

**Connell
Limited
Partnership**

900 Haddon Hall Drive
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March 30, 2017

Mr. Eric Amadi
Hydrogeologist
Remediation & Redevelopment Program
SER-Milwaukee Service Center
Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212-3128

VIA EMAIL to: eric.amadi@wisconsin.gov

Re: Former Koppers Tar Plant and Wabash Alloys Site
9100 South 5th Avenue, Oak Creek, Wisconsin
Connell ERP BRTTS No. 02-41-553761/VPLE BRRTS No. 06-41-560058

Dear Mr. Amadi:

On December 21, 2016, the Department responded to the Remedial Action Options Report addressing contamination on our property located 9100 South 5th Avenue, Oak Creek, Wisconsin. Beazer East, Inc. ("Beazer") will be separately responding to the Department through its consultant, Tetra Tech. This letter sets forth our response.

We understand the remedial action plan addressing PCB and metals contamination (Connell VPLE BRRTS No. 06-41-560058) associated with former secondary aluminum smelting activities that occurred on the property is acceptable to the Department. However, implementation of our remedial action plan is dependent on the Department and Beazer first resolving the issues set forth in the Department's December 21, 2016 correspondence. We stand ready to move forward with our approved remedial action plan, and to that extent, we request that the differences between the Department and Beazer be quickly resolved so remedial work on our property can commence.

Previously, we discussed with the Department entering into a Negotiated Agreement in order to finalize our commitment to implement our remedial action plan. We are renewing that approach and will be forwarding a draft agreement to the Department for that purpose.

We will certainly continue to allow Beazer to access the property to the extent necessary to obtain data to address the Department's concerns and implement the Department's decisions and directives.

We look forward to the Department quickly resolving the Beazer issues so remedial work on our property can promptly commence.

Very truly yours,



Michael Kellogg
Director, Risk Management

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CC: Michelle Norman, WDNR (via email)
Julie Zimdars, NRT (via email)
Michael Slenska, Beazer East (via email)
Michael Noel, Tetra Tech (via email)
Larry Haskin, Haskin & Karls (via email)
Kathryn Huibregtse, Ramboll Environ (via email)



March 30, 2017

Mr. Eric Amadi
Hydrogeologist
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-3128

RE: DNR Comment Letter Dated December 21, 2016 Regarding Review of Remedial Action Options Report

Former Koppers Tar Plant and Wabash Alloys Site
9100 S. 5th Avenue, Oak Creek, WI
BRRTS # 02-41-553761, FID # 241379050
Connell VPLE BRRTS # 06-41-560058
Beazer VPLE BRRTS # 06-41-561509

City of Oak Creek Utility Corridor, Lot 1
9170 S. 5th Avenue, Oak Creek, WI
BRRTS # 02-41-561425, FID # 341074470
Beazer VPLE BRRTS # 06-41-561426

Dear Mr. Amadi:

This letter provides Beazer's response to the Wisconsin Department of Natural Resources (DNR) December 21, 2016 comment letter concerning the subject Remedial Action Options Report (RAOR) for the Former Koppers Tar Plant and Wabash Alloys Site, and the City of Oak Creek Utility Corridor, Lot 1 (collectively hereinafter, the "Site"). Below we have provided your comments followed by our responses in italics.

Comment 1. Restoration of the environment

Wis. Stat. § 292.11(3) requires actions be taken to restore the environment to the extent practicable. Additionally, Wis. Admin. § NR722.07(4)(a)(4) requires an evaluation of the restoration time frame.

The proposed limited excavation and construction of a barrier cap do very little to restore the environment, regardless of the time frame. This requirement is particularly applicable to potential future wetland impacts, but also to the restoration of groundwater quality to the extent practicable, as very little source removal or treatment is proposed. The "environment" in this area cannot be

expected to be restored by natural processes within any reasonable time frame. Previous site evaluations, nor the RAOR do not provide a restoration time frame for tar-impacted soil and groundwater for the recommended remedial action. Further, the report does not adequately address the proximity of coal tar contaminants to receptors and the presence of sensitive receptors, in particular Lake Michigan. The report should address how the remedial action will be protective of Lake Michigan over the short-and long-term, including the issue of bluff erosion at the property and the impact of such erosion on any selected remedial action.

Response to Comment 1.

In accordance with NR 720.08(3) the construction of a barrier cap is not intended to restore the environment but rather to serve as a performance standard to provide protection from direct contact with residual contaminants in the soil and to minimize the migration of contaminants from contaminated soil to surface water and wetlands via overland runoff. A barrier cap is an acceptable performance standard that is widely used in Wisconsin and across the U.S.

Restoration of groundwater quality is not technically feasible with pump and treat or in-situ treatment alternatives because of the low permeability of the clay soils underlying the Site. The low permeability soils naturally attenuate the contaminants at a rate equal to or greater than the rate they are dissolving from the tar which forms a stable, steady-state plume fringe around the perimeter of the tar areas that is no longer advancing in flowing groundwater (Kueper, et. al, 2003; King and Barker, 1999)¹. However, natural attenuation will not be able to restore the Site as long as dissolution continues from the tar. Restoration would only be possible by excavation of entirely all tar-like material, and this is not practical. The nature of tar impacts in clay cracks and fissures makes complete source removal almost impossible, not to mention the residual tar impact that cannot be removed due to the numerous utility lines (including gas, storm and sanitary sewer, water, electric and telecommunications lines) currently within the City of Oak Creek Utility Corridor portion of the Site. Additionally, any such attempts at complete source removal would be prohibitively expensive. Furthermore, the Site's restoration timeframe would be relatively unchanged for any alternative short of total removal of all tar-like material, therefore, the significantly added expenditure would not be worth the limited benefit achieved.

Any remedial approach that is technically practical to implement at this Site will leave residual tar in place and will not totally restore the environment. Nevertheless, the remedy recommended by the RAOR will stabilize conditions and will very quickly manage and mitigate the risks to human health and the environment including potential sensitive receptors like Lake Michigan and Site wetland areas. This remedy was determined to be the preferred remedial approach based on a thorough evaluation of numerous alternatives, including several alternatives that included significant source removal. This thorough evaluation was conducted in accordance with the NR

¹ Kueper, B.H., Wealthall, G.P., Smith, J.W.N., Leharne, S.A., Lerner, D.N., 2003, *An Illustrated Handbook of DNAPL Transport and Fate in the Subsurface*, R & D Publication 133, Environment Agency, Bristol; King, M.W.G. and Barker, J.F., 1999, *Migration and Natural Fate of a Coal Tar Creosote Plume 1. Overview and Plume Development*, *Journal of Contaminant Hydrology* 39 (1999) 249–279

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722 guidelines and is well-documented in the RAOR.

While gully and bluff erosion along Lake Michigan has occurred in the past, grading and armoring measures put in place in the late 1970's has stabilized further erosion. The Site Investigation Report for the DuPont site to the south noted that since armoring the bluff in 1976, the erosion rate has averaged about 1 foot/year. The nearest coal tar impacts are more than 650 feet from Lake Michigan. Even if the erosion rate maintained the pace of 1 foot/year, which is unlikely due to eventual further stabilization measures as may be necessary, it is estimated that it would take approximately 650 years for the Site impacts to threaten Lake Michigan due to erosion of the bluff. There is very little risk that bluff erosion would impact any selected remedial action. If needed, an institutional control could be added to require maintenance of bluff erosion control measures.

Comment 2. Reduction in the volume of contamination

Wis. Admin. § NR722.07(4)(a)(1)(a) requires an evaluation of the degree to which the toxicity, mobility and volume of contamination is expected to be reduced.

Limited excavation does not significantly reduce the contaminant mass or toxicity. The proposed remedial actions are limited to excavation and disposal of limited volumes of contaminated soil in the wetland areas. The mass of contaminated material proposed for removal appears to be a minimal percentage of the known mass of contamination. The actual existing mass of contamination is likely larger, but has not been determined, as the vertical extent of investigation did not identify the full depth of contamination. An evaluation of how to achieve a more significant mass reduction is required.

Response to Comment 2.

The DNR comment contains an inaccurate statement because the Site investigation did identify the full depth of impacts as less than 30 feet below grade surface (bgs). Section 6.1.1 of the Site Investigation Report (Jan, 2014) states "Tar was not observed below a depth of 20 feet except at one location B-87 where it was observed to a depth of 24 feet. At that location a sample was collected at a depth of 30 feet and no VOCs were detected and only 0.18 mg/kg of PAHs were detected." None of the PAH compounds detected in that sample exceeded the Regional Screening Level.

Additionally, the DNR comment implies that alternatives involving significant mass reduction were not evaluated in the RAOR, which is not accurate. The RAOR includes an evaluation of several remedial action approaches to address the potentially mobile tar present at the Site, including some excavation and off-Site disposal scenarios that achieved a more significant mass reduction than the selected alternative. As noted in the RAOR, an attempt at "total" excavation of potentially mobile tar, which is technically impractical to achieve, is conservatively estimated to cost approximately \$12.7M. As considered in the RAOR, when evaluating these more expensive mass removal approaches it is important to note that additional mass removal eventually reaches a point of diminishing returns wherein further excavation, without complete mass removal (which is not feasible), has minimal impact on improving groundwater quality and Site restoration.

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Beazer is willing to discuss with the DNR alternatives that may include limited source removal targeted toward identified proposed redevelopment infrastructure to potentially minimize complications with future construction activities. Alternatively, Beazer is willing to discuss approaches that allow for the management of impacted soils in accordance with a soil management plan (as outlined in the RAOR) and cost sharing arrangement similar to what was implemented in 2015 when the City rerouted a sanitary sewer line through an area of potential impact.

Comment 3. Monitoring the effectiveness of the remedial action, including naturally occurring biodegradation

Wis. Admin. § NR 722.07(4)(a)(3)(d) requires consideration of the difficulties associated with monitoring the effectiveness of the remedial action option. Additionally, Wis. Admin. § NR722.07(4)(a)(3)(h) requires consideration of the technical feasibility of naturally occurring biodegradation at the site or facility. Finally, Wis. Admin. § NR 722.07(4)(a)(4)(h) requires consideration of naturally occurring biodegradation processes at the site which are expected to reduce the total mass of contamination in an effective and timely manner.

Monitoring to date has not demonstrated that there are naturally occurring biodegradation processes that are expected to reduce the mass of contamination within any reasonable time frame. Based on the extent to which the coal tar and associated high levels of contamination have spread laterally and vertically, it does not appear that the contamination source is stable or receding. The minimal groundwater sampling in water table wells adjacent to the site has not been, and likely will not be, successful in demonstrating a stable source or reducing contaminant mass. The presence of significant contamination extending to depths of more than 20 feet is indicative of a mobile source and contaminant plume. No assessment has been completed to determine the rate of movement of the contaminant mass, nor the potential impact(s) of the contamination to possible receptors. Even with additional source removal, more wells and associated monitoring will be needed to determine the stability of the plume. The proposed cap does not provide any infiltration protection from the precipitation of rain and snow, and thus does not prevent or limit continued leaching of contaminants to groundwater and surface water features via infiltrating precipitation.

Response to Comment 3.

It is not expected that biodegradation and natural attenuation processes will significantly reduce the mass of residual tar, but it is expected that these processes do and will continue to attenuate the movement of contaminants. The initial horizontal and vertical movement of the tar from the former ponds and release areas 50-100 years ago was through fractures in the clay till. The horizontal (50-200 feet) and vertical (less than 30 feet) movement was controlled by the presence of fractures, driving head, tar viscosity and capillary forces. While the tar was once mobile during the period of release 50-100 years ago, the tar is no longer migrating as there is no longer a driving head and the capillary forces retain the tar in the fractures.

The Site Investigation Report included calculations of the linear groundwater flow velocity ranging from 5 to 15 feet per year. Assuming impacts began when tar operations started in 1917 (100 years ago), an unattenuated contaminant plume could have traveled 500 to 1500 feet. Based

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on the observed limited extent of the groundwater plume in the clay till (50-200 feet) it is clear that the contaminant plume is being attenuated and has now reached a stable, steady-state condition. (See Response to Comment 1 above.) The migration may not be attenuated as much along the more permeable backfill within the utility corridor, but measures to eliminate migration along the corridor are proposed.

Contaminated groundwater occurs within and around the area of tar. The migration of this groundwater plume is controlled by the low permeability clay till and, except along the more permeable utility corridor for which mitigation measures are proposed, the migration has been limited to 50-200 feet horizontally from source areas and less than 30 feet vertically. The groundwater in this area is not used as a potable water source so there are no receptor risks. DNR publication RR787 "Assessment Guidance for Sites with Residual Weathered Product" states that "If it appears there is little to no potential for lateral LNAPL migration, the dissolved groundwater plume dynamics are favorable and no receptor risks are present, an evaluation of long-term monitoring in lieu of an excavation should be considered." Beazer believes that the Site meets all of those characteristics. Furthermore, groundwater use restrictions have been proposed, as outlined in the RAOR.

