

Attention: Mr. Thomas F. Lubozynsky, P.E.

Date March 10, 2014

Job No: 201710

To: Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

Phone: 407-897-4300

Regarding: Tomoka Farms Rd Landfill, SW WACS No. 27540

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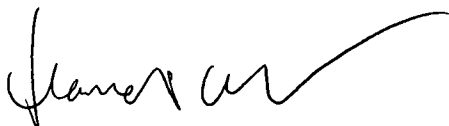
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Dear Mr. Lubozynski:

Enclosed please find one hard copy of the March-2014 Groundwater Evaluation Monitoring Summary Report for the Tomoka Farms Rd Landfill. Please let me know if you have any questions regarding this submittal

Thanks.

Handi Wang



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MAR 11 2014

DEP Central Dist.

2013 Annual Groundwater Benzene Evaluation Monitoring Summary Report

March 2014

**Tomoka Farms Road Landfill, Volusia County
Facility SW WACS No. 27540**



Submitted To:
**Florida Department of Environmental Protection
Central District
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1.0 Introduction

This Groundwater Evaluation Monitoring Summary Report for benzene at Tomoka Farms Road Landfill (TFRLF) (SW WACS No. 27540) is submitted on behalf of The County of Volusia Solid Waste Division. This report summarizes the quarterly groundwater benzene evaluation monitoring results for the 2013 monitoring periods. Based on recommendations from the Florida Department of Environmental Protection (FDEP) in a letter dated May 9, 2013 to Volusia County, Ammonia evaluation monitoring may be terminated in 2013. The FDEP also removed the Appendix II parameters listed in 40 CFR Part 258 from the quarterly monitoring requirement. Existing wells will be monitored only for Appendix I parameters in future events. Appendix II analyses will be required only for the initial sampling event on any new assessment well installation.

Quarterly evaluation monitoring of benzene in groundwater for wells B41-1, B43-1, B45-1, B45-2, B76-1, B77, B79-1, and B81-4 has been initiated from 2010 through 2013. Six additional wells (B82-1, B83, B85, B86, B76-6, and B79-6) were installed on February 6 and 7, 2013 to delineate benzene in the groundwater in accordance with a FDEP letter dated October 29, 2012. The following descriptions provide a general location of where these wells were installed:

- B82-1 – approximately 250 ft downgradient of the B76-1 (screened within Zone 4);
- B83 – in cluster B45-1 (screened in uppermost strata of the Floridan aquifer);
- B85 – approximately 500 ft downgradient of B79-1 (screened within Zone 4);
- B86 – in cluster with B64 (screened within Zone 6);
- B76-6 – in cluster with B76-1 (screened within Zone 6);
- B79-6 – in cluster with B79-1 (screened within Zone 6).

The above noted wells were monitored for Appendix II parameters listed in 40 CFR Part 258 during the 2013 first quarterly monitoring event and then followed by the Appendix I parameters listed in 40 CFR 258 during the second, third, and fourth quarterly monitoring events. Four additional wells (B85-6, B85-F, B87-6, and B87-F) were installed at the east boundary of the landfill in September 2013 to further define the benzene plume boundary. Wells B85-6 and B85-F were installed in a cluster with B85 and screened within Zone 6 and in uppermost strata of the Florida aquifer, respectively. The B87-6 and B87-F were installed in cluster with B87-1 and screened in Zone 6 and in uppermost strata of the Floridan aquifer, respectively. These four wells were monitored for Appendix II parameters listed in 40 CFR Part 258 during the 2013 fourth quarterly monitoring event. The parameters listed in the facility permit required for groundwater compliance monitoring were also tested during the 2013 evaluation monitoring periods. The parameters and testing methods are listed in Table 1. The quarterly monitoring results are discussed within this report.

2.0 Evaluation Monitoring Results

There are eighteen benzene evaluation monitoring wells. Fifteen wells screened in the surficial aquifer and three wells screened in the Floridan aquifer. The wells screened in the surficial aquifer are as follows: one in Zone 1-2 (B45-2); eight in Zone 4 (B41-1, B43-1, B45-1, B76-1, B79-1, B81-4, B82-1, and B85), and six in Zone 6 (B76-6, B77, B79-6, B85-6, B86, and B87-6). Three wells (B83, B85-F, and B87-F) were screened in the uppermost strata of the Floridan aquifer. The detected groundwater results for the evaluation monitoring data are provided in Table 2 through Table 5, which includes field data (Table 2), general chemistry (Table 3), metals (Table 4), and organic compounds (Table 5). The constituents detected above the groundwater standards and the area distribution of the parameters of concern are discussed in this report. The historic trends for the frequently detected parameters from 2010 through 2013 are included in the trend plots (Figure 1 to 20).

2.1 General Chemistry

Ammonia, chloride, iron, nitrate-N, pH, sodium, and total dissolved solids (TDS) were detected out of compliance with the primary drinking water standards (PDWS), secondary drinking water standards (SDWS) or Groundwater Cleanup Target Level (GCTL). Each parameter is discussed in the sections below.

2.1.1 pH (Field)

Groundwater samples collected from the evaluation monitoring wells reported field pH levels consistently below the SDWS range (6.5 to 8.5) during most 2013 monitoring events with the exception of B83, B85-F, B87-6, and B87-F, wells screened in Zone 6 or Floridan aquifer. The groundwater in the shallow surficial aquifer is naturally acidic, which represents the site background conditions. Field pH levels in the surficial aquifer at the TFRF are typically below the SDWS lower limit. Field parameters are displayed in Table 2.

2.1.2 Ammonia-N

Ammonia-N was detected at concentrations above the GCTL of 2.8 milligrams per liter (mg/L) in B41-1, B43-1, B64, B79-1, B79-6, B85, and B85-6 at least once during the 2013 monitoring events. The highest ammonia-N concentration was detected at B41-1. The detected ammonia-N concentrations in general showed a decreasing trend or were stable over time (Figure 5).

2.1.3 Chloride

Chloride was detected above the SDWS of 250 mg/L at B76-1, B76-6, B77, B79-1, and B79-6 at least once during the 2013 monitoring events (Table 3). The detected chloride concentrations were stable over time or showed a decreasing trend over the monitoring history (Figure 6). In a letter dated October 26, 2009, the FDEP indicated that implementation of evaluation monitoring for chloride is not required.

2.1.4 Iron

Iron was detected above the SDWS of 300 µg/L in most groundwater monitoring wells at least once during the 2013 monitoring periods except at well B83, which is screened in the Floridan aquifer (Table 3). Iron concentrations were noted to be higher in the wells screened in Zone 4 and Zone 6 than those screened in the Zone 1-2 and the Floridan aquifer. Iron concentrations in most wells appear to be decreasing with the exception of B45-2 and B76-1 (Figure 7). The fluctuations in B45-2 and B76-1 are likely caused by redox variability. Iron is reduced to more soluble ferrous iron (Fe^{+2}) under reducing conditions resulting in higher iron levels in groundwater. Historical groundwater quality data indicate elevated iron concentrations in groundwater wells are the typical groundwater conditions at TFRLF.

2.1.5 Nitrate-N

Nitrate-N was detected at one compliance well (B45-2) in Zone 4 above the PDWS (10 mg/L) in three of the four quarterly monitoring event (table 3). Nitrate was first detected above the PDWS at B45-2 during the 2012 second semiannual monitoring event.

2.1.6 Sodium

Sodium was detected slightly above the PDWS of 160 mg/L at compliance wells B41-1, B45-1, B76-1, B79-1, B79-6, and B86 at least once over the evaluation monitoring periods (Table 3). The highest sodium concentration (311 mg/L) was detected at B79-6 in May 2013 monitoring event. Groundwater sodium concentrations in general are stable with some fluctuation (Figure 9). In a letter dated October 26, 2009, the FDEP indicated that implementation of evaluation monitoring for sodium is not required.

2.1.7 TDS

TDS concentrations exceeding the SDWS of 500 mg/L were detected in all groundwater samples except B43-1, B82-1, B83, B85-F, B87-6, and B87-F during the 2013 monitoring periods (Table 3). The groundwater TDS concentrations were stable during the 2013 monitoring periods with the exception of B45-2, which indicated an increasing trend

(Figure 10). TDS has historically exceeded the SDWS at the TFRLF and is an indication of natural groundwater geochemically reduced conditions resulting in more metals being dissolved.

2.2 Trace Metals

Barium, beryllium, chromium, cobalt, copper, lead, nickel, silver, vanadium, and zinc (Appendix II metals) were each detected at low concentrations from at least one well during the 2013 evaluation monitoring periods. Barium was detected in most of the 2013 evaluation monitoring events from all wells tested. The other metals were only detected occasionally and most of the detected results were between the detection limits and the report limits. None of the metals were detected above any groundwater standard (Table 4). Time series plot of the barium, beryllium, chromium, nickel, and vanadium concentrations for wells with detected results are shown in Figure 11 through Figure 16. For all the results, if a trend was detected it was stable or slightly fluctuated.

2.3 Organic Compounds

Benzene was detected above the PDWS of 1.0 µg/L in monitoring wells B45-1, B76-1, B76-6, B77, B79-1, B79-6, B81-4, and B86 at least once in 2013 (Table 5). Four wells were screened in Zone 4 (B45-1, B76-1, B79-1, and B81-4) and four screened in Zone 6 (B76-6, B77, B79-6, and B86) of the surficial aquifer. The highest benzene concentration was detected at B45-1 and B76-1 screened in Zone 4 and B79-6 and B86 screened in Zone 6. Benzene was only detected slightly above the detection limit (0.1 µg/L) in B45-2 (Zone 1-2) and not detected in any wells screened in the Floridan aquifer. Benzene concentrations fluctuated slightly at B76-1, B79-1, B79-6, and B86, but were stable or decreased at most other wells (Figure 17).

The groundwater to the south boundary of the Class III landfill near B81-4 and B86 is currently being monitored under the semiannual B5/B37 monitoring program and the B5 remediation activities approved under the Limited Scope Remedial Action Plan (LRAP) Approval Order from FDEP dated March 19, 2009.

Hexachloro-1,3-butadiene was detected above the detection limit and GCTL of 0.4 µg/L during the February 2013 sampling event at B79-6 and B83 (Table 5), however, this compound was not detected above the detection limits in the subsequent quarterly verification sampling events at B79-6 and B83. Therefore, the hexachloro-1,3-butadiene detection was refuted.

Other Appendix I/II compounds were detected at trace levels from at least one of the monitoring wells at least once during 2013 quarterly evaluation monitoring include 1,2,4-Trichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dimethylphenol, 2-Methylnaphthalene, 4-Amiobiphenyl, Acetone, bis(2-Ethylhexyl)phthalate, Butyl benzyl phthalate, Chlorobenzene, cis-

1,2-Dichlorobenzene, total Cyanide, Diethyl phthalate, D—n-Butyl phthalate, Endosulfan II, Endrin, Ethylbenzene, Hexachloro-1,3-butadiene, Naphthalene, O-Toluidine, Phenacetin, Toluene, and total Xylenes. These detections were between the detection limits and the reporting limits and none of these detections were above any groundwater standards.

2.4 Benzene Spatial Distribution

Benzene is the only Appendix I/II organic compound consistently detected above the PDWS (Table 5) in 2013. These detections were limited to Zone 4 and Zone 6 of the surficial aquifer (Figures 1 and 2, Attachment 1). Benzene was only detected at the Zone 1-2 surficial well B45-2 slightly above the detection limit (0.1 µg/L) but below the PDWS (1 µg/L). Benzene was not detected above the detection limit in any of the Floridan aquifer wells (B83, B85-F, and B87-F). Therefore, the delineation of benzene concentrations in the Zone 1-2 of the surficial aquifer and the Floridan aquifer is consider complete and no additional wells are recommended at this time.

The spatial distribution of groundwater benzene concentrations from the November 2013 monitoring events in Zone 4 and Zone 6 of the surficial aquifer are shown in Figure 1 (Zone 4) and Figure 2 (Zone 6) in Attachment 1. Seven benzene evaluation monitoring wells (including B41-1, B43-1, B45-1, B76-1, B79-1, B81-4, and B85) were screened in Zone 4 of the surficial aquifer. Five wells (B76-6, B77, B79-6, B85-6, and B86) were screened in Zone 6 of the surficial aquifer. These wells were installed around the Class III Landfill with five wells (B43-1, B45-1, B76-1, B76-6, and B77) located at the northern boundary, five wells (B41-1, B79-1, B79-6, B85, and B85-6) located at the eastern boundary, and two wells (B81-4 and B86) located at the southern boundary. The historic groundwater flow direction at the site is from west to the east.

The highest benzene concentrations were detected in Zone 4 of the surficial aquifer at B45-1 and B76-1 located to the north boundary of the Class III Landfill. However, the benzene concentration at B43-1, which is approximately 800 feet downgradient from B45-1 and B76-1, was below the detection limit (0.1 µg/L). The benzene concentrations at B45-1 also showed a decreasing trend from the previous monitoring events while benzene levels at B76-1 fluctuated (Figure 16). The facility boundary line is approximately 1000 feet further to the east of B43-1; and benzene is unlikely to impact groundwater at the facility boundary downgradient from B43-1.

Benzene was also detected in B76-6 (Zone 6) above the PDWS during the 2013 quarterly monitoring events (Table 5). The benzene concentrations at B76-6 also indicated a decreasing trend over time (Figure 16). The benzene concentration at B76-6 was only slightly above the PDWS during the 4th quarterly monitoring event (Figure 2, Attachment 1). The benzene level at B76-6 is expected to decrease further below PDWS over time. Given the rate that benzene in B76-6 is decreasing and the distance from the impacted wells to the facility boundary (>1000 ft), is unlikely that benzene will impact off-site

groundwater quality. Additional wells downgradient of B76-6 are not recommended until more monitoring data from B76-6 are available.

East of the Class III landfill, benzene was detected at low levels in B41-1, B79-1, and B85, all screened in Zone 4 of the surficial aquifer. Benzene has been consistently detected at B79-1 above the PDWS. Benzene was detected at B41-1 at a concentration (1.1 µg/L), slightly above the PDWS in the first quarter 2013; but has decreased to below PDWS in the subsequent monitoring events (Table 5). Benzene was detected at B85 (approximately 500 ft downgradient from B79-1) slightly above the detection limit (0.1 µg/L) in two of the quarterly monitoring events and detected below the detection limit in the other two monitoring events. Benzene was not detected above any groundwater standard at B85. As a result, no additional monitoring wells in Zone 4 of the surficial aquifer downgradient of B79-1 are recommended at this time.

Benzene was also detected at B79-6 and B85-6 (Zone 6) of the surficial aquifer. B79-6 was installed in February 2013 and monitored for all quarterly events in 2013. B85-6 was installed in September 2013 and is approximately 500 ft downgradient from B79-6 and monitoring started in the fourth quarter 2013 to further delineate the extent of benzene. Benzene was detected at both B79-6 and B85-6, above the PDWS, however, all detections were below 10 µg/L. Benzene was detected at B85-6 (2.5 µg/L) slightly above the PDWS during the initial sampling event in November 2013. Data from the 2014 first quarterly event (submitted to FDEP) indicated that benzene was detected below the PDWS at B85-6. Benzene concentrations from B79-6 also showed a decreasing trend (Figure 16). Based upon these results, no additional monitoring wells are recommended at this time.

At the southern boundary, benzene was detected at both B81-4 (Zone 4) and B86 (Zone 6) above the PDWS during the 2013 sampling events. Benzene was only detected at B81-4, slightly above the PDWS during two of the four quarterly sampling events of 2013. Benzene has been consistently detected at B86 above the PDWS in 2013 (6 to 12.9 µg/L). Based on the second 2013 semiannual compliance monitoring report for the landfill, the overall groundwater flow direction for the surficial groundwater is northeasterly (Attachment 2), which is consistent with the historic results. Therefore, well B85-6 located at the eastern boundary of the landfill can serve as the downgradient well for B86; and no additional wells are recommended for the southern boundary of the landfill. Also, both B81-4 and B86 are located about 350 ft east of the B37 well cluster; and the B37 area is currently under a site assessment semiannual monitoring program.

3.0 Conclusions and Recommendations

Benzene is the only Appendix I/II compound consistently detected above the PDWS in the benzene evaluation monitoring wells at the Class III Facility at Tomoka Farms Road Landfill (TFRLF), and all detections were in the wells screened in Zone 4 and Zone 6 of the surficial aquifer. In general, benzene concentrations indicate a decreasing trend over time.

Benzene was detected in the groundwater above the PDWS in three areas around the Class III Facility. These detections are as follows:



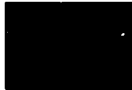

Benzene was detected above the PDWS near the northern boundary of the landfill around the well cluster of B45 and B76. Based on the routine semiannual compliance monitoring results, the overall groundwater flow direction is east-northeasterly across the landfill. Therefore, the downgradient wells for the area are B82-1 and B87-6 for (Zones 4 and 6), respectively. Benzene was not detected in either B82-1 or B87-6. Therefore, the benzene delineation appears to be complete in this area, and no additional wells are recommended.

