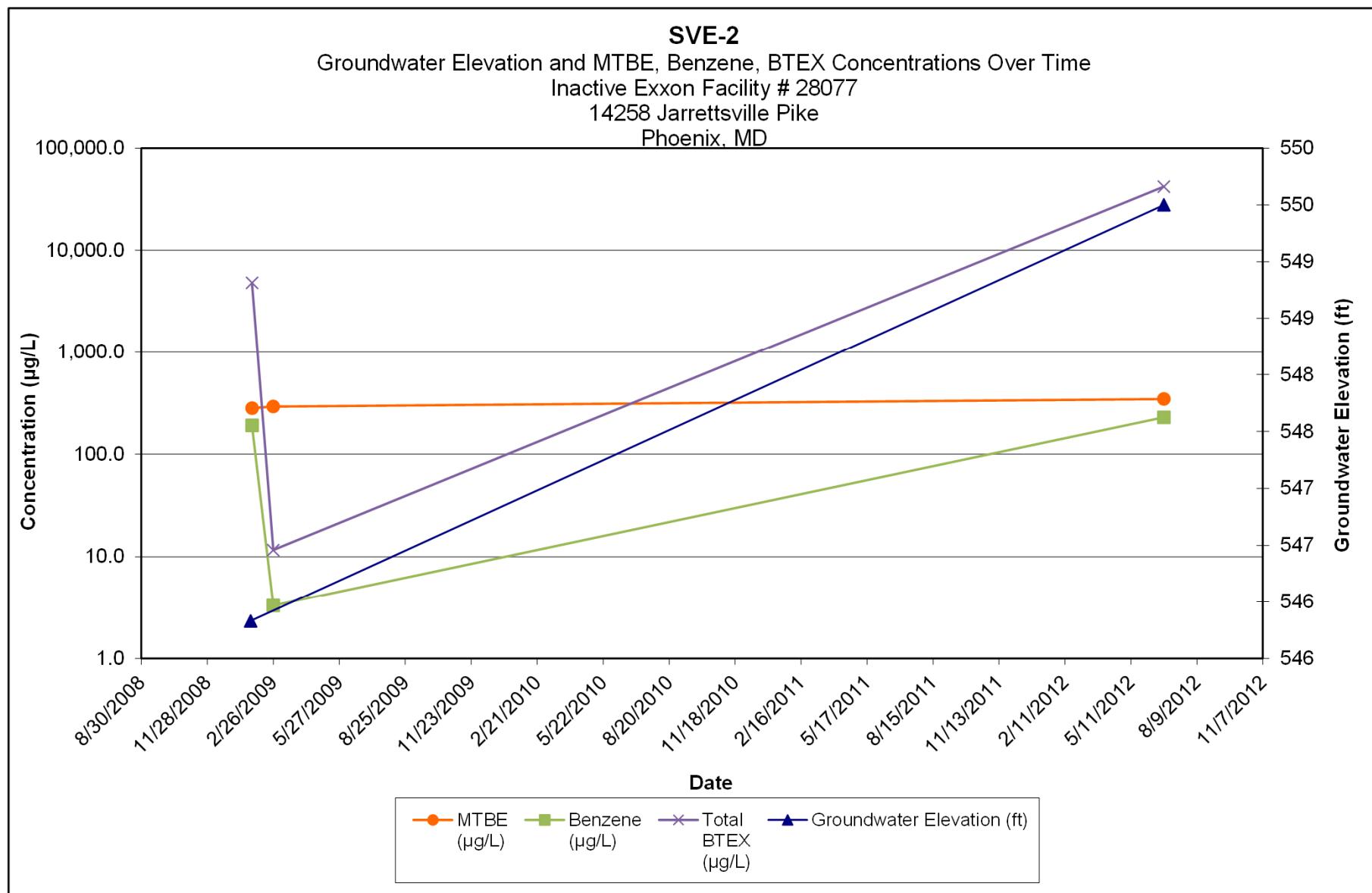


Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) HS-S = Shallow composite HydraSleeve sampler set at 1/2 of open borehole.

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Note:

- 1.) ND results are charted as "0.1" to avoid confusion with estimated "J" values.
- 2.) [R] - indicates well was used for remediation at time of reporting.

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1340 Charwood Road  
 Hanover, MD



Mid-Atlantic Geosciences

WELL ID

MW-181B

Logging Date: 01.04.2011

Logging Datum: Ground Surface

BOC: 60.7' DTW: 59.8' TD: 123.6'

Title: Televiewer, Geophysical, and Flowmeter Logs

Site Name: Client: Kleinfelder

Location: Phoenix, MD

Project No.: 101042

Revision Date: 02.24.2011

Depth	Acoustic Travel Time	Acoustic Amplitude	Televiewer Features	Feature Characteristics	Borehole Diameter	Natural Gamma	Fluid Temperature	Fluid Conductivity	Vertical Flow (HPFM) Static
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	0° 90° 180° 270° 0°	6 INCH	7 0 API	120 3 DegC	15 0 uS/cm	2800 -0.5 GPM	0.5