Contrary to the DNR comment above, groundwater monitoring does show stable or declining concentrations in monitoring wells within and downgradient of areas of tar and along the utility corridor as shown in the attached charts. For example, wells MW-122, MW-123 and MW-125 are located within areas of observed tar and in close proximity to former source areas. BTEX and PAH concentrations in those wells all show declining concentrations over 8 quarters of monitoring. Wells MW-108, MW-115 and MW-118 are 50-200 feet downgradient of source areas and show sporadic low level detections all below groundwater standards. Likewise wells along the utility corridor (MW-1, MW-2, MW-112, MW-131, MW-132, and MW-134) show stable or declining BTEX and PAH concentration trends. Beazer acknowledges that additional groundwater monitoring may be necessary, including the possible need for additional wells and associated monitoring, to demonstrate the stability of the plume during long term monitoring.

Beazer concurs that a substantive portion of the soil cover proposed in the RAOR does not provide much infiltration protection from the precipitation of rain and snow, and thus does not prevent or limit continued leaching of contaminants to groundwater via infiltrating precipitation. Only the proposed impermeable cover areas of the Site would mitigate precipitation infiltration. However, the constituent contribution to groundwater via leaching is considered insignificant compared to existing groundwater concentrations and is, therefore, of no substantial consequence given the stable or declining concentration trends observed in Site monitoring wells as described above. The infinitesimal benefit that might be realized by upgrading the soil cover to eliminate infiltration is not justified by the corresponding cost increase for such additional measures.

Comment 4. Redevelopment potential after remedial action

Wis. Admin. § NR 722.07(4)(a)(3)(i) requires consideration of the redevelopment potential of the site once the remedy has been implemented.

In previous discussions during the course of this project, we have stated that leaving extreme levels

of contamination (free tar in soil) within construction excavation depths over most of the site will significantly increase the difficulty and costs for redevelopment of the site. Additionally, the impact of exposure via direct contact and vapor pathways would be significant and elevate the need to take extra protective measures to ensure any engineering controls put in place do not fail, which may preclude placing foundations within the contaminated area. The risk of exposure to construction workers will be an on-going future issue that would require diligence and increased costs in the maintenance of engineering controls and site construction restrictions. Finally, the cap proposed does not consider any protection for the groundwater pathway. Creating a cap to effectively limit infiltration would require control of slopes and limitations on cap penetrations, as well as monitoring cap effectiveness for a significant period of time.

Response to Comment 4.

The remedy proposed by the RAOR will accommodate any redevelopment potential of the Site. As stated in the RAOR a soil cover maintenance and soil management plan are components of the proposed remedy. As part of the remedial design, the soil cover maintenance and soil management plan will be prepared to address long term cover maintenance requirements as well as soil management requirements during future redevelopment of the Site. The plan will include the following procedures which are not unique and are commonly employed at sites across Wisconsin and the U.S.:

- *a map showing the location of the extent and type of residual contamination and soil cover boundaries;*
- *a brief description of the type, depth and location of residual contamination;*
- *a description of the maintenance actions required for maximizing effectiveness of the soil cover;*
- *the requirements for sampling, handling and disposal of contaminated soils generated during underground excavation and trenching;*
- *requirements for imported backfill sampling; and*
- *requirements for reconstruction of the existing cover in disturbed areas.*

It should be noted that the current property owner, Connell Aluminum Properties, LTD, is also proposing a soil cover as part of the remedy for PCB contamination and will also rely on a soil cover maintenance and contaminated soil management plan to address long term cover maintenance requirements as well as soil management requirements during future redevelopment of the Site.

As discussed in the Response to Comment 3, the minimal benefit realized by upgrading the soil cover to eliminate infiltration is not justified by the cost increase of the upgrade.

Comment 5. Discharges to surface water or wetlands

Wis. Admin. § NR 722.09(2)(c) requires that the selected remedial action ensure that discharges to surface water or wetlands will not result in a surface water quality standard being exceeded, and that remedial actions prevent or minimize, to the extent practicable, potential and actual hazardous substance discharges and environmental pollution that may attain or exceed surface water or wetland criteria.

Wetland areas are present on the site which are already impacted by the tar contaminants. These areas will require remediation; however, areas around the wetlands will also need to be remediated to prevent future discharges to these wetlands. The rate of movement of the contaminant mass has not been evaluated, nor the potential impact(s) of the contamination to possible receptors, including wetlands. The proposed actions are not clearly designed to prevent future discharges to the wetlands, as significant areas of tar will remain close to the surface and have the potential for run off or subsurface movement toward wetlands.

Response to Comment 5.

The proposed actions include excavation of tar from the wetlands and capping areas of near surface tar adjacent to wetlands with a geomembrane and/or soil cover. During the remedial design phase, these measures will be designed to prevent future discharges to wetlands and surface water and to prevent potential run off or subsurface movement toward wetlands and surface water.

As discussed in the Response to Comment 3, the rate of movement of the contaminant mass has been addressed.

Comment 6. Restoration of soil and groundwater

Wis. Admin. § NR 722.09(2)(a) and (b) require restoration of soil and groundwater.

The proposed actions do not provide for soil or groundwater contamination levels to be reduced at all, but rather rely on engineered barriers and presumed, but not demonstrated, natural attenuation to protect all pathways. Because the mass of contamination is so large and consists of high concentrations, the reliance on these types of remedies, if demonstrated to have long-term, technical feasibility would necessitate: 1) a lengthy monitoring period, possibly several years, and as stated above, 2) potential limitation on barrier/cap design and maintenance. Such measures were not included in the RP's recommended remedy. Obtaining case closure from the DNR would take years, if not decades.

Response to Comment 6.

For soil, Chapter NR 720 provides for residual contaminant levels or performance standards. According to NR 720 a performance standard maintains a condition that is protective of human health, safety and welfare and the environment. Use of a performance standard will involve land use restrictions, maintenance agreements, long-term monitoring or a combination of these. The proposed geomembrane and soil cover will be designed, installed and maintained in compliance with these requirements.

NR 720 specifies that contaminated groundwater shall be restored to preventive action limits to the extent technically and economically feasible. There is no technically feasible method to restore groundwater other than total excavation of all source material, which we believe is technically impracticable to implement and is also not economically feasible.

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Beazer concurs that the proposed remedy might require a lengthy monitoring period of possibly several years and that obtaining case closure from the DNR might take years. However, it will not take decades of monitoring to demonstrate that the groundwater constituent concentrations are stable or declining as evidenced in the existing groundwater monitoring data.

Comment 7. Additional Comments

With respect to future development, vapor intrusion risks are proposed to be "mitigated" as the site is redeveloped and structures are built. Prior to installing any type of vapor control system in future construction, the DNR will require a vapor assessment to determine the need for a vapor mitigation system in any proposed buildings.

Response to Comment 7.

Beazer acknowledges that prior to installing any type of vapor control system in future construction, the DNR will require a vapor assessment to determine the need for a vapor mitigation system in any proposed buildings. Furthermore, as described in Section 4.3.1.1 of the RAOR, Institutional Controls are proposed that would require installation of "vapor mitigation systems for any potential future occupied structures constructed at the Site and over other areas of residual soil and impacted groundwater that have the potential for volatilization".

Comment 8. Additional Comments

As stated previously, the site was used historically for industrial operations. The property is currently zoned as commercial, thus the land use classification for this property under Wis. Admin. § NR 720 is as a non-industrial site. The site is currently vacant, with foundation slabs remaining in place. Current zoning and the land use classification under NR 720 must be considered when determining appropriate remedial actions and eventual continuing obligations. Proposing to leave high/undefined volumes of toxic contaminants at the site in a non-industrial setting would likely not achieve the DNR's case closure criteria in Wis. Admin. § NR 726.

Response 8.

There are two points of correction that should be noted regarding the comment above: 1) the Site is currently zoned as agricultural not commercial and 2) the volume of contaminated soil at the Site has been defined. In developing the RAOR, a non-industrial land use classification was assumed for the Site along with appropriate continuing obligations including groundwater use restrictions, a soil management plan and vapor intrusion mitigation measures. We believe these to be standard and rational considerations.

Comment 9. Additional Comments

The DNR hereby requests that you re-evaluate your remedy selection process in consideration of the above listed administrative code and statutory factors and requirements. For the reasons outlined above, the DNR cannot approve the proposed remedy, as it does not: 1) appear to

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effectively comply with the hazardous substance discharge law and applicable sections of the Wis. Admin. §§ NR 700 rule series; 2) comply with other applicable local, state, and federal laws; and 3) does not present a viable, long-term strategy for protectiveness and contaminant reduction, especially at a site located on the shore of Lake Michigan.

Response to Comment 9.

For the reasons provided in our responses to comments above Beazer disagrees with the DNR's assessment that the proposed remedy does not comply with Wis. Admin §§ NR 700 rule series and other applicable local, state, and federal laws. Beazer also disagrees with the DNR's assessment that the proposed remedy does not present a viable, long-term strategy for protectiveness. We have proposed a soil barrier to eliminate the direct contact exposure route, an impermeable cover to prevent tar seepage to the ground surface, excavation of tar and restoration in wetland areas, trench plugs to eliminate preferential pathways along utility lines, and groundwater monitoring to demonstrate plume stability. We have also proposed Site-wide institutional controls for further protectiveness including:

- Access restrictions limiting future Site use to non-residential uses*
- A soil management plan for any future soil disturbance or excavation at the Site.*
- Land use restrictions to prevent installation of drinking water wells at the Site*
- Requirements to install groundwater migration barriers along future utility trenches*
- Requirements to install vapor mitigation systems for any potential future occupied structures constructed at the Site*

Beazer believes that this is a robust remedy that is protective of human health and the environment, complies with Wis. Admin §§ NR 700 rule series and is consistent with environmental corrective actions taken at similar sites in Wisconsin and across the country.

Comment 10. Additional Comments

In addition, the DNR is still waiting for completion of the off-site investigation of the degree and extent of contamination, as requested by the DNR in a letter dated August 12, 2015.

Response to Comment 10.

The DNR's August 12, 2015 letter requested additional off-Site investigation based on its stated conclusion that "monitoring well MW-132 showed NR 140 enforcement standard exceedance for benzo (a) fluoranthene; thus, the degree and extent of contamination is not yet fully defined." Since receiving that letter, six rounds of quarterly groundwater samples have been collected from MW-132 and submitted to the DNR. While the results still indicate an NR 140 enforcement standard exceedance, the overall trend in the concentration of detected constituents has been declining. It should be noted that chlorobenzene compounds are also detected in the groundwater at this location. These chlorobenzene compounds are not detected in any other Site monitoring wells and are not related to prior Site industrial operations (i.e., coal tar processing and aluminum smelter activities).

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Comment 11. Additional Comments

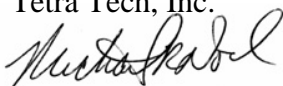
The DNR recognizes the technical and economic challenges with remediation at a site with this level of contamination due to historic use. The DNR is confident that Beazer, Connell, and their consultants can successfully attain the goal of adequate source control through treatment, removal, or a combination of those methods. Reconsideration of natural attenuation through biodegradation can be performed at a later time after additional source control is completed. Per Wis. Admin. § NR 722.15(2)(c), the submittal of a revised RAOR to the DNR is requested by April 1, 2017, in addition to the completed off-site investigation.

Response to Comment 11.

As explained in the responses to comments above, Beazer believes that the proposed Site remedy outlined in the RAOR is, in fact, an appropriate remedial action that will successfully mitigate potential risks to human health and environment that may exist at the Site in a technically practicable and economically feasible manner that is consistent with Wis. Admin §§ NR 700 rule series. To arbitrarily add additional source control through treatment, removal, or a combination of those methods, would only increase the complexity of remedial action implementation and add significant cost without providing any corresponding further reduction in potential risk that may be present at the Site. Therefore, Beazer is in no position to submit a revised RAOR to the DNR by April 1, 2017. Alternatively, Beazer proposes a meeting with the DNR to discuss practical, cost-effective and technically justifiable adjustments to the remediation approach outlined in the RAOR to determine if a mutually agreed upon remedial approach for the Site can be developed.

Please contact me following your review of this letter to arrange a mutually acceptable date and time for such a meeting.