Near the eastern boundary of the landfill, benzene was detected in the groundwater in wells surrounding cluster B79 area. B85 (Zone 4) and B85-6 (Zone 6) were installed in 2013 to delineate benzene for these two aquifer zones. Benzene has not been detected above the PDWS in B85. Therefore, benzene delineation for Zone 4 appears to be complete in this area. Benzene was detected slightly above the PDWS in B85-6 (Zone 6) during the fourth quarterly monitoring event. However, it is advised that additional data be collected prior to the recommendation for additional wells.

At the southern boundary of the landfill, B81-4 and B86 are overlapped with the B5/B37 site assessment monitoring. Furthermore, since groundwater flow direction is north-northeasterly across the landfill, monitoring wells B85 and B85-6 can serve as the downgradient wells for B81-4 and B86 for Zones 4 and 6 of the surficial aquifer, respectively. Currently, the TFRF is performing B5/B37 area semiannual assessment monitoring and B5 area remedial action and evaluation monitoring for the area south of the landfill. No additional requirements are necessary.

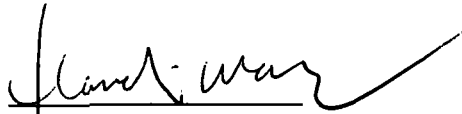
The following recommendations are made based on the results of the 2013 quarterly evaluation monitoring:

1. No additional wells are required at the northern and southern boundaries of the Class III Facility. At the east landfill boundary, no new wells are proposed at this time and additional monitoring data are required to determine whether additional wells will be required to completely delineate benzene near B85-6.



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2. Benzene is the only Appendix I/II parameter detected above the PDWS at the site within the facility boundary and benzene concentrations in general showed a decreasing trend or were stable. Therefore, it is recommended that the evaluation monitoring frequency be reduced from quarterly to semiannually to coincide with the semiannual compliance monitoring events at the TFRL facility.
 3. If benzene concentrations continue to decline or become stable within the next two monitoring events; and if no additional Appendix I/II parameters are confirmed to be above the groundwater standards, it is recommended that the evaluation monitoring be discontinued and return to routine monitoring only.
 4. Benzene was detected only slightly above the PDWS at B41-1, B43-1, and B45-2 historically and in 2013 no benzene or other Appendix I/II parameters have been detected above the PDWS at these wells. Further, no Appendix I/II parameters were detected at B83 and B85 above any standards since their installation in early 2013. Therefore, it is recommended that these wells be removed from the evaluation monitoring list.

4.0 Professional Certification

This document has been prepared under my direction in general accordance with Chapter 62-701, Florida Solid Waste Management Facility Regulations. The information contained within this report is to the best of my knowledge and belief, true, accurate, and complete.



Handi Wang, PhD
HDR Engineering, Inc.
Sr. Environmental Scientist



John S. Catches, P.E.
HDR Engineering, Inc.
FL License No. 2203

Tables

Table 1
Groundwater Monitoring Parameters and Analytical Methods
Tomoka Farms Road Landfill Benzene Quarterly Evaluation Monitoring

Analyte Name	Analysis Method	Monitoring Period			
		Quarter 1	Quarter 2	Quarter 3	Quarter 4
Laboratory Parameters					
Chloride	EPA 300.0 (Chloride)	X	X	X	X
Nitrate (N)	EPA 300.0 (Nitrate (N))	X	X	X	X
Sulfate	EPA 300.0 (Sulfate)		X	X	X
Ammonia (N)	EPA 350.1 No Distillation	X	X	X	X
Residues- Filterable (TDS)	SM18 2540 C	X	X	X	X
Appendix I Metals, Iron, Sodium	EPA 6010/6020	X	X	X	X
Mercury	EPA 1631/7470	X	X	X	X
1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane	EPA 8011	X	X	X	X
Appendix I VOCs	EPA 8260	X	X	X	X
Tin	EPA 6010	X			X*
Pesticides	EPA 8081/8141	X			X*
PCBs	EPA 8082	X			X*
Herbicides	EPA 8151	X			X*
Appendix II Semi-VOCs	EPA 8270	X			X*
Cyanide- Total	EPA 9012 (CN - Total)	X			X*
Sulfide	EPA 9034	X			X*
Field Parameters					
Dissolved Oxygen	EPA 360.1	X	X	X	X
Oxidation Reduction Potential	DEP-SOP	X	X	X	X
pH	EPA 150.1	X	X	X	X
Specific Conductance	EPA 120.1	X	X	X	X
Temperature, Water	EPA 170.1	X	X	X	X
Turbidity	EPA 180.1	X	X	X	X
Water Level (NGVD)	DEP-SOP	X	X	X	X

Note:

X - Parameter was analyzed for the quarter;

* Only 4 new wells(B85-6, B85-F, B87-6, and B87-F) were analyzed for the Appendix II parameters in Quarter 4 Period and all other wells were analyzed for Appendix I list;

Shaded cell indicates that the parameter was not analyzed during the period.

Table 2
Summary of Field Parameters
Tomoka Farms Road Landfill Benzene Quarterly Evaluation Monitoring

Parameter	Standard	Date	B41-1	B43-1	B45-1	B45-2	B76-1	B76-6	B77	B79-1	B79-6	B81-4	B82-1	B83	B85	B85-6	B85-F	B86	B87-6	B87-F	Unit
Aqifer Zone			4	4	4	1-2	4	6	6	4	6	4	4	FL	4	6	FL	6	6	FL	
Dissolved Oxygen	NS	Feb-13	0.28	0.16	0.09	0.28	1903	0.69	0.13	0.15	1.43	0.24	0.11	0.21	0.68			0.14			mg/L
Dissolved Oxygen	NS	May-13	0.34	0.53	0.2	0.42	0.2	0.3	0.21	0.26	0.25	0.28	0.49	0.29	0.25			0.21			mg/L
Dissolved Oxygen	NS	Aug-13	0.36	0.63	0.27	0.35	1.09	0.35	1.3	1.2	1.44	0.55	0.26	0.12	0.55			0.91			mg/L
Dissolved Oxygen	NS	Nov-13	0.71	0.33	0.5	0.26	0.36	0.32	0.3	0.27	0.4	0.23	0.2	0.07	0.29	0.2	0.25	0.19	0.16	0.13	mg/L
ORP	NS	Feb-13	-106.4	-69.2	-114.9	44	-106.4	-13.9	-111.2	-94.4	-19.5	-114.7	-19.8	36.8	-22.8			-39			mV
ORP	NS	May-13	-95.5	-48.9	-129.8	64.5	-79.5	-96.9	-133.2	-70.5	-104.7	-56.1	-52	-132.9	-89.9			-112.7			mV
ORP	NS	Aug-13	-182.1	-163.8	-173.3	-45.3	-130.3	-155.1	-133.5	-119.1	-122.2	-145.7	-133	-218.4	-153.6			-205.9			mV
ORP	NS	Nov-13	-101.4	-72	-64.5	-46.3	-64.1	-87	-73	-68.8	-67.1	-64.1	-51.9	-75.7	-56.6	-96.7	-129.6	-96.3	-121.4	-113.4	mV
pH	6.5-8.5**	Feb-13	6.24	5.60	5.82	4.86	6.76	6.88	5.96	6.06	6.77	6.12	7.13	7.61	6.92			7.19			S.U.
pH	6.5-8.5**	May-13	6.04	5.73	5.79	5.20	5.62	5.93	5.91	5.96	6.03	5.96	5.98	6.74	6.08			6.08			S.U.
pH	6.5-8.5**	Aug-13	6.15	5.80	5.90	5.49	5.31	6.03	5.80	6.11	6.16	6.09	6.03	6.98	6.21			6.32			S.U.
pH	6.5-8.5**	Nov-13	6.18	5.74	5.62	5.69	5.23	5.99	5.80	6.13	6.18	6.06	6.00	6.78	6.07	6.7	6.94	5.96	6.79	6.98	S.U.
Specific Conductance	NS	Feb-13	2329	750	1684	634	2299	1699	1835	2970	2862	954	393	583	1769			2219			µmhos/cm
Specific Conductance	NS	May-13	2420	777	1815	1065	1849	1947	1947	3126	3091	945	402	632	1874			2459			µmhos/cm
Specific Conductance	NS	Aug-13	2025	694	1494	659	1085	1667	1517	2782	2793	560	360	562	1508			1904			µmhos/cm
Specific Conductance	NS	Nov-13	2259	733	1591	1655	1015	1822	1600	2977	2998	585	390	601	1710	1820	751	1962	511	599	µmhos/cm
Temperature	NS	Feb-13	22.53	22.33	22.47	21.32	5.78	22.42	22.31	22.23	21.94	21.76	23.47	22.38	21.9			21.58			deg C
Temperature	NS	May-13	22.84	21.86	21.85	21.45	22.84	22.51	22.09	22.22	22.01	21.72	24.28	22.26	21.98			22.11			deg C
Temperature	NS	Aug-13	23.31	23.17	22.93	25.12	23.95	24.8	23.31	22.83	23.15	23.54	24.59	23.17	22.95			26.79			deg C
Temperature	NS	Nov-13	23.09	22.92	23.12	23.39	23.9	23.06	22.27	22.52	22.68	22.61	24.84	22.57	22.84	22.6	21.7	22.49	22.02	21.5	deg C
Turbidity	NS	Feb-13	2.91	13.4	14.2	8.64	12.5	16.1	9.78	7.44	16.2	10.35	16.5	19.8	5.32			16.5			NTU
Turbidity	NS	May-13	3.75	1.76	8.2	6.05	6.36	4.29	2.89	2.53	3.66	10.01	1.38	2.53	0.29			17.4			NTU
Turbidity	NS	Aug-13	1.84	0.37	1.25	6.32	2.56	0.81	0.53	0.74	1.95	0.98	0.93	0.55	0.01			1.59			NTU
Turbidity	NS	Nov-13	2.54	0.89	0.02	2.39	1.06	0.05	0.19	0.29	0.26	0.72	0.22	0.01	0.01	13.5	0.01	0.24	0.01	0.01	NTU

Note: ** - Secondary Drinking Water Standard (620-520 F.A.C.);
 NS - No Standard;
 Bold value indicates that the result is above the standard;
 Shaded cell indicated the parameter was not monitored or the well has not yet been installed.

Table 3
Summary of Detected General Chemistry
Tomoka Farms Road Landfill Benzene Quarterly Evaluation Monitoring

Parameter	Date	Standard	B41-1	B43-1	B45-1	B45-2	B76-1	B76-6	B77	B79-1	B79-6	B81-4	B82-1	B83	B85	B85-6	B85-F	B86	B87-6	B87-F	Unit
Ammonia (N)	Feb-13	2.8***	79.4	4	0.034	0.032 I	0.028 I	0.039 I	<0.02	47.5	43.2	0.087	0.077	0.26	14.4			0.046			mg/L
Ammonia (N)	May-13	2.8	77.8	1.8	0.021 I	<0.02	0.046 I	0.057	0.059	48.1	42.4 L	0.089	0.07	0.29	13			0.1			mg/L
Ammonia (N)	Aug-13	2.8	72	2	0.046 I	0.028 I	0.066	0.089	0.068	24.2	57.6	0.11	0.095	0.29	9.2			0.16			mg/L
Ammonia (N)	Nov-13	2.8	65.9	1.6	0.047 I	<0.02	0.11	0.11	0.12	41.1	54.4	0.13	0.11	0.34	9.4	7.1	0.3	0.2	0.11	0.33	mg/L
Chloride	Feb-13	250**	165	73.1	148	146	313	274	239	330	334	122	30.3	24.8	144			169			mg/L
Chloride	May-13	250	170	77.9 L	214	114	332	251	267 L	81.8	360	105	31.2	21.8	148			178			mg/L
Chloride	Aug-13	250	178	83.1 L	169	58.9	310	265	254	323	306	91.8	35.4	21.5	122			152			mg/L
Chloride	Nov-13	250	177	90	180	63	260	277	271	324	292	88.5	37.6	21.8	129	207	61.6	152	25.4	34.8	mg/L
Iron	Feb-13	300**	24800	25100	48300	11000	57400	27100	36300	26000	39900	13200	10800	225	13100			25400			µg/L
Iron	May-13	300	22200	20700	47700	2670	60600	34000	36100	22600	38000 J	13400	9160	83.2	7980			21300			µg/L
Iron	Aug-13	300	25000	23400	46600	651	53100 J	32700	35100	24500	38300	10600	10400	101	6570			13000			µg/L
Iron	Nov-13	300	23600	23000	44200	273	39700	33800	32700	25800	37300	9940	10500	37.8 I	6860	13300	1360	13900	3240	1240	µg/L
Nitrate (N)	Feb-13	10*	<0.25	<0.25	<0.25	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			<0.25			mg/L
Nitrate (N)	May-13	10	<0.25	<0.25	<0.25	39.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			<0.25			mg/L
Nitrate (N)	Aug-13	10	<0.25	<0.25	<0.25	37.9	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25			<0.25			mg/L
Nitrate (N)	Nov-13	10	<0.25	<0.25	<0.25	166	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	mg/L
Sodium	Feb-13	160*	162	80.7	195	43.5	192	132	136	288	311	88.4	22.1	19.4	110			199			mg/L
Sodium	May-13	160	163	83.4	202	53.6	188	119	134	301	284 J	87.7	15.3	19.7	116			207			mg/L
Sodium	Aug-13	160	162	82.5	216	35.4	159 J	109	156	284	282	70.2	13.1	23.6	100			299			mg/L
Sodium	Nov-13	160	160	79.3	217	59.3	91	121	128	286	279	69.9	12.8	16.3	108	163	36	269 J	22.8	27.5	mg/L
Sulfate	May-13	250**	7	32.8	<12.5	26.4	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	24.6	<12.5	<12.5			<12.5			mg/L
Sulfate	Aug-13	250	48	25.1	<5	29.6	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	25.7	<12.5	<12.5			<12.5			mg/L
Sulfate	Nov-13	250	39.8	31.9	<12.5	24.6	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	30	<12.5	<12.5	<12.5	6.7	<12.5	<12.5	<12.5	mg/L
Sulfide	Feb-13	NS	2.6	1.1	3.4	<1	1.2	1.5	1.8	2.5	3.1	<1	1.5	<1	<1			1.8			mg/L
Sulfide	Nov-13	NS														1.4	1.3	<1	<1	<1	mg/L
TDS	Feb-13	500**	1200	429	1010	403	1220	1190	1230	1630	1610	591	253	372	1070			1400			mg/L
TDS	May-13	500	1210	415	1070	724	1170	1190	1260	1730	1640	556	250	369	1060			1490			mg/L
TDS	Aug-13	500	1230	419	958	534	1040	1180	1050	1670	1660	443	252	370	980			1280			mg/L
TDS	Nov-13	500	1220	431	948	1320	810	1120	1210	1650	1640	403	264	370	1000	1190	482	1170	334	384	mg/L

Note:

- * - Primary Drinking Water Standard (62-520 F.A.C.);
- ** - Secondary Drinking Water Standard (620-520 F.A.C.);
- *** - Groundwater Cleanup Target Level (62-777 F.A.C.);
- NS - No Standard;
- Bold value indicates that the result is above the standard;
- I - Analyte detected below the quantitation limit;
- J - Estimated value;
- < -The parameter was detected below the detection limit (value);
- Shaded cell indicated the parameter was not monitored or the well has not yet been installed.

Table 4
Summary of Detected Metals
Tomoka Farms Road Landfill Benzene Quarterly Evaluation Monitoring

Metal	Monitoring Period	Standard	Well ID																		Unit
			B41-1	B43-1	B45-1	B45-2	B76-1	B76-6	B77	B79-1	B79-6	B81-4	B82-1	B83	B85	B85-6	B85-F	B86	B87-6	B87-F	
			4	4	4	1-2	4	6	6	4	6	4	4	FL	4	6	FL	6	6	FL	
Barium	Feb-13	2000*	285	168	157	95.5	224	136	107	138	126	86.5	39.9	20.5	55.3			173			µg/L
Barium	May-13	2000*	308	138	135	97.8	220	121	108	139	123	86.1	35	19.4	56.1			178			µg/L
Barium	Aug-13	2000*	312	142	145	52.7	188	103	132	143	124	69.8	36.6	21.6	61.1			121			µg/L
Barium	Nov-13	2000*	309	146	149	101	135	114	106	140	129	71	38	19.5	58	78.9	21.4	127	23.9	17.8	µg/L
Beryllium	Aug-13	4*	0.63 I	<0.5	<0.5	<0.5	0.66 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						µg/L
Beryllium	Nov-13	4*	0.71 I	<0.5	0.51 I	<0.5	0.59 I	<0.5	<0.5	<0.5	0.56 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L
Chromium	Feb-13	100*	5.6	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	3.3						µg/L
Chromium	May-13	100*	6.4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			3.6 I			µg/L
Chromium	Aug-13	100*	5.3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	2.9 I			<2.5			µg/L
Chromium	Nov-13	100*	5.8	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	8.5	<2.5	<2.5	<2.5	<2.5	µg/L
Cobalt	Feb-13	140***	<5	<5	<5	5	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5			µg/L
Copper	Feb-13	1000**	<2.5	<2.5	<2.5	<2.5	<2.5	4.4	<2.5	<2.5	5.1	<2.5	<2.5	<2.5	<2.5			3.6			µg/L
Copper	Nov-13	1000**	<2.5	<2.5	<2.5	<2.5	<2.5	2.7 I	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	2.7 I	<2.5	<2.5	<2.5	<2.5	µg/L
Lead	Aug-13	15*	<5	<5	<5	<5	<5	<5	<5	7.7 I	<5	<5	6.6 I	<5	<5			<5			µg/L
Nickel	Feb-13	100*	<2.5	<2.5	<2.5	6	<2.5	3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5			µg/L
Silver	Aug-13	100**	<2.5	<2.5	<2.5	<2.5	<2.5	2.6 I	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5			<2.5			µg/L
Vanadium	Feb-13	49***	10.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5			µg/L
Vanadium	May-13	49***	9.9 I	<5	5.8 I	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5			<5			µg/L
Vanadium	Aug-13	49***	10.1	<5	<5	<5	<5	<5	7.2 I	<5	<5	<5	<5	<5	<5			<5			µg/L
Vanadium	Nov-13	49***	10.6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	11.3	<5	<5	<5	<5	µg/L
Zinc	Feb-13	5000**	10	10	10	10	35.3	10	10	10	10	10	10	10	10			10			µg/L

Note:

- * - Primary Drinking Water Standard (62-520 F.A.C.);
- ** - Secondary Drinking Water Standard (620-520 F.A.C.);
- *** - Groundwater Cleanup Target Level (62-777 F.A.C.);
- NS - No Standard;
- Bold value indicates that the result is above the standard;
- I - Analyte detected below the quantitation limit;
- J - Estimated value;
- < -The parameter was detected below the detection limit (value).