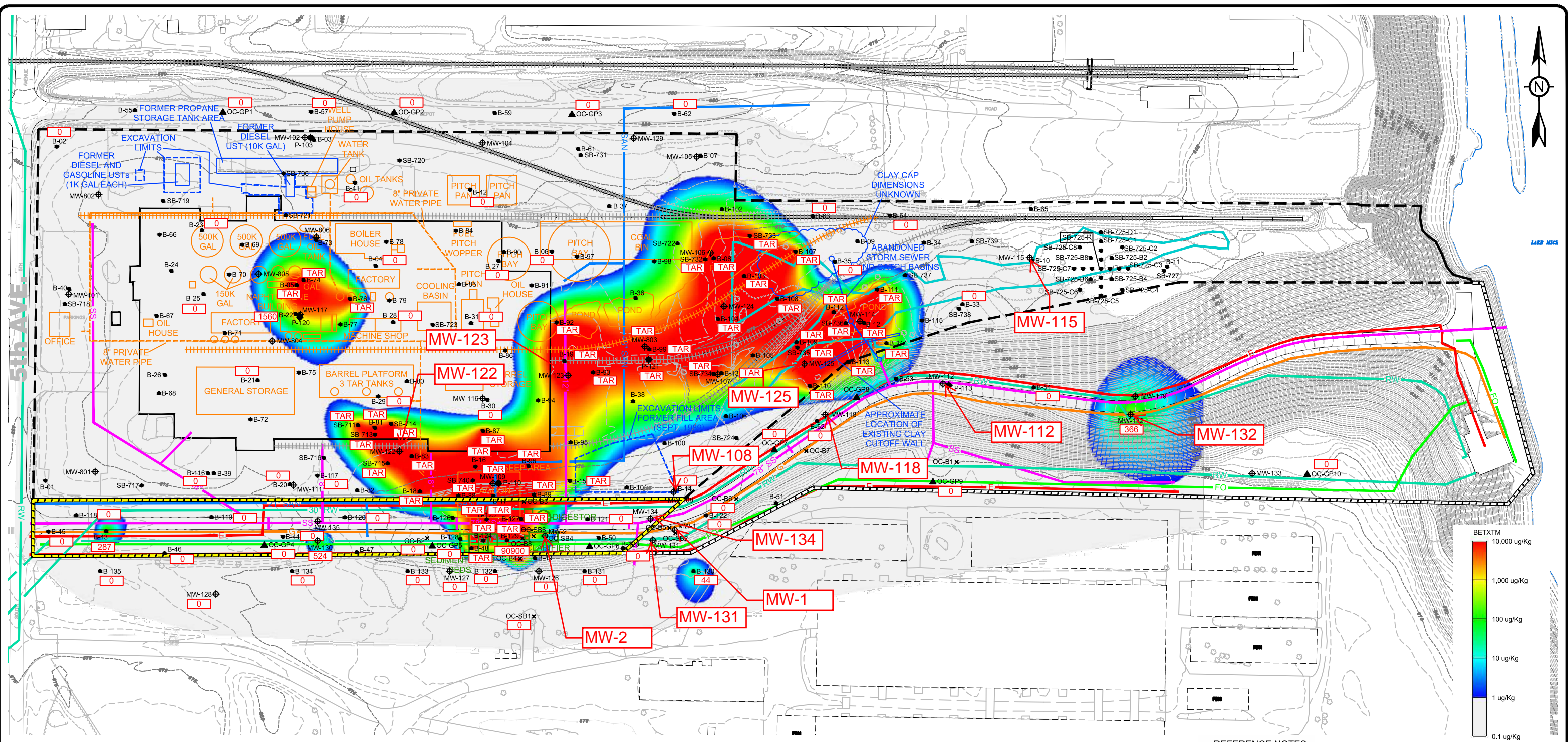
Sincerely,
Tetra Tech, Inc.



Michael R. Noel
Vice President, Principal Hydrogeologist

Attachment

cc: Michele Norman, WDNR (via e-mail)
Michael Slenska, Beazer East (via e-mail)
Mike Kellogg, Connell (via email)
Julie Zimdars, NRT (via e-mail)
Larry Haskin, Haskin & Karls (via e-mail)
Kathryn Huibregtse, Ramboll Environ (via e-mail)



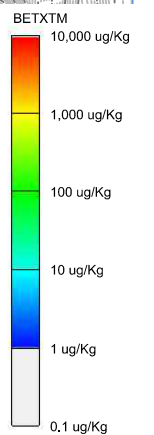
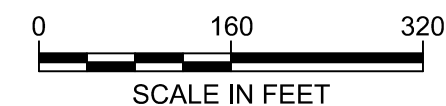
EXPLANATION

⊕ MW-101	WATER TABLE WELL	1560	TOTAL BTEXTM CONCENTRATION (ug/Kg) AT 8-12' BELOW GROUND SURFACE
● P-103	NESTED PIEZOMETER	TAR	TAR OBSERVED IN CLAY FRACTURES OR MATRIX
● B-01	SOIL BORING	E	ELECTRICAL
x OC-SB1	SOIL BORING (CITY OF OAK CREEK)	G	NATURAL GAS
▲ OC-GP1	GEOPROBE (CITY OF OAK CREEK)	RW	RAW WATER
---	APPROXIMATE WABASH PARCEL BOUNDARY (VPLE 06-41-560068)	SAN	SANITARY
---	APPROXIMATE CITY PARCEL BOUNDARY (VPLE # TBD)	SS	STORM SEWER
□ ○	FORMER TAR PLANT STRUCTURES	FO	FIBER OPTIC
▭ ○	PAST REMEDIAL ACTIVITIES		
▭ ○	FORMER WASTEWATER TREATMENT PLANT STRUCTURES		
—	APPROXIMATE WETLAND BOUNDARY		
—	APPROXIMATE CITY UTILITY CORRIDOR PROPERTY BOUNDARY		

REFERENCE NOTES:

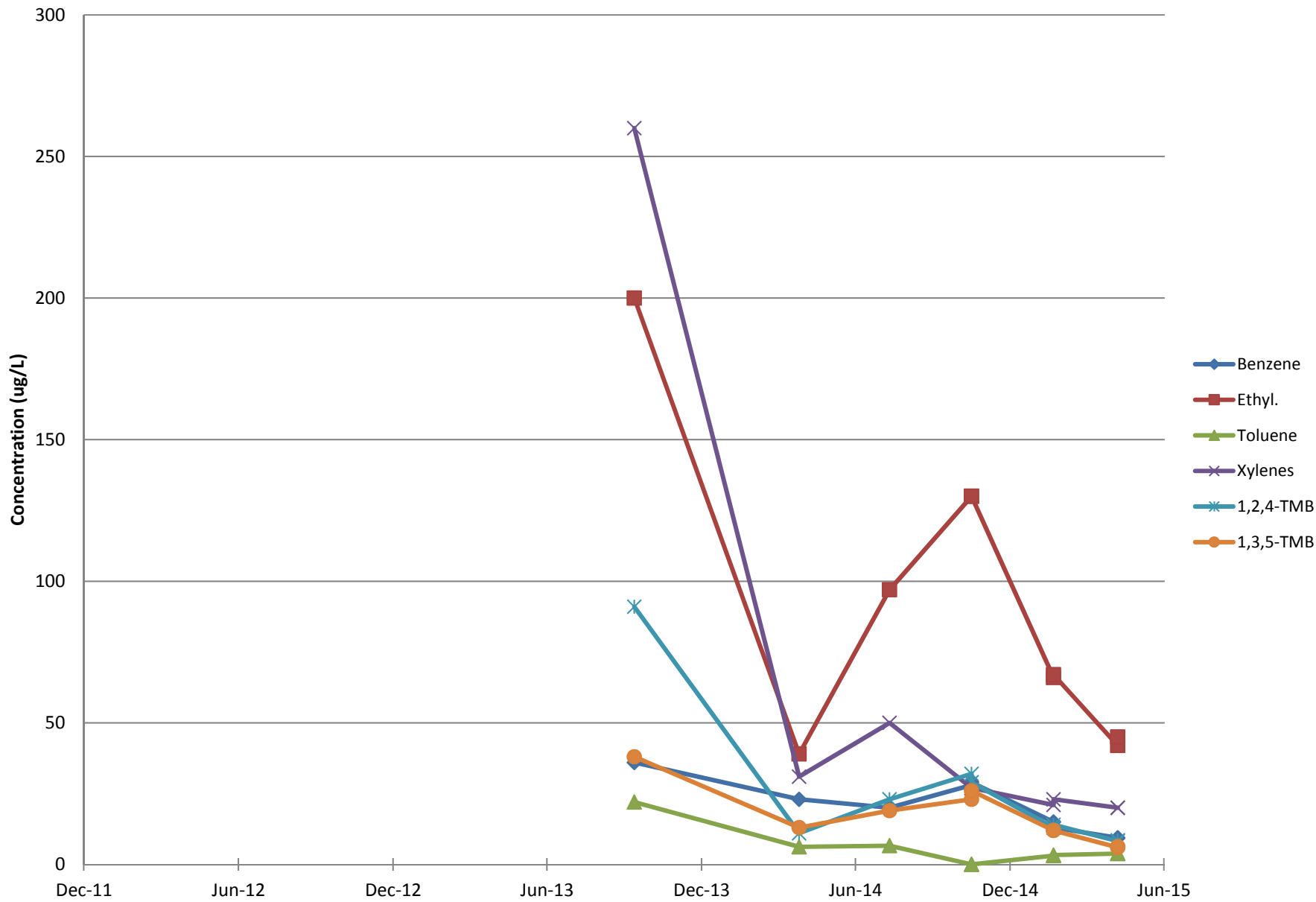
1. EXISTING TOPOGRAPHY AND SITE FEATURES FROM LAND INFORMATION SERVICES, INC. - ENVIRONMENTAL SURVEY, 12/21/2001.
2. FORMER TAR PLANT STRUCTURES FROM THE SANBORN LIBRARY - EDR INQUIRY 2284158.1s, ©1950.
3. FORMER POND AND LAGOON LOCATIONS FROM 1937-1968 AERIAL PHOTOGRAPHY - COMPILED BY AERO-DATA CORPORATION, APRIL 2013.
4. FORMER WASTEWATER TREATMENT PLANT STRUCTURES FROM HARTMAN-STRESS, INC. - FILE NO. 72051-C-303, 12/1/1971.

TITLE: FORMER KOPPERS TAR PLANT AND WABASH ALLOYS SITE		
TOTAL BTEXTM SOIL CONCENTRATIONS - 8-12 FEET BGS		
LOCATION: OAK CREEK, WISCONSIN		
	CHECKED: MRN	FIGURE: B3
	DRAFTED: HJW	
	PROJECT: 117-2201323	
DATE: 4/10/15		



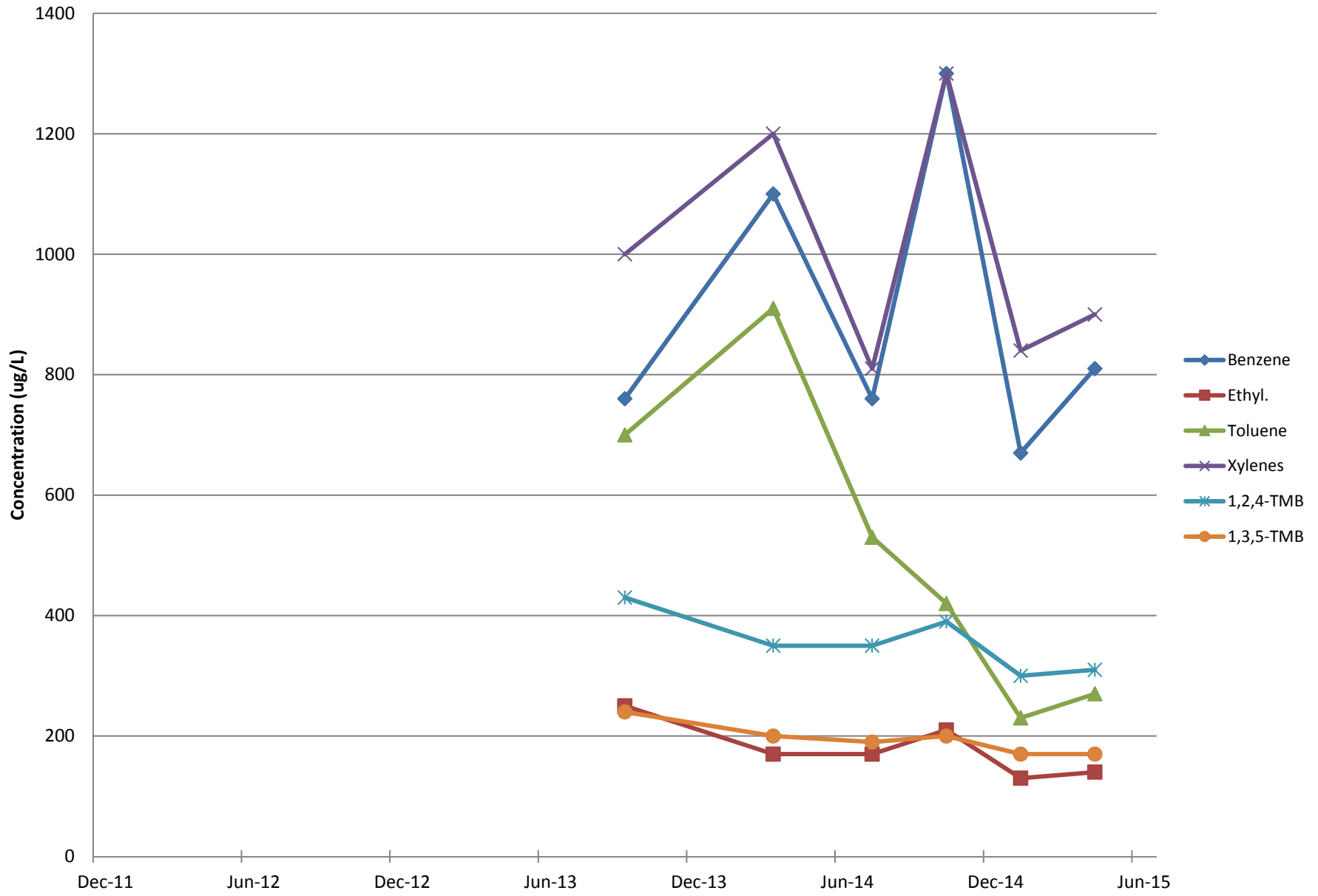
BETX Tar Area Well

MW-122



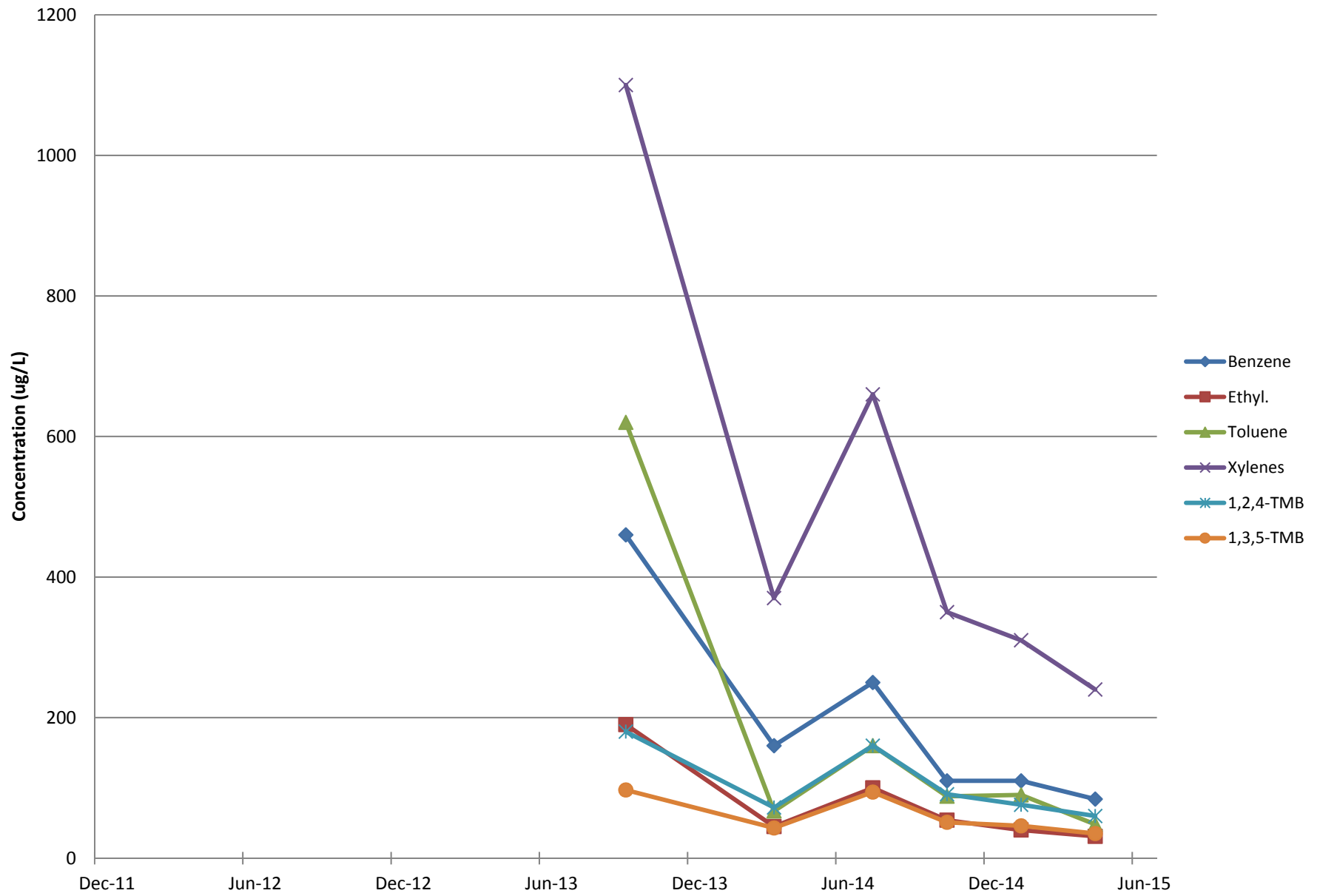
BETX Tar Area Well

MW-123



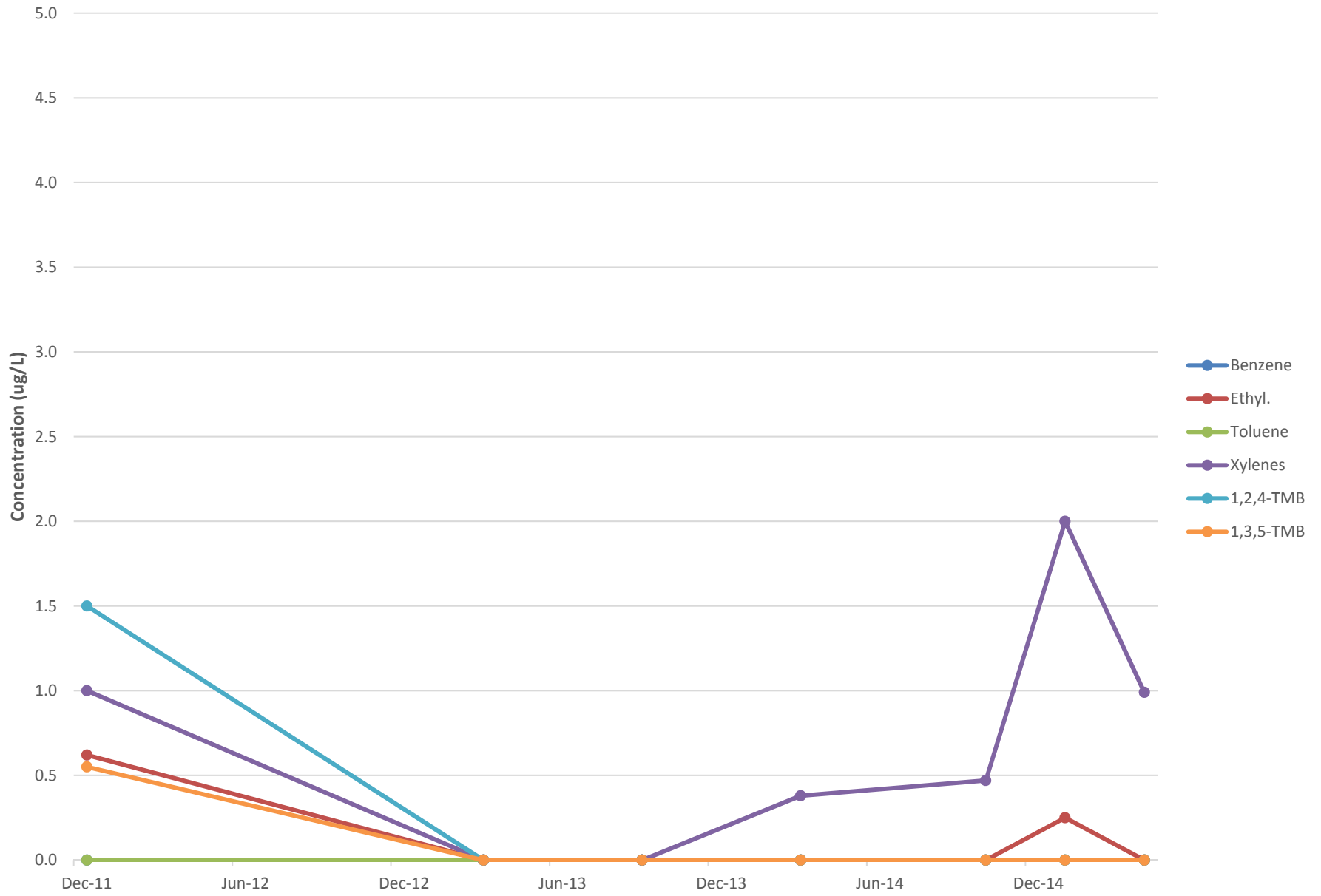
BETX Tar Area Well

MW-125



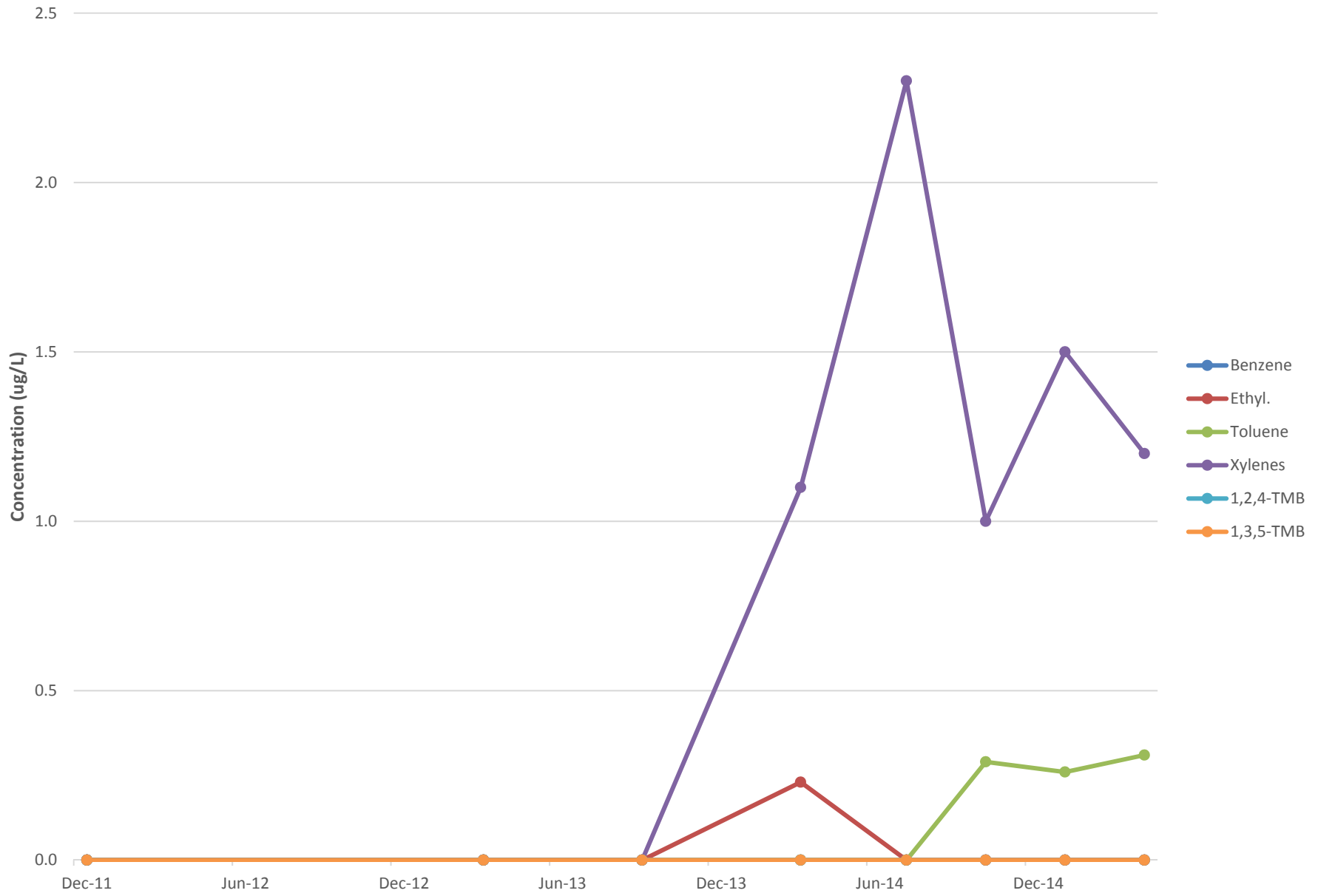
BETX Downgradient Tar Area Well