Table 5
Summary of Detected Organic Compounds
Tomoka Farms Road Landfill Benzene Quarterly Evaluation Monitoring

Parameter	Date	Standard	B41-1	B43-1	B45-1	B45-2	B76-1	B76-6	B77	B79-1	B79-6	B81-4	B83	B85	B85-6	B85-F	B86	B87-F	Unit
1,2,4-Trichlorobenzene	Feb-13		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	1.4	<0.5			<0.5		µg/L
1,4-Dichlorobenzene	Feb-13		<0.5	<0.5	<0.5	<0.5	0.26	<0.5	<0.5	<0.5	0.29	<0.5	<0.5	<0.5			<0.5		µg/L
1,4-Dichlorobenzene	May-13		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5 I	<0.5	<0.5	<0.5	0.75 I			<0.5		µg/L
1,4-Dichlorobenzene	Aug-13		<0.5	<0.5	<0.5	<0.5	0.68 I	<0.5	<0.5	<0.5	0.6 I	<0.5	<0.5	0.66 I			<0.5		µg/L
1,4-Dichlorobenzene	Nov-13		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.63 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L
2,4-Dimethylphenol	Feb-13		<1.5	<1.5	0.27 I	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5					µg/L
2-Methylnaphthalene	Feb-13		<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.14				µg/L
4-Aminobiphenyl	Nov-13	NS													1.2 I	<0.35		<0.35	µg/L
Acetone	Feb-13	6300***	<5	<5	<5	<5	<5	<5	<5	<5	5	<5	<5	<5			<5		µg/L
Acetone	May-13	6300***	<5	<5	<5	<5	<5	5 I	<5	6.3 I	9.3 I	<5	<5	<5			<5		µg/L
Benzene	Feb-13	1*	1.1	0.85	11.6	0.27	16	11.2	5.8	9	8.6	1.6	<0.1	<0.1			10.9		µg/L
Benzene	May-13	1*	0.13 I	0.37 I	10.7	0.17 I	10.5	11.4	5.7	9.4	8	1.9	<0.1	0.26 I			12.9		µg/L
Benzene	Aug-13	1*	0.99 I	<0.1	8.9	<0.1	15	10.8	5.9	7.4	6.1	0.91 I	<0.1	<0.1			6		µg/L
Benzene	Nov-13	1*	0.47 I	<0.1	10.4	<0.1	11.1	1.2 I	5.8	8.5	7.1	1	<0.1	0.25 I	2.5	<0.1	10.5	<0.1	µg/L
bis(2-Ethylhexyl)phthalate	Nov-13	6*													2.2 I	<0.7		<0.7	µg/L
Butyl benzyl phthalate	Nov-13	140***													<0.7	<0.7		1.4 I	µg/L
Chlorobenzene	Feb-13	100*	4.1	4.3	5.5	<0.5	4	2.5	1.8	7.3	6	1.2	<0.5	2.3			8		µg/L
Chlorobenzene	May-13	100*	2.1	2	5.4	<0.5	2.6	2.7	1.8	8.3	6	1.3	<0.5	2.8			9.6		µg/L
Chlorobenzene	Aug-13	100*	2.6	1.7	5.2	<0.5	4.2	2.3	2.3	7.6	6.8	0.95 I	<0.5	3			9.4		µg/L
Chlorobenzene	Nov-13	100*	4.1	1.4	5.7	<0.5	2.1	<0.5	1.8	7.7	6.9	0.59 I	<0.5	2.9	2.3	<0.5	8.9	<0.5	µg/L
cis-1,2-Dichloroethene	Nov-13	70*	<0.5	<0.5	<0.5	<0.5	0.86 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L
Total Cyanide	Feb-13	NS	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0028	<0.002	<0.002	<0.002	<0.002			<0.002		µg/L
Diethyl phthalate	Feb-13	14,000	<0.49	<0.49	0.56	<0.49	0.68	0.38	0.93	0.21	<0.49	<0.49	<0.49	<0.49			0.19		µg/L
Di-n-Butyl phthalate	Feb-13	NS	<0.17	0.22	0.2	0.21	<0.17	<0.17	0.25	0.31	0.33	0.19	<0.17	<0.17			<0.17		µg/L
Di-n-Butyl phthalate	Nov-13	NS													1.3 I	1.2 I		<0.37	µg/L
Di-n-octylphthalate	Feb-13	NS	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	0.18	<0.17	<0.17	<0.17	<0.17	<0.17			<0.17		µg/L
Endosulfan II	Nov-13	42***													<0.00066	0.0014 I		<0.00066	µg/L
Endrin	Nov-13	2*													0.0037 I	<0.0016		<0.0016	µg/L
Ethylbenzene	Feb-13	700*	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5		µg/L
Ethylbenzene	May-13	700*	<0.5	<0.5	0.75 I	<0.5	1.1	0.84 I	0.91 I	<0.5	0.66 I	<0.5	<0.5	0.61 I			<0.5		µg/L
Ethylbenzene	Aug-13	700*	<0.5	<0.5	<0.5	<0.5	0.52 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5		µg/L
Hexachloro-1,3-butadiene	Feb-13	0.4***	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	2	<0.4	2	<0.4			<0.4		µg/L
Naphthalene	Feb-13	14***	<0.14	<0.14	0.99	<0.14	2.3	0.99	2	0.89	0.37	0.53	<0.14	<0.14			1.1		µg/L
O-Toluidine	Feb-13	NS	<0.24	<0.24	0.33	<0.24	0.59	<0.24	<0.24	0.4	<0.24	<0.24	<0.24	<0.24					µg/L
Phenacetin	Nov-13	NS													<0.15	<0.15		1.5 I	µg/L
Toluene	Feb-13	40**	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5		µg/L
Toluene	May-13	40**	<0.5	<0.5	0.61 I	<0.5	<0.5	<0.5	0.77 I	0.56 I	<0.5	<0.5	<0.5	<0.5			<0.5		µg/L
Toluene	Aug-13	40**	<0.5	<0.5	<0.5	<0.5	0.53 I	<0.5	0.79 I	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5		µg/L
Toluene	Nov-13	40**	<0.5	<0.5	<0.5	<0.5	0.52 I	<0.5	0.82 I	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	µg/L
Xylenes- Total	Feb-13	20**	3.7	<0.5	2.6	<0.5	3.5	1.5	3.5	5.2	3.2	<0.5	<0.5	<0.5			1		µg/L
Xylenes- Total	May-13	20**	<0.5	<0.5	4	<0.5	3.6	2.8	4.3	3.7	3.7	<0.5	<0.5	<0.5			1.3		µg/L
Xylenes- Total	Aug-13	20**	<0.5	<0.5	1.8	<0.5	1.9	1.1	3.3	2	1.7	<0.5	<0.5	<0.5			<0.5		µg/L
Xylenes- Total	Nov-13	20**	<0.5	<0.5	2.3	<0.5	2.1	<0.5	3.1	2.9	2.6	<0.5	<0.5	<0.5	0.7 I	<0.5	0.96 I	<0.5	µg/L

Note:

* - Primary Drinking Water Standard (62-520 F.A.C.);

** - Secondary Drinking Water Standard (620-520 F.A.C.);

*** - Groundwater Cleanup Target Level (62-777 F.A.C.);

NS - No Standard;

Bold value indicates that the result is above the standard;

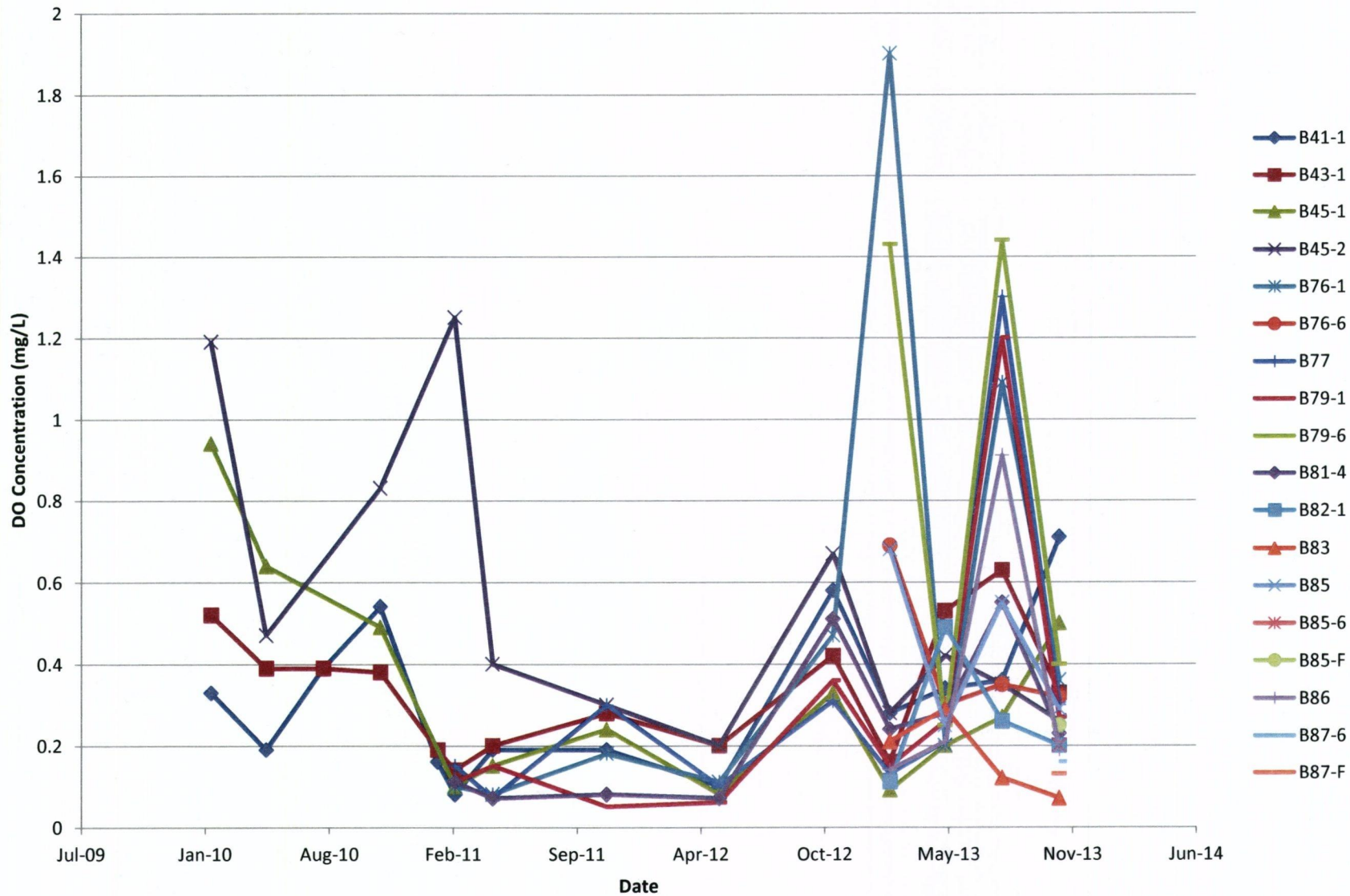
I - Analyte detected below the quantitation limit;

< - The parameter was detected below the detection limit (value);

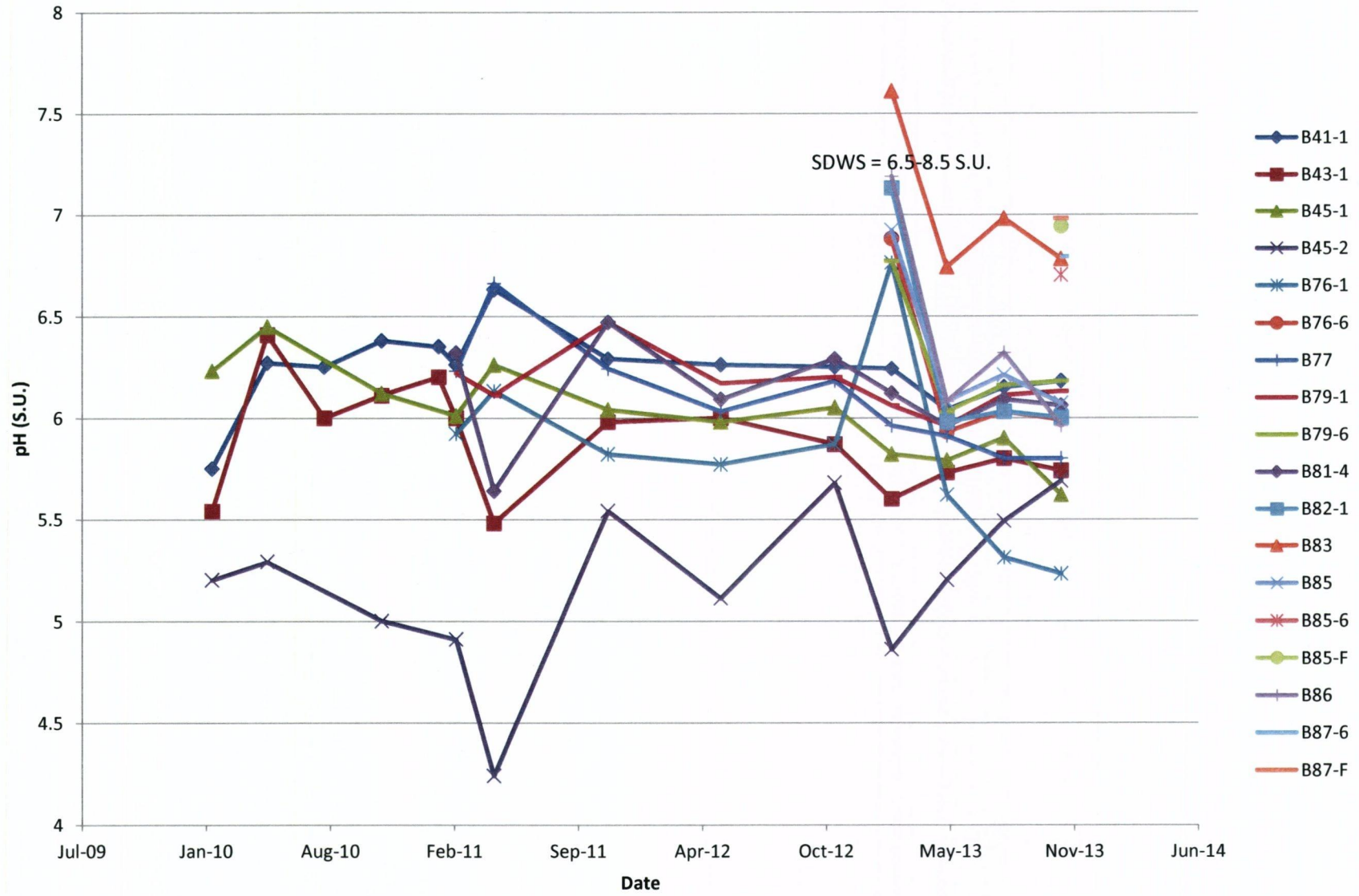
Shaded cell indicated the parameter was not monitored or the well has not yet been installed.