MW-108



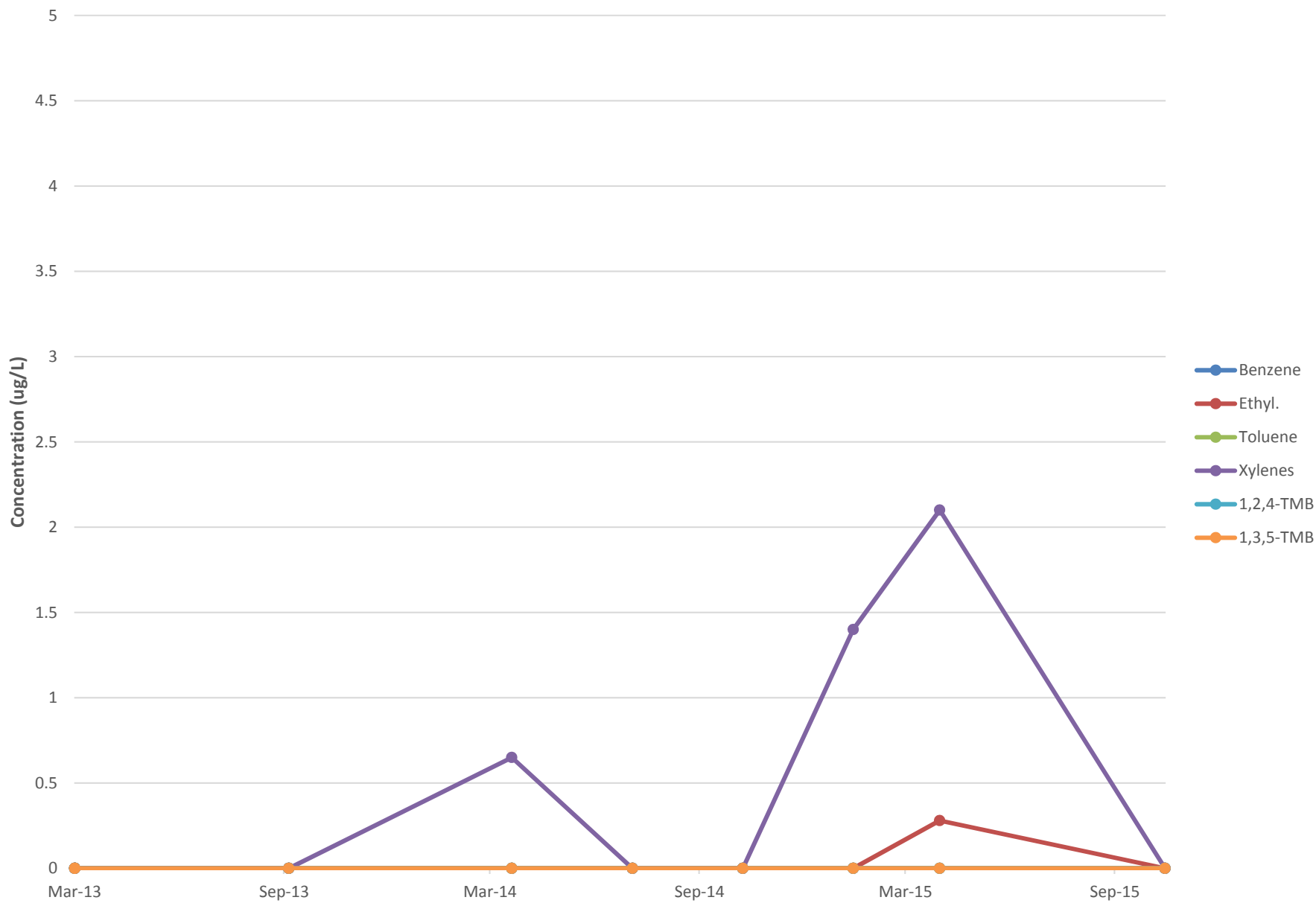
BETX Downgradient Tar Area Well

MW-115



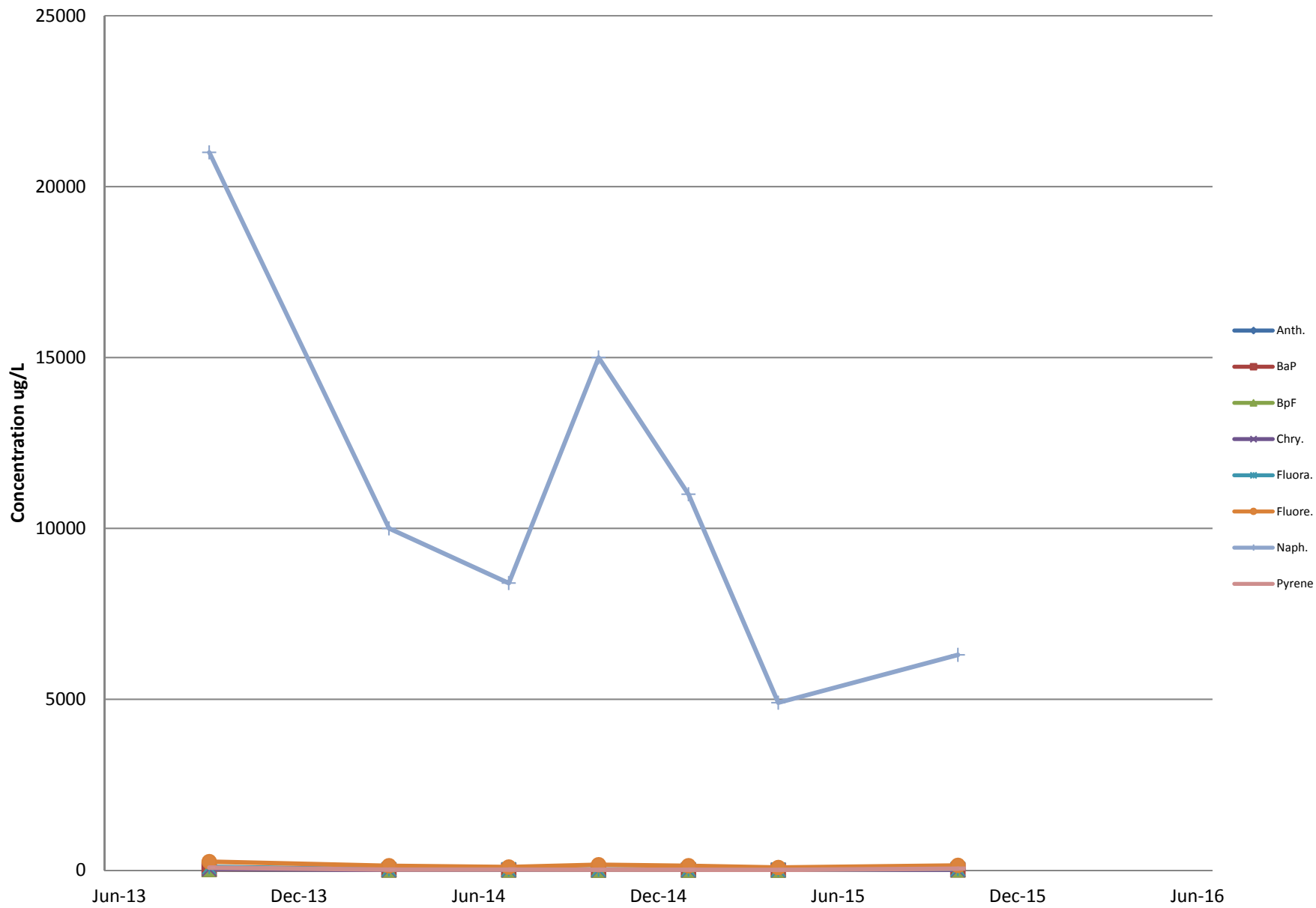
BETX Downgradient Tar Area Well

MW-118



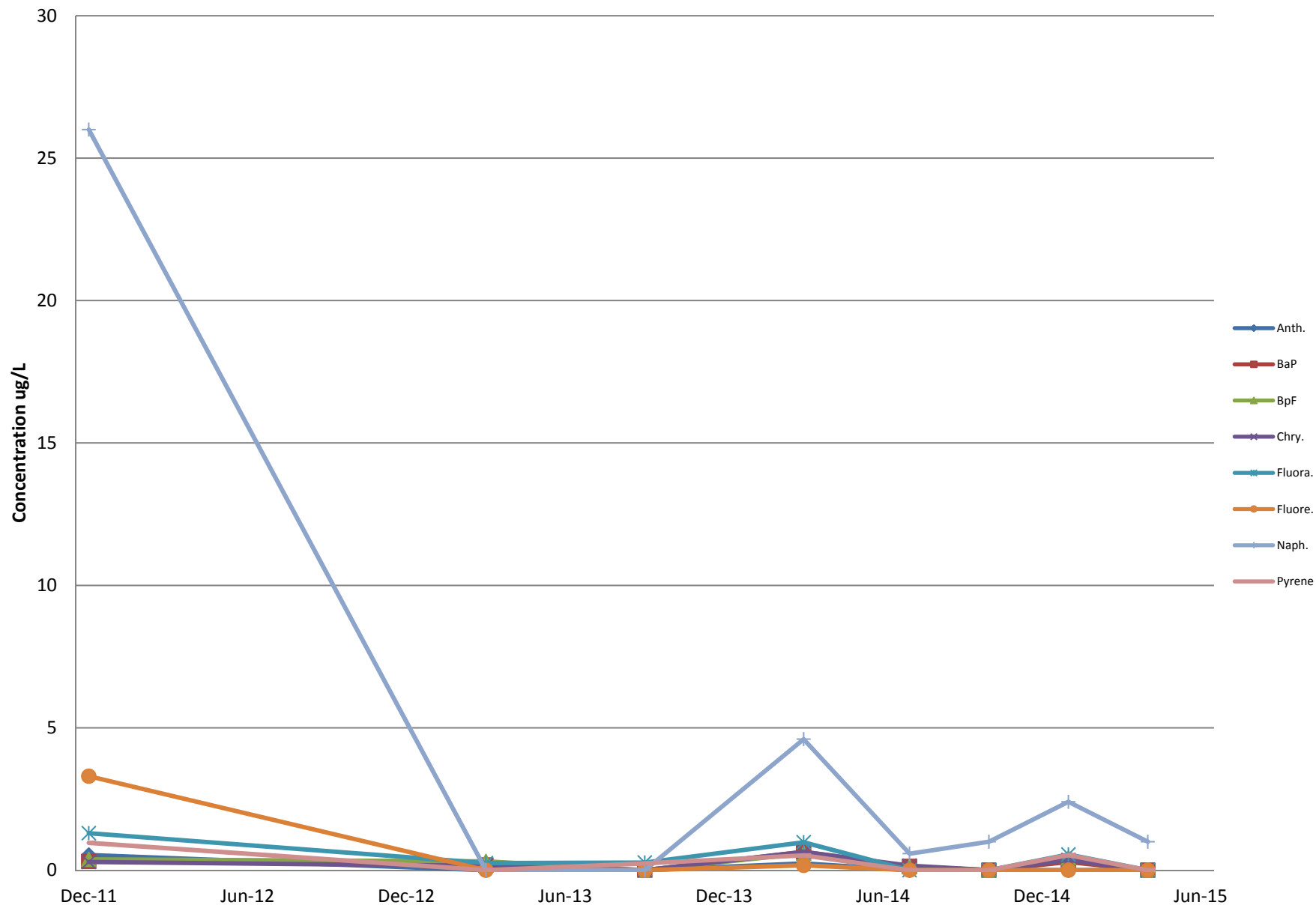
PAH Tar Area Well

MW-123



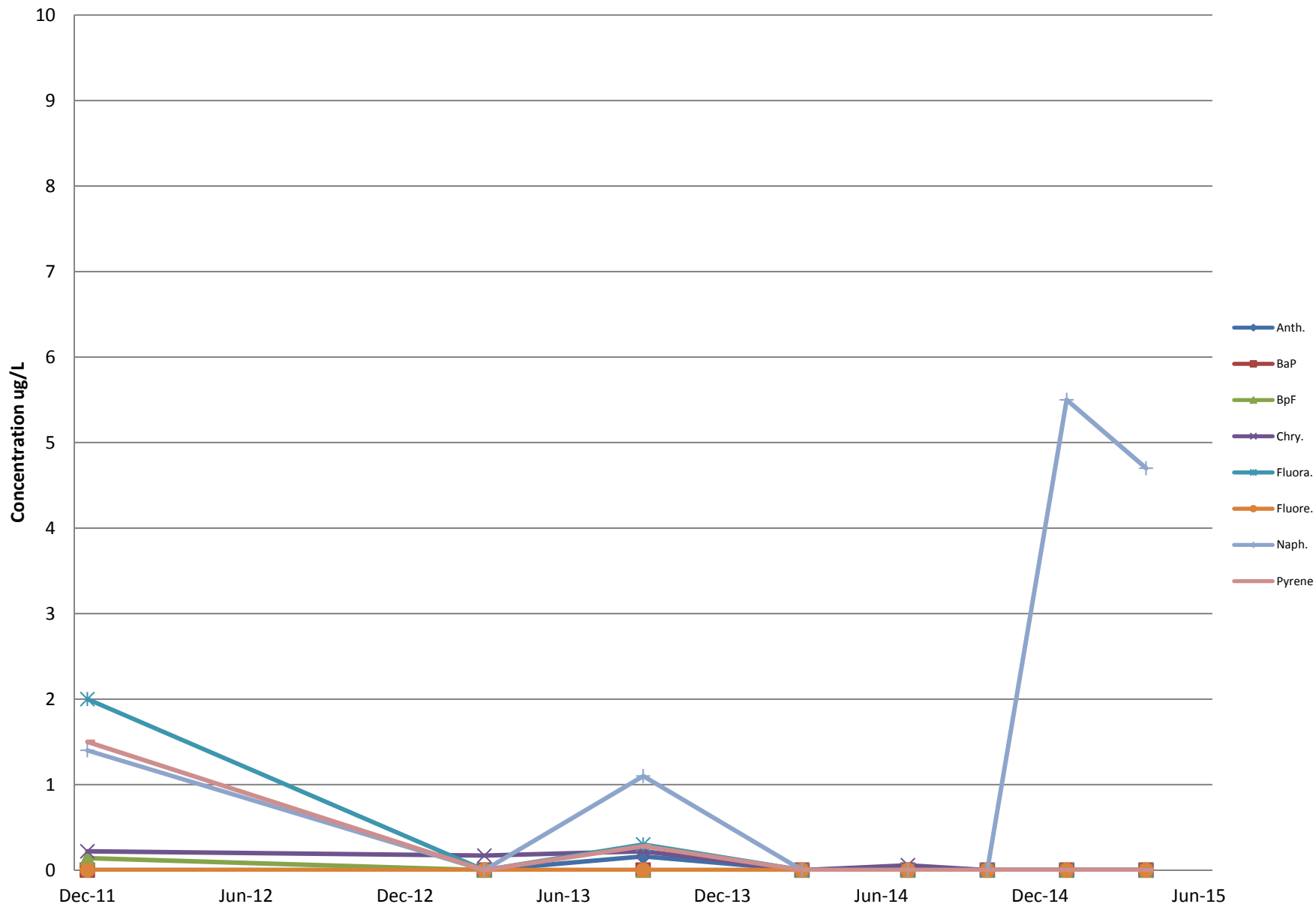