Figures (Time Series Plots)

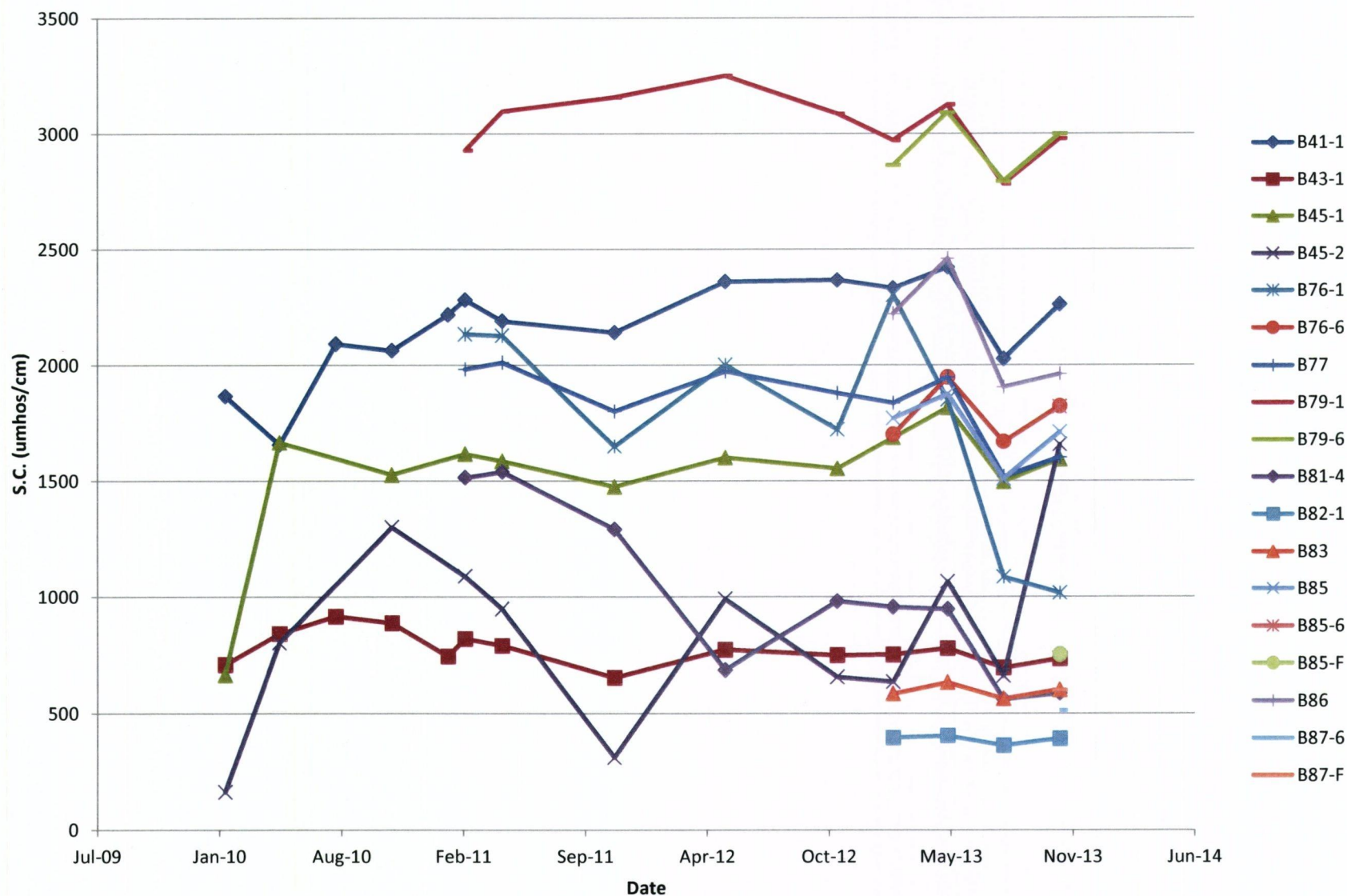
**Figure 1 - Time Series Plots of Groundwater Dissolved Oxygen Concentrations
Tomoka Farms Road Landfill**



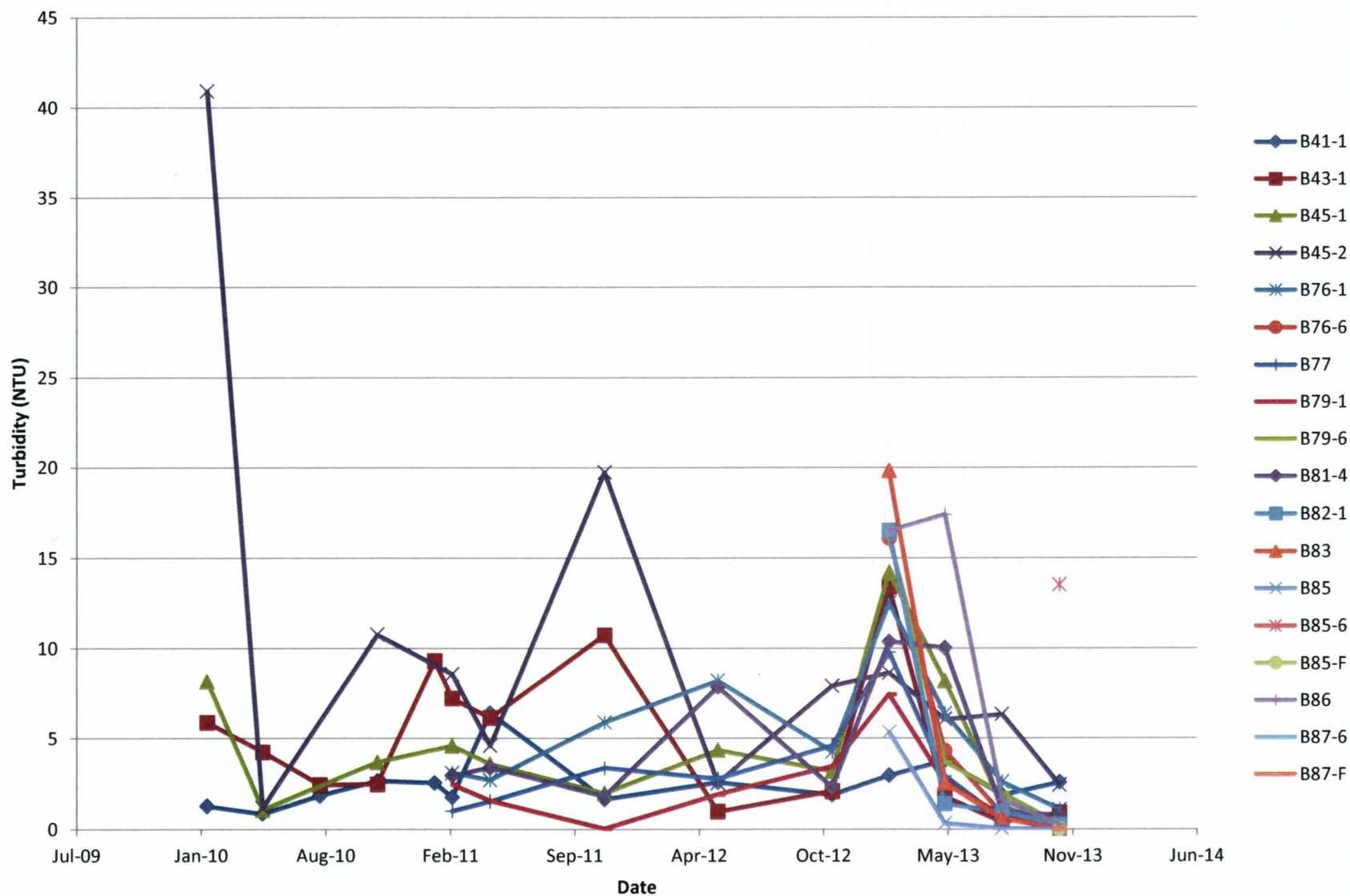
**Figure 2 - Time Series Plots of Groundwater pH
Tomoka Farms Road Landfill**



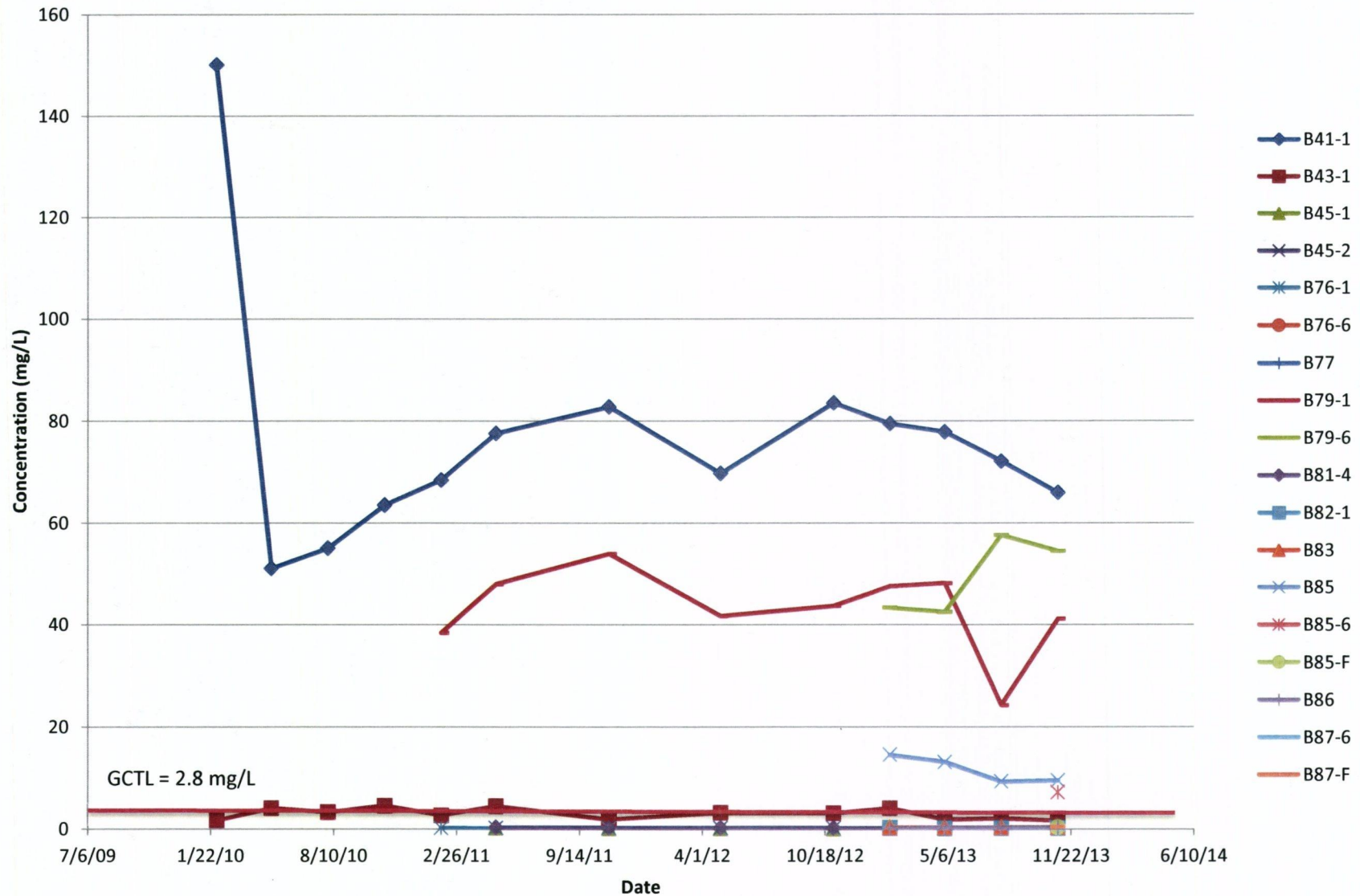
**Figure 3 - Time Series Plots of Groundwater Specific Conductivity
Tomoka Farms Road Landfill**



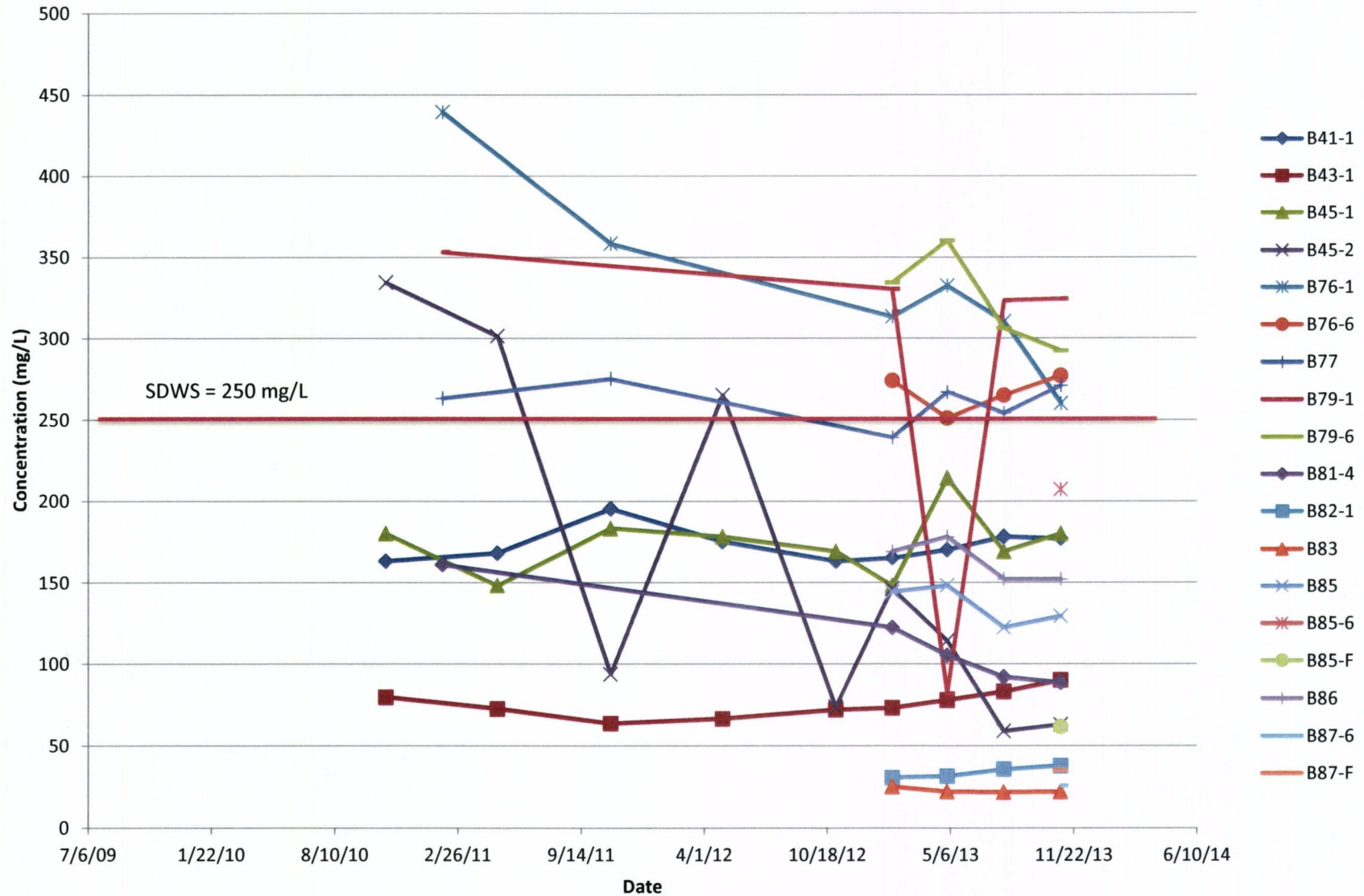
**Figure 4 - Time Series Plots of Groundwater Turbidity
Tomoka Farms Road Landfill**