PAH Downgradient Tar Area Well

MW-108



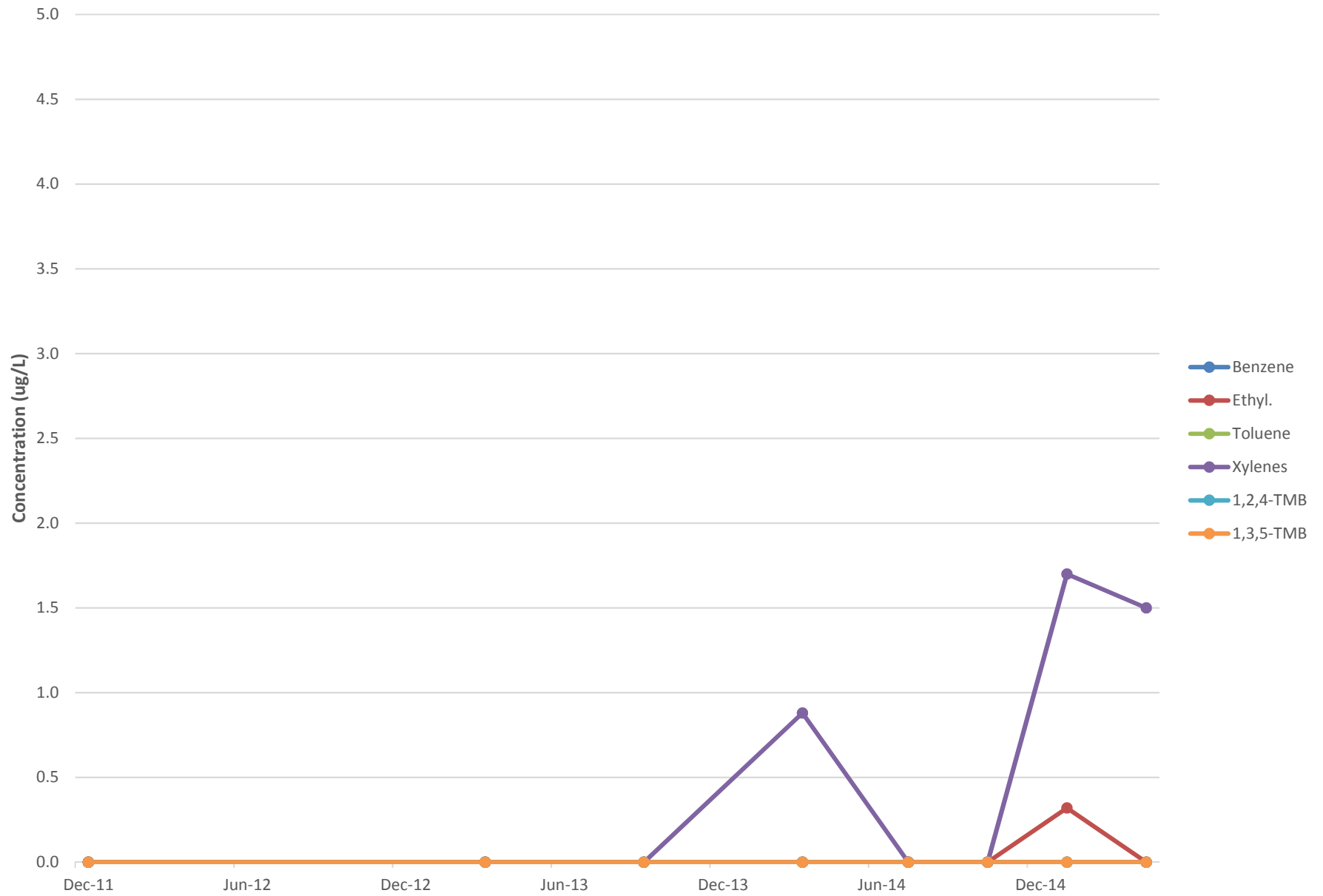
PAH Downgradient Tar Area Well

MW-115



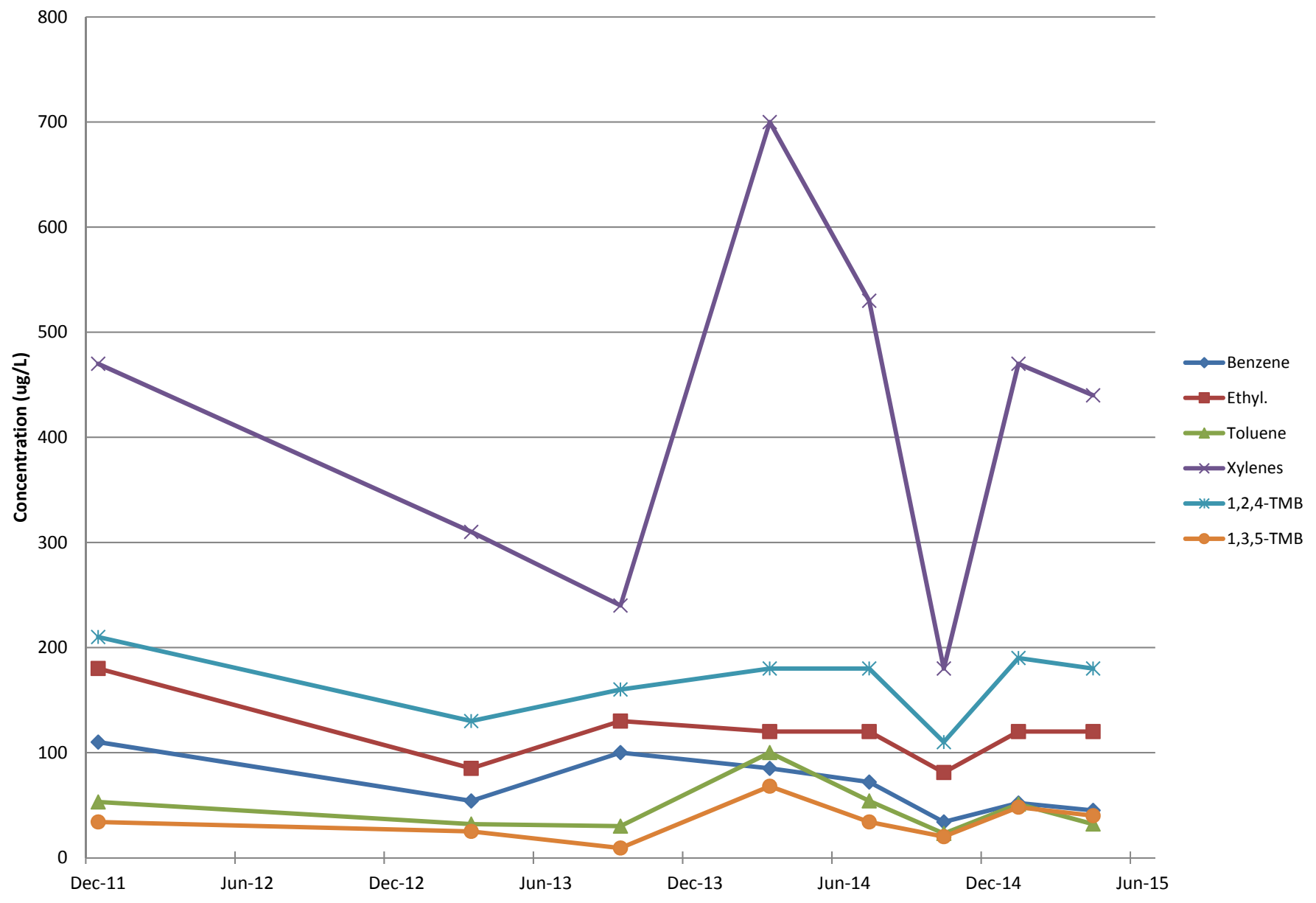
BETX Utility Corridor Well

MW-1



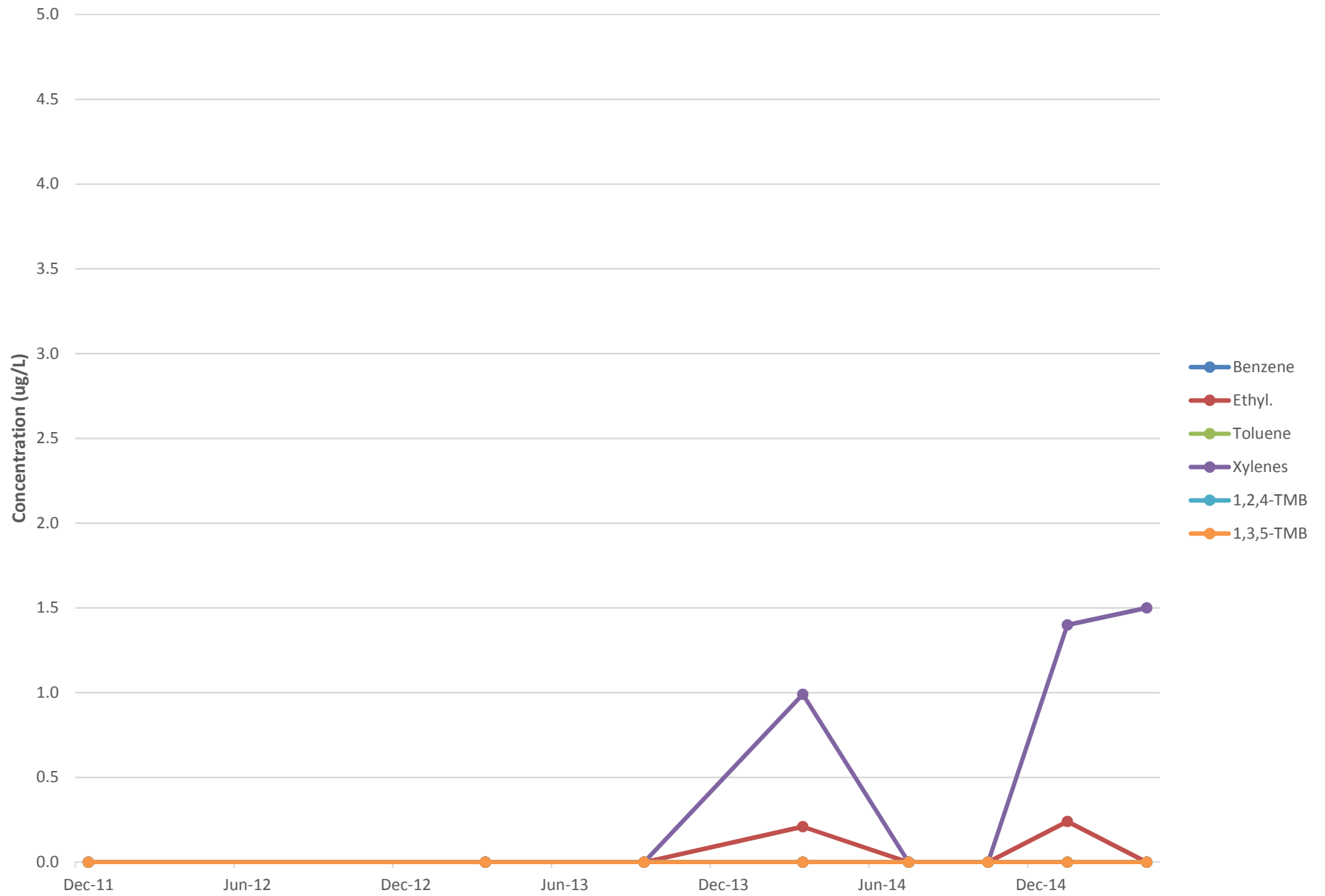
BETX Utility Corridor Well