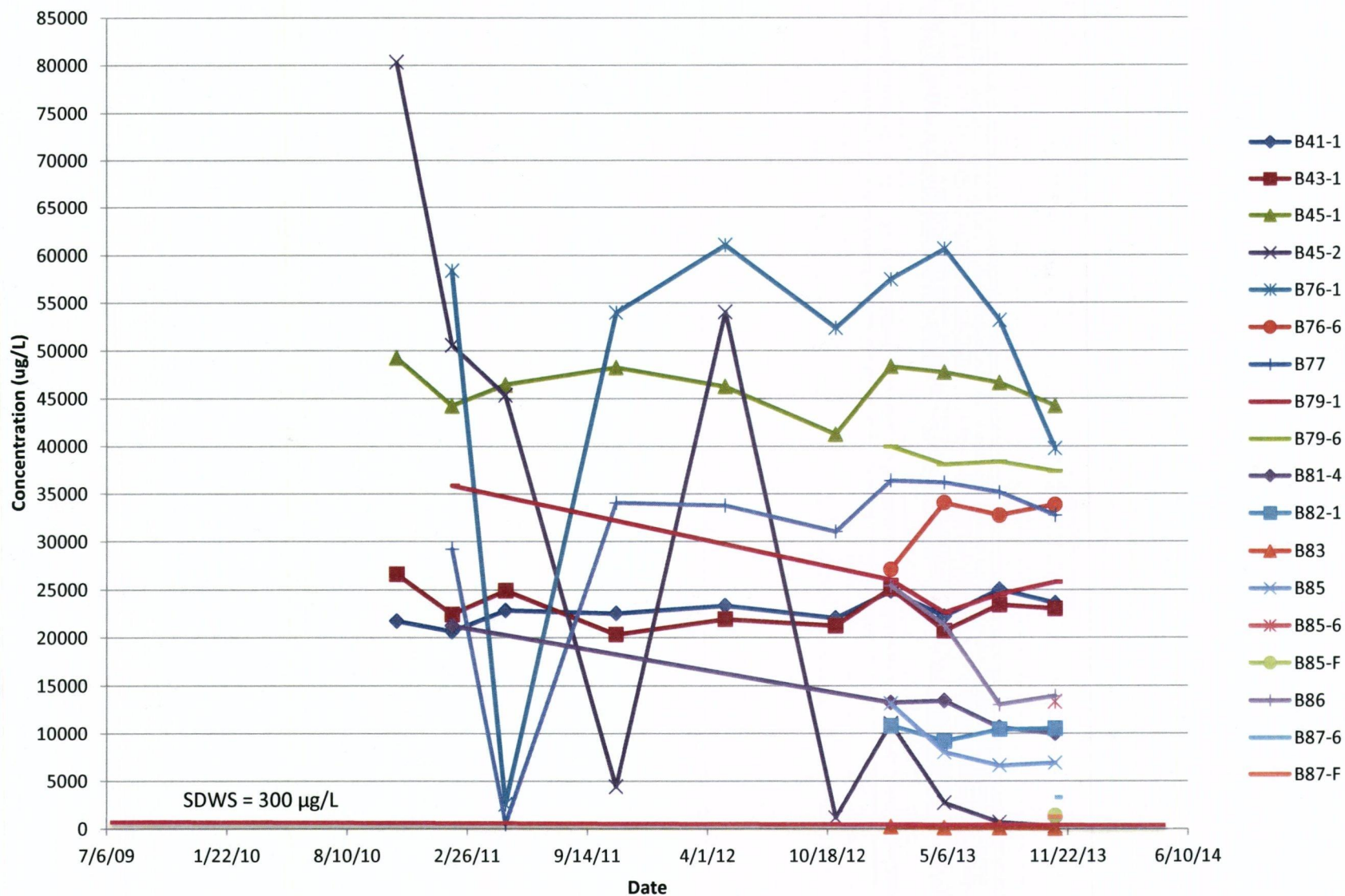
**Figure 5 - Time Series Plots of Groundwater Ammonia-N Concentrations
Tomoka Farms Road Landfill**



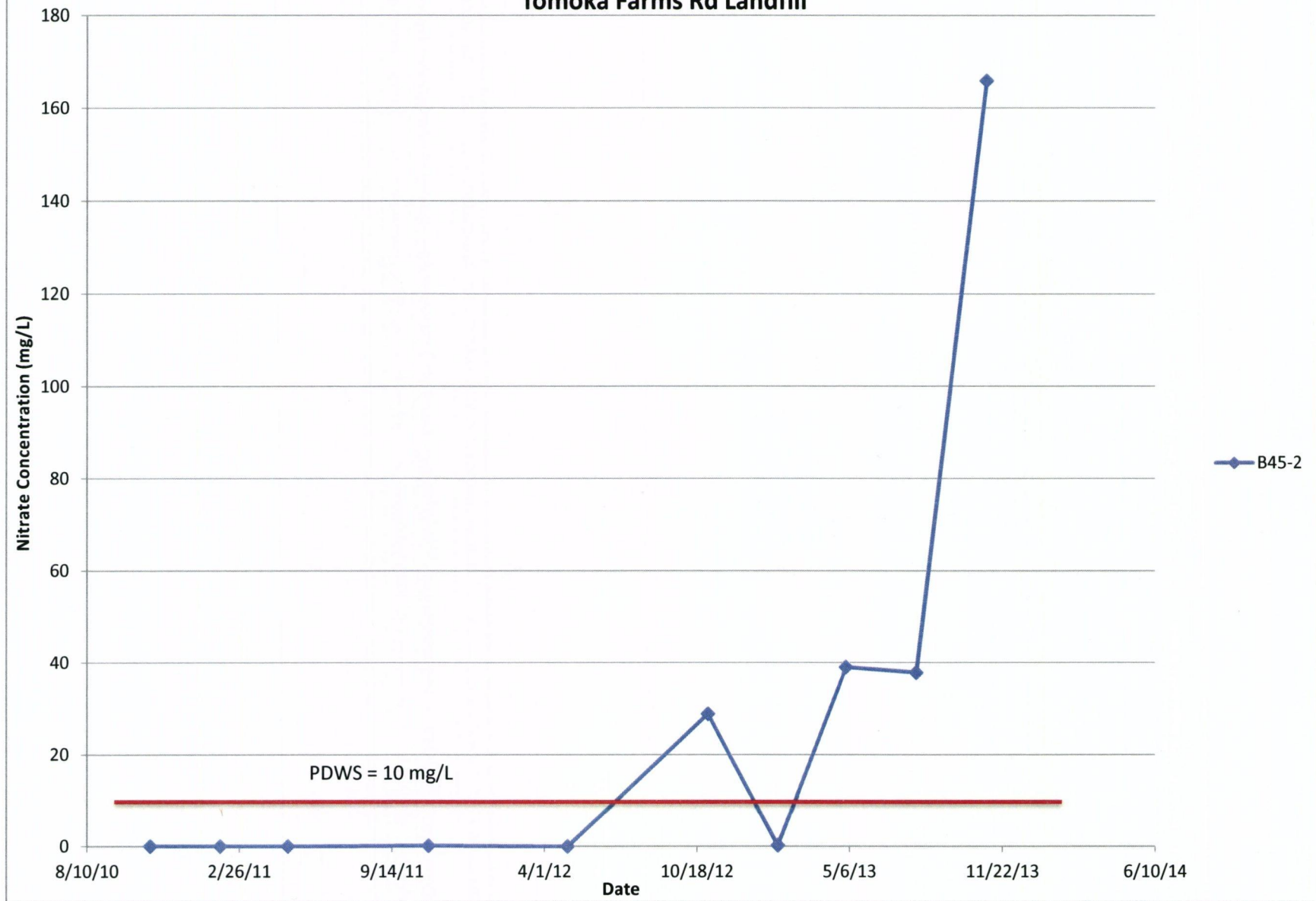
**Figure 6 - Time Series Plots of Groundwater Chloride Concentrations
Tomoka Farms Road Landfill**



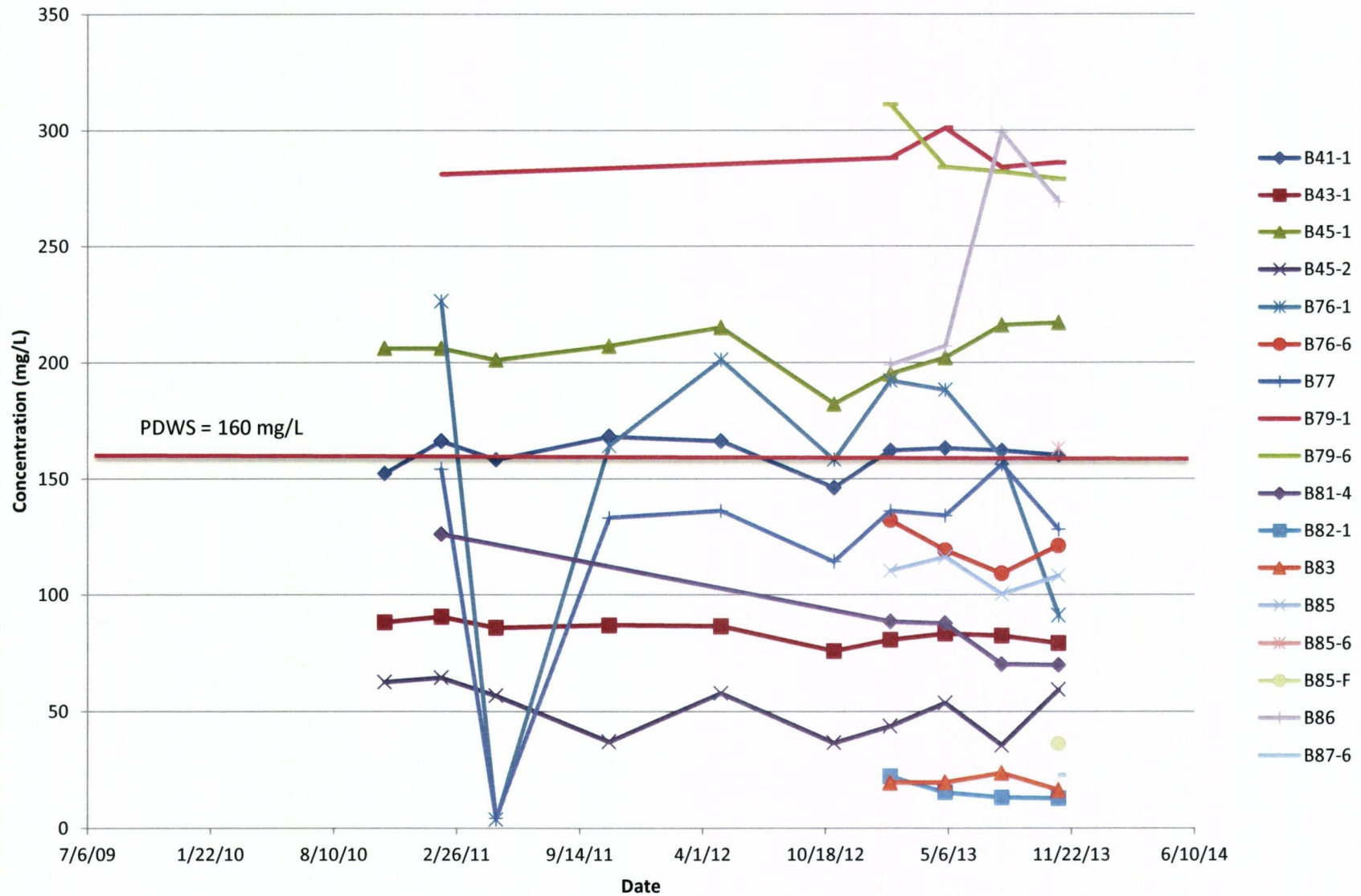
**Figure 7 - Time Series Plots of Groundwater Iron Concentrations
Tomoka Farms Road Landfill**



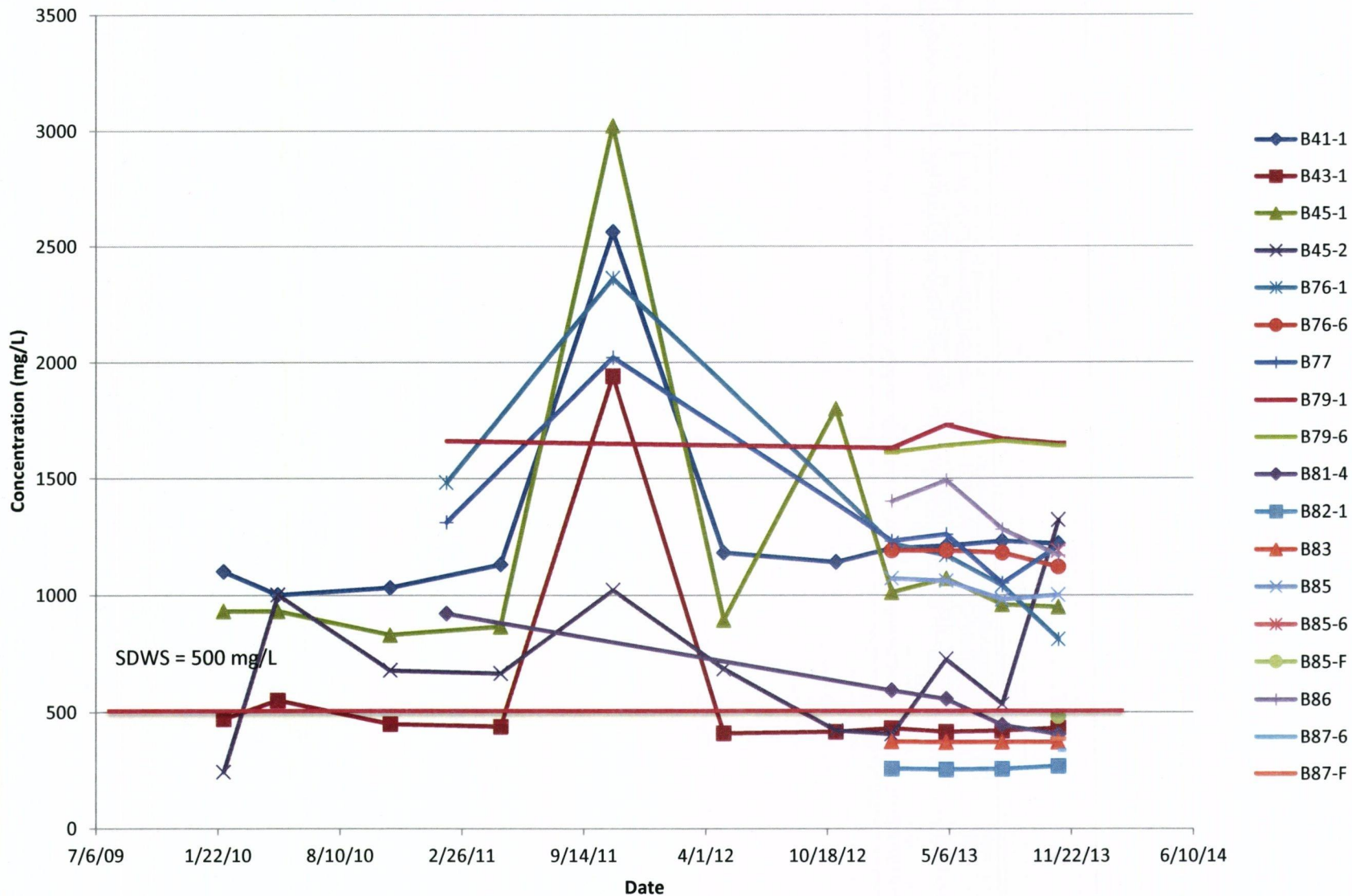
**Figure 8 - Time Series Plot of Groundwater Nitrate Concentrations at B45-2
Tomoka Farms Rd Landfill**



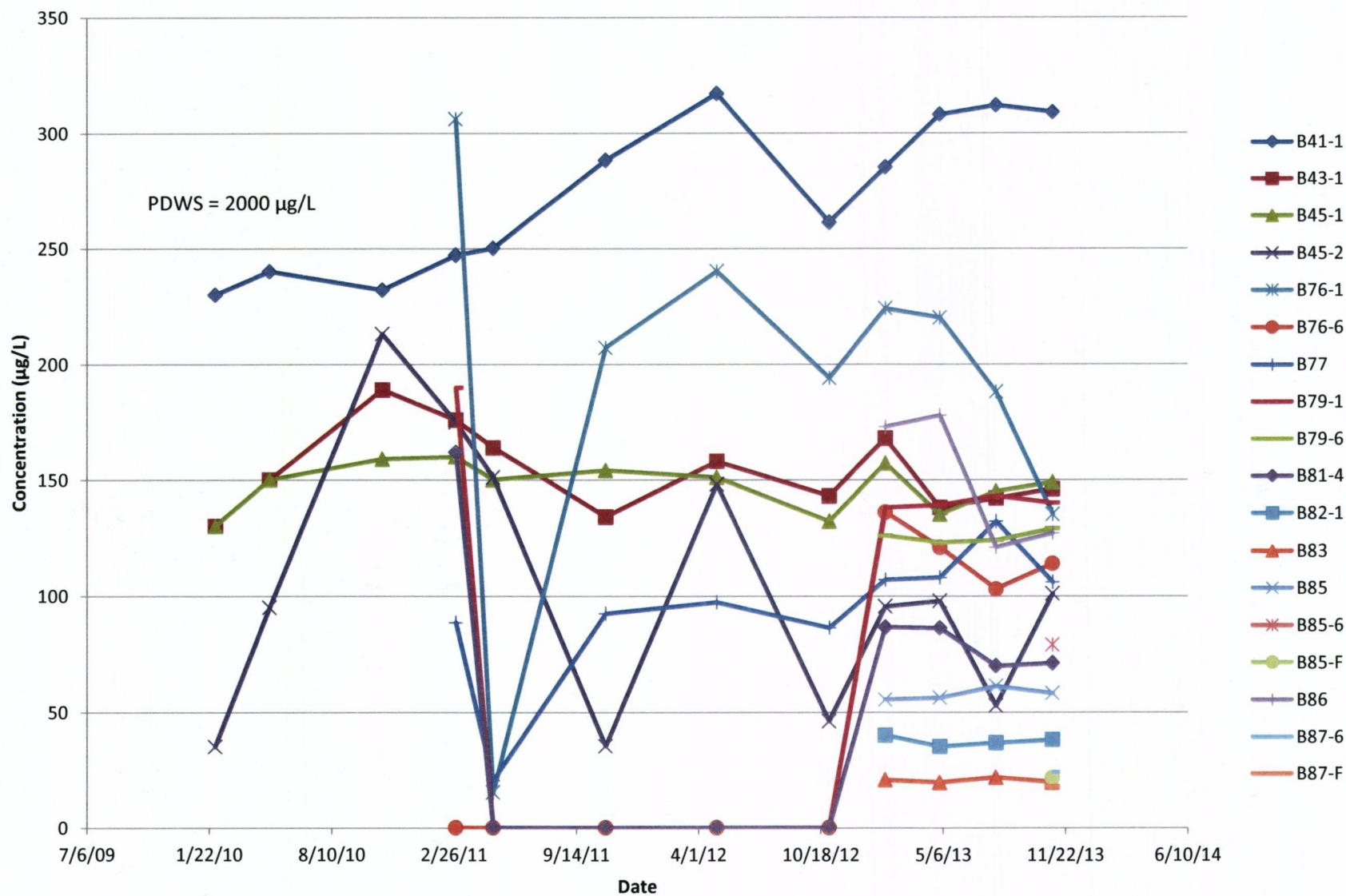
**Figure 9 - Time Series Plots of Groundwater Sodium Concentrations
Tomoka Farms Road Landfill**



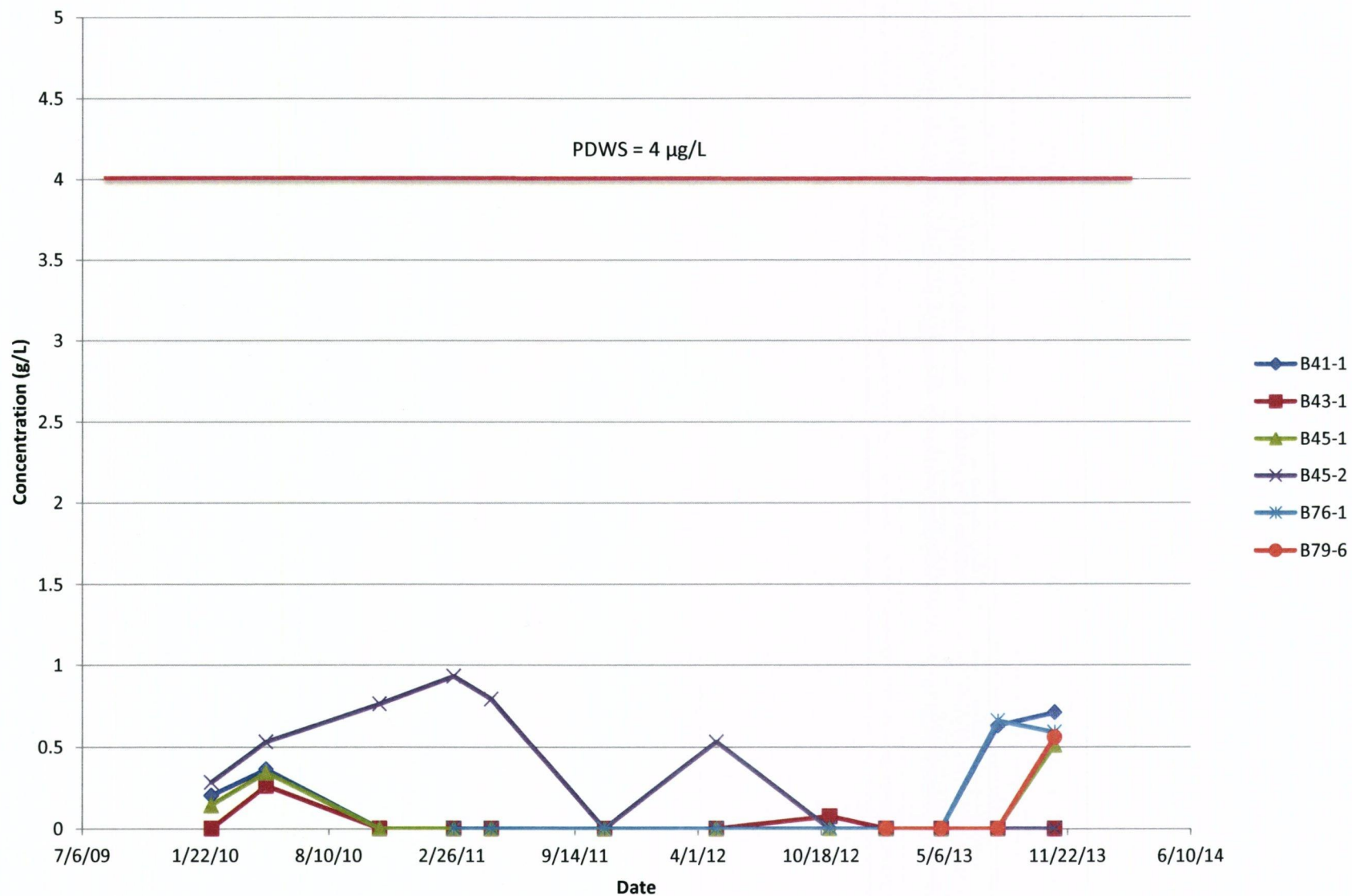
**Figure 10 - Time Series Plots of Groundwater TDS Concentrations
Tomoka Farms Road Landfill**



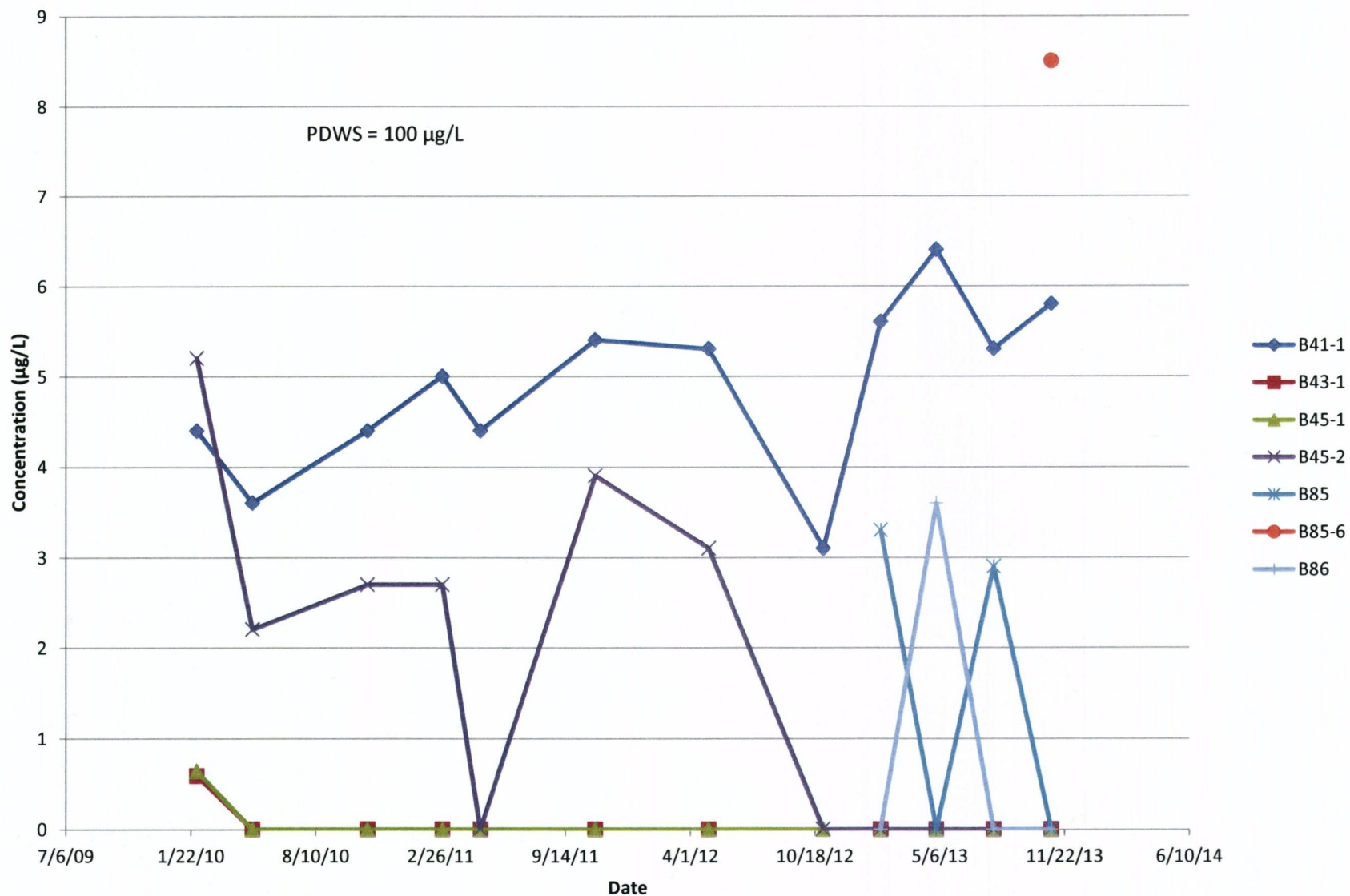
**Figure 11 - Time Series Plots of Detected Groundwater Barium Concentrations
Tomoka Farms Road Landfill**



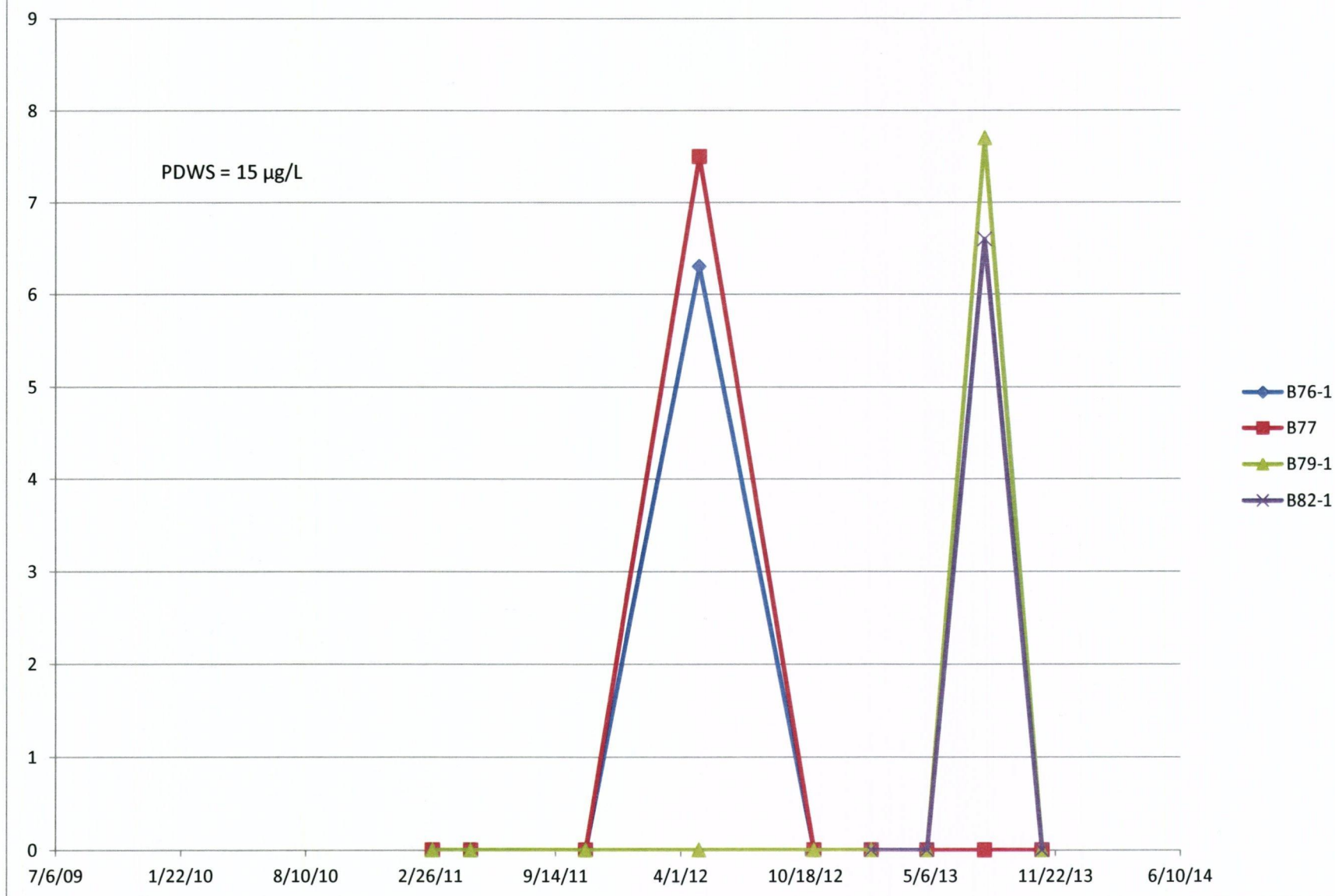
**Figure 12 - Time Series Plots of Detected Groundwater Beryllium Concentrations
Tomoka Farms Road Landfill**



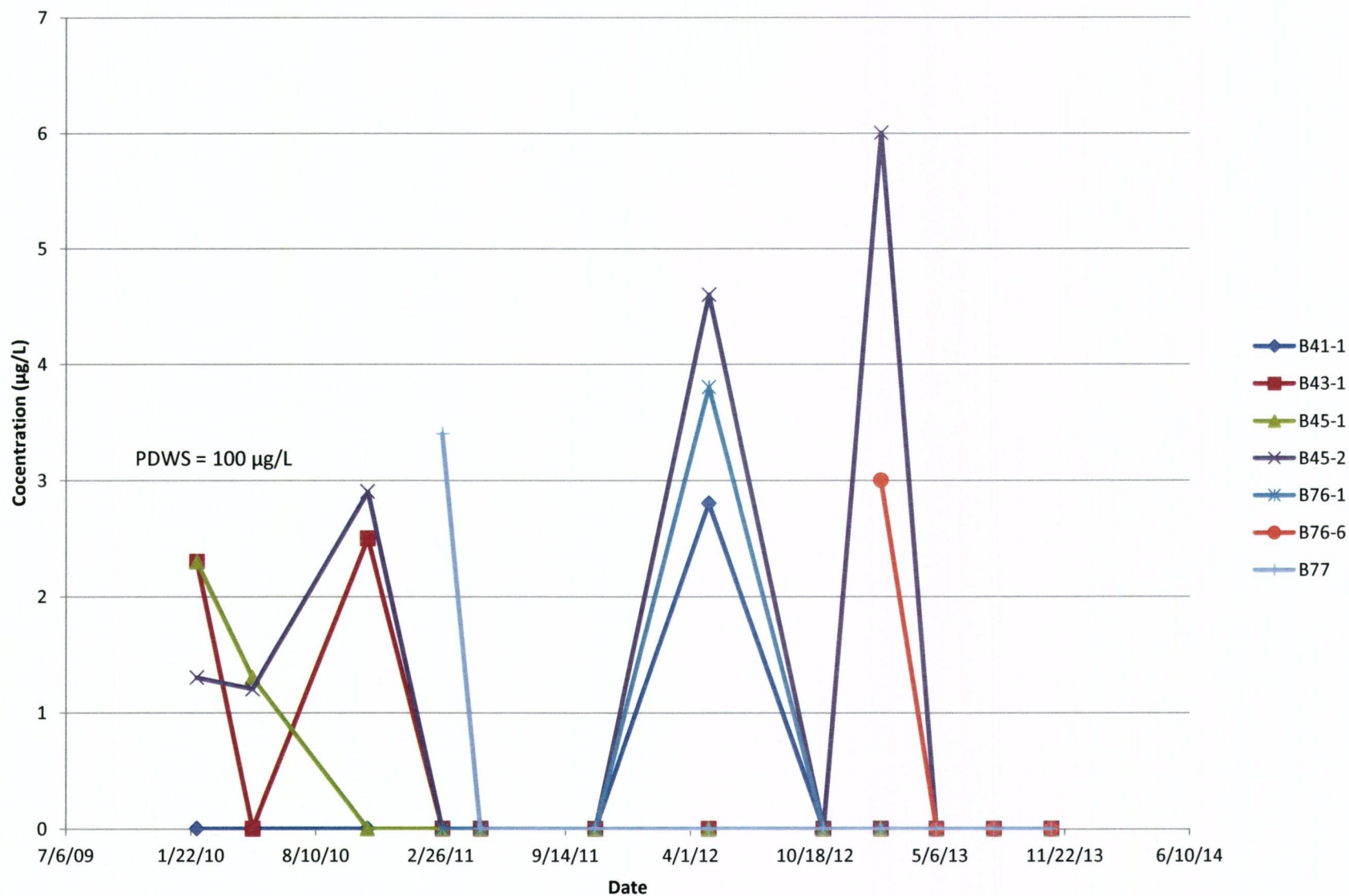
**Figure 13 - Time Series Plots of Detected Groundwater Chromium Concentrations
Tomoka Farms Road Landfill**