MW-2



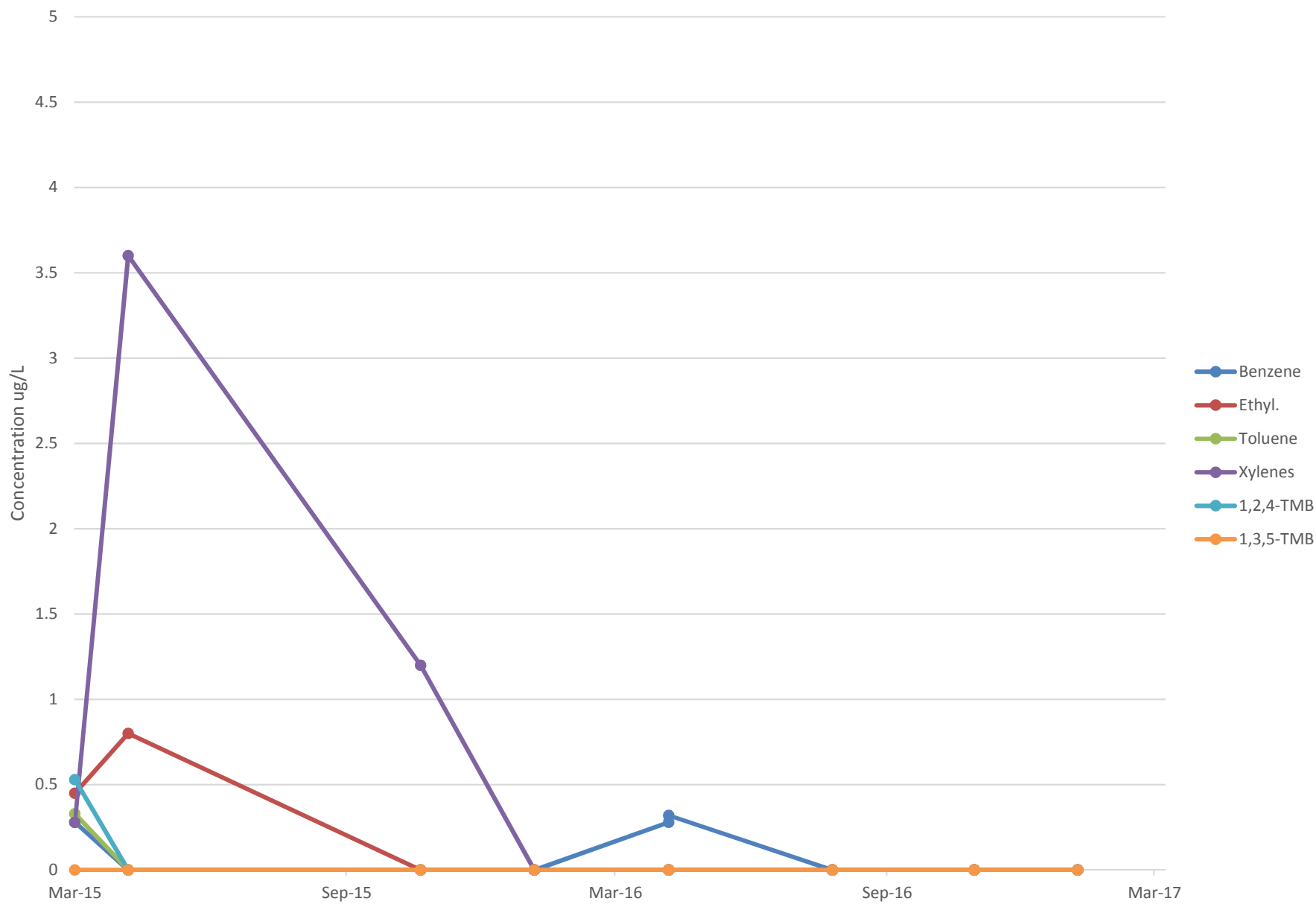
BETX Utility Corridor Well

MW-112



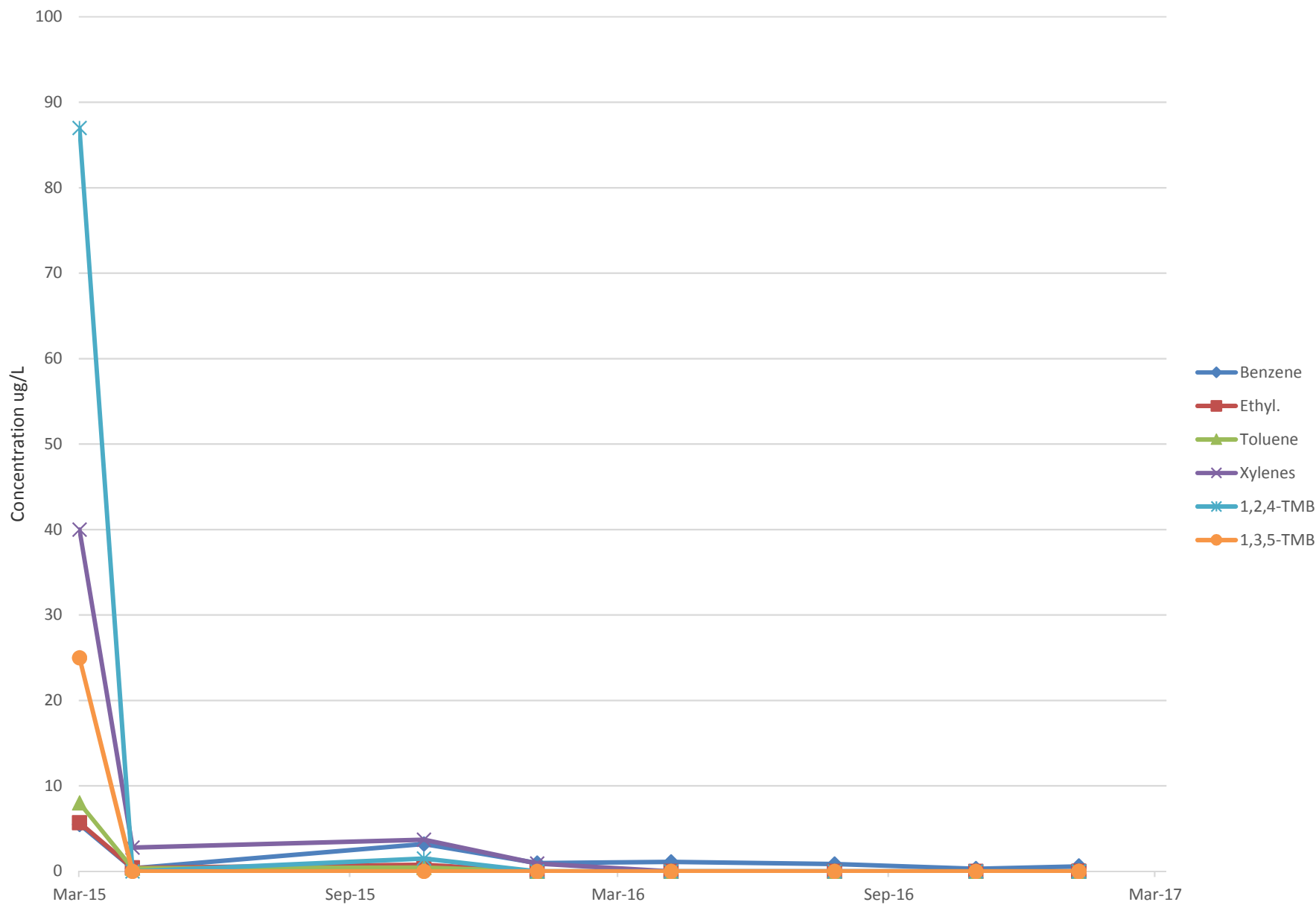
BETX Utility Corridor Well

MW-131



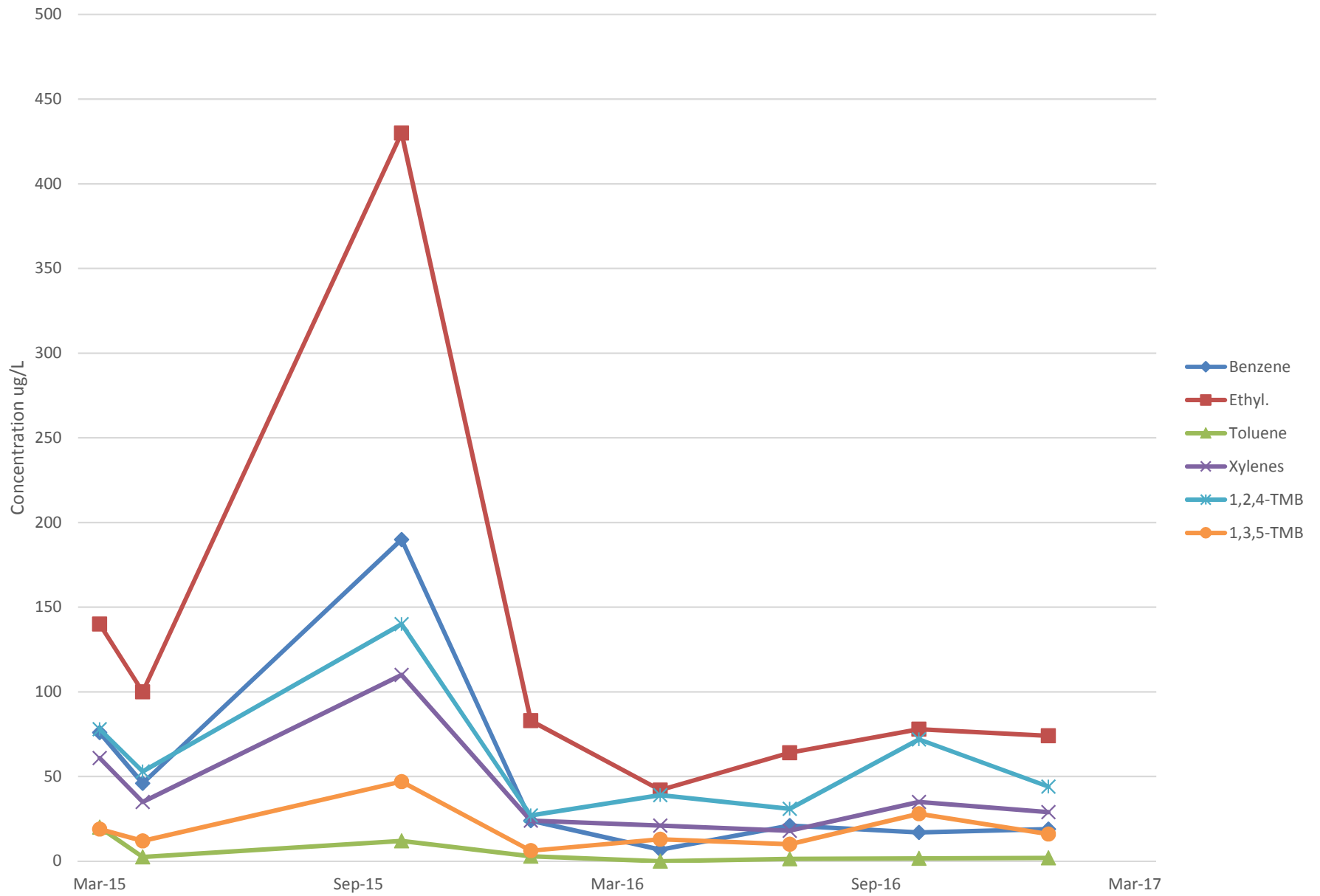
BETX Utility Corridor Well

MW-132



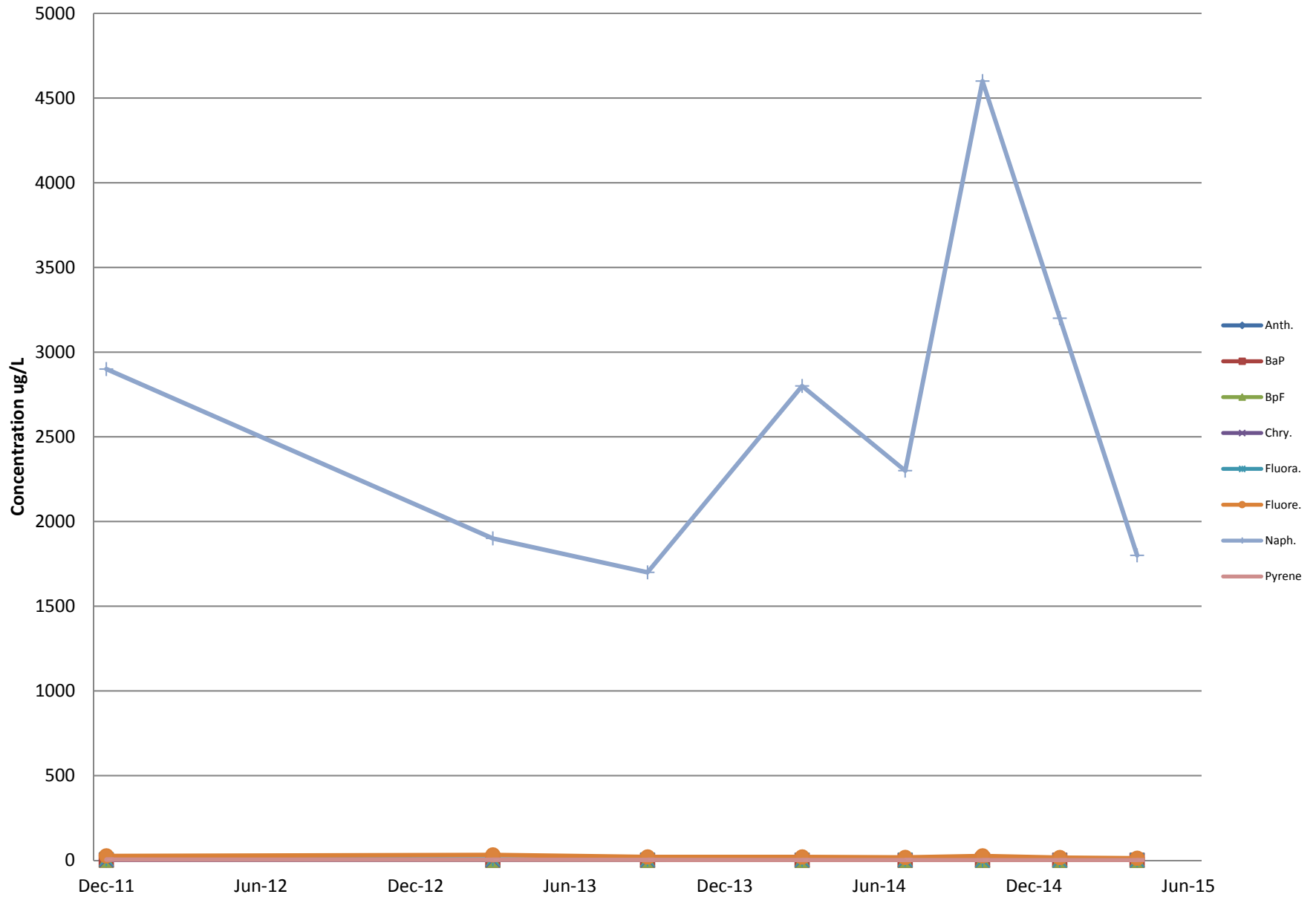