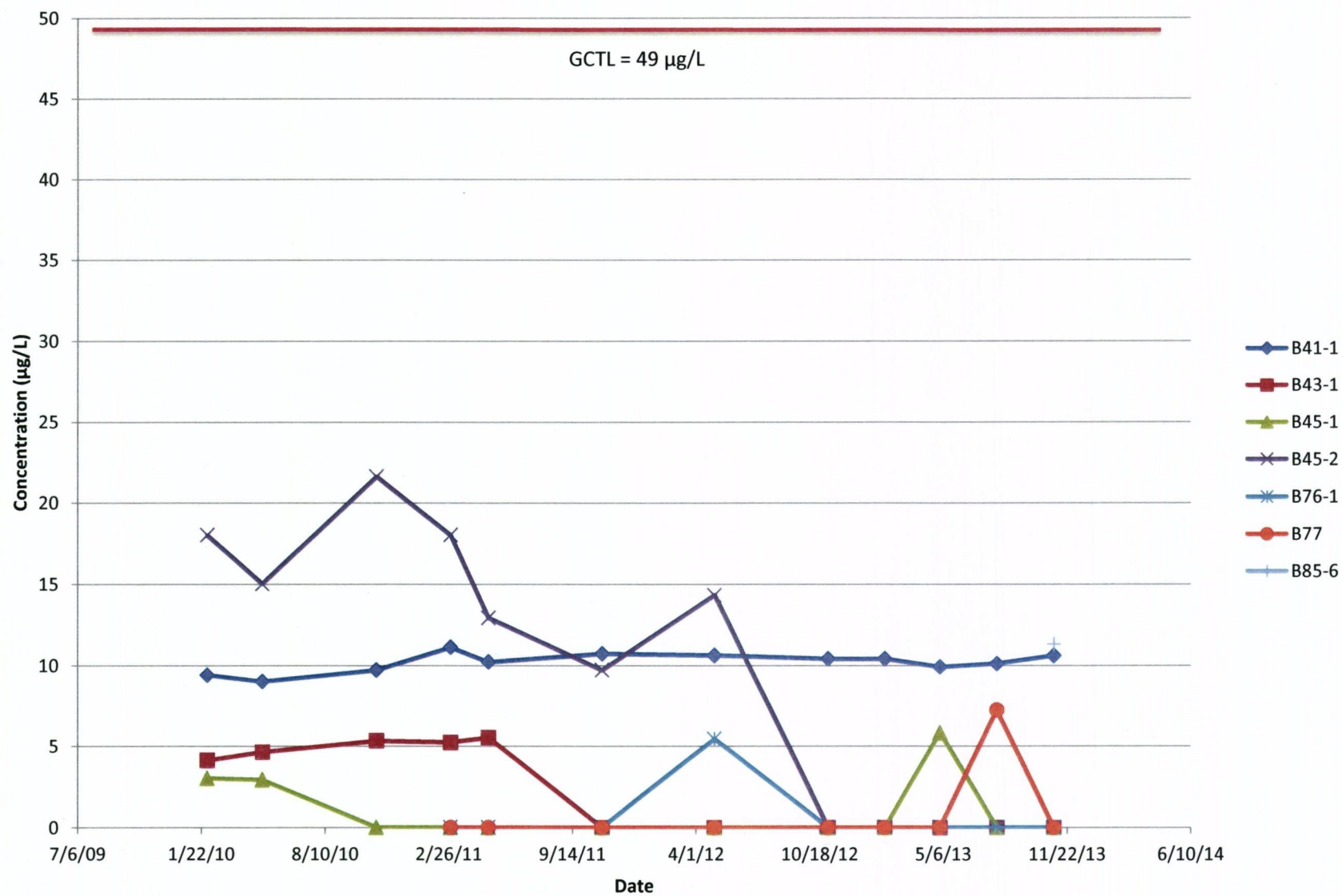
**Figure 14 - Time Series Plot of Groundwater Lead Concentrations
Tomoka Farms Road Landfill**



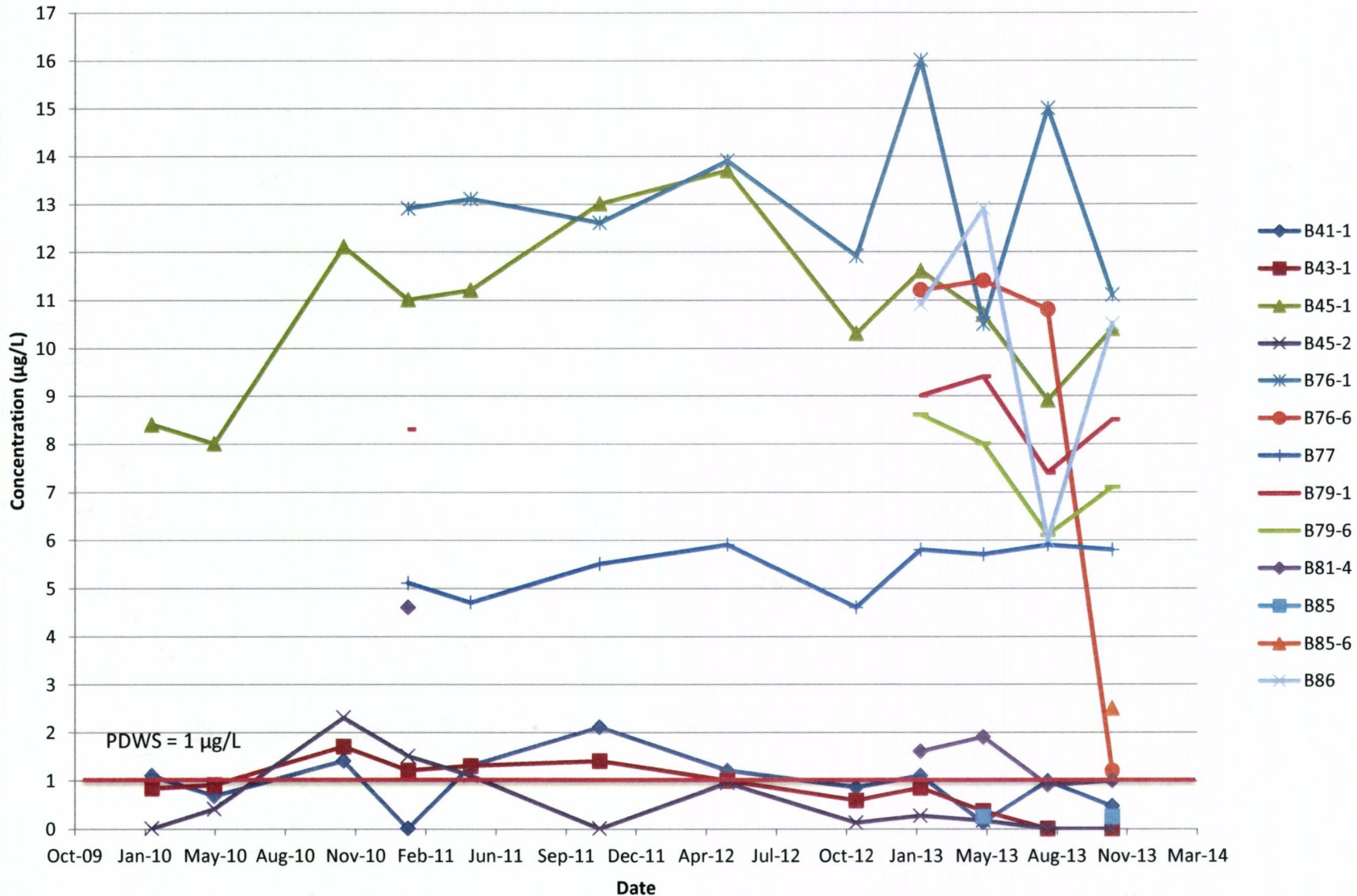
**Figure 15 - Time Series Plot of Detected Groundwater Nickel Concentrations
Tomoka Farms Road Landfill**



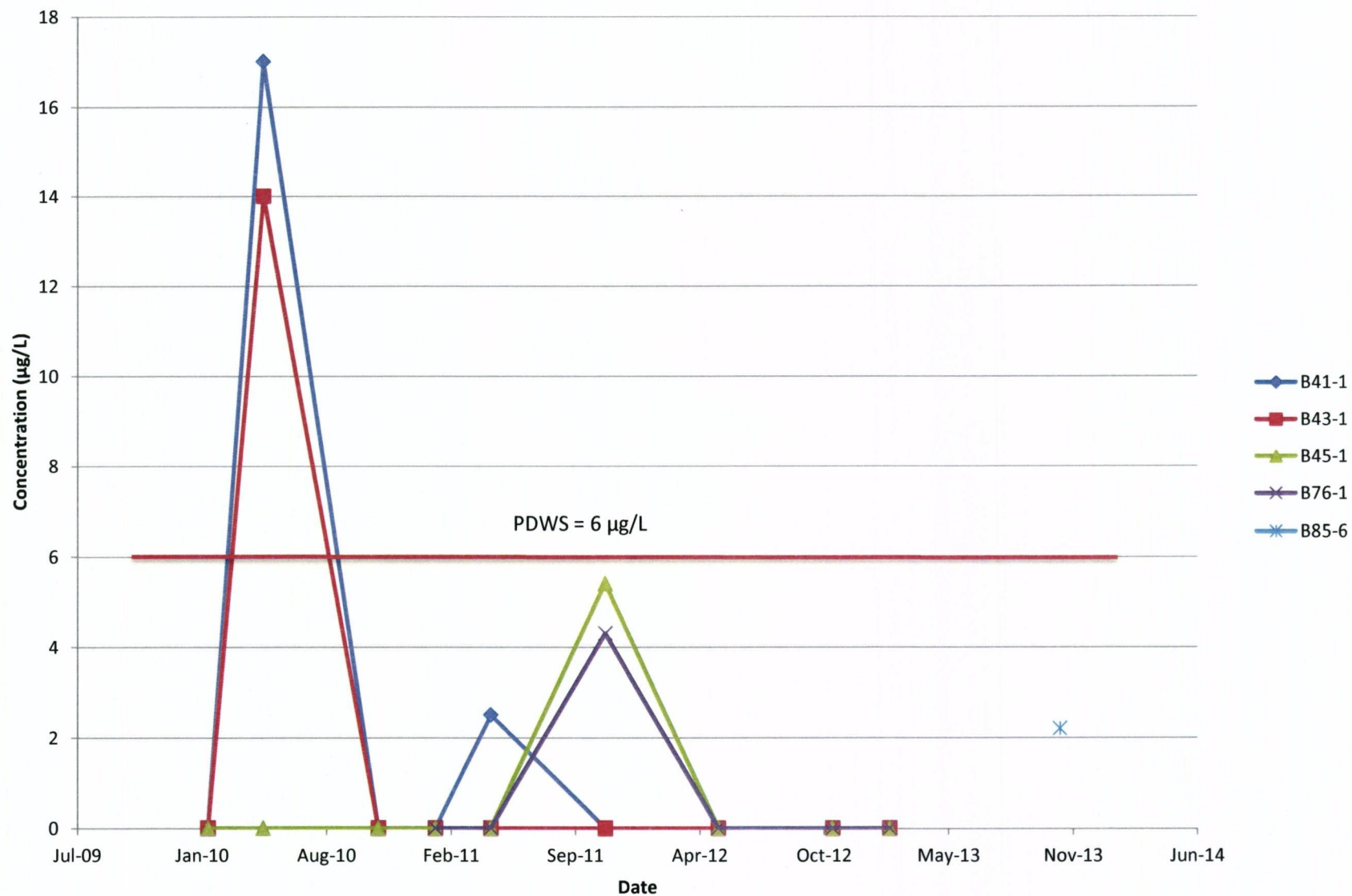
**Figure 16 - Time Series Plot of Detected Groundwater Vanadium Concentrations
Tomoka Farms Rd Landfill**



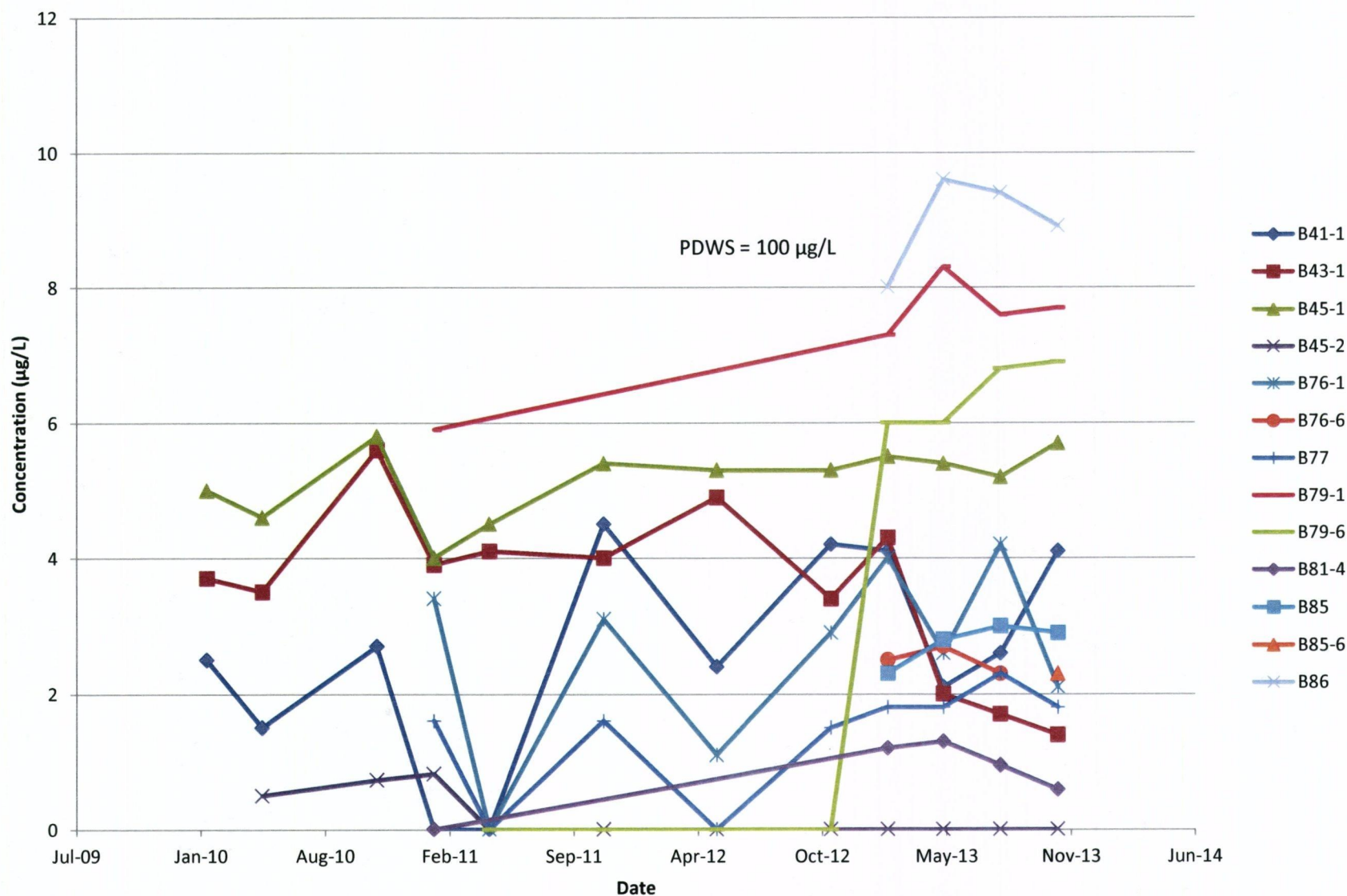
**Figure 17 - Time Series Plots of Detected Groundwater Benzene Concentrations
Tomoka Farms Road Landfill**



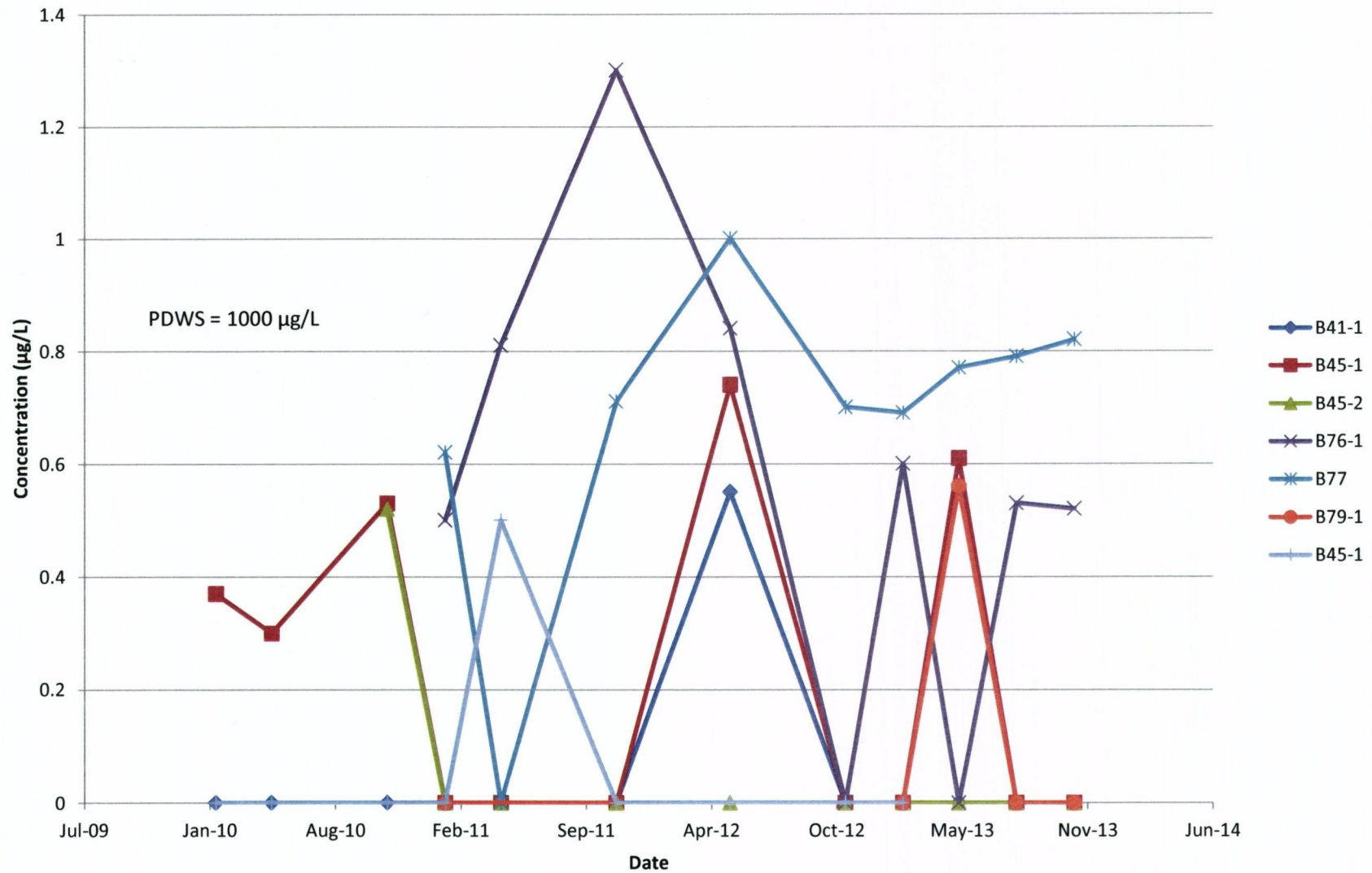
**Figure 18 - Time Series Plot of Groundwater Bis(2-ethylhexyl)phthalate Concentrations
Tomoka Farms Road Landfill**



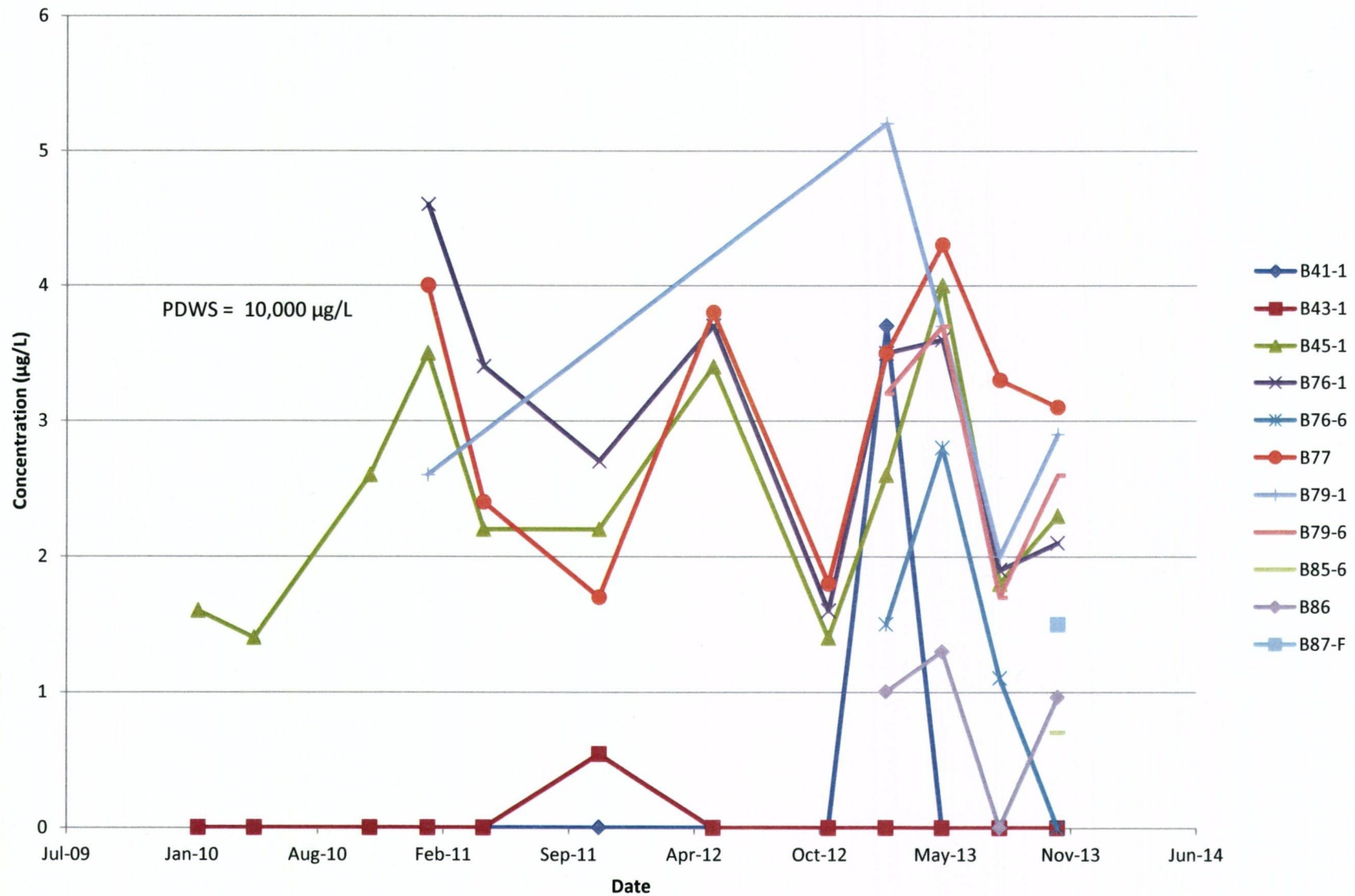
**Figure 19 - Time Series Plots of Detected Groundwater Chlorobenzene Concentrations
Tomoka Farms Road Landfill**



**Figure 20 - Time Series Plots of Detected Goundwater Toluene Concentrations
Tomoka Farms Road Landfill**

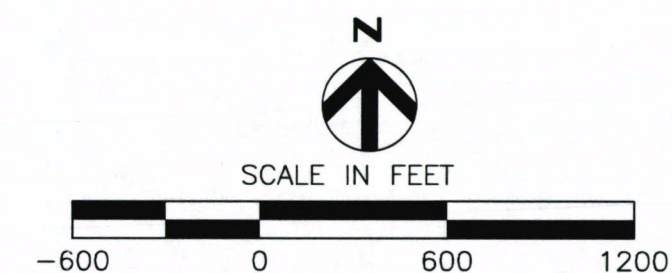


**Figure 21 - Time Series Plots of Detected Groundwater Total Xylenes Concentrations
Tomoka Farms Road Landfill**



Attachment 1

Maps of Groundwater Benzene Iso-contour Concentrations



LEGEND

B77 ● GROUNDWATER BENZENE CONCENTRATION (ug/L)
 5.8

10 — BENZENE ISO-CONCENTRATION CONTOUR IN ug/L

1.21 DETECTED BETWEEN DETECTION LIMIT AND REPORTING LIMIT

BDL BELOW DETECTION LIMIT

NOTES:

1. WELL SURVEY WAS CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.
2. GROUNDWATER WAS SAMPLED ON 5,6,&27, 2013.

HDR

PROJECT TITLE

TOMOKA FARMS ROAD LANDFILL

SHEET TITLE

ZONE 6 GROUNDWATER BENZENE ISO-CONCENTRATION CONTOUR MAP
 2013 4TH QUARTERLY MONITORING

PROJECT NUMBER

PROJECT MANAGER

C. LEBRON

DATE

02/2014

REFERENCE SHEET

REFERENCE DOCUMENT

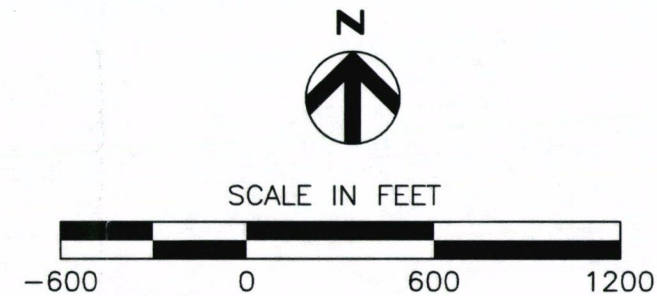
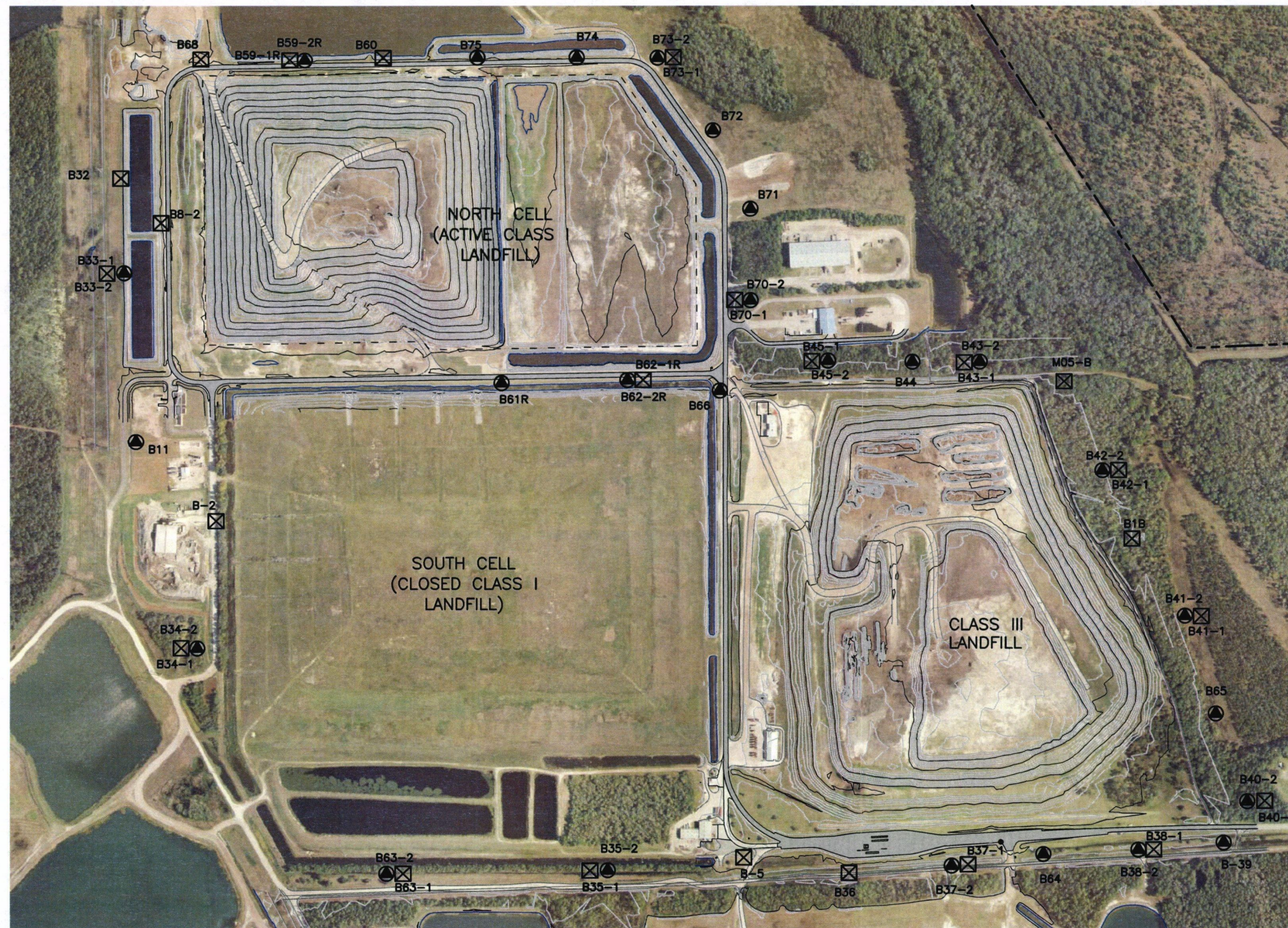
EXHIBIT NUMBER

FIGURE 2

Attachment 2

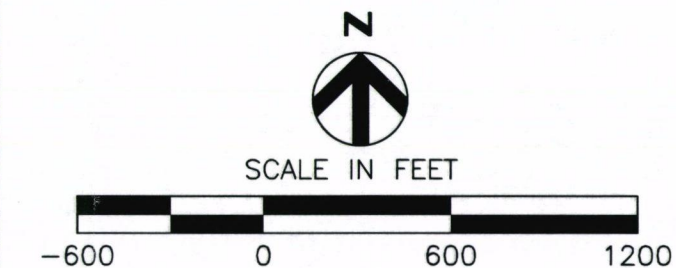
Groundwater Elevation Iso-contour Maps

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LEGEND		
B37-2	●	ZONE 1-2 MONITORING WELL
B37-1	⊗	ZONE 4 MONITORING WELL
---		FACILITY BOUNDARY
- - - -		WASTE UNIT BOUNDARY

	PROJECT TITLE	PROJECT NUMBER	REFERENCE SHEET
	TOMOKA FARMS ROAD LANDFILL	195292	
	SHEET TITLE	PROJECT MANAGER	REFERENCE DOCUMENT
	SITE MAP	C. LEBRON	
		DATE	EXHIBIT NUMBER
		01/2013	FIGURE 1



LEGEND		
B76-6	●	MONITORING WELL
17.98		GROUNDWATER ELEVATION (FT. NGVD)
→		GROUNDWATER FLOW DIRECTION
SW-1	⊕	SURFACE WATER SAMPLING LOCATION
16	—	GROUNDWATER CONTOUR

WELL	LATITUDE	LONGITUDE	TOP OF CASING ELEVATION (NGVD)
B88-1	29°08'14"	81°06'11"	33.53
B76-6	29°08'08"	81°05'31"	27.33
B77	29°08'07"	81°05'32"	31.13
B79-6	29°07'54"	81°05'10"	27.51
B86	29°07'40"	81°05'19"	29.46
B85-6	29°07'57"	81°05'05"	27.02
B87-6	29°08'15"	81°05'26"	29.37

NOTES:

1. WELL SURVEY CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.
2. GROUND WATER LEVELS WERE MEASURED ON NOV. 4, 2013.

HDR

PROJECT TITLE

TOMOKA FARMS ROAD LANDFILL

SHEET TITLE

ZONE 6 GROUNDWATER POTENTIOMETRIC MAP
1ST 2013 SEMIANNUAL SAMPLING EVENT

PROJECT NUMBER

195292

PROJECT MANAGER

C. LEBRON

DATE

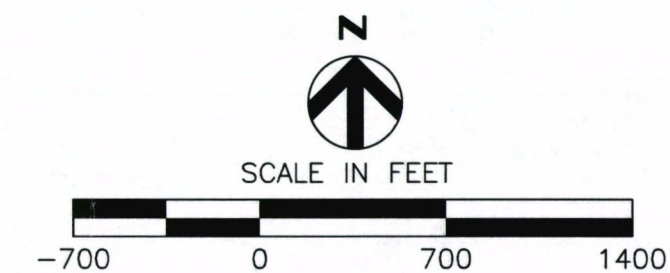
12/2013

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER

FIGURE 4



LEGEND	
FA-2C 14.20	MONITORING WELL GROUNDWATER ELEVATION (FT. NGVD)
	GROUNDWATER FLOW DIRECTION
SW-1	SURFACE WATER SAMPLING LOCATION
15	GROUNDWATER CONTOUR

WELL	LATITUDE	LONGITUDE	TOP OF CASING ELEVATION (NGVD)
FA-1B	29°07'51"	81°06'11"	32.22
FA-2C	29°08'31"	81°05'32"	28.10
FM-B	29°07'42"	81°05'36"	33.88
B85-F	29°07'57"	81°05'05"	27.47
B87-F	29°08'15"	81°05'26"	29.25
B83	29°08'07"	81°05'32"	30.57

NOTES:

1. WELL SURVEY CONDUCTED BY SLIGER & ASSOCIATES ON MAY 01, 2009.
2. GROUND WATER LEVELS WERE MEASURED ON NOV. 4, 2013.

HDR

PROJECT TITLE
TOMOKA FARMS ROAD LANDFILL

SHEET TITLE
FLORIDAN AQUIFER GROUNDWATER POTENTIOMETRIC MAP
2ND 2013 SEMIANNUAL SAMPLING EVENT

PROJECT NUMBER
195292

PROJECT MANAGER
C. LEBRON

DATE
01/2014

REFERENCE SHEET

REFERENCE DOCUMENT

EXHIBIT NUMBER
FIGURE 5