BETX Utility Corridor Well

MW-134



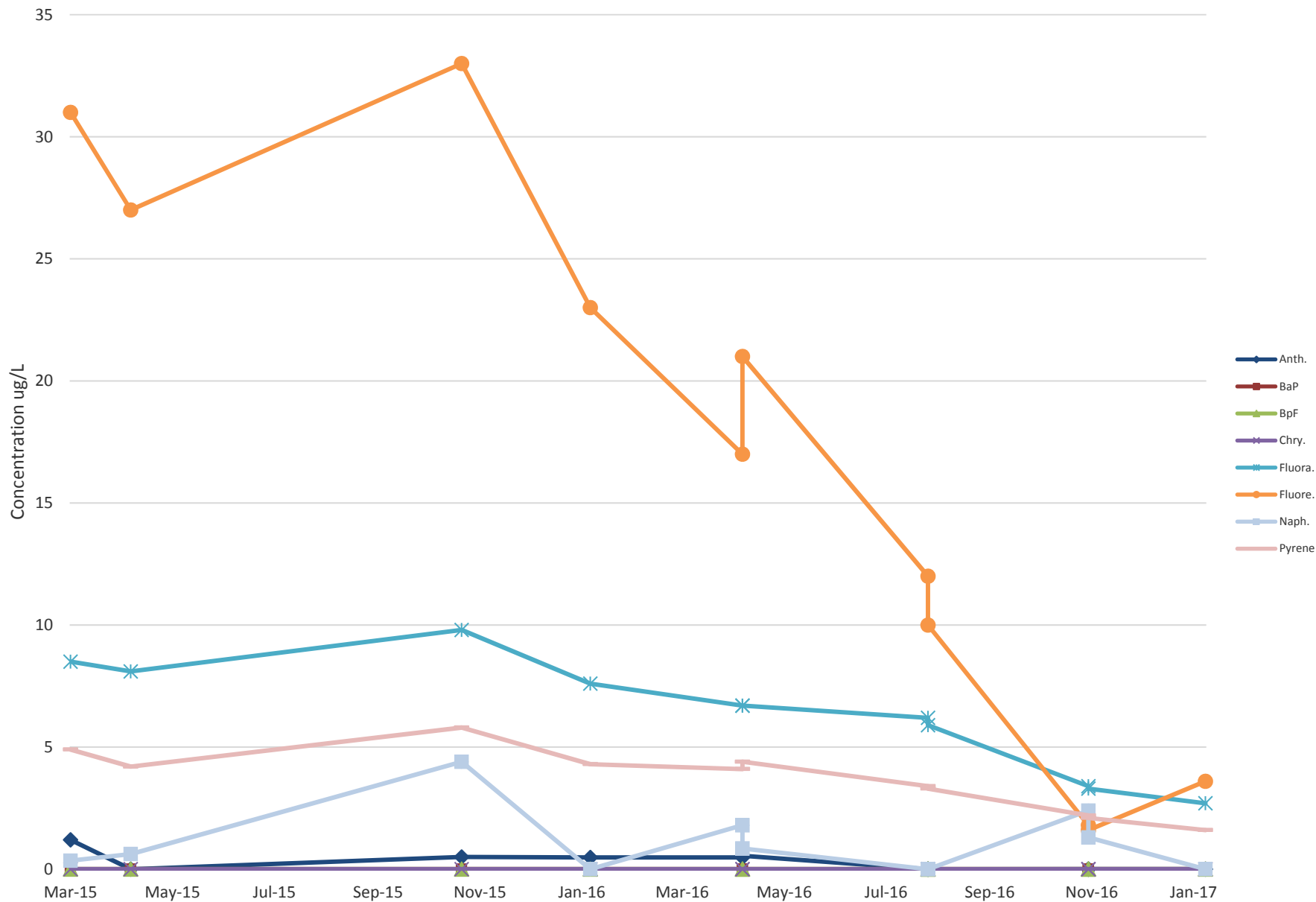
PAH Utility Corridor Well

MW-2



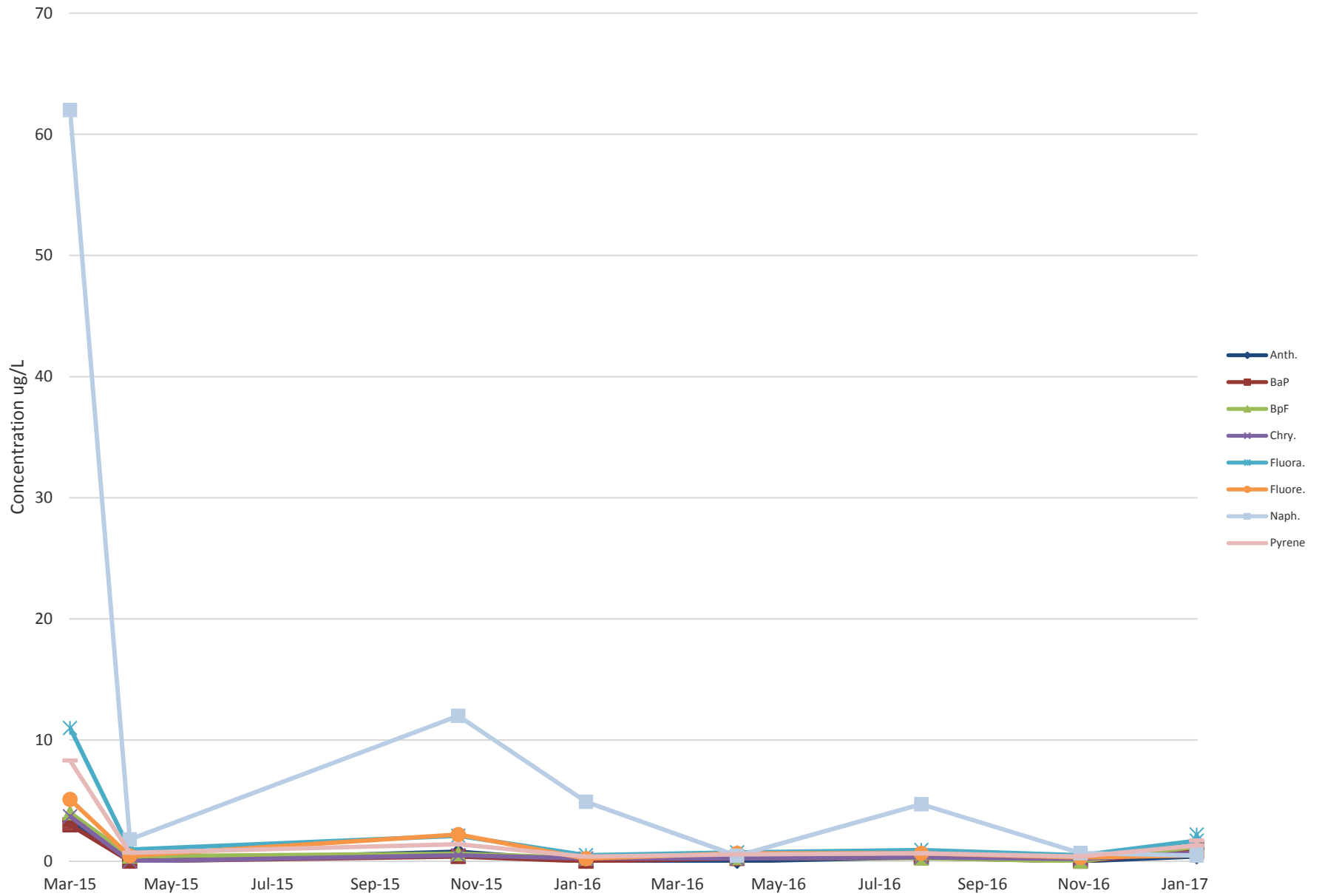
PAH Utility Corridor Well

MW-131



PAH Utility Corridor Well

MW-132



PAH Utility Corridor Well

MW-134

